

Cityscape

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Development and Research*

CONTESTING THE STREETS
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PD&R



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U.S. Department of Housing and Urban Development
Office of Policy Development and Research

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Symposium

Contesting the Streets

*Guest Editors: Raphael W. Bostic, Annette M. Kim,
and Abel Valenzuela, Jr.*

Guest Editors' Introduction

Contesting the Streets: Vending and Public Space in Global Cities

Raphael W. Bostic

Annette M. Kim

University of Southern California

Abel Valenzuela, Jr.

University of California, Los Angeles

Cities around the world increasingly offer their residents better opportunities for employment and income. As a result, we have witnessed a long-term trend of migration and immigration to urban centers, with the result now being that the majority of people live in cities for the first time in human history (UN-Habitat, 2010). This spatial demographic shift means that the number of people and the varieties of uses vying for urban spaces have multiplied; competition for urban space is more intense than ever before.

The growth in the size and complexity of urban areas has led to increased attention to the institutions, laws, and norms that govern the city. Academics and others have long observed that many of the recent human settlements and economic activities in rapidly urbanizing areas fall outside the prevailing formal economic and social arrangements. The questions of the viability, importance, and legitimacy of current informal social and economic arrangements have drawn the attention of many scholars. While earlier scholarship framed a dichotomy between formal and informal sectors (Guha-Khasnabis, Kanbur, and Ostrom, 2006; Portes, Castells, and Benton, 1989), subsequent scholarship has presented a more ambiguous gray zone, especially as various levels of government and state actors tacitly support degrees of informality and regulations (Kim, 2015; Valenzuela, 2014). Governance is now conceived of as institution-building continually in progress, evolving and reforming to changing conditions, with the emergent literature now seeking practical institutional reforms and municipal policies and programs that can incorporate these populations and settlements into a more functional and comprehensive urban system (Cross, 2000; Peñalver and Katyal, 2009; Roy, 2005).

Street vending in many ways epitomizes the challenges of contemporary urban governance and its evolving policy considerations. In many cities, existing formal businesses call on government to curb street vending because they view vendors as unfair competitors who are not paying the same

costs of doing business. At the same time, some advocates and practitioners in the international economic development community view vendors as legitimate informal sector microentrepreneurs who need support. Vending similarly can be seen as private capture of public space that involves significant costs. In addition to its representing a violation of municipal codes, vending's presence in locations lacking an infrastructure meant for such commerce means it can be an impediment to traffic flow and contribute to congestion and other negative externalities, including pedestrian and consumer safety. Vending, however, can also contribute to civic vitality, economic development, employment, and services and product provision. To realize these benefits, some call for new models of public space that accommodate commercial activities such as vending into city plans. These types of competing narratives have made street vendors the focus of intense scrutiny, with governments and even administrations within the same government, reaching different conclusions on their legitimacy and the appropriate level and manner of regulatory oversight.

The issues about the legitimate use of public space, the right to the city, and local ordinance enforcement or dereliction are further complicated by class conflict, the street vendors' diverse ethnic and racial backgrounds, and their migrant or immigrant status. As a result, recent street vendors' challenges and protests have been important catalysts with far-reaching political implications about the future of our urban societies. One only needs to be reminded that the Arab Spring began as a street vendor's protest to his constricted livelihood and poor relations with local police.¹

These issues were the topical focus of *Contesting the Streets II: Vending and Public Space in Global Cities*, a conference held at the Sol Price School of Public Policy at the University of Southern California on October 2 and 3, 2015. The conference was jointly sponsored by the Price School's Spatial Analysis Lab and Judith and John Bedrosian Center on Governance and the Public Enterprise and by the César E. Chávez Department for Chicana/o Studies at the University of California, Los Angeles. The conference was a sequel to the first *Contesting the Streets* conference held in 2010.²

It was particularly poignant to be holding the conference in Los Angeles, a few miles from the city council that was in the midst of debating whether to lift its ban on vending, a way of livelihood for a reported 50,000 people in the city. Far beyond the United States, however, vending is a hotly debated issue in major cities around the world. So, to gain comparative insights, we extended the geographic focus of this second conference's inquiry beyond (while still including) the Americas to a global perspective. From this work, we should better see the scalar forces at play and a clearer view of our historic moment of urbanization. We also hoped to learn from a larger pool of policy developments and experiments from other countries. The intention was that consideration of vending worldwide would illuminate ways in which varied urban societies have sought solutions that serve a broad range of interests.

¹ The Arab Spring democratic uprisings originated in Tunisia in December 2010 and arose independently throughout several countries in the Arab world in 2011.

² Similar to this conference, the earlier conference explored the intolerance to and restrictions on vendors and also examined the various policies and promising practices that different states, municipalities, local nongovernmental organizations, and others were promoting to stem some of the conflict and to make vending more expansive, efficient, and fruitful for vendors, consumers, and other stakeholders such as merchants, residents, and passersby. Still pressing are issues regarding the use of public space, the right to the city, and local ordinance enforcement and dereliction.

Therefore, a particular focus of this conference was to promote empirical research about vending both in the United States and abroad. This focus was chosen because, even though vending controversies are occurring in places with widely differing political institutions, legal and urban planning systems, economic situations, and cultural histories, the way in which the controversies are framed are surprisingly homogenous. Most often, such controversies are framed as being primarily between street vendors and storeowners who might feel threatened by unfair competition from those vendors who do not pay rent, taxes, and so on, and who, therefore, can undercut their prices. Other times, vending is purportedly an obstacle to the modern, world-class smart city that needs the sidewalk cleared for public safety, public health, and traffic flow. These claims are in need of evidentiary support. Is total sidewalk clearance really needed to achieve these good ends? Some have argued that vending creates a more vibrant street life that attracts customers to stores and eateries that complement the vendors. Because in our largest, densest cities, local governments, urban planners, and citizens must find new ways to plan, design, and govern the precious urban public space of the sidewalk and street, this conference particularly sought to shed light on these and other grounded questions, with the goal of pointing to possible futures and narratives that will supplant the old ones.

The conference's first day included keynote orientations from three leading scholars who view the city from different disciplinary perspectives and scales to offer some broad theoretical frameworks for the meeting. Each spoke to the contestations of public space and how claims and access to spaces varied across demographic, economic, and social strata. Presenting new research on the south side of Chicago, Ananya Roy placed a spotlight on how legal institutions around property rights often work to further disenfranchise the poor from space in the city, leaving them vulnerable to informal placemaking in a tenuous cycle. Her analysis pointed to the importance of local activism in the tradition of community organizing in the United States to claim rights that the formal structures are unwilling to impart. Her critique noted that institutions often do not acknowledge the imbalances in access and power that exist in their practices and processes.

Margaret Crawford focused her remarks on the question of who decides what public space is and who has primary claim to that space. She incisively critiqued the way our urban planning and design institutions have sought to implement aesthetic urban design visions that reflect the values of segments of society, even when these values implicitly result in the exclusion of other groups. Crawford noted that this effect is particularly acute regarding race and ethnicity; in some contexts, minorities and immigrants are assumed to "not belong" and can be subject to harassment and less freedom in public spaces. She reminded us of how the Black Lives Matter movement has brought to the American consciousness the intricate relationship between race and urban public space.

Finally, Saskia Sassen argued forcefully that indeterminacy and informality are essential qualities driving urban vibrancy and innovation that have consistently made cities a locus of growth. She challenged the audience to not define cities as places of density, as is done in many fields and contexts, but rather to see the city's essence as the complexity and chaos of less formal arrangements. Pointing to the data collection efforts of the U.S. National Security Agency as an example, Sassen warned that strong political interests exist to reduce or eliminate systemic indeterminacy and suggested that these efforts put the city and urban places at significant risk.

Capitalizing on bringing together these three distinguished scholars, we invited them to engage in a moderated public dialogue together. The keynote addresses and the dialogue conversation are available on line.³

The symposium section of this issue of *Cityscape* publishes 6 articles from the 10 original research papers presented at the conference. In many of our discussions of the papers, we returned to the importance of legislation and the entitlements conferred by the law that affect the legitimacy of street vending. Renia Ehrenfeucht critically examines three central underlying philosophies behind vending ordinances and regulations by examining cases from Albuquerque, New Mexico; New Orleans, Louisiana; and Chicago, Illinois. First, she argues that the notion of adjacent properties needing to be protected from street vendors and their customers belies the fact that they can often play complementary roles. Second, she disputes the notion that protection from pedestrian congestion is a reasonable justification for regulation by presenting evidence that street vending and walking can be compatible. Third, she argues that a drive to create explicit regulations that formally enable vending can result in complex laws that actually increase the difficulty of vending. She argues that a new approach to oversight—one that emphasizes community and participatory planning over regulation—would benefit all parties and increase welfare (Ehrenfeucht, 2016).

Sally Roever reviews some of the surprising global legal and policy developments that have increased the right to vend. Through rich qualitative and quantitative analysis across five countries, her article suggests that low-level harassment, merchandise confiscations, and periodic evictions emerge when ambiguous rules govern the economic right to use public spaces (Roever, 2016). It then documents developments in three case cities (Ahmedabad, India; Durban, South Africa; and Lima, Peru), where street vendors have contested their right to use public spaces for trading, and points to coordination among vendors as a necessary condition for successfully achieving a legal right to trade.

Vendor organizations are also the central focus in the article by Chia Yang Weng and Annette M. Kim, which explores two Taiwanese cases of vendor relocation from an informal street space into a formal public market. One effort was successful and the other failed even though, on the surface, the projects were similar. The article compares the two cases to understand the elements that result in relocation success (Weng and Kim, 2016). The authors find that a street vendor organization plays a critical role during the relocation process by reducing a multiagent dynamic game into a bilateral relationship in which negotiation and planning to achieve mutually beneficial outcomes can be more straightforward. The organization, however, needs to be incentivized and allowed the flexibility to capitalize on the new space, akin to the American shopping mall model.

John Taylor and Lily Song, who examine the experiences with relocating street vendors from the street to purpose-built public markets in three Indonesian cities (Jogya, Solo, and Jakarta), consider additional criteria. Most of the relocation initiatives they study failed, and the authors point to three reasons for those failures. First, relocation efforts placed too much emphasis on aesthetics rather than commercial infrastructure. Second, relocation processes failed to prepare vendors for free-market competition, resulting in their not being competitive in more formal settings. Finally,

³ <http://slab.today/2015/09/contesting-the-streets-2/>.

longer-term relocation planning and management failed to consider the emerging and fluid needs of vendors. They argue that a critical element is ongoing coordination and collaboration between governmental authorities and the vendor community (Taylor and Song, 2016).

Enforcement of laws and regulations is the focus of the article by Kathryn A. Carroll, Sean Basinski, and Alfonso Morales, which examines the often-overlooked issue of the public enforcement costs of fining vendors and highlights the fact that the levying of a fine does not always result in payment of the fine. Using data on citations given to vendors in New York City, New York, during 2010, the authors explore the violation-specific and situational factors associated with default in payment (Carroll, Basinski, and Morales, 2016). Key findings are that default is less likely when the violation pertains to a clear statute that is not subject to multiple interpretations and when the fine amount is lower. The authors argue that lawmakers and enforcement agencies should consider these facts to ensure that the prevailing regulatory structure is as efficient as possible.

In the final article, Robert Baird, David C. Sloane, Gabriel N. Stover, and Gwendolyn Flynn bring a novel lens to the appropriate use of public space by analyzing food vending's role in the larger public health effort to combat childhood obesity and make healthy cities. This study is a health impact analysis of a policy in Los Angeles banning all sidewalk vending in the context of poor public health among school-age children. Through empirical analysis, the authors find that the vending prohibitions are not significantly limiting access of students to vendors (Baird et al., 2016). They argue that vendors offer needed food services in poorer neighborhoods and neighborhoods where informal enterprises are culturally familiar and that a focus on food offerings in restaurants and convenience stores will be important if health improvements are to be observed.

Although some readers might interpret these articles as favoring vendors (or advocates of vendors) in the contest for urban space, we believe that a careful reading of the research reveals a pragmatic and investigative position: vending is a global, widespread phenomenon that needs to be practically governed. This position makes no judgment on the specific location of that activity or the types of governance interventions. For example, several articles focus on vendor relocation efforts—programs to take vendors off the streets and place them in purpose-built commercial buildings—which implies that such efforts would be acceptable if done in a way that preserves vendor viability. Indeed, no article suggests that there is no role for regulation and oversight or that vendors should be able to operate wherever and whenever they wish. Rather, as editors, we pushed all the articles to seek evidence-based improvements to regulations that make them more practically enforceable, welfare maximizing, and politically inclusive. Overall, the orientation of the body of research presented here is that communities should find ways to incorporate the persistent employment and entrepreneurial energy of vendors and the benefits they can bring to consumers, civic life, and government.

At the end of the second day of the *Contesting the Streets II* conference, we concluded with a dynamic discussion among keynote speakers, authors, and discussants that included government officials, nongovernmental organizations, and activists. Two overarching observations emerged.

One observation is that a significant shift is occurring. Somehow, in the modern global liquid economy, the vendor now figures in the city not only physically but in the public imagination more than before. Unlike the derision of vendors in the first historic wave of urbanization at the turn

of the 20th century in the western world (Loukaitou-Sideris and Ehrenfeucht, 2009), many cities now highlight vending as an amenity in the visioning of a vibrant city, like kiosks in a shopping mall, a “vending urbanism.” Vendors are now part of our leading and ascendant global cities. Combined with recent landmark changes in law and policy in some cities in both the global north and south, we wonder if a new global norm is developing akin to how bulldozing squatter settlements is now generally politically untenable around the globe. The growing legal challenges, policy evolutions, and popular narratives appear to be entertaining street vendor rights to livelihood in public space. Engaging in government programs, policies, and research on this topic is therefore even more critical.

The second observation is that, as cities have been densifying, spatial contestation in practice regarding race and immigration has also been increasing. One’s race, class, and legal status significantly determine the range of activities and liberties that one seeks and can practice in public space. The issue of vending has to be understood amidst many of these larger thorny social debates. In the United States, the national discussions sparked by the events in Ferguson, Missouri, and the Black Lives Matter movement have raised the issues of the criminalization of the poor in public space and whether we have criminalized too much conduct. Instead of discussing optimal regulations in a color-blind and class-blind way, our discussions about regulatory design need to directly consider how they ameliorate or exacerbate this basic social problem.

We are grateful for the enthusiasm of all the participants and audience members of our conference. Many inquiries suggested we organize a third *Contesting the Streets* conference. If such a meeting should convene in the future, we hope that we would be able to report significant progress in both governance systems and the imaginations of an inclusive and vibrant public space.

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Lissette Aliaga-Linares, assistant professor, Department of Sociology and Anthropology, University of Nebraska at Omaha (presenter).

Tridib Banerjee, James Irvine Chair in Urban and Regional Planning, Sol Price School of Public Policy, USC (discussant).

Margaret Crawford, Professor of Architecture, University of California, Berkeley (keynote speaker).

Nicole Esparza, assistant professor and Director of Graduate Programs in Nonprofit Leadership and Management, Sol Price School of Public Policy, USC (discussant).

Rudy Espinoza, Executive Director, Leadership for Urban Renewal Network (moderator).

LeighAnna Hidalgo, doctoral student, César E. Chávez Department of Chicana/o Studies, UCLA (presenter).

Gregg Kettles, attorney at law and former deputy counsel for Los Angeles Mayor Antonio Villaraigosa (discussant).

Martin Krieger, professor, Sol Price School of Public Policy, USC (discussant).

Jessica Lockrem, doctoral student, Department of Anthropology, Rice University (presenter).

Darshini Mahadevia, Dean, Faculty of Planning, and member, Centre for Urban Equity, CEPT University, India (presenter).

Nithya Raman, founder of Transparent Chennai (discussant).

Ananya Roy, professor and Meyer and Renee Luskin Chair in Inequality and Democracy and Director, Institute on Inequality and Democracy, UCLA (keynote speaker).

Saskia Sassen, Robert S. Lynd Professor of Sociology and Co-Chair, Committee on Global Thought, Columbia University (keynote speaker).

Guest Editors

Raphael W. Bostic is Judith and John Bedrosian Chair, professor, and Director of the Judith and John Bedrosian Center for Governance and the Public Enterprise at the University of Southern California, Sol Price School of Public Policy.

Annette M. Kim is an associate professor and Director of the Spatial Analysis Lab at the University of Southern California, Sol Price School of Public Policy.

Abel Valenzuela, Jr., is a professor of urban planning and Chicano studies and Chair of the César E. Chávez Department for Chicana/o Studies at the University of California, Los Angeles.

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Designing Fair and Effective Street Vending Policy: It's Time for a New Approach

Renia Ehrenfeucht
University of New Mexico

Abstract

Cities have experienced an upswing in food trucks and other forms of street vending in the past decade. This upswing has led to new debates over how, where, and when street vending should be allowed. Using evidence from three research projects, this article examines three assumptions that underlie discussions about street vending regulations—that extensive regulations are necessary to (1) protect property interests, (2) prevent pedestrian congestion or other impacts, and (3) keep the street orderly. The findings suggest that fewer regulations are needed to meet legitimate public purposes, and cities would benefit from a new approach in which they reduced street vending regulations and actively planned to enhance compatibility with other urban activities.

Introduction

In 2008, Roy Choi and his Kogi taco truck inspired a food truck phenomenon across the United States. His Korean tacos reinvented the traditional *lonchera*, or taco truck, into an urban global fusion food experience. Chefs in other cities were experimenting with food trucks and, by 2012, 1,400 food trucks were operating (Esparza, Walker, and Rossman, 2014) in as many as 1,100 large and small cities nationwide (FoodTrucksIn.com, n.d.). Taco trucks often had served events, work sites, and, in some cities, immigrant neighborhoods, but the new food trucks have sought locations throughout the city at all times of day. This trend has caused city councils, restaurant associations, food truck operators, brick-and-mortar business owners, and urban residents to debate how and when food trucks operate.

U.S. street commerce is severely restricted, but the attention to food trucks has created an opportunity to reconfigure street trade regulation and policy. Food trucks, along with farmers markets, public markets, and sidewalk vending, have created a renaissance in street commerce (Morales

and Kettles, 2009a). The various types of vending are treated differently, however. The number of farmers markets is increasing, and food trucks have advocated successfully for more favorable regulations. Even though sidewalk vendors also have organized, sidewalk vending continues to be mostly prohibited (Martin, 2014; Reyes, 2015). In some cases, the attention to new food trucks and their demands has made it more difficult for longtime vendors who have been operating in ways that did not generate complaints or enforcement (Tomicki, 2010).

The new trends raise important questions. Will the new food truck movement create space for more street commerce? Will it instead privilege some vendors over others and reinforce the inequitable patterns of opportunity? This article examines three assumptions that underlie vending regulations: (1) that adjacent property interests must be protected from street vendors and their customers, (2) that preventing pedestrian congestion justifies street vending prohibitions, and (3) that specific regulations are needed, if street vending is to be allowed. The contemporary restrictive vending landscape is not based on evidence about street vending impacts. Instead, these assumptions have roots in the 19th century, and they were used recurrently in 20th century street vending debates. They can be considered pitfalls, however, because they never resolved the conflicts even though they disadvantaged vendors and their customers. Residents and public officials in 21st century cities have different concerns and priorities than their counterparts a century ago. Cities therefore need a new approach to street commerce.

Investigating these three assumptions suggests that an alternative approach is possible. The next section of this article outlines the research and trends to provide the context for the new regulatory period and the complexity of existing regulations. The following section discusses findings from three analyses. The first subsection examines the public discourse about the adoption or revision of vending ordinances, with a focus on Albuquerque, New Mexico; Chicago, Illinois; and New Orleans, Louisiana. The second subsection summarizes findings from a research project that used direct observation of food trucks in Chicago in October 2013 to understand how the trucks influenced sidewalk dynamics. The final subsection is based on observations of food vending during parades called *second lines* in New Orleans during the 2014–2015 season and asks what observers can learn from informal vending. Together, these discussions provide a new starting point for municipal professionals engaged in street vending discussions. Fewer regulations and actively planning to enhance compatibilities between vending and other urban activities would address street commerce impacts more effectively than the current regulatory approach.

The Changing Context of U.S. Street Food Vending

The 2010s are a critical time to reconsider how to plan for street commerce in the United States. Unlike Colombia, India, and Mexico, where constitutional courts granted some rights to work on the street (Meneses-Reyes and Caballero-Juárez, 2014), the United States has never affirmatively granted these rights. Instead, for more than a century, the most common policy approach has been regulating and prohibiting vending (Baldwin, 1999; Ehrenfeucht, 2012; Kettles, 2007; Morales, 2000).

Regulations do not cause or prevent street commerce, however. Street vending has relatively low barriers to entry, including low startup costs. Many households use a mix of formal and informal strategies to make a living, and street vending and informal services can augment other work

(Raijman, 2001; Uzzell, 1980; Venkatesh, 2006). In the United States, like elsewhere, consumers patronize street vendors because their goods are inexpensive and they are convenient (Bromley, 2000; Cross and Morales, 2007; Donovan, 2008).

Restrictive regulations, however, cause many of the estimated 20,000 vendors in New York City, New York, to operate informally (The Street Vendor Project, n.d.). Despite sidewalk vending prohibitions, Los Angeles, California, has between 10,000 and 50,000 street vendors who generate upward of \$500 million annually (The Economic Roundtable, n.d.; Hsu, 2014). In 2010, only an estimated one-half of the food trucks in Los Angeles were licensed by the Los Angeles County Department of Public Health (Shouse, 2011).

The current regulations stem from 19th century efforts by the business elite and small business owners to modernize the city and domesticate urban streets (Baldwin, 1999; Bluestone, 1991; Ehrenfeucht and Loukaitou-Sideris, 2007; Scobey, 2002). Municipalities adopted increasingly specific and restrictive regulations to exercise social control over the large immigrant populations for whom the street was both workplace and living room (Baldwin, 1999; Ehrenfeucht, 2012). The specificity of the regulations developed in part because particular brick-and-mortar businesses challenged vendors with whom they competed, leading to complex regulations that responded to particular controversies (Ehrenfeucht, 2012; Scobey, 2002).

Nevertheless, changing shopping practices ultimately reduced street vending more than the web of regulations (Bluestone, 1991). These restrictions similarly have not prevented street commerce from growing during times when people needed work. Sidewalk vendors often work in low-income immigrant neighborhoods, where street vending is familiar and newcomers seek incomes (Bromley, 2000; Cross and Morales, 2007; Kettles, 2007; Loukaitou-Sideris and Ehrenfeucht, 2009; Martin, 2014; Raijman, 2001; Stoller, 2002), and in other low-income neighborhoods (Venkatesh, 2006). Street vending in Los Angeles and New York notably increased with more immigration in the 1980s (Kettles, 2007; Stoller, 1996). During the recession in the late 2000s, more people turned to street commerce and day labor (Crotty, 2014; Hsu, 2014).

During this period, restaurants struggled and food trucks also became a new opportunity for restaurateurs (Esparza, Walker, and Rossman, 2014; Martin, 2014; Newman and Burnett, 2013). The \$20,000 to \$50,000 needed to start a food truck was much less than the \$400,000 to start a restaurant (Shouse, 2011). Changing consumer preferences also influenced street commerce. Patrons who wanted novel and fresh food supported the new food trucks (Intuit, 2012; Myint and Leibowitz, 2011; Shouse, 2011; Zukin, 2010). Farmers markets also reflected a desire for local, fresh food and a response to a global food system that had become environmentally damaging and exploitive (Hess, 2009; Morales and Kettles, 2009a). All types of street commerce appealed to consumers who wanted to support local businesses rather than global chains (Hess, 2009; Urban Vitality Group, 2008).

It is advantageous to consider all street commerce as a broader trend. Given the range of food-related health concerns and growing awareness of food deserts, increasing access to healthy food is a public priority. Street food, including markets, can make more fresh food available (Morales and Kettles, 2009a). New York City's Green Cart program, for example, increased the caps on vending permits for vendors selling fresh fruit and vegetables. The city also assists vendors who want to accept Electronic Benefit Transfer cards (New York City, n.d.).

More people also have become increasingly dependent on contingent work and obtain income from multiple sources (Peck and Theodore, 2001; Theodore, 2003; Valenzuela, Jr., 2003, 2001). Although street vending occurs disproportionately in low-income communities, college graduates are also reenvisioning work, both constructing opportunities out of limited choices and seeking different types of work. They are working in agriculture, crafts, specialized manufacturing, and the service sector (Dawkins, 2011; Hess, 2009; Jurjevich and Schrock, 2012). Because street commerce creates markets for local products and produce, it can help urban residents earn a living or supplement their incomes.

In addition, urban cultural and planning trends promote dynamic public environments. Pop-up bars and restaurants, street vending, food trucks, and public markets can contribute to placemaking efforts and community economic development (Bishop and Williams, 2012; Morales, Balkin, and Persky, 1995). Local policymakers and economic development professionals also have tried to facilitate distinctive local economic development and vernacular cultural practices (Carr and Servon, 2008).

At the same time, enabling one type of street vending while restricting others can unintentionally lead to unfair vending opportunities. Public officials embraced food trucks because their customers and proprietors are middle-income residents associated with gentrification and creative class-oriented urban redevelopment (Esparza, Walker, and Rossman, 2014; Martin, 2014; Newman and Burnett, 2013). The politics within localist, fresh food movements has limited views of healthy food, which has led to alternative food practices that reproduce racial difference (Slocum, 2007). One Toronto, Ontario, Canada initiative failed because too many public objectives were layered into a highly regulated street vending program (Newman and Burnett, 2013).

Finally, establishing vending districts or markets has been a repeated response to street vending conflicts. These efforts privilege the concerns of street vending opponents and disregard factors that make street vending profitable and convenient (Donovan, 2008; Huang, Xue, and Li, 2014). Even though some vendors participate and attempt to vend legally, markets have not replaced sidewalk vending (Donovan, 2008; Kettles, 2007; Stoller, 1996). Instead, street commerce—including markets, sidewalk vending, and food trucks—can be seen as a range of activities that serve different niches and have distinct benefits.

A Complex Regulatory System

Street vending regulations are restrictive, complex, and varied. Los Angeles prohibits most sidewalk vending, New Yorks caps the number of vending permits, and Seattle, Washington, allows only products such as flowers to be sold. Where allowed, vendors must comply with local permitting and licensing requirements. They are also subject to parking restrictions, local ordinances that require streets and sidewalks to stay clear of obstructions, and litter prohibitions. In all cases, street food vendors are subject to state and local health regulations that guide food handling and preparation.

In cities where vending is permitted, vendors are subject to restrictions about how and where they vend. These restrictions can include minimum distances from business entries, crosswalks, and restaurants and may also include restricted districts. They limit the length of time that vendors can

stay in one location, or they require vendors to move when not making a sale (Esparza, Walker, and Rossman, 2014; Morales and Kettles, 2009a). In a survey of food truck regulations in 11 cities, 2 had caps on the number of permits, 4 had time limits on parking, 7 had proximity bans near restaurants, and all 11 had restricted zones (Esparza, Walker, and Rossman, 2014).

The complex regulations can make it impossible for vendors to operate legally. Irregular enforcement enables street vending even in restrictive environments but also leaves vendors vulnerable. Vendors can be fined. They lose time during court appearances and revenue when their goods are confiscated, which creates an unstable work environment. Between 2006 and 2010, New York issued 127,758 notices of violation (Kettles, 2014). Because much enforcement is mostly complaint driven (Kettles, 2007), business owners' complaints and, at times, harassment determine how and where vendors operate as much as specific regulations (Devlin, 2011). Even in Portland, Oregon, where food trucks are authorized, Newman and Burnett (2013: 245) argued that Portland's "laissez-faire attitude towards minor infractions" has contributed to the street food scene's success.

The Assumptions Underlying the Current Regulatory Approach

Are restrictive policies necessary? In the 2010s, the food truck regulation discussions have focused on protecting brick-and-mortar establishments. Business groups—business improvement districts, restaurant and hotel associations, and business associations—have supported strict regulations, and city officials have publicly stated that protecting businesses is a primary concern. Because cities cannot explicitly limit competition, they subsequently use pedestrian congestion to justify the ordinances if and when they are challenged. Because the vendors promote their interests and many residents actively support vendors, however, cities also have attempted to balance competing positions. Nevertheless, because street vending regulation and enforcement are complaint driven, the result is a process that unfairly supports some vendors over others instead of addressing direct impacts. A close look at vending activity and the debates, however, suggests that planning could resolve direct impacts and the regulations are not serving obvious public purposes. The following subsections outline the current approach and possible alternatives.

Assumption 1: Adjacent Businesses Must Be Protected

Sidewalks have an ambiguous position as public spaces that also are the front yards of abutting businesses and residents. As public spaces, they are where people travel, see or communicate with others, and trade and socialize. Sidewalk activity nonetheless affects nearby properties more than other residents and businesses (Loukaitou-Sideris and Ehrenfeucht, 2014). U.S. restaurant and business associations have argued that food trucks are unfair competition to or adversely affect abutting brick-and-mortar businesses (Kettles, 2007; Loukaitou-Sideris and Ehrenfeucht, 2009; Newman and Burnett, 2013; Stoller, 1996). They argue that food truck owners do not pay rent and have lower water and disposal fees. Because food trucks can arrive for the most lucrative hours, they can skim business during busy times without the sunk costs. In Portland, the Oregon Restaurant & Lodging Association also has argued that stationary food carts are unfair competition because they have lower costs than restaurants, but they do not change locations (Newman and Burnett, 2013).

City officials respond to concerns about unfair competition in city after city, in both the public media and council chambers. A search of the LexisNexis® Academic Search database's Major World Publications using the keywords "food trucks" from January 1, 2008, to July 15, 2015, returned more than 500 articles from 2011 to 2015 that discussed food truck proponents and opponents. The two main topics included the arrival of food trucks as a new food trend and debates over new regulations. The most frequently reported concern was the effect on established restaurants, or, in the *Tampa Bay Times*' words, "Bricks and Mortar vs. Wheels and Steel" (Lang, 2012). The following paragraphs consider the controversies in Albuquerque, Chicago, and New Orleans in more detail.

In the case of Albuquerque, the city had few restrictions when new food trucks started operating. In 2015, the city had approximately 100 food trucks. In early 2015, the city considered a new ordinance restricting food trucks from operating within 100 feet of brick-and-mortar restaurants unless they received explicit permission from the property owner. According to Isaac Benton, the city councilor who proposed the ordinance, the point was to strike a balance between the restaurant and mobile vendors, citing the potential for unfair competition. The New Mexico Restaurant Association supported the ordinance because it would reduce direct competition, but the 100-foot rule would effectively restrict access to the most lucrative locations, such as the Central Avenue corridor near the University of New Mexico (McCay, 2015). In nearby Santa Fe, the Santa Fe Downtown Merchants Association representative also responded, "I don't think it's fair for the 22 restaurants within a block of the Plaza" (Last, 2015) to a proposal to allow food trucks on the Santa Fe Plaza at night.

In Chicago in 2010, two chefs approached their aldermen about revising Chicago's mobile food vending ordinance to allow cooking. When Chicago Alderman Scott Waguespack introduced such an ordinance, he met with resistance from Alderman Tom Tunney, who was a member of the Illinois Restaurant Association, because the trucks would compete with brick-and-mortar restaurants (Esparza, Walker, and Rossman, 2014). Illinois Restaurant Association President Sheila O'Grady stated that food trucks should be confined to food deserts (*Huffington Post*, 2011). After the proposed ordinance languished for more than a year, in 2012, the mayor and numerous aldermen passed an ordinance that allowed food trucks to cook (City of Chicago, 2012), but the food trucks were prohibited within 200 feet of restaurants except at designated food truck stands and were required to move every 2 hours. Given the density of restaurants, the 200-foot proximity restriction effectively eliminated food trucks from most of the city's downtown Loop. Two food truck operators have challenged the 200-foot restriction. Chicago overturned a 200-foot regulation previously, in 1986, but it was reintroduced in 1991 (Gowins, 2014).

In 2011, when New Orleans food truck operators began to put pressure on the city to revamp its food truck regulations, the city responded with a less restrictive ordinance. The previous ordinance capped active vendor permits to 100, set 45-minute time limits, and had a 600-foot restaurant and school buffer. In 2012, the first proposed ordinance reduced the restaurant buffer to 100 feet. Councilmember Stacy Head and the city attorney questioned whether a restaurant buffer was constitutional (Allman and Woodward, 2012), and Mayor Mitch Landrieu subsequently vetoed the ordinance. Although other councilmembers defended the restriction because it was protecting

cuisine-based tourism, a primary New Orleans industry, the provision was not reintroduced. Nevertheless, the subsequent ordinance restricted food trucks from downtown and the historic French Quarter.

In addition to implementing locational restrictions, cities propose time limits to prevent food trucks from operating like stationary businesses. Chicago and New Orleans have 2- and 4-hour limits, respectively. Albuquerque also recently considered a 4-hour limit. Requirements vary by city, from the time necessary to make a sale (an ice cream truck model) to Portland's stationary food carts. Nonetheless, food truck regulations are changing rapidly. Washington, D.C., lifted its requirement that trucks move unless selling to a customer (Esparza, Walker, and Rossman, 2014). Los Angeles enacted a 1-hour restriction in 2008, but it was overturned because it preempted the state's vehicle code (Morales and Kettles, 2009a).

Are such regulations necessary to protect brick-and-mortar restaurants and businesses? One way to answer this question would be to examine how street vending affects adjacent businesses. Restaurants can benefit from vibrant sidewalk life. One business survey in Portland found that 69 percent of surveyed restaurant owners and 94 percent of other business owners ranked food carts as positive or very positive (Urban Vitality Group, 2008). Street food may compete with takeout establishments, however, where it becomes a local, fresh alternative to fast food (Intuit, 2012; Newman and Burnett, 2013; Urban Vitality Group, 2008), but it is not clear over what distances. New food trucks, for example, use social media extensively, and more than one-half the respondents in one survey found the truck through social media. Therefore, street vending might not primarily compete with adjacent eateries (Wessel, 2012). In many cases, street vendors differ from nearby brick-and-mortar businesses because they have less selection and fewer goods, no seating or other amenities associated with full-service restaurants, no changing rooms when selling clothes, and no protection from the weather (Kettles, 2007).

Adjacent businesses have also expressed concerns about trash, noise, scents, and aesthetics (Kettles, 2007; Urban Vitality Group, 2008). In Portland, one analysis found trash was a problem for food carts operating on private property but not on public property, where trashcans were available. Most respondents from both public and business surveys heard no noticeable noise from food carts. In a public intercept survey, 65 percent noticed the scents but, of those, 86 percent found them pleasant (Urban Vitality Group, 2008). Further analysis could better evaluate potential effects, and most could be addressed through planning.

A different question is whether the restrictions serve a legitimate public interest. People seek food that is affordable and convenient. Readily available street food might change buying behavior because residents have more convenient options. In one survey, 48 percent of respondents reported a food truck purchase replaced food at or from home (Intuit, 2012). Fewer than 20 percent of respondents in a survey of Portland food cart customers anticipated frequenting vendors that moved to brick-and-mortar establishments with higher prices (Urban Vitality Group, 2008). In addition, cities do not have the legal authority to control commerce or competition. Municipalities can address concerns that fall within their police power that allow for regulations to protect public health, safety, and general welfare. Even though the public discussion focuses on competition, municipalities defend their street vending ordinances based on impacts including pedestrian congestion or trash.

Assumption 2: The Potential for Pedestrian Congestion Justifies Street Vending Restrictions

The street is overseen by multiple agencies with different objectives (Loukaitou-Sideris, Blumenberg, and Ehrenfeucht, 2004), and most work under what Blomley (2011) called “traffic logic” that assumes unimpeded travel is the street’s purpose. Other uses—whether people or stationary objects—are considered impediments. For more than a century, unimpeded travel has been the legal justification curtailing other sidewalk activities, even though the conflicts leading to the prohibitions were based on competition or the desire to modernize the disorderly city (Ehrenfeucht and Loukaitou-Sideris, 2007).

The reason for this justification is clear. Local governments can draw on their police power to eliminate sidewalk and street obstructions, but they have less authority to restrict other productive activities. They cannot overtly protect one business from another (Novak, 1996). As a result, parallel discussions occur. For example, in late 20th century New York City, business associations were forces behind campaigns to remove vendors (Loukaitou-Sideris and Ehrenfeucht, 2009; Stoller, 1996), and former mayor Rudolf Giuliani established the Street Vendor Review Panel as part of his initiative to eliminate street-level disorder (Stoller, 1996; Vitale, 2008). The Panel, however, evaluates potential impacts based on pedestrian congestion.¹

Are vending restrictions necessary to ensure that pedestrians can walk along sidewalks without unreasonable disruptions? Fifty years of research on pedestrian behavior and public space suggests that street vending and walking can be compatible. Pedestrians are attracted by other people and activities, and they enjoy unexpected occurrences (Gehl, 2011; Goffman, 1971; Lofland, 1998; Stevens, 2007; Whyte, 1988). Pedestrians are also able to walk through changing and varied pedestrian environments without formal regulations (Whyte, 1988). They can change direction, move in front of or behind others to get through narrow spaces, and walk past people with little disruption to flow or speed (Goffman, 1971; Helbing et al., 2001; Whyte, 1988). Finally, in dense areas and crowded cities, pedestrians become more efficient (Whyte, 1988). This research suggests that the presence of street vending will not impede pedestrian flow.

An analysis of food trucks operating in Chicago supports these findings and suggests that both street design and patterns of public-space behavior facilitate compatibility between pedestrians and food truck customers. In October 2013, pairs of graduate students observed seven sites in the Chicago Loop for 37 2.5-hour periods to understand how food trucks affected pedestrians and how food truck customers and pedestrians interacted. During the observation periods, 82 food trucks operated at the sites, and 77 of those trucks were observed. Food trucks were present during 34 observation periods, 1 of which was a food truck rally in Daley Plaza. Following a protocol, the observers counted the number of food trucks and food truck customers, the number of customers in line at regular intervals, and how often food truck customers or other sources disrupted pedestrian flow. The observers also wrote extensive qualitative field notes.

Consistent with findings from the pedestrian behavior literature, when lines or customer clusters formed, pedestrians were able to walk through or veer around lines with only slight pauses and

¹ N.Y. ADC. LAW § 20-465.1; NY Code - Section 20-465.1.

redirection. An instantaneous reroute to step through a line or to walk around it would take less than 1 second. Pedestrians would pass a truck in approximately 3 seconds—based on Whyte (1988), who found that pedestrians on downtown streets in cities with more than 1 million residents walked at a rate of 280 to 300 feet per minute, or 5 feet per second—and adjustments to avoid collisions took fractions of seconds (Helbing et al., 2001; Whyte, 1988). When lines were long and pedestrian traffic heavy, pedestrians could be delayed by seconds as they shifted into a single-line formation or paused to enable pedestrians to come through from the other direction, and pedestrians with bicycles or trollies were also able to move through the lines with seconds delay.

The street design and common pedestrian behavior also reduced the impact of the food trucks. The 2 to 3 feet of sidewalk space near the curb regularly had signposts, bike racks, trashcans, and planters that created a vending zone. Unless the sidewalks are crowded, pedestrians leave distance or shy away from the curb and fixed objects such as trashcans and utility posts (TRB, 2010). As a result, food truck customers would stand and wait in these spaces, and pedestrians would walk by with no disruption.

A third factor helped create compatibility between pedestrians and food truck customers. The food truck customer lines and crowds shifted in ways that reduced impact to pedestrian travel. The lines moved as people walked through and around them because the waiting customers attempted to get out of the pedestrians' paths. In one observer's words—

As more people line up, the more diagonal in general the line gets. This is contingent, at this point, around 11:15, on how much foot traffic there is. It seems that lines have an awareness of how much foot traffic there is in general, and usually act accordingly, getting more diagonal so as to allow for the foot traffic zone to exist.

At times the lines would be perpendicular to the truck, but, at other times, an L-shaped line would run parallel to the food truck or the line would angle into the sidewalk.

Both the extensive public space research and this analysis of Chicago food trucks indicate that street vending and pedestrian travel can be compatible. Pedestrians could walk around or through the food truck lines without much trouble because pedestrians are efficient walkers, but the customers were also responsive to pedestrians, and the lines separated or moved in ways that reduced impact to pedestrian flow. In addition, existing street design created space for vending. Together, these findings suggest that cities can plan for street vending, and vendors can operate with little pedestrian delay.

Assumption 3: Specific and Complex Regulations Are Necessary

Can street vending offer lessons about how to approach vending regulation and planning? Cities often begin street vending discussions from controversies that arise or in response to challenges to existing regulations. They proceed to modify existing regulations or enact new ones. This process occurs even when residents and public officials support street vending and even though it has led to the complex regulatory environment that forces vendors to work outside the law.

In the 2010s, the City of New Orleans began to pay attention to street commerce. It discussed food trucks and turned its gaze to multiple forms of vending, including those that accompanied

Sunday parades called *second lines*. For 9 months a year, community organizations called social aid and pleasure clubs (SA&PCs) organize afternoon parades that, for about 4 hours, wind through neighborhood streets. The SA&PC members, accompanied by live brass band music, lead the parade. The parades attract neighborhood and citywide residents who join on foot, bike, motorcycle, four wheeler, and horse, resulting in hundreds of people walking and dancing through the streets. Second lines include planned stops at neighborhood bars, clubhouses, or other community sites where the SA&PC members enter and come out again, restarting the parade's movement. The stops can be as short as 15 minutes, but at times they last 30 minutes or more.

Vendors join the second line selling water and beer, JELL-O shots, homemade praline candy, sweet potato pies, and other sweets. At the stops, more food and drink vendors set up. Some have catering trailers with smokers and barbeque; others sell snowballs from food trucks; and many people sell hamburgers, turkey necks, and mixed drinks from flatbeds of pickups. Few second line vendors obtain permits, however, and, when the city stated its intent to enforce vending regulations, it became clear to city officials that the vending regulations were written in a way that second line vendors could not comply. The councilmembers proposed a specific ordinance instead of reducing restrictions to enable more vending flexibility. The proposed fee would be as low as \$25 and the permits would be easy to obtain. The permit, however, would also restrict the time before the event when the vendors could set up, prohibit selling alcohol, and require vendors to remove litter.

To understand the impacts of second line vending and how the proposed regulation would affect the vendors or the event, the author and a research partner participated in second lines throughout the 2014–2015 season. The season comprised 32 parades that rolled for between 2 and 4 hours each Sunday. In one case, a parade did not roll because of a problem with the permit. Each observation session included observing vending as second lines moved through city streets and watching the vendors close and leave at designated stops. In 10 observations, vendors had parked or set up before the parade arrived, and, in other cases, vendors had set up at the parade's start. Six observations included traveling back along the route to determine how observable the impacts were after the parade passed.

The observations showed vending had little additional spatial impact that was separate from the impact of the parades. Vendors selling unopened bottles of water, beer, and Gatorade pulled coolers that were on wagons or carts or adapted tricycles and moved along with the parade. Vendors selling sweets usually did so from baskets they carried in their hands. Vendors participated with different frequencies and, across the season, a wide variety of vendors sold fruit, potato chips, and packaged snacks from pushcarts, wagons, and tricycles. When stopped, the second line would take over the street and block traffic for its duration. The vendors who set up ahead of time parked in parking spots or on the neutral ground (or median), a common if not legal practice. Some pulled up in an intersection when the parade arrived but left as it passed. For larger parades, food vendors arrived at the first stop early to get a good spot. As the parade passed, they quickly pulled away, often to go to a stop farther along the route.

The analysis also showed that the restriction on alcohol would impede second line vending. In New Orleans, drinking alcohol in public is legal, and walking with drinks is common. During the parades, the participants would buy drinks as they continued to walk. At times there would be a

pause at the time of sale, but as often the exchange occurred without either person breaking stride. Because the parades move, participants would have to leave the parades to enter a bar. Bars and corner stores were infrequent throughout the route, but some stops occurred at bars and in other cases where bars were nearby. In these cases, without vendors, the bars would get a greater share of drink business. Other than competition with the bars and corner stores, there was no apparent reason for the alcohol restriction.

Although litter was a visible impact from the parades, it was not clear that the proposed regulation would be effective. New Orleans has very few public trashcans and no street cleaning, and some neighborhoods have a significant number of unmaintained, abandoned properties. Litter was dealt with informally. Along the route, after the parade passed, evidence of the parade such as drink and JELL-O shot containers would remain, but it would not be notably different from litter on nearby streets. After the parade moved from a stop, in some situations, someone stayed back to pick up litter, or an abutting business or residents began to pick up litter. In most cases, within an hour (the time passed before the researchers returned to the site), the sites would not obviously look like an event had passed. Some neighborhood residents complained, however, because they cleaned the streets after a second line. Participants took numerous actions to centralize trash, such as piling bottles off the street or tossing them into the neutral ground at the base of the tree, and nearby trashcans were full and overflowing, suggesting proactive ways to reduce litter.

In this case, no agreement was reached and the city did not enact a specific second line vending regulation. Vendors continue to participate, suggesting that reducing the restrictions would have caused no new problems. Kettles (2006), Kim (2012), and Morales (2010) found that vendors organize themselves, both responding to and creating local norms and coordinating with other vendors. In this case, participants also acted in ways consistent with second line norms. This finding suggests that observing the street and talking with vendors and other participants could provide a starting point about how to reduce litter without burdening vendors with the responsibility for reducing all the impacts from the event.

A Policy Approach: Regulating Less and Planning More

Municipal professionals have the opportunity to adopt a new approach to street vending. Cities can learn from ongoing vending and use this information to plan for greater compatibility among street vendors and other activities. This approach has two steps. Morales and Kettles (2009a, 2009b) have argued that, to enable street vending and public markets, right-of-way restrictions should be relaxed and zoning regulations modified. Extensive research demonstrates that vending can function well with fewer regulations.

The first step to the new approach would be to reduce the restrictions to allow street commerce in varying forms in a wide variety of places. Because public space users self-organize and are adaptable, seeking compatibility is a reasonable response and can result in narrowly tailored guidelines that enable more public space use.

The second step would be to collect evidence about real impacts from vending and to proactively design policies, such as providing more trash receptacles, to address impacts. Performance

standards can require that customer lines leave room for pedestrian flow or that vendors work a reasonable distance from sidewalks and entrances. This approach is based on a new assumption: that street vending can be compatible with other activities. Reducing restrictions to allow street vending of all forms and planning for street vending can reduce identified impacts and break the cycle of informal vending and uneven enforcement.

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Author

Renia Ehrenfeucht is a professor and the Director of Community and Regional Planning at the University of New Mexico.

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Informal Trade Meets Informal Governance: Street Vendors and Legal Reform in India, South Africa, and Peru

Sally Roever

Women in Informal Employment: Globalizing and Organizing

Abstract

Street vendors conventionally are understood as operating outside of state regulatory frameworks. Recent research, however, has emphasized the role of the state in constructing vendors' informal status and has documented local government practices that take advantage of an ambiguous legal environment for vendors. These practices include low-level harassment, merchandise confiscations, and arbitrary evictions. This article examines the regulatory spaces through which local government officials have developed these informal practices and documents the extent to which street vendors and market traders experience them in five cities: Accra, Ghana; Ahmedabad, India; Durban, South Africa; Lima, Peru; and Nakuru, Kenya. The article then identifies three components of legal reform used in Ahmedabad, Durban, and Lima to counter those practices: (1) establishing limits on municipal power, (2) linking street vending to poverty alleviation, and (3) establishing channels for street vendors' representation. The findings suggest ways in which cities can more effectively balance the right to livelihood with the need to govern public space.

Introduction

In the wake of the 2008 global financial crisis, governments and donor agencies increasingly are recognizing the need to rethink employment as a central component of economic recovery and long-term development. A significant shift within that renewed focus is the recognition of informal livelihoods as a form of employment that is here to stay. The World Bank, for instance, has declared that “a global agenda for jobs is needed” (The World Bank, 2013: 38) and echoed the OECD’s recent conclusion that informal is normal (OECD, 2009). Official statistics indicate that

informal employment accounts for much more than one-half of total nonagricultural employment in most developing regions—as much as 82 percent in South Asia and 66 percent in sub-Saharan Africa (ILO and WIEGO, 2013)—and one-half or more of informal workers in most regions are self-employed (Vanek et al., 2014).

The shift in focus toward informal self-employment is especially significant for the urban development agenda. Renewed calls for sustainable and participatory approaches to urban development (for example, UN-Habitat, 2013) require the collective engagement of those who work informally, because they form the majority of workers in many cities (Herrera et al., 2012) but tend to lack representative voice in decisionmaking (Brown and Lyons, 2010; Horn, 2015; Kabeer, 2015). Among the informally self-employed, street vendors comprise as much as 15 percent of total urban employment and 25 percent of total urban informal employment in low-income countries and between 2 and 11 percent of urban informal employment in middle-income countries (Herrera et al., 2012; ILO and WIEGO, 2013)—a substantial and visible part of many urban workforces.

Street trade has long attracted both policy attention and research interest (Bromley, 2000). Recent scholarship is increasingly focused on the interplay between street vendors and local governments and, in particular, the ways in which the state ascribes and constructs informal status on street vendors and the ways in which it does so through a lens of neoliberal entrepreneurial governance (Crossa, 2009; Devlin, 2011; Donovan, 2008; Morange, 2015; Oz and Eder, 2012; Steel, Ujoranyi, and Owusu, 2014; Xue and Huang, 2015). A common theme within this emerging literature is its exploration of governance practices, undertaken on the part of state actors, that likewise could be considered informal.

This article addresses the theme of informal governance practices as they relate to street trading. It begins by establishing a baseline of evidence on these practices from five cities across three continents, drawing from qualitative and quantitative data from 2012. The analysis suggests that three common governance practices—low-level harassment, merchandise confiscations, and periodic evictions—emerge in urban governance contexts in which the rules about the economic right to use public space for petty trading are ambiguous, but also in which limitations on the state's powers are ambiguous. It then examines legal processes in three of the cities as sites of contestation where street vendors have attempted, and been successful at, establishing clearer limits on the local state's power to engage in informal governance practices. The analysis implies that the beginnings of a trend toward legalizing the use of public space for trading may be starting to emerge, but that one necessary condition for such legalization is a coalition of street vending organizations and elite actors with a common commitment to advancing the right to livelihood.

Informal Trade Versus Informal Governance in Global Cities

Street trade played a central role in the development of the concept of economic informality in the 1970s (Hart, 1973; Moser, 1978) and 1980s (Castells and Portes, 1989; De Soto, 1989). Whereas some of the earlier conceptualizations placed street traders and other informal workers outside state regulations and formal economic structures, more recent research has emphasized the role of the state and social institutions in constructing and governing informality (Harriss-White, 2009; Roy, 2005; Watson, 2011, 2009; Xue and Huang, 2015).

An important new direction in this recent research is a focus on the interaction between informal traders and local governments. One research strand places explanations of urban governance approaches—including both public space cleansing exercises (Donovan, 2008) and tolerance of street vending (Holland, 2015)—in electoral politics. Another strand emphasizes the nonpermanence of the relationship between street vendors and the state, as incoming municipal administrations constantly renegotiate the terms on which they tolerate informal trade (Roever, 2005; Xue and Huang, 2015). Several strands also have traced different forms of resistance to neoliberal urban governance approaches that prioritize private investment over public consumption of public space (Crossa, 2009).

All these studies imply that the relationship between informal traders working in public space on the one hand and local government officials charged with governing public space on the other hand is a dynamic one. Often obscured within this dynamic, however, are the regulatory spaces through which local government officials—primarily the police and other enforcement agencies—develop mechanisms to use their own position of relative power to extract concessions, both material and symbolic, from street vendors. These mechanisms are referred to collectively as informal governance practices—informal in that they do not adhere to written norms regulating the ways in which local government authorities are (or are not) empowered to address street vending.

Low-Level Harassment

One such mechanism identified in the literature is referred to as “low-level harassment” (Skinner, 2008). This mechanism emerges in situations in which the legitimacy of street vendors’ access to public space is legally or politically ambiguous. Itikawa (2006), for instance, documented “bribes per square meter” paid in downtown São Paulo, where 90 percent of street vendors lack a permit. Anjaria (2006) similarly showed how an overlay of licensing requirements that are impossible to meet and temporal restrictions on vending activity generated by higher-level city officials can generate a form of double illegality that requires the payment of “double hafta” (bribe) on the part of vendors to lower-level officials. Harassment is not restricted to demands for bribes; researchers have also documented the common police practices of arbitrarily chasing vendors away from their posts and seizing goods for personal consumption (Asiedu and Agyei-Mensah, 2008; Mahadevia, Vyas, and Mishra, 2014). The lack of protection for street vendors is especially evident in cases in which women vendors are targeted for harassment or asked to exchange sex for permits (Lubaale and Nyang’oro, 2013).

Merchandise Confiscations

A second mechanism that local enforcement officials use is the seizing of vendors’ merchandise, using one or more components of the legal infrastructure as justification. In India, for example, for decades, police have invoked the India Penal Code of 1860, the India Police Act of 1861, and the Bombay Municipal Corporation Act of 1888 as justification for seizing vendors’ goods (Mahadevia et al., 2012). It is more common that local bylaws contain provisions granting authority to municipal officials to seize vendors’ goods as a sanction against unauthorized use of public space (Skinner, 2008). Those provisions in many cases are not accompanied by limitations on what municipal authorities can do with seized merchandise afterward and, where such limitations exist, vendors have little recourse anyway if their goods are never returned (Roever, 2014).

Evictions

A third mechanism through which state actors exert unequal power is arbitrary evictions, often linked to electoral cycles or mega-events (Corrarino, 2014). Small-scale, targeted evictions of vendors from particular streets or blocks are common; a 3-month pilot in 2012 to track evictions worldwide counted at least one per day reported in the mass media in English and Spanish only (WIEGO, 2012). More widely recognized are the large-scale, coordinated evictions implemented by multiple city departments, such as the infamous Operation Murambatsvina in Zimbabwe (Musoni, 2010; Skinner, 2008) and Operation Clean Sweep in Johannesburg, South Africa (Bénit-Gbaffou, 2015), and smaller-scale but notably violent evictions (Swanson, 2007; Xue and Huang, 2015). As Steel, Ujoranyi, and Owusu (2014) noted, these evictions may succeed in clearing the streets for a short time but, over the longer term, they do not actually deter street vending.

Common to these governance practices is a “selective logic of regulation” that generates uneven rules and uneven levels of control across urban spaces (Xue and Huang, 2015). They seem to emerge regardless of what the actual regulations are; the common thread is that formal governance regimes are ambiguous about collective rights to access and use urban public space to carry out livelihoods (Brown, 2015), and the regimes are ambiguous about the limitations on the state to enforce them. The following section examines these practices in five cities: Accra, Ghana; Ahmedabad, India; Durban, South Africa; Lima, Peru; and Nakuru, Kenya.

Legal Ambiguity and Insecurity of Workplace: Evidence From the Informal Economy Monitoring Study

This section draws on the Informal Economy Monitoring Study (IEMS), a 10-city study of working conditions in three occupational sectors of the informal economy—home-based work, street vending, and waste picking—undertaken by the global research-policy-advocacy network Women in Informal Employment: Globalizing and Organizing (WIEGO) and membership-based organizations (MBOs)¹ of informal workers as part of the 5-year Inclusive Cities project.² The objective of the IEMS was to provide credible, grounded evidence of a range of driving forces, both positive and negative, that affect conditions of work in the informal economy over time. Using two primary data collection

¹ The term *MBOs* in this report refers to those representing informal workers. Informal workers' MBOs are a subset of the broader category “membership-based organizations of the poor,” which are defined as organizations whose governance structures respond to the needs and aspirations of the poor because they are accountable to their members (Chen et al., 2007).

² More information about the study is at <http://wiego.org/wiego/informal-economy-monitoring-study-iems-publications>, and more information about the Inclusive Cities project is at <http://www.inclusivecities.org>.

techniques—one qualitative³ and one quantitative⁴—the study examined the impact of these drivers across and within sectors and also informal workers' responses to them. The first round of the study, undertaken in 2012, examined street vending in Accra, Ahmedabad, Durban, Lima, and Nakuru.

The study's sampling approach was designed to maintain comparability in the results across cities on the one hand and to allow some flexibility as demanded by local circumstances on the other hand. Each city team aimed to include only MBO members or affiliates. Street vendors were sampled along two variables in each city, sex, and location, where location was dichotomized into center-city and noncentral areas.⁵ Among the respondents in the sample, 72 percent were women and 28 percent were men. In each city, the research team developed the most representative sample possible of MBO members, including both street and market vendors.⁶

The pervasiveness of the practices noted previously is evident in data from the study, with some interesting variations by city and type of trader. The drivers ranked most important by focus group participants related to workplace insecurity, harassment, and evictions (Roever, 2014: 22). The quantitative data similarly showed that general insecurity of vending sites and harassment on the part of authorities are common problems for street vendors in Ahmedabad, Durban, Lima, and Nakuru, but are less so for vendors in Accra (exhibit 1). Harassment on the part of local authorities and police affect more than one-half the survey sample in Ahmedabad and Durban and nearly one-half in Lima and Nakuru; merchandise confiscations and evictions were also common in Ahmedabad, Durban, and Nakuru.

The data in exhibit 1 reflect somewhat different approaches to the regulation of street trade in the five cities. The Accra sample consists mostly of market traders, who pay a mix of daily, weekly, monthly, and annual fees to the local authority (Anyidoho, 2013; Budlender, 2015). The local governance regime around *markets* in Accra builds on the historical role that central markets have played in the city's history; the governance regime around *streets*, conversely, criminalizes informal trade. The low percentage of Accra respondents reporting problems associated with an insecure trading site reflects the fact that the sample contains mostly market traders with more secure worksites.

³ The qualitative component of the study was based on participatory informal economy appraisal (PIEA), an innovative method designed to capture systematically the perceptions and understandings of informal workers, in their own words, in a focus group setting. The PIEA qualitative methodology was developed collaboratively with Caroline Moser, Angélica Acosta, and Irene Vance, who designed the tools and trained the city teams in data collection methods and data analysis. Each city team—consisting of an MBO coordinator, two qualitative researchers, and two quantitative researchers—conducted 15 focus groups of about five participants each per occupational sector or group (home-based workers, street vendors, and waste pickers).

⁴ The quantitative component consisted of a survey questionnaire administered to the 75 focus group participants plus another 75 workers, for a total of 150 respondents per city-sector. The questionnaire was designed to supplement the focus group data by collecting information on the household profile and income sources of the workers; the asset profile of the workers' households; the enterprise or occupation of the workers; and the linkages between their informal work and the formal economy.

⁵ The exception was Ahmedabad, where only women street vendors were sampled because the partner MBO, the Self-Employed Women's Association (SEWA), has only women members. In that case, the second sampling variable was product category, dichotomized as food and nonfood vendors.

⁶ The findings are therefore not necessarily representative of the entire street vending population in each city—only those affiliated with the MBO.

Exhibit 1

Problems Street Vendors Encountered in Work in Five Cities

Problem	Accra, Ghana (%)	Ahmedabad, India (%)	Durban, South Africa (%)	Lima, Peru (%)	Nakuru, Kenya (%)	Total (%)
Insecurity of vending site	6.71	67.76	49.31	60.14	42.22	45.33
Harassment	8.00	61.18	55.41	43.54	43.97	42.41
Confiscations	3.33	44.08	53.42	21.77	38.35	32.01
Evictions	7.33	63.16	44.90	17.36	27.35	32.39

N = 738.

Note: Differences between cities are statistically significant at the .001 level (χ^2) on every item.

Source: Informal Economy Monitoring Study survey data (2012)

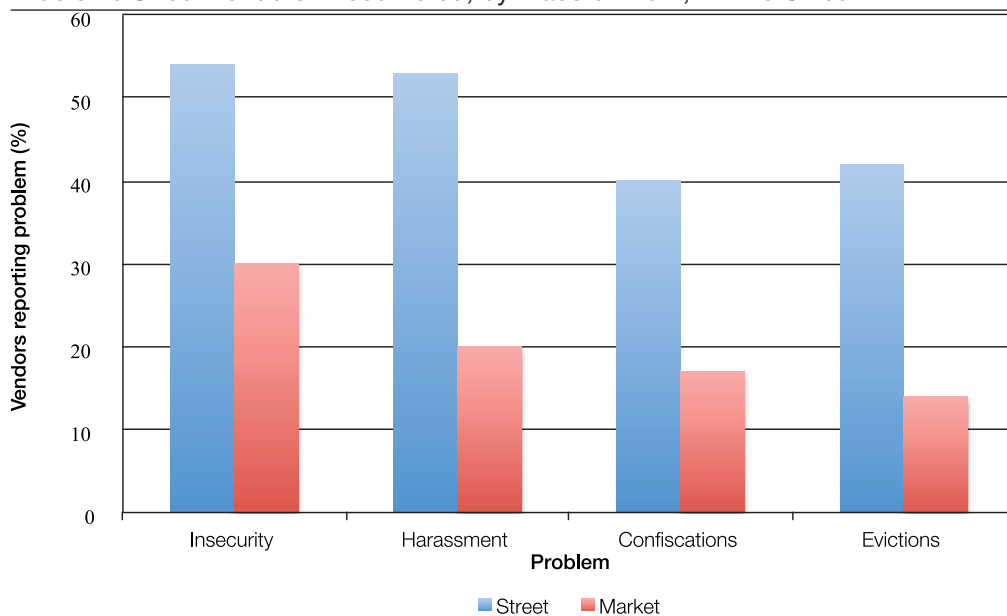
The Ahmedabad sample to some extent represents the other end of a continuum. This sample consisted only of street traders, none of whom hold a license because the municipality has not issued licenses for many years, despite high court demands to do so (Mahadevia, Vyas, and Mishra, 2014). Street trade in Ahmedabad is not explicitly criminalized in law; in fact, it is one of the few cities where vendors can point to several decades of judicial decisions supporting their right to livelihood. Local authorities, however, routinely apply their own informal governance approaches, rooted in asymmetrical power and a lack of effective rights among the poor, by engaging in all manner of harassment and justifying those actions with colonial-era legal provisions related to public obstruction and public nuisance.

Local authorities in Durban, Lima, and Nakuru all fall somewhere in the middle by applying a mix of permitting or licensing, regulatory restrictions, neglect or forbearance, and low-level harassment to manage street trade. Durban’s policy orientation toward street trade has oscillated from apartheid-era control to inclusion and support and to incremental erosion of that support (Skinner, 2008). The city has a permitting system for street and market traders, and many traders in the sample hold permits; yet the permits do not provide them with *effective* protection of rights (Mkhize, Dube, and Skinner, 2014; Roever, 2015) because, in practice, few limitations exist on the effective power of the local authorities over traders. Put differently, the written rules are ambiguous enough that they establish opportunities for local authorities to abuse their positions of power and take advantage of traders who have little recourse; for example, one trader said about the police, “they do as they please” (Roever, 2014: 25). This abuse of power helps explain why even a notable portion of market traders—who have a more routinized claim to their space in cities—are subject to harassment, confiscations, and evictions (exhibit 2).

Lima’s policy orientation toward street vendors has likewise shifted over the years, but it has also been uneven over the city’s 43 local municipal districts. The trend broadly was toward supportive policy in the 1980s, when municipal elections opened a door for politicians to recruit votes from vendors; moved toward more antagonistic policy in the 1990s under urban neoliberalism that prized successful evictions and relocations, starting with the city’s Historic Center; and became ambivalent in the early 2000s (Aliaga Linares, 2012; Roever, 2005). Some municipalities have licensing systems, but others do not.

Exhibit 2

Problems Street Vendors Encountered, by Place of Work, in Five Cities



Source: Informal Economy Monitoring Study survey data (2012)

The Lima respondents, also a mix of street vendors and market traders, reflect the variety of circumstances in this large city. Instability of workplace is very common (60 percent). Some vendors in the sample hold licenses, but those are temporary and can be revoked by the authorities at any time. Others sell from the same spot every day but have to dodge the authorities because they lack licenses. Still other vendors in the sample are itinerant and have no fixed workplace at all. Harassment on the part of local authorities is fairly common across the board and is especially common among women and fresh produce vendors (Castellanos, 2014; Roever, 2014). Confiscations as a practice are less prevalent among the Lima sample than among the samples in Ahmedabad and Durban, however, and evictions are more episodic.

Nakuru represents an interesting contrast as a smaller city. Like Lima, Nakuru has a licensing system, and those in the sample who hold licenses reported the substantial benefit that it brings in terms of security of workplace. Those who try to sell in the busiest part of the city, known as “the stage,” however, are more likely to be itinerant vendors and more likely to report increasing harassment (Lubaale and Nyang’oro, 2013), including assault, abuse, arrest, and solicitation of bribes in exchange for licenses, and those who sell farther away from the heart of the city reported fewer problems. For example, one respondent said, “They trump up charges and then you get locked up.... If you are fortunate, they will ask you to pay a bribe” (Roever, 2014: 28). Therefore, although the formal legal-regulatory system in Nakuru does not vary across space, as it does in Lima, the informal practices applied by local authorities do.

These issues around informal governance mechanisms have shaped legal challenges and campaigns undertaken by street vendors in Ahmedabad, Durban, and Lima. The following sections explore these legal developments, emphasizing three countermechanisms that aim to transform the relationship between city authorities and street vendors. The next section, *Establishing Limits on Municipal Power*, examines instances in which legal challenges have established limitations on the power of municipal authorities, with specific reference to confiscations and evictions. The following section, *Linking Street Vending to Poverty Alleviation*, traces the pro-poor components of current legal norms that open a space for the legitimization of street vending as an appropriate use of public space. The next section, *Providing Channels for Street Vendors' Representation in Decisionmaking*, outlines cases in which structures of representation have been created to bring the collective voice of street vendors into local decisionmaking. The shift in these cases toward some form of legal recognition of street vending is significant historically, given the global restructuring of employment that has been under way for several decades now (ILO, 2015).

Establishing Limits on Municipal Power

Ahmedabad

Efforts to establish limitations on the power of local authorities began in Ahmedabad with the Self-Employed Women's Association (SEWA) of India, which has been organizing women street vendors since the 1970s and which was instrumental in the founding of the National Association of Street Vendors of India (NASVI). Both organizations—SEWA beginning in the 1970s and NASVI in the 2000s—have pursued legal reform through various strategies, including public interest litigation, protest, negotiation, and national-level advocacy.

Street vending in India has long been framed by colonial-era legislation. During the first half of the 20th century, municipal authorities drew on the substantial powers granted to them in laws defining public nuisance,⁷ assigning duty to the police and to municipal authorities to remove obstructions in the public way,⁸ and establishing sanctions for committing offenses in public space⁹ to restrict or prevent street vending. Of those laws, only the Bombay Municipal Corporation Act of 1888 identified a circumstance in which selling goods on the street would be permissible: under and in conformity with the terms and provisions of a license granted by the commissioner.

In the latter half of the 20th century, street vendors began pushing back against the considerable arbitrariness with which nuisance regulations were being applied. One early success took place in the 1970s, when SEWA filed a case petitioning the High Court of Gujarat state for trading spaces and licenses for vendors at Manek Chowk, the historic trading area in central Ahmedabad (Bhatt, 2006). In this instance, the petitioners argued the case on the basis of article 19(1)(g) of the Constitution of India, guaranteeing the protection of rights to carry on any occupation, trade,

⁷ India Penal Code of 1860, Section 268 (public nuisance) and Section 283 (obstruction in public way).

⁸ India Police Act of 1861, Section 31 (establishes police as duty bearer for keeping order in streets and preventing obstructions); Bombay Municipal Corporation Act of 1888, Section 314 (establishes Municipal Corporation as duty bearer for the removal of obstructions [Section 61]).

⁹ India Penal Code of 1860, Section 283; India Police Act of 1861, Section 34.

or business. The argument was that the Ahmedabad Municipal Corporation and its police force were using the power granted to them under state legislation¹⁰ to collect fines from street vendors without complying with provisions from the same legislation mandating the municipal corporation to issue licenses for street vending (Mahadevia et al., 2012). In this case, the court granted the request to issue licenses and vending space to the vendors at Manek Chowk.

Additional cases filed in the 1980s led the Supreme Court of India to progressively clarify the rights of street vendors. In one case, the Bombay Hawkers' Union challenged the constitutional validity of the Bombay Municipal Corporation Act of 1888 on the grounds that it confers unguided power on the authorities to refuse vendors licenses and, therefore, denies them the right to livelihood as established in article 19(1)(g) of the Constitution. In its ruling, the court evaluated the Bombay Municipal Commissioner's (BMCs) scheme for issuing licenses and creating hawking zones and, in doing so, introduced some restrictions on the BMCs power by applying a *standard of reasonableness*.

This ruling marked a significant shift in the way the Supreme Court of India evaluated claims around the right to livelihood. The court defined several practices that were unreasonable: (1) to deny street vendors the ability to protect their wares at all from sun, rain, wind, and so on; (2) to prohibit the sale of food, as "there are several working families in Bombay, belonging to different strata of society, which depend on the food supplied by hawkers"; (3) to require vending to stop at 9:00 p.m., because "in cities like Bombay nights are quite young" at that hour; and (4) to not issue licenses for hawkers in areas other than nonhawking zones; indeed, it argued that licenses "should not be refused in the hawking zones except for good reasons." The court also established a spatial norm for the first time, that "as far as possible there should be one hawking zone for every two contiguous municipal wards in Greater Bombay."¹¹

The limitations the court placed on local government power were subsequently reflected in the National Policy on Urban Street Vendors, first issued in 2004 and later revised in 2009 (Sinha and Roever, 2011), and in the Street Vendors Act of 2014,¹² which protects the rights of urban street vendors and regulates street vending activities at the national level. The 2014 act places explicit restrictions on merchandise seizures, evictions, and relocations. Although it has yet to be implemented fully, these provisions give vendors leverage in reigning in arbitrary treatment on the part of the authorities.

Durban

The organizing context in Durban has followed a different path than in Ahmedabad and, consequently, the trajectory of legal challenges there began much more recently. The first successful effort on the part of street vendors and their allies to limit the power of the local state came in 2009 with a case filed to block the city's plans to demolish part of the historic Warwick Junction markets

¹⁰ The Bombay Provincial Municipal Corporation Act of 1949 (Section 384); the Bombay Police Act of 1951 (Section 102 and Section 117). These two pieces of legislation were rooted in, and borrow language from, the Bombay Municipal Corporation Act of 1888 and the India Police Act of 1861, respectively.

¹¹ *Bombay Hawkers' Union v. Bombay Municipal Corporation*, July 3, 1985.

¹² Accessible at <http://wiego.org/resources/street-vendors-protection-livelihood-and-regulation-street-vending-act-2014>.

to make way for a shopping mall (Chetty and Skinner, 2013). The city eventually rescinded its decision to build a mall, but, throughout that period and in subsequent years, street and market traders faced frequent harassment from local authorities.

The city's 1995 street vending bylaws, along with the 1991 Businesses Act, framed local government practice in a way that has encouraged the impoundment of goods, even when a street vendor holds a permit. Such was the case of John Makwickana, a 65-year-old trader supporting a family of eight by selling plastic and rubber sandals in downtown Durban. In 1996, he secured a permit in exchange for a fee and, in subsequent years, hired an assistant, who also paid for a license. On August 6, 2013, a police officer arrived at his stall when he was away and his assistant had gone to a nearby market to purchase food; the officer impounded 25 pairs of new sandals on the grounds of illegal trading, given that both the applicant and his assistant were away from the table at the time she arrived.¹³ The receipt she issued for the impounded goods did not itemize what she took, nor did it specify where the goods would be kept or how he could get them back. The notice set the fine at 300 rand.

The South African Legal Resources Centre supported Makwickana in challenging the component of the relevant norm¹⁴ that imposed no limit on fines applicable to street traders, thus providing police officers with “unfettered discretion to determine the amount of the fine regardless of whether it is proportional to the infringement.” The case also challenged the norm in its failure to offer guidelines about how confiscated goods should be dealt with, again allowing for unlimited discretion on the part of police officers. Without clear guidelines, they argued, the act conflicted with section 1(c) of the Constitution of South Africa establishing the supremacy of the rule of law.

The judge who heard the case ruled that the municipality was going beyond the scope of its powers by impounding the applicant's goods¹⁵—a highly significant development in a context in which abuses of authority were routine and pervasive. According to the ruling, the municipality was not authorized by the empowering provision to impound the goods and, thus, violated the principle of legality embedded in section 1(c) of the constitution.

Further, the court ruled that the impoundment provisions of a revised bylaw issued in 2014 (section 35(1) to (8)) were problematic. This section of the ruling is significant, because it recognizes the type of everyday harassment that vendors face and it articulates the blatant disregard for due process on the part of the authorities.

Section 35(1) permits an official to remove and impound goods upon the mere suspicion, reasonably held, that the informal trader has contravened a provision in the By-law. Effectively, the street trader suffers punishment and deprivation of her property before a court of law has determined her guilt.... Section 35(1) is over-broad in that it permits impoundment for all contraventions without differentiating between serious absolute contraventions and less serious, formal non-compliances such as trading without producing proof of a permit that do not pose a threat to the public.¹⁶

¹³ The local bylaws have been interpreted over the years to say that the permit holder must be physically present at his or her stall at all times.

¹⁴ Subsection 6(A)(1)(d)(i) of the 1991 Businesses Act.

¹⁵ *Makwickana v. eThekweni Municipality & Others*, Paragraph 74.

¹⁶ *Makwickana v. eThekweni Municipality & Others*, Paragraph 80.

These deficits were held to be all the more significant, given that the bylaw also empowers the municipality to sell, destroy, or otherwise dispose of impounded goods. In Makwickana's case, the municipality failed to give notice of the sale of his goods or the refund to which he was entitled, less the impoundment fee—making it effectively a confiscation rather than an impoundment. Allies of Makwickana viewed the court's move to limit the authorities' ability to engage in this practice as highly significant, given its pervasiveness.

Lima

By contrast with events in the other two cities, the street vendor movement in Lima has focused recently on legislation, rather than litigation. The city's approach to street vending evolved from populist support in the 1980s to a strong neoliberal stance in the 1990s that continues to dominate into present day (Aliaga Linares, 2015). Street vendor organizations most recently lobbied for an updated metropolitanwide ordinance to replace one that had been in existence since 1985 but that was rarely enforced. The metropolitan administration under Mayor Susana Villarán undertook the effort to pass a new ordinance; Ordinance 1787 came into effect in May 2014.

The ordinance reflects what was politically possible for the city's first leftist mayor since the 1980s, given the country's neoliberal political orientation. It establishes the "temporary and exceptional" nature of authorizations to vend in public space (chapter II, par. 4.3) and contains a vision of eventually "graduating" all street vendors to microenterprise operators working in private commercial spaces. The ordinance contains very little in the way of limitations on the power of local authorities, save for article 47, which contains mentions of the right to due process, to be treated with respect, to be oriented in formalization processes, and to the rights established in the country's constitution. Nonetheless, it complements regulation with promotion in the sense that it aims to support vendors in an effort to save enough capital to eventually formalize—so it is not strictly focused on restrictions and punitive measures.

Linking Street Vending to Poverty Alleviation

Ahmedabad

In addition to establishing limits on the actions of local authorities regarding its restrictions on street vending, the Supreme Court of India also made a case for public space as a livelihood resource in contexts of poverty. In another 1985 ruling on the constitutional validity of the provisions of the Bombay Municipal Corporations Act of 1888 relating to obstructions on public streets relative to the rights outlined in article 19 of the constitution,¹⁷ it ruled on the content of the right to life and, specifically, on the question of whether the right to life contained the right to livelihood. It is significant that the court ruled that it does.

The sweep of the right to life conferred by Article 21 is wide and far reaching. It does not mean merely that life cannot be extinguished or taken away as, for example, by the imposition and execution of the death sentence, except according to procedure established by

¹⁷ *Olga Tellis & Others v. Bombay Municipal Corporation & Others*, October 7, 1985.

law. That is but one aspect of the right to life. An equally important facet of that right is the right to livelihood because no person can live without the means of living, that is, the means of livelihood. If the right to livelihood is not treated as a part of the constitutional right to life, the easiest way of depriving a person his right to life would be to deprive him of his means of livelihood to the point of abrogation. Such deprivation would not only denude the life of its effective content and meaningfulness but it would make life impossible to live. Deprive a person of his right to livelihood and you shall have deprived him of his life.¹⁸

The court went on to establish the right of street vendors to work in public space more forcefully than it had before in the case of *Sodan Singh v. New Delhi Municipal Corporation* in 1989. It stated explicitly that the right to carry on trade or business established in article 19(1)(g) of the constitution, “if properly regulated, cannot be denied on the ground that the streets are meant exclusively for passing or re-passing and for no other use.”¹⁹ Proper regulation is a necessary condition, it argued, but “there is no justification to deny the citizens of their right to earn a livelihood by using the public streets for the purpose of trade and business.”²⁰ Moreover, the court acknowledged that roads are not laid for the purpose of the carrying on of private business, but rather for the use of the general public for transit. It argued, however—

This is one side of the picture. On the other hand, if properly regulated according to the exigency of the circumstances, the small traders on the said walks can considerably add to the comfort and convenience of the general public, by making available ordinary articles of every day use for a comparatively lesser price. An ordinary person, not very affluent, while hurrying towards his home after [a] day’s work can pick up these articles without going out of his way to find a regular market. If the circumstances are appropriate and a small trader can do some business for personal gain on the pavement to the advantage of the general public and without any discomfort or annoyance to the others, we do not see any objection to his carrying on the business.²¹

These and other provisions of the court’s rulings have firmly established the right to use public space for street vending in India 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.

Durban

The Durban High Court’s ruling on the Makwickana case also reflects a pro-poor orientation toward the use of public space as a livelihood resource. In doing so, it begins to establish the groundwork for arguments in favor of collective rights to public space, pushing back against the commodification of public land. The court’s opinions on two aspects of the case—the poor’s access to courts and the need for procedural fairness with regard to property rights—make the point clearly.

¹⁸ *Olga Tellis & Others v. Bombay Municipal Corporation & Others*, Paragraph 2.1.

¹⁹ *Sodan Singh v. New Delhi Municipal Corporation*, Paragraph 3.

²⁰ *Sodan Singh v. New Delhi Municipal Corporation*, Paragraph 11(4).

²¹ Paragraph 16 of Special Leave Petition (C) No. 15257 of 1987, cited in *Sodan Singh v. New Delhi Municipal Corporation*.

Regarding access to courts, although Makwickana had legal representation, which the court noted is unusual for street vendors, he still did not have an opportunity to recover his goods before they were disposed of, nor was he compensated for his loss afterwards. As the court stated,

[The] right of access to courts is theoretical and illusionary for street traders generally... The meager income they generate goes to sustaining their large families. Employing legal assistance is not realistic. Reform of the dispute system design in the informal sector should take this into account.²²

In addition, the court ruled on the impoundment provisions as they relate to section 25(1) of the constitution, which says that no law may permit arbitrary deprivation of property. The Constitutional Court had previously ruled that a law is arbitrary if it does not provide sufficient reason for the deprivation or is procedurally unfair; in this case, the Durban High Court ruled that the dispute mechanism in section 35 “is incapable of giving effect to the right to procedural fairness before a street trader is deprived of her property permanently,”²³ and also not a proportionate means to the intended end. It forcefully argued that—

Deprivation is so invasive of their property rights that it impacts on the welfare of the street traders and their large families. For most the impounded goods are their only assets and means to a meal. Impoundment is therefore serious irrespective of the commercial value of goods. Deprivation also impacts on their identity and dignity as people with property, however little that is.²⁴

Again, this marks a significant turning point in that the court is explicitly recognizing the conditions of poverty in which these workers are operating and explicitly articulating the effective denial of rights that takes place when the powers of local authority are not constrained. The effect of the bylaw, it argued, was an “irrational and arbitrary deprivation of property,”²⁵ an unacceptable limit on the constitutional right to trade, and a violation of the constitutional protection against discrimination.

The effect of section 35 is to deny street traders access to courts in terms of section 34 of the Constitution, to deprive them of their property permanently without compensation or accounting in contravention of section 25 of the Constitution, and to prevent and impede them in exercising their right to trade in terms of section 22 of the Constitution. Cumulatively and individually the limitation of these rights compounds the prejudice upon a race and socio-economic group already adversely impacted by poverty.²⁶

The court also found that the bylaw limited the constitutional rights to life (section 11), security of person (section 12), the freedom to trade, the right to property, and the right to equality. It recognized that “the nature of the sector is such that unless officials are oriented to be empathetic towards street traders, the risk of powerful officials mistreating powerless poor people is real.”²⁷

²² *Makwickana v. eThekweni Municipality & Others*, Paragraph 87.

²³ *Makwickana v. eThekweni Municipality & Others*, Paragraph 96.

²⁴ *Makwickana v. eThekweni Municipality & Others*, Paragraph 97.

²⁵ *Makwickana v. eThekweni Municipality & Others*, Paragraph 99.

²⁶ *Makwickana v. eThekweni Municipality & Others*, Paragraph 122.

²⁷ *Makwickana v. eThekweni Municipality & Others*, Paragraph 135.

Lima

Despite Lima's explicit neoliberal policy orientation, even that city's new 2014 ordinance also contains some pro-poor provisions. The crux of the ordinance is around access to temporary authorizations to use public space for street vending. The ordinance establishes preferential access to "vulnerable groups in extreme poverty," including the elderly, persons with disabilities, and female heads of household (article 21). It also allows vendors with disabilities and elderly vendors to have a helper assist with the business, and it contains provisions for temporary assistants in cases of illness (article 24). Further, authorizations are issued for a 2-year period, an improvement from the previous 1-year period that vendors argued was necessary to allow sufficient time for accumulating the capital necessary to move off the streets.

Providing Channels for Street Vendors' Representation in Decisionmaking

Ahmedabad

A central component of the 2014 Street Vendors Act in India is the definition of Town Vending Committees (TVCs) to carry out surveys of vendors, ensure that all existing vendors are accommodated in vending zones, and issue certificates of vending. The act orders that the members of the TVCs include at least 40 percent representatives of street vendors, elected by street vendors themselves, at least one-third of which are women. It also requires that due representation is given to scheduled castes and tribes and also to other minorities and persons with disabilities.²⁸

The TVCs are granted considerable authority, leaving the details of who gets a license to vend in what space to a local struggle about who controls the TVC. With 50 percent representation coming from nongovernmental organization (NGO) representatives (40 percent vendors, 10 percent community-based organizations or NGOs), in principle, less scope exists for governance practices that ignore the protections of vendors outlined in the legislation. Also note that SEWA and NASVI both influenced the development of the law, as they had the policy, over the course of many years—so they had the opportunity to build in protections, including the representation of street vendors in decisionmaking.²⁹

Durban

As noted previously, Durban does not have the long history of organizing that characterizes Ahmedabad and Lima, and the recent court decision on confiscations does not address representation in decisionmaking *per se*. The ruling, however, does argue that, as currently written, the relevant street trading bylaw does not offer meaningful dispute resolution to vendors, given the costs involved in litigation. It therefore recommends that a "more accessible and expeditious dispute design system" take into account the capacity constraints on affected vendors and that the

²⁸ Chapter VII of the law details the composition and procedures of the TVCs.

²⁹ The nature and extent of this influence were corroborated in personal interviews with SEWA representatives, conducted by Lily Freeman on behalf of WIEGO, on November 3, 2014.

city must manage its officials more effectively, for “without a firm hand on officials who misbehave, conflict with street traders will persist as respect for law enforcers wanes.”³⁰ The court’s attention to meaningful engagement between street vendors and local authorities represents a first step along the path followed in other cities.

Lima

Although it is far less focused on rights and protections for vendors than the other two cities, Ordinance 1787 in Lima was passed with unprecedented consultation between municipal officials and street vendors’ organizations. The latter established a “Metropolitan Coordinator of Popular Commerce” (locally referred to as the *Coordinadora*) in May 2012 as the space in which vendors’ organizations could achieve a unified voice on the content of the ordinance and liaise with the city administration on its passage. The administration, in turn, formulated its own draft ordinance and organized dialogue sessions with vendors in different parts of Lima, which helped the administration identify concerns with its proposal. It then established a working group with representation of both vendors and city officials to make revisions to the text and eventually present it to the city council.

Moreover, the ordinance itself contains a representative structure, somewhat like India’s TVCs. These structures, called Tripartite Consultation Commissions, also consist of representatives of the municipality, vendors’ organizations, and neighborhoods. Their mandate is to coordinate plans and formalization programs for street vendors with their democratic participation. The ordinance also contains provisions outlining the rights of street vending organizations’ leaders, including the right to be recognized as interlocutors and to be attended to by local officials. According to the city official who implemented the consultative process with street vending organizations in Lima’s 43 districts, “the initiative that vendors took was evident in their proposal to promote changes that would allow them to exercise their citizenship rights and influence the Municipality of Lima, to overcome repressive policies and, in concerted fashion, make municipal legal norms more adequate.”³¹

Policy Implications and Future Research

Despite widespread recognition that street vending is an ancient form of livelihood that exists all over the world, its legitimacy as a modern-day occupation is rarely made explicit in law or in policy. An important stream of recent scholarship has begun to explore how this deficit shapes the day-to-day interactions between vendors and local governments. The evidence presented in this article locates informal governance practices—including low-level harassment, arbitrary confiscations, and evictions—within legal-regulatory frameworks that lack limits on local authorities’ power vis-à-vis street traders. It also gives examples in which street vendors and like-minded elites have jointly advanced collective livelihood rights via legislation and litigation.

³⁰ *Makwikhana v. eThekweni Municipality & Others*, Paragraph 144.

³¹ Guillermo Nolasco Ayasta, “Ordenanza que Regula el Comercio en Los Espacios Públicos de Lima: Iniciando un Sueño (que se hizo realidad),” May 7, 2014. <http://marcialperezherrera.blogspot.com/2014/05/ordenanza-que-regula-el-comercio-en-los.html> (author’s translation).

Recent research holds important lessons for policymakers in both developing and developed countries. First, just as reasonable limits should be placed on the use of public space for livelihood activities, so should limits be placed on informal governance practices that enable local officials to use their position of power to undermine the income-generating activities of those who rely on public space for their livelihood. Second, policy processes in which street vendors and their representative organizations are involved can result in a balance between regulation and protection that may be more sustainable than strictly regulatory or punitive approaches. In U.S. cities where street vending regulations are being contested at present—including New York City, New York; Chicago, Illinois; and Los Angeles, California—understanding the daily experiences and perceptions of vendors themselves could go a long way toward developing rules that are appropriate and sustainable. Finally, in the global urban policy agenda, efforts to recognize and promote the “right to the city” and sustainable, inclusive urbanization—including those under way as part of the Habitat III process³²—must not neglect informal livelihoods.

Further research into informal governance practices and the rules that shape them can play an important role in addressing a city’s need to balance livelihood opportunities on the one hand and reasonable regulation on the other hand. A specific need is for future research to analyze the menu of technical options for establishing fair and transparent systems for allocating licenses and permits, including mechanisms designed to advantage the poor in accessing them. A strong need also exists for more research that privileges the lived experience of vendors in interacting with local authorities and legal-regulatory structures.

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Author

Sally Roever is the Urban Policies Programme Director at Women in Informal Employment: Globalizing and Organizing.

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³² Habitat III is the third United Nations Conference on Housing and Sustainable Urban Development, which takes place every 20 years. The next meeting will take place in Quito, Ecuador, in October 2016.

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The Critical Role of Street Vendor Organizations in Relocating Street Vendors Into Public Markets: The Case of Hsinchu City, Taiwan

Chia Yang Weng

Hsinchu City Government, Taiwan

Annette M. Kim

University of Southern California

Abstract

This article analyzes how the Hsinchu municipal government in Taiwan was able in one instance to successfully relocate street vendors into a thriving public market, the Zhu Lian market, but failed in another instance to replicate this success with the Guan Dong market. These two cases both involved in situ relocation of street vendors with similar economic situations. Fieldwork and key informant interviews with vendors and government officials were carried out in Hsinchu City, Taiwan, in 2012.

The research finds that street vendor organizations play a crucial role during the relocation process. In game theory terms, the organization can shape the multiplayer dynamic game of relocating a large number of vendors to overcome the prisoner's dilemma and play a cooperative game for mutual benefits. The article also discusses the potential pitfalls of relying on strong vendor organizations in managing street vendors in the city. Increasing the authority and autonomy of organizational leaders can enable them to bypass lower-ranking officers and negotiate directly with high-ranking officers and politicians, fostering a political patronage system in the city.

Introduction

Street vending is a global urban phenomenon in both the east and the west (Ball, 2002; Bhowmik, 2005; Cross, 2000; Roever, 2006). Conflict and negotiation between street vendors and city governments take place in every major city around the world, and numerous laws and municipal

ordinances are regularly devised to regulate street vendors (Brown, 2006; Cross and Morales, 2007; Kim, 2012). The most common ways city governments regulate street vendors include (1) limiting the number of vendors through licenses or permits, (2) designating public spaces such as street-vending zones, and (3) relocating vendors into public market buildings (Garnett, 1995; 2009). Of these strategies, the effort to move vendors off the street and into market halls and buildings involves more significant public investment and is more complex in its attempt to formalize spaces for vendors. Often, implementation has been problematic because the spatial locations and arrangements are not economically feasible for vendors' livelihoods (Morales and Kettles, 2009). How to spatially manage street vending is a vexing conundrum for many cities around the world.

This article offers the case study of the Taiwanese city of Hsinchu to analyze the reasons why the municipal government in one instance was able to successfully relocate street vendors into a new thriving public market building, the Zhu Lian (ZL) market, but in another instance was unable to replicate this success with the Guan Dong (GD) market project.

In both cases, Hsinchu City worked through the institution of the street vendor organization. The role of vendor organizations is not well studied in the vending policy literature when hypothesizing the problems of previous attempts to manage street vendors through the formalization of public markets. This study focuses on them in order to find what role they may have played in the successful ZL public market case. Then, the comparative GD public market case, in which the city government tried to replicate its success with the ZL market, provides further insights about both the necessary and sufficient conditions that are needed.

Review of the Literature

Street vendors usually develop a sense of entitlement to the space in the city they use to vend, especially if they have been allowed to use the space regularly for a long time. Whether through tacit condoning or an impracticality to evict, the status quo that is built with neighbors and customers helps to socially construct this entitlement. As a result, vendors usually have built social networks and figured out a way to make business profitable (Kim, 2015).

Meanwhile, street vending is viewed as a sign of poverty and underdevelopment by developmental states eager to grow the nation's economy and world standing. Vending's demise is considered a desirable sign of progress toward a more prosperous and developed urban environment. Although municipal governments sometimes may enjoy some success in progressing toward such an environment, street vendors are resilient because of the necessity for livelihood. The police may be able to stamp out street vendors in certain parts of the city, but the street vendors may simply move their business to other parts of the city where enforcement is less aggressive and proactive. Or vendors may wait until enforcement wanes and then return to their old places. Therefore, municipal governments have used another strategy—relocating street vendors to designated vending districts or public markets. Implementing such projects usually involves a long and difficult process of negotiating with vendors. In cities where the occasional off-street public markets have been built, many of those markets suffer high desertion rates and fail altogether. The following list describes the reasons for their failure.

1. **Ill-conceived location.** The new off-street market ideally should be highly visible to customers and be easily accessible. Appropriate locations are usually difficult to find because of high urban land values and the preexisting densely built environment. Lyons and Msoka (2010: 1091) noted that, “The relocation to customer-poor sites makes it difficult for many—and impossible for some—to rebuild their businesses.” Cross (1998) also pointed to unprofitable locations as one crucial factor that led to the rejection of enclosed public markets in Mexico City.
2. **Bureaucratic regulations.** After moving into an enclosed public market, street vendors generally have to face more regulatory compliance obligations with the formal market—obligations that they did not have to deal with when they were on the street (Cross, 1998; Donovan, 2008; Kettles, 2004). In addition, the city government’s rigid method of allocating market booths (such as long-term leases and standardized booth sizes and designs) may not fit well with the needs of street vendors (Morales, 2010).
3. **Lack of customer drawing power.** Vendors may also find it difficult to keep their customer base in new locations (Bromley, 2000; Donovan, 2008; Lyons and Msoka, 2010). Because business relocation is disruptive to business, relocating in situ or in close proximity is important. Furthermore, part of the advantage of shopping in the street often was the convenience to customers en route. The new public market’s design, however, may increase shopping time and costs without offering enough substitutionary advantages. Bromley (2000: 19) noted, “When customers fail to follow, the vendors have little choice but to return to the streets.”

The issues cited in the preceding list put primary agency in the government: successfully relocating and nurturing vibrant public markets depends on the actions of the state. The literature about the social networks of street vendor associations or organizations, however, suggests that such organizations could play a vital role in the relocation process. For one, they could help negotiate vendors’ interests with complex bureaucracies. In addition to having negotiating power, they may have detailed knowledge about the practical needs of street vendors’ livelihoods, which is key to devising any successful street vendor relocation program. If vendor associations do exist, they could also play a key role because their social support network, norms, and regulations might be the ones more relevant to vendors and might also complement, compete with, or challenge the efforts of the state (Cross, 1998; Peña, 2000). Beyond representation, however, it is less clear what role the street vendor organization may play in implementing a relocation program.

This article focuses on further analyzing the role of street vendor organizations in public programs to relocate vendors into market buildings. It aims to tease out lessons by comparing one successful and one failed street vendor relocation case in Hsinchu City, Taiwan. Rather than primarily focusing on the actions of the government, we seek the point of view of the street vendors themselves as well as the government. The goal of this research is to understand what factors make a street vendor relocation process successful, both in terms of empowering street vendors to improve their situation and in terms of the government’s objective to relocate vendors off the street.

Case Selection and Methods

Hsinchu City, with a population of 0.45 million, is known for its high-technology industries; its residents’ median incomes are the highest in Taiwan. Street vendors in Hsinchu City operate under

three kinds of legal statuses: (1) government-registered (GR) street vendors, (2) government-condoned street vendors, and (3) undocumented (UN) street vendors. At the time of this study, roughly 2,500 street vendors were operating in Hsinchu City before the relocation projects discussed in this article began (Taiwan, 2003).

We chose the ZL and GD as comparison cases because they were similar in some important ways. The two public markets are located in the same administrative district in Hsinchu City and are close to each other—the Euclidean distance between these two markets is less than 4.4 miles. The opening of the markets occurred only 7 years apart, with the ZL market opening in 1999 and the GD market in 2006. Both markets are located in middle- to upper middle-class neighborhoods, and most market vendors in both markets have secondary education.

Both cases involve groups of vendors that had existed in the city for more than 40 years. Their long history of existence implies that they enjoyed a stable market demand for their goods and services. They also make interesting comparison cases because ZL is the larger group involving 500 street vendors while GD involved 100 vendors. ZL's larger size would imply a more challenging collective action problem (Olson, 1965; Ostrom, 1990), which makes its success even more interesting to investigate.

Although the ZL public market is located closer to the old Central Business District in Hsinchu City, which would place it in a more valuable location, it also faces stronger competition from other downtown shopowners and street vendors. On the other hand, even though the population density of the eastern part of the city is lower, the GD public market faces less competition because no other public market or Special Street Vending Area (SSVA) operates in the eastern parts of the city.

So, in sum, many of the common obstacles to vendor relocation problems are held constant between these two cases. They both involved relocations in situ, dealt with the same bureaucracies, and used the same public market designs. Thus, rather than focusing on state actions, we focus on the role of the vendor organizations and ask the following research questions.

Research Question 1. How did the vendor organization negotiate and manage the relocation process in the ZL case and how did its actions contribute to the vendors' decisions to move and to stay in the new public market?

Research Question 2. Why did the lessons learned from the ZL market fail to generate a successful market project in GD? What happened differently? What factors led to the failure of the GD street vendor relocation process?

The case study method was chosen as the appropriate method to answer these questions about complex organizational behavior and relationships and to search for new variables to explain success and failure. These case studies were built through fieldwork undertaken in Taiwan in the summer of 2012. The research included semistructured interviews conducted in the Chinese language. The 34 total interviewees included 6 ZL market customers, 4 ZL market vendors, 5 ZL vendor association leaders, 3 GD market customers, 2 GD street vendors who left the market, 2 GD market vendors who stayed, 3 GD vendor association leaders, and 9 Hsinchu City government officials. The study also involved participant observations at the markets and their surrounding streets and a review of government documents and secondary data. The interviews were triangulated with each other and with secondary data in order to allow for some falsifiability.

The Relocation Process of the Zhu Lian Street Vendors

Street vendors first started conducting their business on the streets around ZL Temple, a faith center with historical and religious significance in Hsinchu City, Taiwan, in the late 1800s. By the late 1970s, it was estimated that more than 500 street vendors earned their living in the ZL street market every day (Tai, 2005).

The Hsinchu Street Vendors' Union

The Hsinchu Street Vendors' Union (HSVU) was first formed in 1958 by around 20 street-cart vendors in the downtown area. The main mission of HSVU was to protect the rights of its street vendor members by building a communication bridge between street vendors and the city government. By the late 1970s, the number of HSVU members had grown to around 400 street vendors, and it was the oldest and biggest of its kind in the city.

By the late 1990s, more than 1,000 vendors throughout the city were HSVU members. Approximately 300 of these vendors operated in what is now the ZL public market area, and the rest conducted their businesses in other SSVAs. To manage such a large group of people was challenging. To address this management problem, HSVU divided the vendors into roughly 40 subgroups, each consisting of 20 members, around 5 delegates, and 1 elected opinion leader. Together, these opinion leaders played a significant role in helping to manage HSVU's daily affairs. They not only exerted strong influence on their subgroup members' attitudes and behaviors toward major business issues, but they also offered advice and mediated disputes on the street. Any important HSVU decision could not be made without first reaching a consensus among these elected opinion leaders.

The opinion leaders elected a 12-member board of directors. The board was composed of an executive chairman, a vice executive chairman, a treasurer, and several directors. The board elected its executive chairman, who served as the head of HSVU and its members.

The Construction and Management of the ZL Market Building

As Hsinchu City became more modernized and car oriented in the early 1980s, the city government's policy toward vendors started to change (Mian and Chua, 1986; Tian, 2012). In 1986, City Mayor Rèn (1940–2010) planned a new four-story indoor market building to accommodate 500 booths and underground parking, less than a block away from where the ZL vendors were operating.

More challenging than construction, however, was how to cajole the street vendors into the market building and create a sustainable public market. Even after the ZL market building construction was finally completed, most street vendors were reluctant to move into the multistory market building. They claimed that contact with urban pedestrians would be very limited and their existing customer base would not follow them to the new location. As discussed previously in the literature review, fear of losing business is a common concern that deters vendors from moving into public market buildings as are the cumbersome application processes and the rigidity of market vending regulations.

Before the ZL case, public market buildings in Hsinchu City were built and then directly managed by the city government. This government management model, however, did not serve the purpose of running a successful public market very well.

To avoid repeating the same mistake, the city government conceived that a new management model was needed. In 1998, after reporting to City Mayor Tsai, the then Market Sector Chief Cheng, responsible for managing all street vendors in the city, decided to adopt a public-private partnership approach to managing the ZL marketing building. The city government would commission the operation of the ZL public market to a concessionaire. Upon expiration of the operation period, the right to operate would revert back to the city government. Sector Chief Cheng conceived that the concession contract could help solve the bureaucratic problems in traditional public service delivery and fix failures of the government-managed public markets. It was assumed that, to earn more profit, the concessionaire would have stronger incentives in attracting more customers and reducing the market vacancy rate than a civil servant would.

The Concession Negotiation Process

In May 1997, after no tender had been submitted for two consecutive tendering periods, Section Chief Cheng personally reached out to the HSVU leaders and asked them to tender for the concession contract. Under tremendous pressure from Mayor Tsai, in the meetings Cheng threatened that if no tender was offered by the end of the summer, city government might use any means necessary (that is, forceful eviction and demolition) to relocate the street vendors into the market building and then operate the market without HSVU.

Having long been recognized by the city government as the “legitimate managing entity” of the four biggest SSVAs in the city for more than 30 years, some HSVU leaders said they felt a “moral obligation” to cooperate with Cheng. In addition, the HSVU leaders had the incentive to maintain their dominant position among other street vendor organizations. An HSVU leader recounted, “During that time, we had several internal meetings. Not everyone was confident about moving into the market building,” but, in the end, the late HSVU Chairman Huang agreed to sign a concession contract memorandum with the city government. For the concession right of the ZL market building, the HSVU leaders agreed to pay an annual fee of around 200,000 U.S. dollars (USD) for 9 consecutive years to the city government. In return, the city government promised to offer assistance in helping the HSVU leaders to operate a successful public market.

Due to the logistical and technical difficulties of relocating hundreds of street vendors into the market building, which needed to be redesigned and remodeled to fit the new demands of a modern public market, both sides agreed the concession contract would not enter into force until May 1999.

Redesigning the Market Building

After signing the contract, the HSVU leaders decided to modify the existing circulation system of the ZL market. Under the concession contract—with the exception of two new proposed escalator ramps for customers—all other improvements had to be paid by the vendor organization. They decided to make the following improvements: (1) build a new car-parking ramp that would enable

vendors to more easily unload their wares, (2) upgrade two dilapidated cargo elevators, and (3) set up public seating and indoor landscaping to help foster a sense of community and invite customers to stay at the market.

The HSVU leaders also decided to install a new central air-conditioning system in the ZL market. They wanted to reverse the stereotype in the public's mind that public markets were muggy and smelly. In addition, they hired 10 full-time market cleaners to scrub the floors and clean the windows and contracted with a pest-control company to apply pesticide every 2 months. Next, HSVU leaders organized the market space into three different vending zones: (1) a wet-goods zone (for example, meat, seafood, and fresh produce), (2) a dry-goods zone (for example, handcrafts, textiles, and trinkets), and (3) a prepared-foods dining area.

The Opening of the Market

Upon signing the concession memorandum with the city government, HSVU had already started recruiting street vendors to move into the market. To reach economies of scale and to share the renovation costs, HSVU leaders calculated they needed to rent out a minimum of 250 booths with each booth's tenant(s) paying around 2,000 USD to share the cost of renovations. Although approximately 700 street vendors were conducting business outside the market building daily, at first, few vendors showed interest in moving into the market.

As the market remodeling work progressed, however, more and more street vendors, especially HSVU members, began to convert and move in. Those vendors tended to trust their leaders more than they trusted city government officials. Instinctively entrepreneurial, the street vendors became willing to take the risk. "During that time, everyone was skeptical and unsure about it, but I decided to take a gamble and moved in the market with my friends. In the worst scenario, we could always retreat to and re-occupy the street again," said one street vendor.

In April 1999, the remodeling of the market was complete and approximately 250 street vendors moved in. HSVU's office opened in the ZL market. The street vendors who did not move into the market migrated to other places in the city or rented stalls on private vacant lots abutting the street. In June 1999, the ZL market began its trial operation. After that, the city government sent in the bulldozers and police to evict the remaining few vendors on the street, demolishing the temporary structures and widening the road. Today, the ZL market building remains fully occupied and is viewed as the most successful public market in Hsinchu City.

Major Findings About the Zhu Lian Public Market Relocation Process

Our case study analysis allows us to locate several reasons for the success of the ZL public market project.

Special Relationship Between HSVU and the City Government

One of the most crucial factors that contributed to the ZL public market's success was that its relocation process was implemented by a street vendor organization, the HSVU. The major reason the city government was able to ask HSVU to help relocate the ZL street vendors in the first place was that they had shared a special relationship with each other for more than 30 years. The HSVU leaders maintained social order among the vendors for the city government, and the city government maintained the commercial interests of the HSVU leaders.

In the past, in public market projects, booths were rented individually to street vendors at a symbolic price to "bribe" vendors to stay in the market. In the case of the ZL public market, however, the government adopted a very different approach. Instead of subsidizing street vendors on an individual basis, the city government subsidized the street vendor organization (that is, HSVU) through a relatively low concession fee, treating the organization as a concessionaire that could manage the renting of the booths. The low concession fee helped to assure a profit margin for the HSVU leaders with which to recruit street vendors.

The city government was willing to offer such a novel deal because of the credibility that the HSVU had gained over the years as an effective organization. At the same time, HSVU leaders were willing to assume the task of relocating ZL street vendors because (1) the low concession helped to assure a profit potential, (2) the city government supported their dominant position among vendor organizations, and (3) HSVU leaders also wielded some political influence because they were the biggest and oldest street vendor organization in the city. They could ask for governmental assistance if something went wrong. The successful ZL market relocation process was therefore first carried out on this foundation.

Market Tenant Selection Strategy

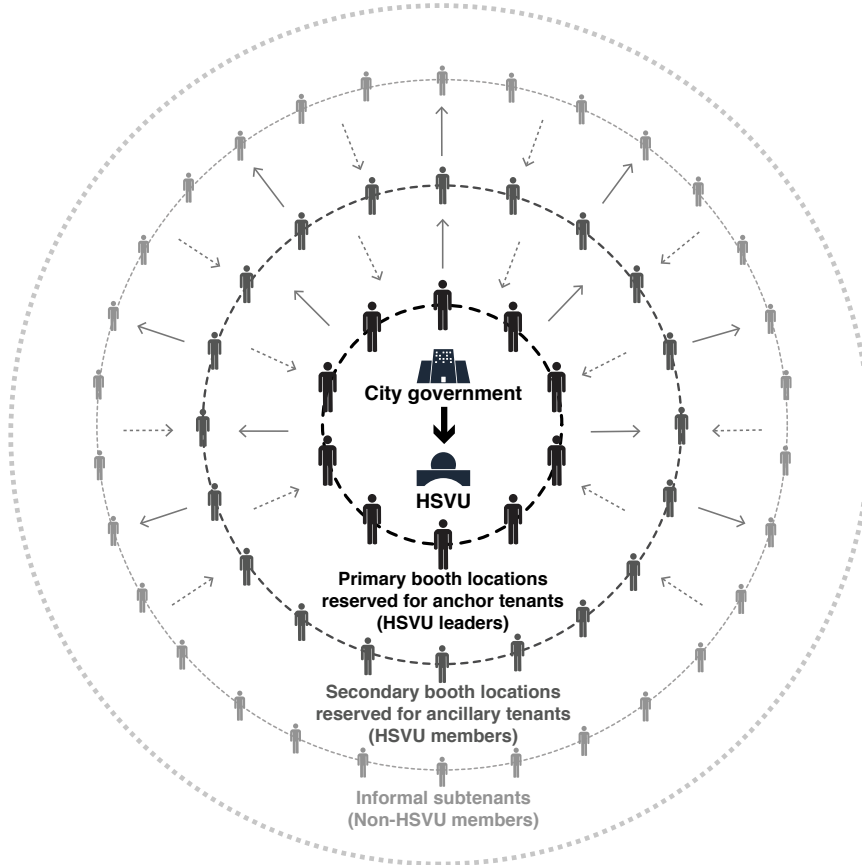
Another important aspect of the ZL street market relocation process was that it had gone through a very careful planning process of the public market project both physically and organizationally. Although it comes from a very different context, the literature about the strategies of American shopping malls is a useful analogy (Brown, 1992; Forgey et al., 1995; Gerbich, 1998; Sweet, 1959; William, 1994).

The street vendors are not a homogeneous group but vary in their relative power and resources (see exhibit 1). When enlisting street vendors for the ZL public market, HSVU leaders mainly focused on recruiting their own members who were willing to share the improvement costs of the market (around 2,000 USD per tenant). Non-HSVU-member vendors who were willing to prepay the improvement cost voluntarily were given secondary consideration. Street vendors who were unwilling or unable to contribute to the improvement cost could not join the market. In this way, the tenant-selection policy excluded any uncommitted or low-margin street vendors from moving into the public market at the very beginning.

The result was a group of the most resourced and entrepreneurial street vendors. Therefore, they were more likely to be able to afford the capital investment necessary to secure new stalls in the new market building. In contrast, the street vendors who were unwilling or could not afford to share the upfront investment cost tended to either be stationary vendors who were still doubtful about the future prospects of the public market, or they were the mobile vendors who moved from

Exhibit 1

The Distribution of Power and Space in the ZL Public Market



HSVU = Hsinchu Street Vendors' Union. ZL = Zhu Lian.

place to place vending their goods. The latter kind of street vendors commonly did not vend continually in the ZL street market. Unable to claim their own urban territory, these vendors' survival strategy was to scavenge the inferior locations left in the ZL street market. Therefore, they were less likely to be able to accumulate a loyal customer base and invest the capital needed to secure new stalls in the market building.

Because the market concession contract did not regulate how many booths one vendor could rent, the HSVU leaders divided the market tenants into three categories: (1) the anchor tenants, (2) the ancillary tenants, and (3) the informal subtenants. Before signing a concession contract with the city government, HSVU first attempted to secure long-term lease commitments from prospective anchor tenants (that is, the street vendors who were willing to rent three or more market booths in the ZL public market at one time and share the corresponding amount of market improvement cost). In return for their entrepreneurship, these anchor tenants had their pick of prime locations in the ZL public market.

Anchor tenants were usually the patriarchs of street-vending families who had participated in the original open-air ZL public market (that is, families who had managed several market booths on the street for a long time and whose syndicates had also cultivated a loyal customer base). Securing the commitment of anchor tenants was an important step in laying the foundation for the future growth of the ZL public market. The seniority and name recognition of anchor tenants attracted customers and also other ancillary tenants to come into the market.

At the founding of the ZL public market, seven anchor tenants accounted for around 10 percent of the market's booths, roughly three booths for each. By moving their own operations into the market early in the relocation process, HSVU leaders were able to market the ZL public market's development plan persuasively to prospective market vendors who might otherwise have felt uncertain about moving their business to a new, indoor public market.

Because street vendors rely on each other's presence to draw foot traffic, after ZL street vendors were assured that certain anchor tenants' customers would visit the public market, they became more willing to set up stores in the ZL public market. As more floating street vendors observed their friends and colleagues relocating, gradually they perceived the ZL public market as a potential business opportunity and decided to relocate as well.

After anchor tenants or ancillary market tenants committed to paying the rent and sharing market renovation costs, HSVU allowed them to sublease their booths to anyone at any price for however long they saw fit. This policy inadvertently created an informal market for ZL public market booths, which allowed market booths to be bought, sold, and exchanged between different subtenants. In addition, HSVU leader/anchor tenants became the largest landlords in this market.

Because of this flexible sublease policy, some anchor tenants thought of renting market booths and conducting their vending business in those booths as two different business decisions. By acquiring (or investing in) more market booths than they needed to conduct their vending businesses, some entrepreneurial anchor tenants anticipated the possibility of future sublease income streams from their spare market booths. The public market project capitalized the street vendor.

The anchor tenants did not move into the market because they were eager to cooperate with the city government; they joined the system only because of clear economic benefits and certainty that their dominant positions would continue to be guaranteed. The HSVU leasing policy offered them tangible financial benefits from the capital appreciation of market booths and potential sublease income.

Scale, Merchandise Mix, and Variety

The large number (250) of vendors in the ZL public market was another asset to the market's success. The vendors offered customers a wide variety of competitively priced products that prompted them to return for both specialized and basic items. One HSVU leader said, "As a rule of thumb, I personally think a successful public market must have more than 150 booths, so the products are diverse enough to draw people back."

The merchandise variety was further enabled by HSVU's ability to allow market vendors to sublease their rights to sell in the market to anyone else on a daily basis—even at a higher daily rent than the market vendors had to pay to HSVU. This practice helped generate new types of

businesses and bring in new business owners to the market. This daily-lease strategy turned out to work particularly well for the fashion retailers. By subleasing their booths to other aspiring street entrepreneurs, particularly those in the specialty apparel, designer clothing, or chic accessory segment, 2 or 3 days a week, existing market vendors were able to add trendy new formats to their booths' overall product portfolio. In fact, more than one-half of the "fashion vendors" in ZL public markets were subtenants.

These daily-lease subtenants were critical to the revitalization of the ZL public market in several ways. First, sometimes a subtenant's business might fare even better than their "landlord's" business. In these cases, these budding entrepreneurial subtenants, who were optimistic that their exclusive merchandise and/or superior service would continue to thrive, might decide to "purchase" the booth from their landlord and officially become a ZL market tenant. Second, when a certain type of product or service was already oversupplied, the mechanism could automatically adjust itself by discouraging market subtenants to lease space. The third benefit of this daily-lease policy was that the sublease tenant helped assure that all booths were operational, especially in situations in which the first tenant might need to be away for personal reasons. Vacant stalls are very conspicuous and hurt the market's image. This daily-lease policy allowed subtenants to plug in to idle booths and maintain the sense of a bustling market.

Management Structure

Both opinion leaders and anchor tenants acted as the main contact people for the ZL public market, and they were available whenever the market was open. They worked together with the HSVU board, overseeing the daily market operations, such as collecting market booth rentals and membership fees, enforcing market rules and regulations, and handling complaints and disputes. HSVU leaders hired a full-time clerk, several guards, and cleaners to cover the daily operations of the ZL public market.

Because HSVU leaders were all street or market vendors themselves, they understood market vendors' specific needs. Therefore, market vendors were more likely to support their leaders' decisions, which in turn made it easier for HSVU leaders to implement new ideas and address new challenges. The management structure also allowed for quicker and easier input, which helped build market vendors' trust of their opinion leaders, instill a sense of ownership in the market, increase communication, and create openness to the market's governance structure.

In Situ Relocation

At the beginning of the ZL public market's planning process, the city government decided to build a new market building on a public space that was part of the original ZL street market. Thanks to its close proximity to the old street market site, the new ZL market was able to retain the social, commercial, and cultural networks of the old street market. As the literature review has shown, by locating the new market building on the site of the old street market, the city government helped sustain the new ZL public market not only by maintaining the support of a loyal customer base, which the old street market had developed for more than 50 years, but also by minimizing the impact on customers' shopping and travel patterns. In addition, as we shall see in the next case, in situ relocation is a necessary but insufficient factor in sustained relocation and market operation.

The Relocation Process of the Guan Dong Open-Air Market

The GD open-air market first appeared in the eastern part of Hsinchu City in the late 1940s. Management of the GD public market vendors differed from that of the ZL street market vendors; whereas a vendor organization managed the ZL street market vendors, the city government managed the GD public market vendors. Roughly speaking, two types of vendors operated in the GD public market. One type was the GR vendor, and the other was the UN vendor. The city government assigned a civil servant to oversee the day-to-day business of the market, such as resolving disputes and collecting stall rents.

By the 1990s, as the population of Hsinchu City grew larger, the crowded and unhygienic conditions of the GD public market generated concerns that it might be detrimental to the city's image. In 2000, after successfully moving the ZL street market vendors indoors, the city government decided to build another new enclosed market building to accommodate the original GD open-air public market vendors. Armed with the knowledge and experiences from relocating the ZL street market vendors, the city government felt confident it could recreate "another successful ZL public market relocation experience," as one civil servant recalled.

The government deployed the following best practices learned from the ZL public market.

- **Relocation in situ.** By setting up the new public market at the original site, the new market building could inherit an established customer base. The GD market vendors could avoid the unprofitable lag time of rebuilding their customer base all over again. So, according to the literature, one of the largest reasons for failure had been avoided: vendors were not relocated to distant locations but were kept in situ.
- **Fostering a vendor organization.** The city government believed that a self-managed public market would give vendors a stronger sense of ownership and incentive for the market's success. The Guan Dong Public Market Vendor Association (GDVA) was established as a for-profit legal entity at the general meeting and the vendors ratified the GD market bylaws. The first GDVA board of directors was elected in 2003. It was assumed that the GDVA would strive to further the common interests of its members, such as maintaining a clean shopping environment, attracting more customers, and increasing foot traffic. These assumptions later turned out to be wrong.
- **User participatory design.** The city government thought that a public market planned and designed with the involvement of its vendors would be more responsive and appropriate to vendors' practical needs, thereby leading to more successful businesses. The GDVA was, therefore, fully consulted during the entire design and development process.
- **The market building.** The new market building was completed in 2006. The mixed-use five-story building, which included two levels of underground parking, was built at the cost of 165 million new Taiwan dollars (3.5 million USD). The ground and second floors were designated as the new market, with 112 market booths, while the remaining floors were designated as a community activity center. The new market had a modern cargo elevator, two passenger elevators, an inclined moving walkway system, a central air-conditioning system, and a loading dock. In short, physically, the new GD market building was a scaled-down version of the ZL public market.

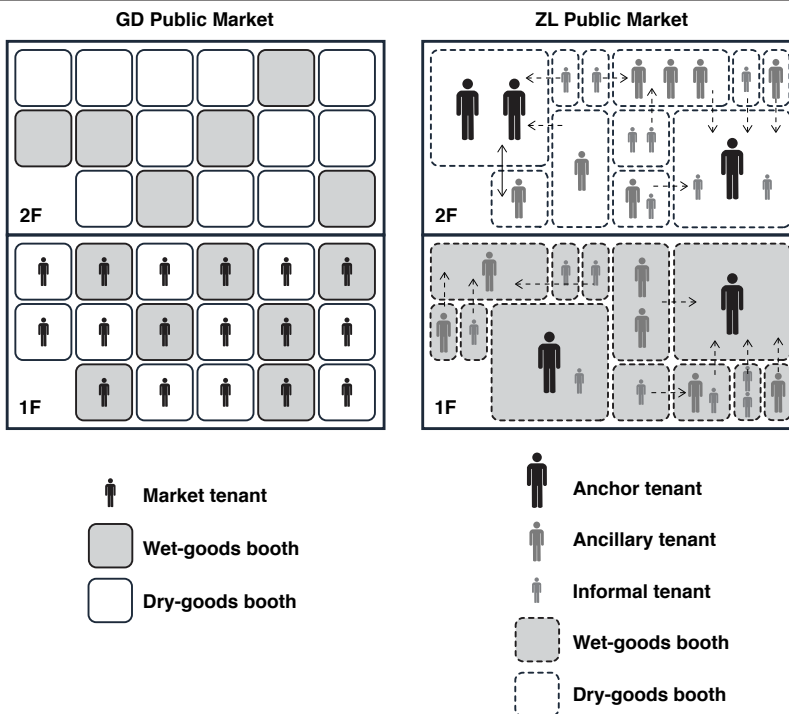
In the fall of 2006, the new GD public market opened. It did not generate the same amount of foot traffic as the original open-air market. The city government and the GDVA failed to recruit enough market tenants to fill the empty market stalls in the beginning—the total market booths were only 60 percent full. On the second floor, particularly, only 8 market vendors had moved in and the rest of the market booths (41) were standing unoccupied. As a result, the cash flow from the market booths rental did not match the investment scale of the market building either. Even though significant efforts had been made by the city government to encourage street vendors to move into the new market, a critical mass of vendors did not move in.

Major Findings About the Guan Dong Public Market Relocation Process

Even though the lessons of relocating the ZL street market vendors had been applied by the city government, the result of the GD public market relocation process had been mediocre. Uncovering the reasons why the GD market was not successful despite mimicking the “best practice” ZL case is important for honing in on the reasons why the first case worked and learning more about the critical role of vendor organizations. As we explain in the subsequent sections, spatial regulations and enforcement importantly shape the economic viability of a property rights system within the market (see exhibit 2).

Exhibit 2

Comparison of the Property Right System in the GD and ZL Public Markets



1F = first floor. 2F = second floor. GD = Guan Dong. ZL = Zhu Lian.

Management Structure and Membership

Even though the city desired to work with a vendor organization and tried to foster one into existence, the main reason the GDVA failed was the problematic way that it was constituted. The government adopted a two-phased GDVA member recruitment strategy, which later turned out to be very detrimental to the market's development. The city government invited the GR vendors to join the GDVA first and recruited the other UN vendors to join the GDVA later. All the GDVA leaders were GR vendors. The result of this recruiting bias was that the UN vendors and their interests were not well represented when the GDVA leaders were holding general meetings and ratifying the GD market bylaws, which were crucial in forging the market's spatial and economic structure.

The city government gave first priority to recruiting the GR vendors because they had established a loyal customer base. The hope was that, after the GR vendors' committed to moving into the market, their seniority and name recognition would help generate the anchor power to influence their customers and also the UN vendors to follow them into the market, as had happened at the ZL market.

To encourage the GDVA members to promote the success of the new GD market, the GD market bylaws required that the GDVA membership status could be granted only to the people who had fully committed to moving into the market. Because the city government used a two-phased tenant recruitment process, predictably the first recruited market tenants (that is, the GR vendors) were able to grab all the market booths on the first floor, and then left all the empty market booths on the second floor to the GDVA members who might (or might not) move into the market later.

Furthermore, under this system, only the GDVA members could change the GDVA bylaws. Therefore, the UN vendors could not change the system unless they joined the GDVA first. Because all the market booths on the first floor had already been grabbed up by the GR vendors, however, if the UN vendors really wanted to change the way market booths were assigned, the only way they could achieve this aim would have been to first rent the market booths on the second floor of the market. None of the UN vendors decided to join the GDVA, and most of the UN vendors remained on the sidewalk where foot traffic is higher than it would have been on the second floor of the GD market.

Allocation of Market Spaces and Zoning

While approving the GD market bylaws, the GDVA founding fathers also decided to abolish the GD market zoning code, so the GDVA members could freely choose the floor where they wanted to conduct their businesses. Right after the GDVA abolished the market zoning code, the GDVA leaders asked the city government to change the market floor plan layout, because all the GR vendors wanted to stay on the first floor and refused to go to the second floor.

In particular, the GDVA chairman himself was a butcher and wet-goods vendor who was originally supposed to go to the second floor of the market. Instead of following the market zoning code, however, the GDVA chairman led all wet-goods GR vendors to abolish the code and sought help from the city council members to ask the city government to change the original design of the market.

A problem emerged with trying to squeeze more market booths on the first floor: each market tenant's vending area became smaller and more crowded, and the market aisles also became narrower. Every vendor had less space to exhibit his or her goods to customers, thereby hurting the diversity of merchandise mixes the vendors could offer. Worse, being squeezed together with the wet-goods vendors, the dry-goods vendors could not enjoy the positive customer spillover effect from each other. During our field survey, we found that only the wet-goods vendors were still conducting their business on the first floor. All dry-goods market vendors had left the market. Even though the city government had installed inclined moving walkway systems to move customers to the second floor as the ZL market had done, the customer base was not willing to go upstairs without high-demand vendors and full occupancy.

From a game theory point of view, the wet-goods GR vendors shared a common interest in decreasing the overall vacancy rate of the GD public market: lower vacancy rates and a more diverse merchandise mix would draw more customer foot traffic. But the wet-goods GR vendors also had individual interests in staying on the first floor, where the customer foot traffic would be highest.

When, in the initial plan, the number of market booths on the first floor exceeded the number of dry-goods GR vendors who were first assigned there, a few wet-goods GR vendors were assigned to those empty spots. But as more wet-goods GR vendors moved to the first floor, the drawing power of the second floor grew weaker. Then, each wet-goods GR vendor would find that, as long as an empty booth was still available on the first floor, to maximize personal interest, he or she should move there to the point until no empty spot was available and to ignore the effects of his or her personal movement on the market.

The net result of this game was that the customer drawing power of the second floor became almost zero, very few UN vendors wanted to move in, and the vacancy rate of the public market has remained high. The market zoning code, the government price support, and the existence of a vendor association that is supposed to act in the interest of the group might have kept wet-goods GR vendors from acting contrary to the common interests of all other prospective market tenants. Even though such intervention mechanism did exist in the GD market, it did not work properly.

Law and Rigid Bureaucracy

In the ZL market case, the street vendor organization—HSVU—had more autonomy in spatially managing its market. In the GD market case, however, the city attempted to foster a street vendor organization, civil servants were still involved, and the city still officially managed the GD market. Public management entailed more restrictive regulations. The major reason the city government could not provide strong incentives for the wet-goods GR vendors to stay on the second floor was that the law did not allow the city government to do so. The law required the city government to treat every market tenant equally—that is, to treat all market tenants literally in the same way. The Public Market Management Law (PMML) requires that all market booths “managed by the city government” should be rent controlled; a lottery should be used to ensure all market booth locations are equitably assigned; every household should acquire no more than one market booth; the tenant should own and operate his or her booth; and the tenant should not transfer (or sublease) the booth to another person, except for his or her family members.

Therefore, the major incentive strategy for convincing the strongest vendors to relocate to an upper floor in the ZL market case was unavailable in this case. Even though the city government knew that enticing the wet-goods GR vendors to stay on the second floor was necessary for the financial stability of the GD market, the city government, handicapped by the PMML, was not able to offer any benefits to compensate the risks and uncertainty the wet-goods GR vendors might face. Also, because of the PMML, the wet-goods GR vendors were not able to capitalize on their first-mover advantage. They could not select prime locations for themselves, their rent per square foot was not discounted compared with the late-movers' rent, they received no cash inducement from the city government, and they could not invest in spare market booths to anticipate the possibility of a future sublease income stream.

Furthermore, because civil servants had to obey the system of rules and follow procedural routines to carry out their duties, the management of the GD public market could sometimes become very inflexible. From time to time, the rigid bureaucratic process made the civil servants unable to respond to the sudden shifts in the environment, and it even restricted the civil servants from solving the problem efficiently and effectively.

Discussion

The city government used similar relocation strategies in both markets: (1) in situ relocation, (2) user participatory design, (3) two-story markets, (4) modern building facilities, and (5) working through a street vendor organization.

The two major differences between these two cases are (1) scale—the ZL market has 250 booths, whereas the GD market has only 112 booths, and (2) institutional capacity—a vendor organization managed the ZL market, whereas the municipality managed the GD market.

This section discusses why, even though the ZL market strategies were applied to the GL market, the success of the GD market has remained elusive. It also examines what can be learned from these two cases that will contribute to a better understanding of the crucial role that street vendor organizations play in the street vendor relocation process.

The Crucial Role of a Robust Street Vendor Organization

A public market can be thought of as a collectively owned resource system, and the market booth is thought of as the unit that each market vendor appropriates from the system. Because the market is jointly provided, maintained, and used by the market vendors, positive externalities can be realized through cooperation, such as higher customer foot traffic and better shopping environments. Enjoying the higher individual net benefits from joint cooperation requires an institution that can effectively regulate the costs and benefits of each of the members. If the institution either does not adequately disperse the benefit/cost ratios or tolerates free riders, however, the common goods will devolve into a suboptimal and dysfunctional arrangement and eventually collapse (Ostrom, 1990).

Many potential risks and uncertainties exist, however, for the first-mover street vendors into a collectively managed resource of a new public market. Even though a cooperative strategy of moving into the market together maximizes the benefits for all vendors, a prisoner's dilemma may arise

in which every street vendor's dominant strategy is to be a late mover. In the GD case, the leaders of the group went even further to alter the rules for their personal benefit. Credible commitments and strong enforcement of transparent governance rules are two of the main ways to overcome the prisoner's dilemma. This article shows that solving this synergistic problem involves the creation of an institutional arrangement so the sets of working rules regulating each street vendor's behavior can be clearly defined, effectively enforced, and mutually monitored.

Scale and Inclusivity

The market generally needs to reach a certain scale so it can offer the necessary diverse merchandise mix to retain or expand its customer base. As the size of the market becomes bigger, so does the difficulty of arranging synchronized collective actions among street vendors. What is more, in the case of the ZL market, the diverse merchandise mix is not created only by the HSVU members (that is, the anchor tenants and the ancillary tenants)—the breadth and depth of the products of the ZL market is, in fact, created also by cooperating with many non-HSVU vendors (that is, the informal subtenants). Working with these “outsiders” makes the coordination work of the ZL market even more complex and intricate.

HSVU leaders, however, were able to perceive the potential values that those outsiders could add to the ZL market and devised a complex property-right system to realize them. An institutional approach that conceives a set of rules determining what actions are required, forbidden, or permitted is therefore essential in solving the tricky problem of coordinating collective actions between the insiders and the outsiders during the ZL market relocation process.

Collective Action and Enforcing the Rules of the Game

Through market zoning and settling the anchor tenants on the second floor, HSVU was able to convince market tenants to trade off the short-term personal interest (that is, grabbing the booths on the first floor) for the higher future economic return (that is, enjoying the higher property value of their market booths). By creating strong customer drawing power on both the first and second floors of the market, HSVU was able to ameliorate its members' anxiety and help them gain a more accurate understanding of what to expect from the market. The HSVU leaders followed these new plans by taking second floor booths, while also being compensated by the ability to buy more booths. Therefore, the vendor members can expect all other vendors to follow the zoning scheme accordingly and adopt adherence to the new order.

In the ZL public market, the regular meetings of the opinion leaders of the street vendors serve as a forum for face-to-face discussion of collective problems and potential joint strategies; therefore, all decisions of the street vendor relocation process are made collectively with every player knowing what the other players will be doing. Even though the forum per se may not change street vendors' dominant strategy of maximizing one's self-interest, the forum helps communicate the rules of the game.

Furthermore, because the information about compliance rates is available from the regular face-to-face meetings with street vendor leaders, street vendors can acquire the information needed to formulate their future strategic decisions. When they know that more affected street vendors agree

to comply with the market zoning code, they are more likely to make the same commitment and act accordingly. If no market vendor is found breaking the market zoning code, it is then reasonable for each market vendor to keep complying with the rule.

The Implications of Having Strong Street Vendor Organizations

ZL public market's success can be attributed to its unique booth-leasing strategies and location assignment rules. These rules followed the original socioeconomic structure of the old market—prime locations were reserved for senior street vendors with the strongest customer-drawing power; marketable property rights for booths were developed so the booths could be subleased or resold, hedging the investments of all vendors; and daily booth rentals were retained for floating street vendors to test new markets.

By recognizing and incorporating the existing activities of street vendor organizations, the government is able to make policies that are more resonant with the local conditions and that are more likely to succeed. In return, after the street vendor organization gets the government's *de facto* recognition, it can make and enforce the rules itself. The power dynamics between the government and the governed has morphed with greater autonomy and governing power.

Political Capital

In some circumstances, the change in power dynamic is so great that the street vendor organization gains even more bargaining power than the government. For instance, when the city government first announced the ZL public market concession bid in 1997, HSVU leaders thought the price of the concession fee was unacceptably high; therefore, they refused to bid. Not until the city government voluntarily lowered the concession fee twice (to 20,000 USD per year) and announced the bid for the third time were HSVU leaders willing to bid on the concession contract. The reason HSVU had the audacity to force the city government to lower the concession fee was that, during that time, no other entity had the ability to relocate the ZL street vendors into the ZL public market. Lacking competition, HSVU had the ability to set its own price.

In other circumstances, when the members of the street vendor organization reach a certain number, the organization leaders wielded political influence over the government civil servants. Again, in the case of HSVU, which had around 1,200 members by the end of 2011 when combining the vendors' friends and relatives, they comprise a politically significant voting bloc that is strongly motivated to protect HSVU members' rights and promote their interests. In other words, at this size, HSVU is no longer merely a group of street vendors on the sidewalks. It has become an advocacy group that carries strong political clout in the street vendor policy decisionmaking process.

Capitalizing on the Street Vendor Organizations' Control of Public Space

A strong street vendor organization provides vendor leaders with an instrument to facilitate engagement in higher value-added "commercial property development" activities rather than just laborious, cost-based street vending. For example, in the first case study of the ZL public market,

some HSVU leaders (that is, anchor tenants) are in the unique positions of “landlord” and therefore are able to receive extra market booth sublease income that is, in fact, more financially rewarding than earnings from running their own vending businesses. In some cases, HSVU leaders can afford to live solely on this alternative source of income.

Furthermore, HSVU leaders not affiliated with the ZL public market spend time and energy seeking underused urban public spaces that have the economic potential to become SSVAs. Such spaces include plazas, parks, sidewalks, and empty market halls in the downtown area, which, according to the urban zoning code, can be converted into SSVAs at night, on the weekends, and in other situations.

After these HSVU leaders gain the use right to such an urban space, they will divide it into lots and establish a system for respecting each stakeholder’s property rights. Next, they determine booth layout and assignment plans, rental/sublease schemes, and other programmatic and formal elements for the space. The city government generally is acquiescent of the property-right system that HSVU leaders devise. Like the ZL public market development process, conflicts of interest are typical, but city government officials generally prefer not to know (or pretend not to know). After HSVU leaders manage to change an underused urban public space into a successful SSVA, such as a night market, or a holiday open-air market, the real market value of the land will typically increase to several times what it was when HSVU leaders first leased the land from the city government.

In the ZL public market’s case, because the concession fee the HSVU leaders paid to the city government was so low during the first 9-year concession period, their profits were very high. Some other street vendor leaders who did not belong to HSVU, or who were pessimistic about the prospects of the ZL public market at the beginning, later became jealous of the huge profits the HSVU leaders possessed and aspired to share a piece of the pie. Some of these street vendor leaders managed to garner enough political and social support to unite as a second big street vendor union, called Night Market Vendor Union (NMVU), to compete with HSVU.

Formalizing the Informal

Although large street vendor organizations are able to gain more political influence and, with that, additional legal protection and formality (such as a stable business environment free from police harassment and a lower risk of capital confiscation), this condition also inevitably attracts more regulatory attention. Therefore, for a large street vendor organization, the goals of gaining more legal protection and evading authoritative supervision are sometimes incompatible with each other. To avoid any external monitoring, a street vendor organization has to stay small and invisible, which will restrict it from garnering strong political influence.

An organization’s size not only makes it more noticeable to regulatory officials, but it also makes it an easy target for the outside entities (such as other street vendor organizations and community groups) that may use existing regulatory norms to weaken the larger organization’s competitive advantage. As long as a street vendor organization keeps growing and gaining more political influence, it may have to begin to formalize in some measure.

An example of this formalization happened during the first 9-year concession period of the ZL public market. Even though the HSVU's dominant position gave its leaders the ability to bargain down the concession fee with the city government, the high-profit margin on the concession contract attracted the attention of Taiwan's Internal Revenue Service (TIRS), a central government agency. By conducting a rental survey to assess the "rental property market" in the ZL public market, TIRS agents were able to assess HSVU's income and tax liability and then required HSVU to pay its fair share of the tax. In short, once the magnitude of a robust street vendor organization (that is, an informal social institution) has reached certain economies of scale, it may make more sense for it to become formal to protect its capital investment and resources.

Collusion

Because the allocation of urban public spaces (such as the ZL public market and the special street vending zones) to street vendor organizations is generally sanctioned by the state, street vendor leaders will find it necessary to create collusive relationships with the agents of the state to maintain their organizations' dominant positions in the city.

By way of illustration, even being the biggest street vendor organization in the city, HSVU still needs to win the bidding war to defend (or expand) its urban territories. If every entity bids on a level playing field, however, HSVU's chances of outbidding others cannot be guaranteed every time. Because the stakes are high, the two biggest street vendor organizations in Hsinchu City (that is, HSVU and NMVU) both sponsor their own "clients" in the city hall. By doing so, both organizations' leaders are able to check on each other to ensure they are not being taken advantage of.

In one rare instance, however, when the financial risk of developing an underused urban public space was so large and the potential return on investment was so immense, both the HSVU and NMVU leaders decided to share the pie together. They worked together to ensure that the bidding result unfolded as originally planned. Their aim was to acquire the usufruct right of a very big lot in the downtown area and then subdivide the benefits among themselves. In this scenario, the HSVU and NMVU leaders were able to undercut the administrative authority of the city government and reconfigure the political and economic structure of Hsinchu City. The urban territory battle takes place not only on the sidewalk but also inside city hall.

Conclusion

This article points out the critical functions a street vendor organization can play during the street vendor relocation process. We explored this issue by comparing two street vendor relocation cases in the same district in Hsinchu City, Taiwan. In the first case, ZL public market, was successfully relocated by a robust street vendor organization; in the second case, the GD public market relocation failed when the city government tried to foster a street vendor organization, but the process devolved into a dysfunctional state.

At first blush, we might think the problem of relocating street vendors into an enclosed public market is a one-person static game—each affected street vendor decides for himself or herself whether to move into the market, filling one empty market booth at one time, one by one, until all

booths in the market are filled. This article points out, however, that the street vendor relocation process is, in fact, a multiplayer dynamic game. A robust street vendor organization plays a crucial role in solving the street-vending relocation puzzle, by providing a governance institution that can better convince its members to conform to the public market plan. In addition, we found that, although spaces were not distributed evenly, they were distributed to the stronger businesses while still allowing for inclusivity of newer entrepreneurs.

The robustness of a street vendor organization affects street vendors' incentives in such a way that they may be more willing to commit themselves to acting together and contributing to the success of the street-vending relocation process. It is a social network that bonds street vendors together and bridges diverse interests, with its own social norms and etiquette. It wields great influence on street vendors' decisions about whether to move into the new enclosed public market and, therefore, can make or break the relocation process.

We also conclude, however, by discussing the strong political influence street vendor organization leaders may possess. Even though the city government may attempt to control and regulate street vendors with the help of the street vendor organization leaders, this approach is a double-edged sword. The recognition from the city government enables street vendor leaders to strengthen their organization's position, expand their territory, and attract more street vendor members; with that, street vendor leaders are able to accumulate more political influence.

After gaining sufficient political clout, street vendor leaders will wield substantial influence over not only their own members but also the same city government that sanctions them in the first place. As a consequence, they can use their political connections to bypass lower-ranking officers and negotiate directly with high-ranking officers and politicians, effectively fostering a patron-client relationship that undermines the sovereignty of the city.

The future of street vendor relocation policies therefore should be designed in such a way that the city government sets the principal rules and the vendor organization implements and monitors these rules. This organization-oriented approach may represent an alternative way to solve the relocation problems; however, the system of checks and balances should also be carefully designed. Even though the city government may need to rely on street vendor leaders' help to facilitate the relocation process, these leaders' power also needs to have checks for the public interest.

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Authors

Chia Yang Weng is head of the Urban Regeneration Group in the Department of Urban Development, Hsinchu City Government.

Annette M. Kim is an associate professor and Director of the Spatial Analysis Lab, Sol Price School of Public Policy, University of Southern California.

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Return to the Streets

John Taylor
Yayasan Kota Kita

Lily Song
University College London

Abstract

In recent years, several Indonesian cities have relocated street vendors through engagement and participation and with limited confrontation, in turn reducing the volume of itinerant vendors, carving out better work and business environments, and improving public spaces. Despite such celebrated successes, however, many vendors have returned to the streets over time for reasons that remain little examined and understood. Undertaking a comparative case study of three Indonesian cities hailed for recent street vendor relocation policies, this article investigates the potential factors and conditions underlying the return of informal vendors after “successful” relocation and upgrading policies and distills lessons for policy and planning improvements. It finds that vendors return to the streets because relocation efforts fail to look beyond aesthetic improvements, relocation processes fail to prepare vendors for the competitiveness of the free market, and longer-term relocation planning and management fail to consider the emerging needs of vendors. In turn, the discussion of policy and planning implications focuses on mechanisms for enhancing the sustainability of relocation programs and on economic empowerment of the urban poor and their rights to urban space, accessibility, and mobility.

Introduction

Informal vendors have remained a longstanding feature of Indonesian street life, their presence tending to increase during times of economic stagnation and hardship (Dick, 2002; Peters, 2013; Vickers, 2013). With forcible removal prevailing as the official response to the vendors’ presence, distrust, simmering tensions, and violent conflict between vendors, police, and city governments have often followed. In recent years, local governments have entered into dialogue and negotiation with vendors in efforts to transfer them off the streets and into purpose-built public markets. Many such efforts have been successful in removing vendors from the streets in a conflict-free manner through engagement and participation and with limited confrontation, in turn reducing the volume

of itinerant vendors, carving out better work and business environments, and improving public spaces. Such signs indicate that Indonesian local governments are learning to better engage with the informal sector and provide solutions to longstanding issues of public space and economic empowerment.

Despite such celebrated successes, however, many vendors have returned to the streets over time to revive public concern, controversy, and debate at the nexus of urban informality, public space, and rights to the city. While “best practices” have received considerable scholarly and popular attention, the questions of why informal vendors return to the streets and how urban policies and planning might produce more enduring impact remain less examined and little understood. Undertaking a comparative case study of three Indonesian cities hailed for recent street vendor relocation policies, this article investigates the potential factors and conditions underlying the return of informal vendors after “successful” relocation and upgrading policies. It additionally explores mechanisms for enhancing the sustainability of relocation programs and also their implications for economic empowerment of the urban poor.

We summarize our findings on why relocated vendors return to the streets as follows.

1. *Relocation efforts fail to look beyond aesthetic approaches.* Many street vendor-related policies represent aesthetic approaches to relocation that deliver improvements in the visible quality of public spaces, but less thought has been given to physical functionality and locational factors, key concerns of vendors. In the absence of effective site plans and designs, including infrastructural elements integrating the market with its urban surroundings, vendors are more inclined to return to the streets.
2. *Relocation processes fail to prepare vendors for the competitiveness of the “free” market.* The formalized free market environment of a public market and extension of property rights to street vendors can unwittingly hinder rather than advance their economic empowerment. Many vendors are unprepared and incapable of competing in fixed purpose-built facilities alongside vendors possessing more business experience, greater financial resources, or unfair locational advantages and also those vendors skirting regulation. In such cases, economic empowerment requires more interventionist policies on behalf of vendors to protect them from unfair competition and help them adapt to, and find niches within, the market.
3. *Longer-term relocation planning and management fail to consider the emerging needs of vendors.* Although governments have focused on ensuring the relocation of street vendors through a process of negotiation and often make significant concessions, their role is by no means over after the vendors have been installed in the market facilities. Policy maintenance and enforcement following relocation and also provision of training and support around financial literacy, management skills, and other capacities are additionally needed for vendors to remain in the markets and thrive. That many of these requisites lie outside the standard responsibilities and repertoires of government indicates a support or mediating role for local nongovernmental organizations (NGOs), financial institutions, trade or professional associations, and community-based organizations (CBOs).

In sum, the findings help to refocus the attention of policies that support vendors from short-term solutions aimed at managing public space toward considerations of economic empowerment of the urban poor and their rights to urban space, accessibility, and mobility. In the next section, we review an emerging literature regarding vendor relocation. In the following section, we provide an overview of the research design and methodology. Then we present a description of each case study and findings from the study before concluding with a discussion of policy and planning implications along with future research questions and data collection.

Literature Review

Our work builds on an emerging literature that rejects a long-held view in writings about informality; that is, that the relationship between informality, as imbued and practiced by the urban poor, and the state should be viewed generally in principally oppositional terms. We adopt Roy's critical policy epistemology of informality as a lens to analyze the shortcomings of street vendor relocation policies (Roy, 2015, 2014). Interrogating urban policies and planning initiatives addressing urban poverty and informality in the global south, Roy identified the emphasis on urban upgrading strategies whereby spatial designs and redevelopment overwhelm consideration of underlying social, political, and economic drivers and also upgraded livelihoods, rights, and political participation as a key problem (Roy, 2005, 2004). Roy additionally critiques market-based approaches to poverty alleviation, relying on the likes of land title and financial credit extension that unwittingly trigger conflicts over resources and pose added risks and burdens on already economically vulnerable groups. Finally, warning of formalization processes that deepen inequality by giving the upper and middle ranks of low-income communities advantages that spur gentrification and displacement at the neighborhood or urban level, she notes the potential utility of regulatory exceptions and regularity exceptions, which both expand tenure and use value claims in cities through incremental improvements. The former is exemplified by moratoria on standards and codes and the latter by forestalled payments.

Actually addressing the distinctive planning challenges and paradoxes associated with street vendor relocation, however, additionally requires imagination and creativity, albeit one grounded in practical experience and deep contextual understanding. Here, the study builds on Watson's notion of the interface between "conflicting rationalities" between what she termed "techno-managerial" and "marketised" systems of planning and development and survival efforts on the part of the poor and marginalized as a space of open-ended and ongoing political struggles carrying unanticipated and unintended positive and negative consequences (Watson, 2009). Rejecting a single characterization of power—it is neither one directional nor totalizing, not exclusively negative or repressive—Watson highlights instances in which actors in the informal sector have begun to develop practices that interrelate more closely with formal urban planning and development apparatuses in expressions of "positive hybridity" that exercise power and deliver gains on a wider and more inclusive basis. As many vendors nonetheless return to the streets over time, the framework's longer term, flexible, open-ended perspective brings into clear relief the importance of attending to the extended trajectories and impacts of such policies beyond their immediate successes, particularly regarding the various stakeholders.

Research Design and Methodology

The research was designed as a comparative case study with embedded units of analysis. The three Indonesian cities of Solo, Yogyakarta, and Jakarta were chosen as focal sites because each had received wide recognition by the national popular press for having undertaken broad-based, popular, and presumably successful campaigns to remove street vendors from public spaces under previous mayors. They also stand out because the approach adopted in all three cases contrasts with more widespread practices in Indonesian cities of employing physical force and coercion. On further examination several years later, however, the stories had evolved, with many of the vendors abandoning the public markets that they had been assigned to and returning to the streets. To better understand the potential factors and conditions underlying the return of informal vendors after “successful” relocation and upgrading policies, the study focused on one or two of the most widely recognized market relocation sites in each city—Solo’s Pasar Notoharjo and Pasar Panggunrejo, Yogyakarta’s Pasar Pakuncen, and Jakarta’s Pasar Tanah Abang Blok G and Pasar Gembrong Cipinang Besar—with varying fates regarding relocation policies. In short, the five street vendor relocation sites and processes were chosen because they were the most well-known cases across the three cities and were frequently cited by street traders during the exploratory phase of the comparative case study.

Researchers conducted indepth interviews with 60 current and former vendors, 20 from each city, between May and June 2015. These vendors included those who had been involved in the relocation processes and decided to remain in the new facilities and an equal proportion of those who had since left those facilities to return to the streets. Varying the respondent sample as such helped illuminate at the individual level how certain factors and mechanisms helped or hindered vendor relocation and resettlement. Researchers learned about the whereabouts of the street vendors from the vendors who had stayed. Vendors who left the new facilities typically returned to their original locations, but some also had moved to informal street markets, often night markets, such as Pasar Senthir in Yogyakarta.¹ Interview questions were aimed at understanding the background and experiences of vendors. For example, vendors answered questions about their involvement in and perspectives on street vendor relocation policies, their reasons for and experiences of remaining in or abandoning the market facilities, and their thoughts and recommendations on how the city might better support their businesses and ensure that similar vendor relocation and upgrading policies are more successful in the future.

The research was carried out by a team of five researchers from the local Indonesian NGO Yayasan Kota Kita, whose mission is to support the empowerment and inclusion of citizens in decisionmaking and planning of their communities and cities. The interviews were conducted in the Bahasa Indonesia language and lasted about 1/2 hour each. Because of the precariousness and economic vulnerability of vendors on the streets, some respondents were reluctant to be seen giving interviews. For the most part, however, respondents were willing to respond and give insights on their relocation experiences and circumstances. Nonetheless, the research team refrained from audio- or video-recording the interviews to uphold vendor confidentiality. Following the interviews, the team of Kota Kita researchers analyzed the notes and transcriptions before distilling findings in collaboration with the authors.

¹ This market is essentially an empty parking lot that street vendors are permitted to occupy at night.

Description of Cases

This section presents an overview of our five case study sites, namely Solo's Pasar Notoharjo and Pasar Panggungrejo, Yogyakarta's Pasar Pakuncen, and Jakarta's Pasar Tanah Abang Blok G and Pasar Gembrong Cipinang Besar.

Pasar Notoharjo, Solo

As informal trading grew dramatically in the aftermath of the Asian Financial Crisis of 1997, many unemployed workers in Solo congregated as vendors in Banjarsari Park, a public space in the middle of the city. At its peak, the park was bursting with 1,000 vendors, leading to complaints by nearby residents about noise, trash, and general lawlessness and precipitating into the most visible public agenda issue of the city. Repeated attempts by Mayor Slamet Suryanto to force the vendors away, largely through the violent action of the police, were unsuccessful.

In 2005, a new mayor, Joko Widodo, known to the people of Indonesia as "Jokowi," tried a fresh approach of transitioning informal vendors into legal status, installing them in purpose-built markets, and taking back public spaces. Previously an entrepreneur furniture salesman, the mayor (now President of Indonesia) invited the street traders and other stakeholders of Banjarsari Park to more than 50 open-dialogue meetings. The rapport and personal relationship that he built were instrumental in convincing them to support his relocation plan, which was implemented within a year's time. The negotiations included significant concessions from the government side, including a new purpose-built market, stall ownership certificates, and access to business loans to support their businesses. The government also responded to vendors' concerns that the relocation site was too remote and disconnected from the city by surfacing roads, installing signage, designing new bus routes to improve access, and promoting the new market through the media.

Marked by a parade of the vendors through the streets to the new location called Pasar Notoharjo, the ceremonial fanfare and celebration helped to attract the attention of the public and raise the credibility of the move. Still, during the first year, many traders complained that they had lost their customers and struggled to make ends meet as a result of the new location. Some sold their stalls and returned to the streets but eventually returned when the market started to attract more customers after the first year. In 2012, the city undertook a second round of vendor relocations to Pasar Notoharjo, this time from Jl. Veteran, a main road in central Solo. Again, vendors were relocated to a purpose-built facility adjacent to Pasar Notoharjo and received stall titles; this time, however, the relocation involved less engagement and participatory planning and less fanfare and spectacle. Moreover, the market was located off the main road and separated from the 2007 relocation site by a wall, such that relocated vendors struggled to attract new clients.

Pasar Panggungrejo, Solo

In the eastern part of Solo, near the Sebelas Maret University campus, a main road that runs alongside the campus featured a high density (around 160) of small-scale traders who had congregated there since the late 1990s. As the city prepared for the construction of a strategic urban project, the Solo Techno Park, Mayor Jokowi sought to clear the vendors from the north side of the road.

Paguyuban Pedagang Sekitar Kampus (PPSK), an association of traders established in 2000, strongly opposed the proposed plan, contesting the proposed location of the market and seeking concessions such as stall titles from the government. The density of existing land uses in the campus area, however, limited the availability of potential sites beyond that proposed by the city, which sat behind a government building, out of view from the main road. Moreover, because the street vendors faced negative public opinion and pressure from the university, the PPSK conceded.

Between January 2008 and December 2009, 201 traders were relocated to the newly constructed Pasar Panggungrejo; just a few years later, almost *all* the traders had abandoned the market for the streets. In particular, those who sold food, mobile phone credit, and spare auto parts—drawing from students as their primary client base and requiring convenient access points—were the first to go. Despite gaining stall certificates, vendors complained that they were forced into the move, with no governmental promotion of the market, technical assistance, or access to loans. Many thought that plying their trade back on the streets would give them easier access to clients.

Pasar Pakuncen, Jogjakarta

In Jogjakarta, Mangkubumi Street, Alun Alun Kidul, and Asem Gede Street grew into key sites of informal trading from the late 1990s, eventually raising public concern over circulation issues. In 2007, Mayor Herry Zudianto (2001–2006; 2006–2011), influenced by Mayor Jokowi's success in Solo, announced that street vendors would be relocated from these areas to purpose-built markets. Although many vendors agreed to the move, others resisted, staging street demonstrations and protests. A progressive, reform-minded mayor, Zudianto asked the vendors to organize themselves and for a group of representatives to serve as a bridge between the vendors and the city government. In return for relocation, the vendors asked for stall ownership certificates, financial subsidies, and public promotion of the site as well as that the new market site be the only secondhand goods market in the city. Agreeing to these conditions, the government relocated nearly 700 vendors to the purpose-built market, Pasar Pakuncen, near the center of the city, in November 2007.

Because business was slow at the outset and many of the vendors started to feel desperate, the government allayed their fears by offering lunch money for nearly 2 months while market patronage picked up. Meanwhile, many vendors abandoned the site for the streets, believing that they would be better off if they were mobile. During this period, the market shed its secondhand specialization because more of the new vendors purveyed new goods in the abandoned stalls, bending the rules and regulations to create storage space and expand their stalls. Because the new vendors tended to be more experienced and better-resourced entrepreneurs, many of the original street vendors felt hard pressed to compete, particularly with their secondhand goods. Within a few years, there was an exodus of vendors who thought they had not only lost clients during the relocation but also thought they were increasingly losing opportunities, and “face,” to new vendors with whom they could not compete.

In 2011, Mayor Zudianto left office, and the city dropped the prior commitment to preserving Pasar Pakuncen as a specialized location for vendors of secondhand goods. The new administration saw an opportunity in having several secondhand markets, further decreasing the locational advantage of the original relocated vendors. At the time of this writing, large numbers of the 697

vendors had moved back on the streets, replaced in Pasar Pakuncen by entrepreneurs from all over Indonesia. Pasar Pakuncen is now thriving, but many of the original vendors are to be found at places like the Pasar Senthir night market or on streets across the city.

Pasar Tanah Abang Blok G, Jakarta

As the capital and largest city of Indonesia, Jakarta historically has drawn people from all over the country who are seeking opportunities and employment, often as street vendors. Successive governors previously attempted vendor relocation efforts with little success but, in 2013, Governor Joko Widodo, former Mayor of Solo, decided to try his winning approach on Pasar Tanah Abang, a central Jakarta textile market. Among the largest markets in Southeast Asia, Tanah Abang is actually a sprawling complex of several markets including Blok A, Blok B, Blok F, and Blok G, together housing nearly 20,000 kiosks, with estimated daily sales revenues between 20 and 30 million U.S. dollars. Its central location and high sales turnover attracted vendors to ply their trades within its walls but, more frequently, just outside. For Jokowi, installing public order and improving circulation would not only relieve other parts of the city but also set an important precedent for his governorship.

The government sought to relocate vendors from Jl. Kebon Jati, the main road that runs north-south through the Pasar Tanah Abang area, now impossible for vehicles to pass through, to a nearby air-conditioned, purpose-built, indoor market called Blok G. Many vendors found the offer attractive, given the scarcity of such designated spaces and challenge of playing “cat and mouse” with the authorities, but they remained concerned about the site’s constrained internal circulation and customer access to upper floors. The government promised to improve pedestrian circulation by building a purpose-built skybridge, directly connecting Blok G to the train station, and installing an escalator to the third floor, where most vendors would locate. The civil police also warned that they would seize the goods of noncompliant vendors. Otherwise, the relocation process moved very quickly, with very little time or room for negotiations or even consultation and with a notable absence of a vendor association to facilitate dialogue. Within 3 months of Governor Jokowi’s inauguration, the vendors received notice of the pending relocation and were relocated 6 months later, in September 2013.

The relocation foundered almost immediately because of inadequate improvements within Pasar Tanah Abang and in the surrounding streets. The promised skybridge and improved circulation improvements failed to materialize, leaving the Blok G vendors in inaccessible locations with few customers and burdensome high monthly rents. Meanwhile, efforts to regulate the vendors *outside* Pasar Tanah Abang focused on the main road, Jl. Kebon Jati, to the exclusion of the side streets. Because these areas offered more accessibility than the higher floors of Blok G, they became increasingly crowded with a growing volume of vendors, who additionally benefited from the protection of powerful local organized crime groups. Unable to compete, many of the relocated vendors returned to the streets within a year’s time.

Pasar Gembrong Cipinang Besar, Jakarta

The case of Pasar Gembrong Cipinang Besar represents a repeat of the Pasar Tanah Abang Blok G case previously described, because the Jokowi government rushed to relocate street vendors

in the capital without much stakeholder engagement or participatory planning. Over 25 years, Pasar Gembrong Cipinang Besar had grown as a long row of stalls along Jl. Basuki Rahmat in East Jakarta, with street vendors, mostly specializing in toys, numbering 212 by the time of the relocation efforts.

In July 2013, the authorities approached the vendors to register them before shortly serving them notice of relocation plans to Pasar Gembrong Cipinang Besar. Located about 1/2 kilometer from their current location, the new facilities were considerably better than the vendors' makeshift street stalls, but many complained that the location was too far from existing customers and vendors' homes, thereby introducing new daily transportation costs.

Despite opposition by most vendors, the relocation took place in September 2013, and, as it turned out, the market lacked adequate parking and had poor stall arrangements and site design. Because relocated vendors experienced customer loss and income decline, almost all moved back to their original location on Jl. Basuki Rahmat. When the civil police subsequently sought to move them back into the market and issue a regulation, the street vendors organized an association to continue to fight the move.

Research Findings

This section summarizes our research findings regarding why informal vendors from the five market sites returned to the streets after "successful" relocation and upgrading efforts and how policy and planning interventions might prevent such outcomes in the future.

Relocation Efforts Failed To Look Beyond Aesthetic Approaches

Even when government relocations took into account vendors' desires to relocate near the public spaces where they formerly operated, they often ironically lacked integration with the surrounding urban fabric and major circulation corridors, resulting in limited public access and patronage. For example, in Jakarta's Pasar Tanah Abang Blok G, vendors were moved from the readily accessible street level to the third floor of an indoor facility, with failed promises of a connecting bridge that would help steer the public in their direction and escalators that would help customers reach the higher floors. Hasan, one of the leaders of the street vendor association, said, "Look, this one-way road is ridiculous; people will never stop in front of this market; there should be a good management of circulation here." Ida, a vendor who abandoned Tanah Abang for the streets, said, "The government promised to provide good infrastructure before relocating us, but never fully completed it." Likewise Jakarta's Pasar Gembrong Cipinang Besar repelled customers with inadequate parking, and Solo's Pasar Panggungrejo was imperceptible from the road because of a large setback. Eko, a trader who left Panggungrejo for the streets, said—

The market is not accessible for students... I only had a limited number of regular customers who knew me from my previous location. When they graduated, it was very difficult to find new customers due to the nonstrategic location. So I had to move out.

Spatial considerations, however, also go beyond the market locations to include locational arrangements within markets and other interior features of facilities. In Pasar Panggungrejo, Pasar

Notoharjo, and Pasar Tanah Abang Blok G, the poor circulation, limited access of upper levels, and cramped corridors were noted as inhibiting customer traffic and patronage. Locational considerations are particularly important for certain types of purveyed goods and services, such as mobile phone credit, fast food, and auto parts and repairs, which require high levels and easy modes of accessibility for clients on the go. Wiwin, a former Pasar Panggungrejo trader who now operates a stall on Jalan Ki Hajar Dewantoro, elaborated on this issue.

Location is really key for those of us who sell mobile phone credit. Our main targets are people passing in the street. People will not park their motorbike and go inside the market just to find phone credit. Inside the market, from 9 a.m. to 5 p.m., we can get 10 transactions, which is good but, many times, it's worse than that. Outside the market, I can get 50 transactions on average.

Purman, a Banjarsari Park vendor who abandoned the Pasar Notoharjo relocation site for a nearby parking area, said, "I got a second floor stall, which was suitable for garments but not suitable for me as a secondhand goods vendor. All secondhand goods should be located on the first floor because it is hard to bring heavier goods up the stairs." Given the limited amount of stall space on the street level or close to the entrance, relative to other parts of the market, such insights indicate a need for strategic spatial planning and management within the market spaces to support various businesses. Yogyakarta's Pasar Pakuncen, on the other hand, has good spatial distribution and grouping of goods within the market, which helps orient customers; auto parts are positioned on the ground floor, and mobile phones and electronics are on the second floor.

In other cases, vendors complained about the dimensions of the assigned stalls. Among vendors who had abandoned Pasar Pakuncen, some faulted newcomer vendors for progressively upgrading their stalls to improve storage capacity, display areas, and lighting as to claim unfair competitive advantages and change the nature of the market. Many of the relocated street vendors wanted to *maintain* smaller, more communal stall areas, which favored small-scale merchants, as opposed to larger stalls, which favored larger, better-performing businesses. This finding indicates the importance of designing markets and sales spaces to suit the actual profiles and needs of the relocated vendors to prevent gentrification and displacement.

Another key dilemma noted by vendors who left the markets for the streets was the inability to wait for purpose-built markets to gain public recognition and patronage, given their immediate economic insecurity and need to seek income from one day to the next. In the cases of Yogyakarta's Pakuncen and Solo's Notoharjo, many of the relocated vendors sold their certificates of perpetual stall ownership within the first year of operation. In so doing, other merchants (many of whom were quite successful and not poor) captured the positive externalities of the markets' eventual popularity. The street, in turn, offered traders flexibility to change locations depending on customer location and present competition. Eko, a former Pakuncen trader, said, "We prefer to stay mobile so that we can find a place to sell our goods, a place that is at our level. In the market, we are stuck in one place and the level can rise around us." Thus, for many previously informal vendors, their economic insecurity and resultant inability to absorb the investment costs of being in a fixed location pushes many of them to revert to the more flexible, short-term approach of roaming to capture opportunities throughout the city.

In offering policy and planning recommendations, a number of interviewees underscored the importance of following up the market siting with effective site plans and designs, including infrastructural elements and other accoutrements, such as bridges, signage, and parking spaces, that facilitate public access. As our comparisons show, such approaches and trajectories appeared more likely where vendor relocation and site planning processes prioritized dialogue, negotiation, and a commitment to finding mutual benefits for street vendors and the city. For example, in the Pasar Notoharjo relocation of 2007, Mayor Jokowi heard the vendors' concerns about the site's remoteness from the rest of the city. As a result, his administration extended new bus routes, completed street surfacing, and undertook a promotional campaign to integrate the area with its surroundings and change its reputation. Beyond the construction of the market building, the urban infrastructure improvements and promotional work boosted awareness of the new site, which became popular even beyond the city as a center for auto parts and secondhand goods. The result not only pacified the vendors and instilled their confidence in the move but also enabled a greater number to thrive in the new locations and stay off the streets.

Relocation Processes Failed To Prepare Vendors for the Competitiveness of the “Free” Market

The government issuance of certificates of stall tenure has enabled vendors to access credit from banks and increase their stock, invest in progressive upgrades, and, in some cases, operate different stalls. In the best cases, the savvy business vendors have found niche markets and maintained relationships with long-time clients while attracting new ones to expand their revenues and incomes. Local governments often tout such scenarios as evidence that relocation can support one of their desired effects, which for Solo's Mayor Jokowi was to improve the *ekonomi masyarakat*, or the economic conditions of the poor.

Several interviewees also spoke to the challenge of remaining in their new locations in the face of growing competition, however, especially from vendors possessing more business experience, greater financial resources, and unfair locational advantages and also from those vendors skirting regulations. In Jogjakarta, Mayor Zudianto designated a single marketplace for secondhand goods in a demonstration of firmness (*tegas*) and a pro-poor policy. As policy enforcement lapsed under the new mayor, however, three other public markets transitioned into secondhand markets, undermining the position of the Pasar Pakuncen vendors, who nonetheless grew in number to include purveyors of new items. Pak Sutrisno, a former Pakuncen trader, said—

Pak Herry was strict. The new vendors and products had specific places where they belonged. Now there is less interest in protecting the interest of the poor. Before, there were more antiques, more cheaper goods. Now the market is very busy with new things, new goods, but not with old goods. Now there are different products and new customers.

Rizal, another Pakuncen trader, also remarked on processes of market oversaturation and resulting competition.

The concept of the relocation is good, but then as it grows, new traders come, it is then not suitable for secondhand goods traders anymore. We could not compete with non-secondhand goods traders, especially when they sell similar types of goods. We cannot operate in the same location.

For some vendors, lacking finance know-how and business experience and skills (for example, accounting, marketing, inventory management) further stymied potential benefits of having a certificate and a fixed location in the market. Lia, a Pasar Pakuncen vendor, said—

Those who abandoned Pasar Pakuncen mostly had bad financial management skills. By using their certificates, they accessed bank loans that were too big and then couldn't manage the money—they became trapped in debt. Some of them already had a huge amount of debt before they'd been relocated.

Rizal, a trader from Solo's Panggungrejo market, said, "Many traders have low education levels. Most of us are afraid to borrow money from the bank. We don't really have a clear understanding of how it works and feel insecure about the risk." Thus, low levels of education can put vendors in a situation of financial stress because they lack information and wherewithal.

Aside from the fear of predatory lending (given its prevalence in poor communities), lack of familiarity and access to more formal banking systems along with financial literacy to access loans on favorable terms, even from formal banking institutions, additionally increased the economic vulnerability of vendors. Many commented on feeling trapped in their new positions because competitive concerns led them to obtain loans to enlarge their stock. These loans created significant exposure, because these vendors had little experience in managing business debt. The vendor Purman of Solo's Pasar Notoharjo said, "Immediately after I got the stall from the government, I borrowed money from the bank [with stall as collateral] just to add commodities, but, after a year I didn't have enough revenue, so I abandoned the stall and went back to the street and the bank seized it." Despite possession of a formal certificate and access to bank loans, vendors risk losing everything—including their stall and right to occupy the market—in the absence of other collateral in the failure of loan repayment. While street vending allows flexibility of movement and experimentation with strategic locations enabling better access to customers during difficult times, being tied to single locations preclude such opportunities.

Other respondents accentuated how moving to a new facility with a certificate to operate a stall can unwittingly exacerbate the economic and social vulnerability of the poorest vendors. Some have experienced unexpected hardship, such as a medical condition, forcing them to sell their certificate to access financial resources. Bagus, a vendor from Pasar Pakuncen, was keen on operating a stall and thrilled to receive a certificate, but he was forced to sell it soon after to pay for his father-in-law's surgery following a motorcycle accident. Others referred to similar family emergencies; problems with gambling, alcohol, or irresponsible financial management; and other unexpected or unavoidable shocks as triggering sudden liquidation of assets. The trader Sutrisno and his wife, also from Pakuncen, spoke more generally: "How could poor traders like us resist such temptation of instant money from other traders? We finally sold our stall for big money." As a counter example, Jakarta's Pasar Tanah Abang Blok G relocation included regulations stating that the vendors do not possess ownership of stalls but only the right to occupy them (which they cannot transfer or sell), which protected poor vendors from the seduction of selling. For those not using their allocated stall in 3 months, the government reserved the right to grant it to someone else.

Thus, market mechanisms intended to advance the economic prospects of vendors often unwittingly perpetuate inequality, as better resourced and more able vendors leverage available

opportunities to get further ahead while the poorest vendors get overwhelmed by the competition, shoulder added economic risks and burdens, and ultimately return to the streets. In simple terms, the free market engenders creaming and inequality, thus exacerbating the conditions causing urban informality in the first place. Among potential policy and planning interventions that interviewees discussed, several vendors accentuated the importance of government oversight, whether in regulating new street vending following relocations, illegal business practices and unfair competition within the markets, or the selling of stall ownership certificates, the latter being critical to tempering gentrification and displacement within the markets. Beyond seeking protection from fierce and uneven competition, many interviewees also underscored the importance of adapting to and finding niches within the market. Antok, head of the Pasar Pakuncen traders association, summarized this issue: “There are some reasons people fail or succeed here: level of tenacity, type of commodity, amount of capital, extent of knowledge based on experience and education, and social links or networks.” A fellow Pakuncen vendor, Dul, added, “To win competition, first we should become distinct in the quality of our commodities, service delivery, and price because the competitors are not just those in this site but also the many new street vendors who have not been relocated.” Again, local NGOs, financial institutions, trade or professional associations, and CBOs may play a role in delivering technical assistance along these lines, given they fill the jurisdictions and usual functions of government. Finally, where financial credit access is both a great resource and a liability, interviewed vendors suggested a mediating role for civil society organizations. Nur Rochmad from Solo’s Pasar Notoharjo said, “A cooperative offering soft loans can be really helpful for vendors to access capital and make new investments.”

Long-Term Relocation Planning and Management Failed To Consider the Emerging Needs of Vendors

Our findings indicate that government commitment to vendor outreach, inclusive and continued negotiation, and participatory planning is instrumental to successful vendor relocation from street to market and also to sustaining results beyond the transition phase. In the relocation of street vendors from Solo’s Banjarsari Park to Pasar Notoharjo in 2007, Mayor Jokowi’s deep engagement of vendors through dinner invitations, site visits, and participatory planning processes involving the vendors, their associations, and intermediary NGOs and CBOs was critical to building trust, obtaining mutual concessions, and producing a satisfactory outcome. The second phase of the project in 2012, which lacked such participatory and communicative components, failed, however, because of inadequate support. Likewise, in Jogjakarta, the Pakuncen administration supported newly relocated vendors with lunch money in the initial phase when the market was growing in reputation and popularity and undertook renovations when there was a fire, the result being that vendors remained on site during difficult periods.

Street-to-market transfers have been less successful in cases of inconsistent maintenance and enforcement following relocation. When former sites of relocation are inadequately monitored, the streets often become reoccupied and reclaimed, in turn spurring jealousy and weakening resolve among relocated vendors, not to mention distrust toward city officials. In Jakarta’s Tanah Abang, the relocation of some vendors to Blok G was followed by the reoccupation of vacated spaces by other vendors without regulatory consequence, and in Solo’s Pasar Panggunrejo, the government

relocated one group of traders while allowing others to remain in the streets; in both cases, the result was increased tension among vendor groups and diminished faith in government capacity. A number of Jakarta vendors additionally remarked on policy inconsistency and shifts after regime changes. Within Jogjakarta's Pasar Pakuncen, inconsistent enforcement of stall rules, in part because of corruption, resulted in vendor gentrification and displacement, with newcomers upgrading spaces, increasing their own stock and display areas, and outcompeting original stall occupants to whom the markets were designated. One vendor talked about the unfair competition—

Before, the stalls were low, but people kept building them higher and higher, and so they were competing with people who invested more. They couldn't survive or compete with it; the others felt terrorized (by the building of the cage); this wasn't the original one (70 centimeters high, with a bunker beneath). Now they can store above and below, so much stock. That's not fair for them; it blocks access to buyers. It's the government's fault; the government failed because they couldn't regulate and protect the interest of the vendors. This changed the nature of the market. However, also the market evolved by itself, they recognized this, but the failure was to not regulate the rules of the game.

In Solo's Punggungrejo, weak government monitoring and poor communication between government officials and vendors, along with dispersal of the traders' association, which had mediated the relocation negotiations, similarly resulted in an inhospitable business environment, compelling many vendors to return to the streets.

Some interviewees identified government as directly causing the problem through inconsistency in applying policy and poor coordination across different government departments. The fact that the Market Department typically spearheads vendor relocation processes without engaging other departments, such as Social Welfare, Urban Planning, and Economic Empowerment, results in fragmented policies and plans. Because government departments receive funding only for projects that they develop for themselves, rarely do integrated approaches occur by themselves in the absence of oversight or leadership. Fragmentation is precisely what happened in Jakarta's Pasar Tanah Abang Blok G, as opposed to the integrated approach seen during the first move of vendors from Banjarsari Park to Pasar Notoharjo, where Mayor Jokowi saw that all the relevant government departments attended meetings, developed viable solutions, and contributed in a coordinated manner.

As for policy and planning implications, many vendors recommended augmenting relocation processes in which government merely moves people from one place to another with provision of training and support around financial literacy, management skills, and other capacities to succeed at business in a fixed location, formalized market environment. Rizal, a trader from Jogjakarta's Pasar Pakuncen, said about government assistance—

Assistance from the government is clearly needed to make [vendors] know that there are banks in which they can access loans to improve business. Most of the vendors are afraid to borrow money from banks, just because they don't have a clear understanding on how it works. They feel insecure about the risk.

Speaking in more general terms, Mbah Sukir, a Solo-based trade association leader, said, “One thing that Jokowi forgot about: He uprooted the tree from the soil and replanting it in other land, but he forgot that the tree needs fertilizers. The traders need that fertilizer to make them grow in the market.” While Sukir emphasized the importance of technical assistance and training following deep participatory and collaborative processes of vendor relocation, another Jakarta-based vendor underscored the hazards of regime change, remarking, “Jokowi has abandoned us, becoming the president (after serving as Jakarta’s governor, he won the national presidency); the current government could not continue the project. There should be a followup, assistances to empower the traders.” Reflecting on the potential of self-organization and more sustained engagement by civil society organizations, Aa, a community-based organizer, said, “After relocation, the government should empower the vendor association to protect themselves legally, run soft saving and loan programs, get better leverage, and run mutual help associations to counter adversity.” In the case of Solo’s Pasar Notoharjo, such organizations played an instrumental role in enabling the vendors to address common issues as they arose and responded to the mayor in a coordinated manner, while the city alternatively exploited differences among vendors in Pasar Panggungrejo to weaken their bargaining position.

Policy and Planning Implications

Our study took a more indepth and extended look at “best practices” of street vendor relocation to investigate the potential factors and conditions underlying the vendors’ return to the streets and to distill lessons for improving related local policies and programs. Building on the three sets of findings presented in the previous section, the following discusses implications for policy and planning. Each implication reflects a transition from the prevailing current approach to vendor relocation to a new, more inclusive and context-specific approach.

From Aesthetic Approaches to Pro-Poor and Inclusive Spatial Interventions

Even when government relocation efforts place vendors near the public spaces where they formerly operated, spatial interventions often lack integration with the surrounding urban fabric and major circulation corridors. They may also neglect locational arrangements within markets and other interior features of facilities as to limit public access and patronage and disregard the need for immediate returns and flexibility of movement among the poorest vendors who operate on a survival basis. In simple terms, present vendor relocation policies appear to focus on reclaiming public space from low-income street vendors and placing them in aesthetically pleasing new markets rather than improving their economic prospects and addressing the socioeconomic, political, and spatial disparities underlying urban poverty and informality. By following up vendor relocations with effective site designs and plans, including commerce-enhancing infrastructural elements (for example, marketing campaigns, integrating market sites with major circulation routes, and enhancing pedestrian access), local governments can help upgrade vendors’ livelihoods to ensure vendors remain in the markets long term. In addition, incorporating vendors’ perspectives and preferences on stall location within the markets, in relation to external surroundings, internal circulation corridors, and other vendors offering various products and services, can promote the viability of new facilities.

What is ultimately needed is an explicit commitment to pro-poor and inclusive spatial interventions. In Solo, vendor relocation efforts were part of a larger local campaign of economic empowerment (of the urban poor) and building a people's economy. Pro-poor and inclusive spatial policy and planning would go far beyond convincing street vendors to abandon public spaces for designated marketplaces. It would require attention to vendors' rights to the city, including their connectivity to fellow urban denizens and major transport networks along with their freedom of mobility, albeit tempered to some extent by regulatory agreements prioritizing the public interest, inclusively and progressively defined. If done well, this approach would mitigate current problems, including locational remoteness, inadequate transportation connectivity, and poor commerce-related infrastructure. It would also result in a public that viewed the site positively, which would further enhance its commercial perspective. Moreover, it could support the day-to-day subsistence needs of its low-income vendors in the interim; for instance, by extending "regulatory exceptions" such as rights to roam at designated spaces and times. Within the markets, pro-poor and inclusive processes of strategic spatial planning and management might rethink the current lottery system, which simply guarantees each street vendor a space and imparts a sense of equal treatment through random assignment. Instead space could be reapportioned based on the varying profiles and needs of the different vendors and how they might complement each other to promote the overall success of the new market.

From Market-Centric Approaches to Community-Based Wealth Generation

Relocating street vendors to purpose-built markets and giving them certificates of perpetual stall ownership, while intended to advance the economic prospects of vendors, often has the opposite effect. Exposure to new and more aggressive forms of market competition within fixed spaces can make vendors even more economically vulnerable because they lose their freedom of movement to proactively seek out new customers and find spaces where the competition is manageable; in addition, they become divided among themselves in competitive struggle. Moreover, the provision of stall ownership certificates, which in turn enables access to bank loans, poses added economic risks and burdens in the absence of technical assistance and training. As a consequence, unforeseen circumstances can trigger sudden liquidation of assets, and debt-financed inventory expansion can heighten financial insecurity. Vendors clearly require more support than new facilities, even with a formal certificate, given little experience working in formal conditions and, in some cases, paying taxes and monthly rent. Being poor, they also have generally low levels of education and are often reluctant to take out loans, given the prevalence of predatory lending and disastrous—and, in some cases, violent—consequences of debt in their communities.

On occasions in which market relocation has benefited the poor, they have had regulatory protection from the government, benefited from technical and organizational support, and effectively found niches. Such approaches to market relocation require rethinking the traditional role that governments have played in street vendor management, which has mostly centered on physically relocating vendors from public spaces and streets to purpose-built markets before relinquishing involvement and responsibilities to the free market. Instead, promoting vendor organizing and social, political, and economic empowerment in partnership with civil society groups and organizations would enable vendors themselves to resolve emerging issues and engage with government

planners as needed. When some of the trainings and technical assistance might fall outside the scope of government capacity, NGOs, trade associations, and microcredit financial institutions could step in. For example, these groups might introduce e-commerce, marketing, accounting, inventory management, and other useful knowledge and skills. They could also create flexible, cooperative credit and mutual savings institutions that help vendors manage financial risk and build shared wealth. Meanwhile, government could focus on consistently enforcing rules and regulations to ensure fair competition or improving public accessibility of markets; for instance, through subsidized bus fares or undertaking urban infrastructure improvements that improve circulation and walkability in the market vicinity. Such regulatory persistence helps ensure that the gains of regulatory exceptions remain.

From the Policy Cycle to Adaptive Governance

Policy, as traditionally understood, is undertaken by government, which defines the problem, determines goals, chooses and implements courses of action, and evaluates results, which, in turn, inform future policy. Alternatively, ongoing, adaptive government engagement, complete with inclusive and participatory planning processes involving street vendors along with their associations and intermediary NGOs and CBOs, with provisions for policy learning and innovation, is critical to sustaining results beyond the relocation phase and ensuring the gains of “regulatory exceptions” remain and proliferate. As described in the previous section, poor locational decisions and site plans compromising the viability of some of the markets were more often than not issues that vendors had keenly anticipated and were aware of. Had the vendors been meaningfully consulted and involved in the site planning and design phases, or even in troubleshooting problems as they arose, the problems might have been avoided or ameliorated.

Rather than approaching vendors individually, efforts to facilitate relocation, site planning and design, or even business planning can be maximized by building on existing capacities such as social organization and collective action. These efforts could involve trusted intermediary and boundary organizations. For example, given vendor reluctance to take on loans and go into debt or risk of losing certificates of stall ownership in the face of unforeseen circumstances, collective contractual arrangements and structures of governance might ease some of the fears and risks and also tend toward better outcomes. On site, vendors are more likely to support stall reapportionments that are based on the varying profiles and the needs of the different vendors if mechanisms for shared decisionmaking and gains distribution are in place. Vendors may form a worker cooperative in which each member owns shares, contributes business revenues as a share of total profits, and takes out dividends (perhaps based on a combination of individual and group performance and also number of shares), in turn breaking cycles of day-to-day subsistence because even “regularity exceptions” run out in due time. Moreover, vendors could participate in shared decisionmaking about product and service placement within markets, improvement of common spaces, marketing campaigns to maximize client patronage and total revenues, and proactive engagement of the city to deliver urban infrastructure improvements and other public works and services that enhance the site’s connectivity to the rest of the city and resultant public patronage.

Future Research Questions and Data Collection

In concluding, we offer brief thoughts about future research questions and data collection that might extend our findings and also the state of knowledge about vending. First, a quantitative assessment of street vendor relocation and upgrading policies would contribute greatly to our understanding of these policies and their effects. For instance, one might investigate how different policy approaches affect profits and income among relocated vendors, taxes and fees collected by local governments and other public authorities as a result of vendor relocations into purpose-built markets, or even the cost of insurance for vendors as a way to avoid their having to sell their stalls. Second, research could focus on the extent to which street vendors are “informal.” In many Indonesian cities, local governments often manage to collect taxes and fees from itinerant vendors. At the same time, vendors who sell in purpose-built markets may not pay taxes or requisite fees and lack proper documentation. Thus, the notion of informality in Indonesia is fluid and amorphous. It would be of interest to explore whether informality in other countries is similarly vague. Such research could serve to help clarify the nature of formal/informal boundaries. Finally, connecting street vending research with the literature on shopping mall retail development could inform improvements in stall arrangements and site planning within purpose-built markets. While stall assignments at our case study sites were largely decided based on the lottery system, the reapportionment of spaces based on the complementary products and services of the different vendors could promote the overall success of markets and enhance total revenues.

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Authors

John Taylor is the founder and Director of the local Indonesian nongovernmental organization Yayasan Kota Kita (YKK/Our City Foundation).

Lily Song is a provost fellow in the Department of Science, Technology, Engineering and Public Policy at University College London.

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Fining the Hand That Feeds You: Situational and Violation-Specific Factors Influencing New York City Street Vendor Default in Payment

Kathryn A. Carroll
University of Wisconsin-Madison

Sean Basinski
Urban Justice Center

Alfonso Morales
University of Wisconsin-Madison

Abstract

A large portion of levied street-vending fines in New York City (NYC) historically have gone unpaid. In 2009 alone, the NYC Independent Budget Office estimated street-vending fine enforcement cost more than \$7 million (Turetsky, Vega, and O'Brien, 2010). Rather than generating revenue from the associated \$15 million in written fines, approximately 93 percent of these potential returns went uncollected. While legislative victories in 2013 for street vendors resulted in lower fine levels for some violations, no further policy changes have occurred.

Given the high public cost associated with street-vending fine enforcement, a better understanding of the violation-specific and situational factors that influence default in payment is needed. This article represents a step in that direction from the enforcement perspective. We define violation-specific factors to include ticket attributes, such as whether the cited statute is “crystal clear” or “muddy” in terms of its interpretation. Situational factors include attributes such as the borough location of the proposed transgression.

Using data from more than 25,000 2010 NYC vending citations, we estimate the influence of several factors on the probability of citation nonpayment via a binary logit model and subsequent odds ratios. Our results suggest that more crystal-clear violation statutes and lower fine amounts could help manage public enforcement costs. We conclude that enforcement agencies should take into account both situational and violation-specific factors when ticketing street vendors as a means to both combat the public cost of vending regulation enforcement and improve current policy.

Introduction

Street vending is a phenomenon that has become globally prevalent (Bromley, 2000). In the United States, street merchants have long been an essential part of the economic structure of cities themselves. Vending has been used to enhance food security, alleviate unemployment, and even integrate new immigrants into social and economic life. At the same time, local municipalities have paralleled these trends by regulating vending to maintain order and traffic flow and to reduce potential competition with brick-and-mortar businesses.

Street vending in New York City (NYC), in particular, has a long history and continues to remain synonymous with the city itself. Historical records from as far back as the 17th century highlight just how intertwined street vending was with daily city life (Bluestone, 1991). Throughout the 19th century, street vending was a way for many immigrant residents to earn a living; the goods they purveyed provided lower-income residents with a source from which to purchase household necessities (Taylor et al., 2000). Street merchants were then widespread in NYC from the late 1800s until the mid-1930s, when city improvements for the upcoming 1939 New York World's Fair began to restrict their street presence.

The current framework of street vending in NYC continues to be restrictive: since the early 1980s, the city has limited the number of vending permits issued to 3,100 2-year permits, 1,000 seasonal permits, and 1,000 green (produce) cart permits (City of New York, 2015). These numbers have remained unchanged for more than 30 years, with the exception of green cart permits, which were added in 2008 (Leggat et al., 2012). This cap on vending permits has resulted in a “black market” for leased permits in NYC. Leasing a permit from another holder, which is illegal, can cost a potential vendor upwards of \$20,000, while those who are selected to apply for a new permit legally via a random lottery system (maintained by the city) pay only \$200 (Marritz, 2015). Once issued a permit, license holders may renew their permit indefinitely, without having to prove that they continue to operate. Coupled with the difficulty in obtaining a proper vending permit is the complexity and irregularity of street-vending rules and regulations. No single city agency currently is responsible for overseeing street-vending activities. Sluszkza and Basinski (2006) noted that such a “multiagency approach” has resulted in a set of vending regulations that are complex, unclear, and, in some cases, contradictory for both vendors and enforcement officers.

Street vending perhaps can be considered one of the most visible examples of irregularly enforced activity in the United States today. While some violations are “crystal clear,” others are often viewed as murky, ambiguous, and “muddy.” Every rule of law may be characterized as either crystal clear or not. A rule that one “may not vend within 8 feet of a bus stop” is crystal clear. Disagreements over its application are likely to be rare and are quickly resolved. By contrast, a rule that a street vendor “must keep adequate records of sales” is ambiguous and can be interpreted differently from vendor to vendor. Such a rule encourages disagreement over what constitutes “adequate records,” and thus complicates dispute resolution. Such muddy violations also empower law enforcement officials with a substantial amount of discretion (Kettles, 2014).

Given these challenges, it is perhaps not surprising that many issued vending tickets go unpaid. For 2009, the NYC Independent Budget Office reported that street-vending fine enforcement alone

cost the city \$7.4 million (Turetsky, Vega, and O'Brien, 2010). Coupled with the cost of enforcement, only a small percentage of fines written in 2009 were actually paid. Out of an estimated \$15.8 million in total civil vending penalties for 2009, approximately \$14.9 million in written fines went uncollected.

Earlier research on NYC street-vending violations by Davis and Morales (2012) concluded that, as the fine level of the ticket increased, so did the likelihood of nonpayment by the vendor. Davis and Morales examined violations from 2006 through 2010 and recommended that NYC change its policy so that frequently cited violations were associated with less-expensive fine levels. In 2013, the city council passed a series of bills that reduced vending penalties by more than 50 percent, thus overturning the higher penalty structure that was introduced in 2004. While the earlier work of Davis and Morales (2012) suggests that lowering ticket charges would lead to an increase in net revenue for the city, it is probable that other factors besides fine size influence whether a vendor defaults in payment. Such factors may be situational, such as the borough in which the violation occurred, or may be violation-specific, as with the aforementioned fine levels. By identifying possible additional factors, vending enforcement and regulation could be further improved and public cost reduced.

Given the high public costs associated with street vendor fine enforcement, a better understanding of the violation-specific and situational factors that influence default in payment is needed. We define violation-specific factors to include ticket attributes such as whether the cited statute is crystal clear or muddied in terms of its interpretation. Situational factors include attributes such as the borough location of the proposed transgression. It is possible that interactions between and within these two types of factors further influence the likelihood of default in payment; for example, those officers who use their discretion to write a lot of tickets (a violation-specific factor) may make the situation (the borough location) and thus the likelihood of default in payment more complex. The influence of both situational and violation-specific factors has yet to be examined for street vendor ticket payment in NYC. Therefore, the objectives of this research are to (1) identify the violation-specific and situational factors that increase the likelihood of a vendor defaulting in payment and (2) uncover whether interactions within and between these two types of factors influence the probability of payment. We use 2010 violation data containing more than 25,000 NYC written street vendor tickets (of which 54.25 percent were in default) to explore potential factors related to default in payment. We employed a binary logit model to estimate factor influence on imposed fine default in payment, with odds ratios computed from the estimated coefficients.

By identifying those factors that influence default in payment, enforcement agencies and policymakers alike could use such information to better manage the public cost of vending-regulation enforcement. To the knowledge of the authors, this research is the first effort to focus on the enforcement of street-vending regulations from the perspective of nonpayment likelihood and public cost.

The remainder of this article is organized as follows: we present a review of pertinent background information and literature, followed by a discussion of our research methods. Next, we include the estimated model, its subsequent results, and a discussion. We conclude with a summary of pertinent findings, suggestions for street-vending enforcement agencies and policy change, and implications for future research.

Background and Literature Review

In considering street-vending regulation enforcement and fine repayment, we review two high-level issues—vending regulation and officers' citation behavior—that provide context for the analysis.

Vending Regulation

As the population of NYC expanded over the years, immigrant vendors across the city played an important role in employing and provisioning the city's residents. Today, immigrant and minority vendors comprise the majority of streetcart entrepreneurs (Sluszkta and Basinski, 2006).

Although these street vendors have filled an important need in the community, some city stakeholders have frowned on their activities and have continually pushed for stiffer penalties, regulation, and enforcement. Enforcement historically focused on unlicensed street vendors; however, in response to “quality of life” regulations introduced in the 1990s, policing tactics expanded enforcement to licensed vendors. Work by Duneier (1999) discusses how enhanced police enforcement of booksellers led to an increase in ticketing for minor infractions and, in some cases, even the confiscation of goods. As Stoller (2002) later mentioned, the resulting fines from this increased enforcement caused some vendors to lose their licenses and ultimately exit the vending business.

Earlier work by Austin (1994) examined the role and police treatment of Black street vendors in society. She argued that for many poor Black vendors, the only way to survive economically was to break the law. Austin also noted that police officers subjectively enforced street-vending regulations, with many of them using personal discretion when writing citations. In a later study focusing specifically on street vending in NYC, Devlin (2011) concluded that regulation enforcement was ambiguous and, at times, statutes were contradictory. In particular, he found that regulation in Manhattan was inconsistent and influenced by property owners and other business stakeholders who used intimidation to discourage vendors from operating.

In 2004, before Devlin's study, the NYC Department of Health and the Department of Consumer Affairs increased the penalties on street-vending violations, some of which were raised from \$250 to \$1,000 per offense (Turetsky, Vega, and O'Brien, 2010). Two earlier research efforts explored street-vending violation data from NYC and the relationship between fine size and the likelihood of fine payment. The first effort by Schwefel (2011) analyzed violation data from 2009 and 2010 and concluded that, as fine size increased, the likelihood of fine payment decreased. Davis and Morales (2012) extended this research to include violations from 2006 through 2010 and likewise concluded that the most expensive violations are paid with less frequency compared with other fine levels. They proposed that NYC restructure its fine scheme so that frequently written tickets would be associated with a less-expensive fine, thus increasing the likelihood of the vendor paying the ticket. Although the city ultimately reduced the fine levels in 2013, it is probable that other factors beyond fine levels influence vendor default in payment.

Officers' Citation Behavior

The second issue is the subjective behavior associated with giving citations. This issue has been most widely studied in the context of traffic citation issuance, and a large body of research has

examined situational factors influencing traffic tickets. Ingram (2007) looked at traffic citations for a large metropolitan area of the Southwestern United States and concluded that neighborhood characteristics, such as racial demographics, played a role in the issuance of traffic citations. In particular, officers behaved differently depending on the neighborhood in which they were policing traffic, thus influencing the number of citations written.

Earlier studies by Meehan and Ponder (2002) and Petrocelli, Piquero, and Smith (2003) likewise examined the influence of place on the practices of police traffic enforcement and found the place the citation occurred to be a significant factor. Meehan and Ponder found minority drivers were more likely to be racially profiled when the traffic stop occurred in an area with a low minority composition. In areas where the population was mostly White, minority drivers were also more likely to be stopped and monitored by police.

Petrocelli, Piquero, and Smith (2003) similarly concluded that socioeconomic indicators were a factor: Black drivers were more likely to be searched by police because of officers' perceptions of them. In addition, the higher the crime rate of the neighborhood, the greater the number of total traffic stops performed by police officials. A similar study by Engel and Calnon (2004) concluded that minority drivers (particularly Black and Hispanic drivers) were at higher risk of being issued a violation, holding constant the traffic behavior of all races.

Taking a more economic approach, Makowsky and Stratmann (2009) explored how traffic officers issue citations using a utility maximization framework and the concept of opportunity costs. They concluded that officers often make ticket-issuing decisions after first taking into account the likelihood of the recipient contesting the violation. They also consider how the ticketing decision will reflect on their overall work performance. Similar to Ingram (2007), Makowsky and Stratmann (2009) imply that officers might behave differently when faced with similar circumstances, depending on the particular situation. We generalize the work of Makowsky and Stratmann, then, to our current context by exploring situational factors that influence the payment of vendor citations. Such factors would be of importance to city agencies looking to minimize the public costs of vending regulation enforcement.

Methods

To explore the effect of vending regulation and officer citation behavior on unpaid vendor citations, we obtained data on street vendor tickets from the City of New York. We propose an empirical framework to examine the influence of violation-specific and situational factors on the probability of default in payment.

Data Procurement and Variable Coding

Data for all civil street vendor tickets for 2010 were obtained from the City of New York through the use of a Freedom of Information Law request. Violations included in the data set consisted of more than 100,000 vendor tickets returnable to the Environmental Control Board for the 5-year period of 2006 through 2010, which the researchers entered from paper tickets. The entered

data consisted of details for each violation, including the relevant section ordinance, fine amount, borough location, date and time of the offense, and whether the respondent defaulted in payment on the imposed ticket.

To test for significant differences across the 5-year period, we tested several variables for differences in their proportions across years by conducting a series of Tukey-type multiple comparison tests on proportions appropriate for unequal sample sizes (Elliott and Reisch, 2006). This approach enabled us to test all possible pairwise differences simultaneously. We tested the following proportional variables: violations in default, muddied violations issued, health-code violations issued, moderate fines imposed, high fines imposed, violations issued in Manhattan, and violations issued on a street corner location. For each variable, testing the multiple comparisons for differences across time periods failed to yield any comparisons that were significant at the 5-percent level; we found no evidence of differences across time periods for the variables examined. Therefore, we focused on the more recent 2010 data, which contained 25,820 violations with complete ticket information.

Using the available ticket information for 2010, we next created dummy variables for a series of five violation-specific attributes and five situational-factor attributes. It is probable that both types of enforcement factors (beyond fine levels only) influence vendor default in payment. If so, vending enforcement and regulation could be further improved and public cost reduced by taking both types of factor attributes into consideration when revisiting policy recommendations and officer regulation procedures.

Violation-Specific Factors

Violation-specific factors investigated included the clarity of the specific law (crystal clear or muddied), the type of section ordinance (health code or administrative), whether the section cited was a frequently cited ordinance, whether the officer was a frequent ticket issuer, and the fine level for the ticket.

One of our central claims is that some rules found in the sections of the New York City Administrative Code and of the New York City Health Code are either muddied or crystal clear; that is, either ambiguous or not. We executed a coding process to determine whether a particular rule should be deemed crystal clear or muddied. Two members of the research team each independently coded the rules on the basis of whether the rule was clearly defined and later compared codes. Each coder executed the same process, which was to examine each rule for its degree of clarity. For instance, a relatively clear rule requires the vendor to be a certain distance from a driveway or subway, and a relatively muddied rule requires the vendor to permit regular inspections. The former can be physically measured; the latter is not measurable and subject to interpretation. We then enjoined an external legal expert to independently code the rules. We found 94 percent initial agreement across the three coders. For cases in which a discrepancy existed, all coders jointly reexamined the rule in question and, if necessary, deferred to the more experienced opinion of the external legal expert.

Type of section ordinance was included as a factor because vendors probably perceive these two types of ordinances differently. Before becoming a licensed vendor, applicants must complete an 8-hour, 2-day “food protection” course offered by the city. They must also pass a vending unit

inspection by the Department of Health. Vendors then may feel better informed of and educated about health-code violations compared with administrative ordinances, and thus view the importance of these two types of ordinances differently.

Of the 127 different sections cited on vending tickets, 10 accounted for more than 64 percent of all violations issued in 2010. Vendors may be more likely to pay these particular violations if they are commonly understood and less likely to pay if they deem them a nuisance. Likewise, 10 officers accounted for 29 percent of all violations issued in 2010. These 10 officers issued more than 475 tickets each; the average issuance for the remaining officers in the sample was less than one-half this number. As previously mentioned, no single city agency is responsible for street-vending regulation and enforcement. It is unclear why these 10 officers are writing so many vending tickets, but it may be that vendors view their individual and independent vigilance as a nuisance, which reduces the likelihood that a vendor would pay an issued ticket.

Following the earlier work of Davis and Morales (2012), the fine level of the ticket was likewise included here as a potential variable. Because of the city's fine structure, the violation fines issued were only between the ranges of \$25 and \$100, \$200 and \$880, and \$1,000 and \$2,200.

Situational Factors

Situational factors coded included the borough in which the infraction occurred, whether it occurred on a street corner location, the day of the week, the time of day, and the season of the year. Devlin (2011) noted that vending regulation in Manhattan was particularly inconsistent. Of vending violations in 2010, 78 percent were written in the borough of Manhattan, and 62 percent were written on a street corner location. Corner locations may be an area frequently patrolled by officers due to their high visibility. As Makowsky and Stratmann (2009) mentioned, officers may make ticketing decisions based on how it reflects on their work performance. These locational factors may influence the likelihood of default in payment if vendors think tickets issued in these areas are particularly unfair.

Additional situational factors may include day-of-the-week effects. Bryson and Forth (2007) found day-of-the-week effects for office workers; office workers were more likely to be productive midweek. It may be that such effects occur for police officers as well. Therefore, variables for a midweek day and a weekend day were coded.

Tickets also appeared to be somewhat clustered around the early afternoon, with more than 35 percent of tickets issued during the lunchtime hours of 12:01 to 3:00 p.m. During this timeframe, officers would likely be highly visible to vending patrons who are on their lunch break and frequenting vending units. Makowsky and Stratmann (2009) suggested that officers may wish to be seen by large volumes of patrons when issuing citations if they think this action reflects well on their job performance. Because the city issues seasonal vending permits in addition to annual permits, it may be that seasonality influences ticket payment, particularly if ticket payment is linked to the profitability of the vendor's enterprise at the time of issuance.

Descriptive statistics for the 2010 data are presented in exhibit 1. Approximately 64 percent of tickets issued were for the violation of 1 of a set of 10 different ordinances.

Exhibit 1

Descriptive Statistics, 2010 NYC Street Vendor Violations

Ticket Attribute	Percent of Sample
Violation-specific attributes	
Law characterization	
Muddy violation	11.78
Statute type	
Health code violation	22.93
Commonly written section violation	
Top 10 ticket-written section	64.03
Prolific ticket-writing officer	
Top 10 ticket-writing officers ^a	29.03
Level of fine	
Moderate	21.26
High	39.77
Situational attributes	
NYC Borough	
Manhattan Borough ^a	77.99
Street corner location ^a	62.19
Day of the week	
Wednesday	18.74
Saturday	11.84
Time of the day	
Early afternoon	35.36
Season of the year	
Winter	21.85
N	26,028

NYC = New York City.

^a This variable included some missing values. It included 25,931 observations for prolific ticket-writing officers, 26,026 observations for Manhattan Borough, and 25,916 observations for street corner location.

Empirical Framework

We propose that both situational and violation-specific factors influence the probability of default in payment for street vendors. The dependent variable of interest was evenly split in the data, with 54.25 percent of tickets defaulted. Therefore, to estimate the influence that factor attributes and attribute interactions have on the probability of ticket default in payment, we employed a binary logit model. Binary logit models are used in a variety of fields when the dependent variable of interest is binary in response, including transportation research (White and Washington, 2001), urban land use and policy (Braumoh and Onishi, 2007; Krizek and Johnson, 2006), and mechanical systems (Phillips et al., 2015).

From Horowitz and Savin (2001) and Hosmer, Lemeshow, and Sturdivant (2013), we specify the binary logit model as—

$$P(D = 1 | \mathbf{X}, \mathbf{Q}) = F(\beta_0 + \sum \beta_k \mathbf{X} + \sum \beta_k \mathbf{Q}), \tag{1}$$

where F is the cumulative logistic distribution function, k represents factor attributes $1 \dots n$, and $D = 1$ if the vendor defaulted in payment of the violation. The vector \mathbf{X} consists of dummy variables for violation-specific and situational factor attributes, while vector \mathbf{Q} consists of dummy interaction variables for factor attributes. Descriptions of the model variables are presented in exhibit 2.

The logistic distribution function is defined as—

$$F(v) = \frac{1}{(1 + e^{-v})} \text{ with } v = \beta_0 + \sum \beta_k \mathbf{X} + \sum \beta_k \mathbf{Q}. \quad (2)$$

Equation (1) is estimated using maximum likelihood in Stata 12.1.

We compared the model specification against a similarly specified probit to check for misspecification. Following Horowitz and Savin (2001), we recall that both logistic distributions, and the cumulative normal distribution of the probit model, are symmetrical around zero and have similar distribution shapes. The logistic however has fatter tails. Coefficient estimates between the logit and probit models were similar, and parameter significance was the same. Postestimation, Akaike's and Schwarz's Bayesian information criteria (AIC and BIC) were examined between the two models, which resulted in conflicting conclusions: the AIC was slightly lower for the logit, whereas the BIC was slightly lower for the probit. The similarity of the reported criterion indicates that either model would be an appropriate fit for the data.

Exhibit 2

Description of Model Variables and Expected Coefficient Signs

Variable	Description	Expected Coefficient Sign
<i>Defaulted</i>	1 if vendor defaulted on payment, 0 otherwise	NA
<i>MuddyVio</i>	1 if for an ambiguous statute, 0 otherwise	+
<i>HealthCodeVio</i>	1 if for a health code violation, 0 otherwise	-
<i>TopSection</i>	1 if for one of the top 10 most commonly cited sections for 2010, 0 otherwise	-
<i>TopOfficer</i>	1 if by one of the top 10 officers in terms of ticket abundance for 2010, 0 otherwise	-
<i>ModerateFine</i>	1 if fine was between \$200–\$880, 0 otherwise	+
<i>HighFine</i>	1 if fine was between \$1,000–\$2,200, 0 otherwise	+
<i>Manhattan</i>	1 if in Manhattan, 0 otherwise	+
<i>StreetCorner</i>	1 if on a street corner, 0 otherwise	-
<i>Wednesday</i>	1 if on a Wednesday, 0 otherwise	-
<i>Saturday</i>	1 if on a Saturday, 0 otherwise	-
<i>EarlyAfternoon</i>	1 if between 12:01–3:00 p.m., 0 otherwise	+
<i>Winter</i>	1 if between December 21–March 19, 0 otherwise	+
<i>HealthCodeVio*MuddyVio</i>	Interaction between <i>HealthCodeVio</i> and <i>MuddyVio</i>	-
<i>HealthCodeVio*TopSection</i>	Interaction between <i>HealthCodeVio</i> and <i>TopSection</i>	-
<i>HealthCodeVio*TopOfficer</i>	Interaction between <i>HealthCodeVio</i> and <i>TopOfficer</i>	+
<i>TopSection*TopOfficer</i>	Interaction between <i>TopSection</i> and <i>TopOfficer</i>	+
<i>Manhattan*HealthCodeVio</i>	Interaction between <i>Manhattan</i> and <i>HealthCodeVio</i>	-
<i>Manhattan*TopSection</i>	Interaction between <i>Manhattan</i> and <i>TopSection</i>	+
<i>Manhattan*TopOfficer</i>	Interaction between <i>Manhattan</i> and <i>TopOfficer</i>	+
<i>Manhattan*HighFine</i>	Interaction between <i>Manhattan</i> and <i>HighFine</i>	+
<i>StreetCorner*TopSection</i>	Interaction between <i>StreetCorner</i> and <i>TopSection</i>	+
<i>StreetCorner*TopOfficer</i>	Interaction between <i>StreetCorner</i> and <i>TopOfficer</i>	+
<i>Saturday*EarlyAfternoon</i>	Interaction between <i>Saturday</i> and <i>EarlyAfternoon</i>	+
<i>Winter*Wednesday</i>	Interaction between <i>Winter</i> and <i>Wednesday</i>	+

NA = not applicable.

Due to the usefulness in interpreting the odds ratios of the logit, we chose the binary logit in equation (1) as our final model. To correct for heteroskedasticity in the error structure, we employed robust standard errors. Due to the large number of observations in the data set, we also conducted a sensitivity analysis to estimate the predictive power of the final model. The results of this analysis indicated good predictive power, with more than 77 percent of violations correctly classified. Finally, we computed odds ratios, the exponential function of the regression coefficient, from the reported logit estimates. Because logit estimates range from negative to positive infinity, it is helpful to interpret the model results using odds ratios.

Hypotheses

We made hypotheses on the model variables a priori. We expected that both violation-specific and situational factors would have a significant effect on the probability of ticket default in payment. The expected parameter sign for each variable is also presented in exhibit 2.

A primary interest of the study was whether violations for ambiguous rules were more likely to go unpaid. Therefore, *MuddyVio* was expected to have a significant positive effect, because it seems likely that vendors may choose to not pay a fine for a statute that they think is ambiguous and subject to the discretion of the issuing officer.

Of secondary interest was whether the type of section ordinance influenced ticket payment. We hypothesized that *HealthCodeVio* would have a significant negative effect, which may indicate that vendors view health-code violations as being more pertinent to their business than administrative violations. We likewise hypothesized that interactions with *HealthCodeVio* would be significant. It is probable that there is a gradient when it comes to default in payment outcomes, particularly between crystal clear and muddy administrative violations and between crystal clear and muddy health-code violations, although the direction of the effect is indeterminate.

Also of secondary interest were the effects of fine level and street corner location. From the earlier conclusions of Davis and Morales (2012), we hypothesized that both *ModerateFine* and *HighFine* would have a significant positive effect on the probability of default in payment compared with citation fines of less than \$200. We also hypothesized that the variable *StreetCorner* had a significant negative effect on the probability of default. Vendors who operate on street corner locations are perhaps more visible to law enforcement and also are located in a higher traffic area. It is plausible that such vendors are less likely to default on a violation so they can keep their business operating smoothly.

Results and Discussion

We tested the previously mentioned hypotheses by estimating a binary logit model on the probability of vendor default in payment. Model results and odds ratios are subsequently presented, followed by conclusions and implications for future research.

Binary Logit Model

The results of the binary logit model are presented in exhibit 3. For violation-specific factor attributes, *MuddyVio*, *ModerateFine*, and *HighFine* all had a significant positive effect on the probability

Exhibit 3

Binary Logit Model, Vendor Default in Payment

Variable ^a	Estimated Coefficient	Robust Standard Error	Pr > z
Constant	- 1.45391	0.09771	< 0.001
MuddyVio	0.60667	0.05102	< 0.001
<i>HealthCodeVio</i>	- 0.02179	0.11123	0.846
<i>TopSection</i>	- 0.17203	0.09382	0.069
TopOfficer	- 0.85321	0.14994	< 0.001
ModerateFine	1.15139	0.04451	< 0.001
HighFine	2.92302	0.08031	< 0.001
Manhattan	0.24941	0.09918	0.012
StreetCorner	- 0.22749	0.05739	< 0.001
Wednesday	- 0.23764	0.04773	< 0.001
Saturday	- 0.29756	0.06508	< 0.001
EarlyAfternoon	0.15493	0.03557	< 0.001
Winter	0.18768	0.04280	< 0.001
HealthCodeVio*MuddyVio	- 0.34788	0.15062	0.021
HealthCodeVio*TopSection	- 0.52196	0.11422	< 0.001
HealthCodeVio*TopOfficer	0.85464	0.12004	< 0.001
TopSection*TopOfficer	0.29249	0.12143	0.016
Manhattan*HealthCodeVio	0.20778	0.10676	0.052
Manhattan*TopSection	0.36504	0.09036	< 0.001
Manhattan*TopOfficer	- 0.56246	0.09256	< 0.001
Manhattan*HighFine	0.72479	0.09216	< 0.001
StreetCorner*TopSection	0.31904	0.06841	< 0.001
StreetCorner*TopOfficer	0.13531	0.07288	0.063
Saturday*EarlyAfternoon	0.31627	0.10649	0.003
Winter*Wednesday	0.33810	0.09574	< 0.001

^a Variables in bold are significant at the 5-percent level or better.

Note: N = 25,820.

of ticket default in payment, as was expected. Vendors are more likely to pay a citation if the reason for the violation is clearly reflected in the cited statute and if the fine amount is less than \$200.

TopSection was found to have a mildly significant negative effect at the 10-percent level only, which may indicate that vendors are somewhat less likely to default in payment (that is, more likely to pay) when a commonly cited section violation is used. The effect of *TopOfficer* was found to be significantly negative, indicating that vendors are less likely to default when a prolific ticket-writing officer issues the citation. Vendors may be more familiar with these commonly cited sections and with the officer and, thus, may be more likely to pay the fine. Vendors may also see the officer who wrote these tickets on a daily basis and pay because they know they will see the officer again, as it makes sense that a top ticket-writing officer would frequent areas with a large volume of street vendors. These top ticket-writing officers may also have other characteristics, such as being more skilled or highly trained (or working harder) at their job, or they may be longer tenured officers with a better relationship with (or be more trusted by) vendors.

The following situational factor attributes had a significant positive effect on the probability of ticket default in payment: *Manhattan*, *EarlyAfternoon*, and *Winter*. The finding for *Manhattan* may be attributed to the large number of street vendors operating in that borough compared with the number in other areas. With more vendors, it may be harder to find those who choose not to pay. It may also be that the culture in Manhattan is such that vending tickets are viewed as a nuisance: the social norm may be to not pay the fine. The inconsistency of regulation in Manhattan noted by Devlin (2011) may also contribute to this higher likelihood of default in payment.

It is important to note that the early afternoon coincides with what is typically lunchtime for many individuals and, thus, perhaps one of the busiest times of the day for vendors. Officers may think early afternoon is a key time to enforce regulations, because many vending units will be operating and well populated. By contrast, vendors may think these efforts are a nuisance and opt for nonpayment as a form of protest. The effect uncovered for the winter season could be due to lower revenue and financial stress on the part of the vendor. With colder temperatures, individuals spend less time outdoors, and consumers may be less likely to purchase items in the winter compared with other seasons. The holiday season is also an expensive and busy time of year, and vendors may be less able to pay violations or less willing to spend time on paying the fine during this period.

We find it interesting that situational factor attributes *StreetCorner*, *Wednesday*, and *Saturday* all had a significant negative effect on the probability of violation default in payment. Officers may choose to cluster at busy street corner locations with both high traffic and prominent public visibility, thus leading to more fines issued at these locations. As theorized previously, vendors may be loath to default on these violations, because such an action might jeopardize their access to these high-traffic locations.

The day-of-the-week effect may be attributed to an increase in officers' citation writing on these days. A study by Bryson and Forth (2007) on officers' work productivity found evidence of day-of-the-week effects; worker productivity peaked on Tuesdays and was lowest on Fridays. Perhaps officers are more inclined to write violations on midweek days, although why this might occur is unclear. It may be that officers are more prolific at ticket writing midweek. Likewise, they may write more tickets on Saturdays when many individuals are off from work and have time to frequent vending carts. From a vendor's perspective, more consistent payment of fines levied on Wednesday and Saturday may indicate that these days are of particular importance in terms of business volume, and that vendors do not want to draw attention to themselves and potentially lose access to otherwise profitable business locales.

All the interaction terms between factor attributes were found to have a significant positive effect on the probability of default in payment, with the exception of the interactions *HealthCodeVio*MuddyVio*, *HealthCodeVio*TopSection*, and *Manhattan*TopOfficer*, which had a significant negative effect. Note that the positive effects of *Manhattan*HealthCodeVio* and *StreetCorner*TopOfficer* were only mildly significant at the 10-percent level.

The results for *HealthCodeVio*MuddyVio* in particular indicate evidence of a gradient in default in payment outcomes: while clear violations are overall more likely to be paid than muddy tickets, muddy health-code violations in particular are more likely to be paid than clear administrative tickets. Perhaps vendors are more likely to pay muddy health-code violations because they

consider such tickets to be clear due to the health-code affiliation. It could also be that food vendors will sacrifice larger profit margins if they quit vending. It may be that even if vendors view muddy health-code tickets as ambiguous, they may worry that consumers will see the rule as clear (although difficult to enforce) and thus are more likely to pay the violation as a way to protect their businesses.

The results for the main effect of *HealthCodeVio* are particularly interesting. Although the variable is not significantly associated with repayment on its own—indicating that whether a violation is administrative versus a health-code statute alone does not appear to influence the probability that a vendor will default in paying his or her ticket—it does appear to have a significant effect when interacted with other factor attributes.

*HealthCodeVio*TopOfficer* had a significant positive effect on the probability of default in payment. It may be that vendors who commit health-code violations are more likely to stop vending because of the expense of equipment to ensure compliance. Health-code violators may also be mindful of top officers, those being the officers who use their discretion to write the most tickets and, thus, would likely fine them again if they continued to operate. These vendors may feel persecuted by such officers and could become unwilling to go on in business. Without more information regarding whether health-code violators continue to operate after being issued a ticket, however, it is difficult to draw firm conclusions.

Odds Ratios

Exhibit 4 presents the computed odds ratios for each model variable and interaction term, using 95 percent confidence intervals. Fines written for muddy violations overall were found to be 83.4 percent more likely to default in payment than fines written for crystal-clear violations. As previously mentioned, however, we uncover a clear gradient in terms of ticket nonpayment: crystal-clear versus muddy violations are more likely to be paid overall, but muddy health-code tickets are more likely to be paid than crystal-clear administrative tickets.

As expected, moderately priced fines (ranging from \$200 to \$880) and higher-priced fines (ranging from \$1,000 to \$2,200) both had greater odds of default compared with the odds of default for low-priced fines (ranging from \$25 to \$100). Moderate fines were 3.16 times more likely to default compared with the odds of default for low fines. This finding is consistent with earlier efforts focused on reducing violation fine levels. Estimates for higher fines were even greater, with higher fines 18.6 times more likely to default compared with citations involving low fines for all boroughs, excluding Manhattan. High fines issued to Manhattan vendors were 2.06 times more likely to default compared with the odds of default for low fines in other boroughs.

The odds of a street vendor in NYC defaulting on his or her imposed fine was found to be higher (28.3 percent) for Manhattan-issued tickets compared with the odds of defaulting in payment on tickets from the remaining four boroughs combined, excluding higher-priced fine tickets, health-code violations, and top section tickets.

The time of day a violation was written was also found to be significant; vendors issued fines in the early afternoon (between 12:01 p.m. and 3:00 p.m.) were 16.8 percent more likely to default

Exhibit 4

Odds Ratios, Binary Logit Model

Variable ^a	Odds Ratio	Robust Standard Error	Pr > z
Constant	0.23365	0.02354	< 0.001
MuddyVio	1.83431	0.06931	< 0.001
HealthCodeVio	0.97845	0.10366	0.846
TopSection	0.84195	0.07665	0.069
TopOfficer	0.42605	0.06356	< 0.001
ModerateFine	3.16258	0.14088	< 0.001
HighFine	18.59729	1.49695	< 0.001
Manhattan	1.28327	0.12569	0.012
StreetCorner	0.79653	0.04575	< 0.001
Wednesday	0.78848	0.03760	< 0.001
Saturday	0.74263	0.04836	< 0.001
EarlyAfternoon	1.16757	0.04149	< 0.001
Winter	1.20644	0.05149	< 0.001
HealthCodeVio*MuddyVio	0.70618	0.10637	0.021
HealthCodeVio*TopSection	0.59336	0.06978	< 0.001
HealthCodeVio*TopOfficer	2.35053	0.28204	< 0.001
TopSection*TopOfficer	1.33976	0.16315	0.016
Manhattan*HealthCodeVio	1.23096	0.13195	0.052
Manhattan*TopSection	1.44058	0.13178	< 0.001
Manhattan*TopOfficer	0.56980	0.05280	< 0.001
Manhattan*HighFine	2.06432	0.18998	< 0.001
StreetCorner*TopSection	1.37581	0.09403	< 0.001
StreetCorner*TopOfficer	1.14489	0.08353	0.063
Saturday*EarlyAfternoon	1.37199	0.14643	0.003
Winter*Wednesday	1.40229	0.13424	< 0.001

^a Variables in bold are significant at the 5-percent level or better.

compared with the likelihood of defaulting on tickets issues at other times, for all days of the week excluding Saturdays. For tickets written on Saturdays in the early afternoon, vendors were 37.2 percent more likely to default in payment. It could be that early afternoon is the busiest time of the day for many vendors, because consumers may be shopping during lunchtime. During this busy time, vendors may misplace tickets or even forget issued violations (especially if tickets are frequently issued) in their efforts to keep up with increased customer demand.

We find it interesting that a seasonal component was uncovered: fines written during the winter (December 21 to March 19) were 20.6 percent more likely to default in payment compared with fines written during other times of the year, excluding Wednesdays. For Wednesdays, tickets written during the winter season were 40.2 percent more likely to default in payment.

Health-code violations written by top ticket-writing officers were 2.35 percent more likely to default than administrative violations written by other officers. It may be that top ticket-writing officers are more likely to ticket clear health-code violations by vendors, who then end up going out of business or changing what they sell.

Conclusions and Implications for Future Research

The results presented in the previous section suggest that both situational and violation-specific factor attributes influence the probability that a vendor will default in payment of a ticket. As expected, the odds of default in payment for more expensive fines compared with odds for lower fines were greater. Results presented here suggest more crystal-clear violation statutes, lower fine amounts, and attention to the time of day and even seasonality can all influence fine payment, the management of public enforcement costs, and thus the fining of “the hand that feeds you.”

The implications of this research suggest that street-vending policy needs to take into account the interactions between both factor types when managing public costs of vending-regulation enforcement. Our findings also propose a few considerations of interest to city police departments, city planners, and policymakers interested in increasing compliance, and thus city revenues. From a policy perspective, the findings uncovered here suggest policymakers should aim to rewrite ambiguous vending statutes so that they are crystal clear in interpretation. First, stakeholders who are in a position to rewrite ambiguous statutes should consider doing so. Officers who are in charge of levying street-vending tickets should likewise be mindful of whether the cited violation is crystal clear to the vendor or open to interpretation. That vendors are more likely overall to pay fines for crystal-clear statute violations is information that could help increase the payment of future imposed fines, and it is important information for city planners as they work to manage public costs.

For vendors, it would be beneficial if all violations were crystal clear. Street vendors might be better able to avoid future tickets if they clearly understood how additional violations could be avoided, thus increasing their business revenue. Crystal-clear tickets could work as a learning tool for vendors working to be in compliance and wishing to reduce future fines. Muddy violations, however, are open to officers’ interpretation, and vendors may feel unsure about how to avoid such tickets in the future. If a goal of issuing tickets is to prevent future occurrences, statutes must be written in a way to effectively educate the vendor on why they were in violation in the first place (Kettles, 2014; Morales and Kettles, 2009).

More detailed analyses of the practices of the top ticket-writing cops could also yield important information for street-vending stakeholders. Our findings confirm those by earlier researchers that street vendors are more likely to pay fines that range from \$25 to \$100 compared with greater fine levels. Although a cost-benefit analysis of lower fine amounts is beyond the capabilities of this article, future research of such an analysis would be vital to cities looking to increase their violation revenue.

Expanding these initial questions is of importance. Our findings regarding compliance were from the perspective of the officer issuing the citation and with respect to situational factors. Such factors are a proxy for the issuing officer’s perception of the situation and the policing policy that officer is enacting. Thus, it is one side of the compliance problem and process. The social process of compliance must also include the perspective of the vendor responding to being ticketed and also the bureaucratic and organizational intricacies of this larger social process of compliance. Our research agenda must comprehend other components of this larger process and we offer a few thoughts in this regard.

Further, and importantly, to produce some comparison of the factors we analyzed, we are seeking new data from after the policy change. Note that the research presented here uses citation data from 2010; these data are from tickets that were issued before the 2013 vending policy change that lowered fine levels. Using the 2010 data enabled us to follow up on the earlier efforts and findings of Davis and Morales (2012). The 2010 citation data were also the most readily accessible citation data available, given the arduous task of obtaining and entering the fine information from paper tickets provided by the city.

Future efforts would use citation data from after the 2013 policy change, to compare whether results are similar to our current findings. It may be that an anchor effect occurs after the policy change in that, after fines are reduced, vendors are more likely to now default on moderately priced tickets than they were before the policy change. Additional research efforts could compare the likelihood of payment default before and after the policy change by building off of the pre-policy change findings presented here.

We examined and coded vending regulations in the data set from the perspective of whether the rule itself was legally ambiguous. Additional coding of vending statutes could consider how the vendors themselves would view these regulations and whether variation in interpretation occurs based on vendor characteristics. For example, vendors may consider certain violations to be justifiable and others simply a nuisance, regardless of whether the regulation is clearly interpreted. Further, characteristics such as the education level of the vendor may represent additional situational factors that may influence both regulation interpretation and the likelihood of default in payment. Such questions could be answered via the collection of additional primary data examining how vendor-level demographics influence the interpretation of existing statute wording and how differences in interpretation influence the likelihood of violation default in payment. Coupling such primary data with existing secondary data on vending violations after the policy change could yield further insights for managing public costs of regulation.

In addition to analyzing such organizational and situational factors, we suggest further analysis regarding the aforementioned perspective of the vendor, which is not well understood and again provides a number of important questions for future research. Possibly the first of these is whether vendors would agree with the coding scheme we used here. Developing a clearer understanding of how vendors perceive the citation, and act on it, is essential to understanding the social process of compliance.

Although the city council reduced vending penalties by 50 percent in 2013, the city needs to take further steps to make the current structure of street-vending violations clear for the city's vendors. Policy statutes are often written from the legal enforcement perspective and, as such, can be challenging to navigate and interpret without adequate training. Revising current street-vending statutes so that regulations are not contradictory across city agencies would be beneficial for vendors and officers alike; such revisions could help reduce the public cost of enforcement by minimizing violations that vendors might think are unclear.

Large cities such as NYC should also be mindful that violations imposed during slower and financially stressed business times of the year may be more susceptible to lack of payment; we found the likelihood of default higher during the winter. The results uncovered here indicate that vendors

who are issued violations in Manhattan are more likely to default in payment than vendors who are issued tickets in other boroughs. Although these results may be attributed to the large number of vendors in Manhattan as a whole, it is still vital information for officers policing street vendors in NYC.

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Authors

Kathryn A. Carroll is a Ph.D. candidate in consumer behavior and household economics at the University of Wisconsin-Madison.

Sean Basinski is the Director of the Street Vendor Project at the Urban Justice Center.

Alfonso Morales is a professor of urban and regional planning at the University of Wisconsin-Madison.

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A Step Toward a Healthier South Los Angeles: Improving Student Food Options Through Healthy Sidewalk Vendor Legalization

Robert Baird

Community Health Councils

David C. Sloane

University of Southern California

Gabriel N. Stover

Gwendolyn Flynn

Community Health Councils

Abstract

Obesity, especially among children and adolescents, is a critical issue that marginalized urban communities nationwide confront. This article reports on the results of a Health Impact Assessment (HIA) conducted regarding the reconsideration of a ban on sidewalk food vending in Los Angeles, California. The HIA explored the potential impacts that the regulatory change would have on the food environment near schools, which research shows can play an important role in the eating behaviors of young people, and examined potential ways to encourage healthy alternatives in this nutrition landscape.

Introduction

The potential long-term health effects of the obesity epidemic are particularly adverse in the young. As rates of overweight and obese children and adolescents have risen, concerns about their future and the epidemic's economic and social impacts have led activists and policymakers to reconsider longstanding customs and laws. This article explores one such law in which the City of Los Angeles, California, decades ago outlawed all sidewalk vending and its recent reconsideration of that

law. Community Health Councils (CHC), a local health policy education organization, conducted a Health Impact Assessment (HIA) to examine the health considerations of this proposed reform and to inform the dialogue regarding a potential new regulatory structure (Baird, 2015).

HIAs are an increasingly common way for stakeholder groups, advocacy organizations, and public agencies to examine the potential health outcomes of policy changes and development proposals and to educate policymakers about their positive and negative effects. HIAs focus on a specific proposal that is or may soon be considered for adoption or implementation within a given geography. Environmental and economic factors often contribute to these findings, which make it easier to identify specific populations that are vulnerable to environmental or regulatory changes. The foci of this HIA are the effect of the proposed legislative change on areas surrounding public schools and a proposal to use the reconsideration of this legislation as an opportunity to reshape the food environment around schools, thereby potentially creating healthier food options that will aid children while creating new opportunities for vendors.

Background

With the dramatic rise of children's weight over the past 40 years, overweight and obesity rates have become prominent public health concerns because of their relationship with chronic health conditions (Child Trends Databank, 2014). South Los Angeles, which has the highest childhood obesity rate (29 percent) in Los Angeles County (OHES, 2013), includes the four City Council districts with the lowest life expectancy (75 to 79 years), which ranges from 1 to 5 years less than the city average (OHES, 2010).

Although few studies have considered the specific relationship of sidewalk food vendors and the health of school-age children, the existing research suggests reason for concern, especially at elementary schools (Tester, Yen, and Laraia, 2010). As part of this assessment, observers surveyed the presence of food vendors at two high schools, two middle schools, and eight elementary schools. Food vendors were most prevalent around elementary schools. This finding led us to devise a more systematic approach to studying the presence and impact of food vendors around elementary schools.

A previous analysis of three elementary schools in South Los Angeles determined that the most common snack purchased from vendors (chips) contains about 300 calories, which accounts for 15 to 20 percent of the U.S. Department of Agriculture (USDA)-recommended daily caloric intake for a child between the ages of 8 and 11, depending on the child's physical exertion that day. When a soda is added to the purchase (61 percent of purchases in the study included more than one item), the average caloric intake rises to 480 calories and 24 to 31 percent of the daily recommendation. These measurements led to the finding that students who exercise less than 30 minutes per day (likely most students) may be overconsuming calories by 16 percent with the purchase of one bag of chips and 27 percent with the purchase of one bag of chips and one container of soda. The study also noted that many of these calories are "empty,"¹ leading to passive overconsumption caused by unrelieved feelings of hunger (Goetz and Wolstein, 2007).

¹ Many chips and candy items purchased from sidewalk vendors have an energy density that is two or three times greater than the 1.5-kilocalorie-per-gram threshold marking passive overconsumption (Goetz and Wolstein, 2007).

Student Nutrition Environments in South Los Angeles

In response to pressures from parent groups and health advocates, the Los Angeles Unified School District (LAUSD) is reforming policy and lunchroom programs in an effort to make school meals healthier, more accessible, and more presentable to students. These reforms are often works in progress, attracting continual scrutiny and revision (Gase et al., 2014). The process has been driven by a series of resolutions enacted by the Board of Education to limit the sale of sugary drinks during school hours,² set nutrition standards for snack food sold on campuses,³ improve the marketability and nutrition content of school food,⁴ establish minimum lunch periods and improve school breakfast participation,⁵ and enhance procurement standards.⁶

Although on-campus nutrition environments are gradually improving, the low-quality food environment that surrounds many South Los Angeles school campuses remains a stubborn health challenge (Rose et al., 2009). South Los Angeles hosts three of the city's five lowest-scoring community plan areas as rated by the Modified Retail Food Environment Index (mRFEI), which measures the ratio of healthy food outlets to total food outlets (DCP, 2013). In South Los Angeles, 75 percent of restaurants employ a limited-service fast-food format compared with 50 percent of restaurants for all of Los Angeles County (U.S. Census Bureau, 2013). The prevalence of liquor stores and dearth of full-service grocery stores in South Los Angeles are also well documented, especially in contrast with West Los Angeles (Park, Watson, and Galloway-Gilliam, 2008). It is not surprising that rates of fast-food and sugar-sweetened beverage consumption among children and adolescents in South Los Angeles are substantially higher than in the county overall, and rates of fruit and vegetable consumption are the lowest in the county (OHES, 2013).

Awareness is growing that mobile food vendors (including sidewalk vendors and food trucks) are an important, if challenging to quantify, component of this wider food ecology. Also, commentators share a growing awareness that student nutrition advocacy must eventually pivot from campus-oriented interventions toward a wider consideration of resource environments in surrounding communities (Mieszkowski, 2013; Mikkelsen and Chehimi, 2007). As lunchroom operators and students navigate a transition to a new and healthier menu, the real possibility remains that students will negate this effort by purchasing nutrient-poor snacks and sugary beverages outside schools. At the same time, sidewalk vendors represent an alternative opportunity to introduce healthier food (for example, fresh fruit and vegetables) into communities where major retailers either do not exist or do not provide it (Fuchs et al., 2014).

Sidewalk Vending Regulatory Environment

Sidewalk vending (including food sold from street carts) is currently prohibited citywide in Los Angeles.⁷ Los Angeles is the only major U.S. city to prohibit the activity on such a comprehensive scale,

² LAUSD Board of Education, Motion to Promote Healthy Beverage Sales (2002).

³ LAUSD Board of Education, Obesity Prevention Motion (2003).

⁴ LAUSD Board of Education, Cafeteria Improvement Motion (2005).

⁵ LAUSD Board of Education, Improving Food Nutrition Policy (2012).

⁶ LAUSD Board of Education, Good Food Procurement Policy (2012).

⁷ Ordinance appears in Los Angeles Municipal Code, section 42.00(b).

rather than regulate it as a legitimate commerce. A separate ordinance prohibits general vending (including sidewalk vendors and mobile food trucks) within 500 feet of school campuses during normal school hours.⁸ The latter regulation exists in numerous jurisdictions across the nation, although the specific distances and times vary, and they often include other sensitive locations (for example, libraries, parks). Los Angeles County, through the Department of Public Health, regulates the food handling aspects of sidewalk vending, but local jurisdictions have the discretion to regulate the spatial and commercial aspects of vendor activity. Regardless of whether food vendors in Los Angeles County are compliant with local rules, they are required to maintain a *food service cart* permit, which commits them to having pushcarts of a sufficient quality and overnight storage in a commissary. The certification process subjects vendors to permit fees, warehousing fees, higher equipment costs, and periodic safety inspections.

Enforcing these regulations involves law enforcement citing sidewalk vendors, public health officials confiscating products and equipment, or both. Officials can simply warn a vendor to move on or they can arrest them and confiscate and destroy their property (Rosales, 2013). Even given these possible adverse outcomes, sidewalk vending is very widely practiced in Los Angeles, with one agency estimating that around 10,000 food vendors are in the public domain on any particular day.⁹ With only limited resources available, enforcement may appear arbitrary, often driven by complaints from local merchants, property owners, or school administrators. Rather than discouraging illegal sidewalk vending, enforcement may actually be trapping people within the city's shadow economy by eliminating the economic gains that would help them secure a foothold in more legitimized enterprises (Morales, 2000; Vallianatos, 2014).

Seeking to relieve pressure on these informal sector workers and microentrepreneurs, dozens of community-based organizations have partnered on a campaign to highlight the legal challenges that sidewalk vendors face and to recognize their influence on Los Angeles' emergent food culture.¹⁰ The Los Angeles City Council initiated the legislative process to legalize sidewalk vending in November 2013—calling for the formulation of regulatory alternatives.¹¹ Although many councilmembers agree the current citywide prohibition of sidewalk vending is impractical and in need of at least a partial repeal, debates about the details of a new regulatory structure have stalled the issue in committee.

Methods

This HIA employs a comparison between the nonpermissive regulatory environment in South Los Angeles and a more permissive regulatory environment in Compton, California, to measure differences in vendor-related activity near selected schools. These jurisdictions have similar socioeconomic conditions that may influence sidewalk vendor activity. Unlike Los Angeles, though, Compton allows sidewalk vending but limits it to specific locations and times.¹² We capitalize on

⁸ Los Angeles Municipal Code, section 80.73, defines normal school hours as 7:30 a.m. to 4:30 p.m. on weekdays.

⁹ The report is available in City of Los Angeles, Chief Legislative Analyst, Council file 13-1493 (November 26, 2014).

¹⁰ A list of partner organizations is available at <http://streetvendorcampaign.blogspot.com/p/partners.html>.

¹¹ The motion is available in Los Angeles City Council, Council file 13-1493 (November 6, 2013).

¹² The Compton Municipal Code, section 9-26, restricts vending in the following ways: not within 10 feet of vehicle realm, not within 50 feet of another pushcart, not within 300 feet of school campuses on school days between 7:00 a.m. and 5:00 p.m., and not in residential areas between 6:00 p.m. standard/8:00 p.m. daylight and 8:00 a.m.

this variation and compare vendor prevalence and use across multiple schools in each jurisdiction. The framework enables us to consider the roles of both environment and regulation in the context of vending and student nutrition. Results may indicate that certain socioeconomic factors correlate with higher or lower sidewalk vendor activity regardless of jurisdictional regulation, suggesting influences other than vendor regulations help shape the student nutrition environment. Differences between the two jurisdictions that are consistent across socioeconomic factors, however, would suggest that vendor regulations do influence the student nutrition environment.

This HIA considers three variables that are closely related to sidewalk vendor activity and can be measured using field observations and student surveys. First, the presence of sidewalk vendors in proximity to school campuses provides one measure of how nutrient-poor snacks and sugary beverages are made accessible to students and how effectual vendor prohibitions are in regulating access. Snack and beverage offerings are also observed for any distinction between vendors who offer more and less healthy options. Second, surveying student and caretaker purchases provides insight on nutrition behaviors in relation to sidewalk vendors and, by including other food retail points, assesses the role of sidewalk vendors within the wider food resource environment. Third, sidewalk vendors have been viewed both as a safety hazard, because they may congest sidewalks, and as a positive influence on safety in the public realm, because vendors represent “eyes on the street” that can check bad actors. This question is addressed by recording bicyclist and pedestrian activity and sidewalk conditions near the same schools where vendor activity was observed.

School Comparisons

To construct the comparison between a nonpermissive and a permissive regulatory environment, a statistical analysis was performed to identify similar jurisdictions. Percentage of *Spanish-speaking population* was one criterion, based on local studies that connect sidewalk vending with the culture of Latin American immigrants (Rosales, 2013; Goetz and Wolstein, 2007). The second criterion was *population living under the poverty level*, taken from studies that show sidewalk vending is a fallback enterprise for many people who struggle to generate sufficient incomes within the formal economy (Austin, 1994; Morales, 2000). Three jurisdictions with more permissive vendor regulations were chosen for deeper analysis based on Spanish-speaking populations at least as high as in South Los Angeles and poverty rates that were more than 20 percent.

The statistical analysis was then extended to specific schools to identify the closest matches for specific environmental variables. Data were compiled reflecting the socioeconomic characteristics of residents living within a 1/2-mile proximity of the applicable school campus, as opposed to students attending that school or their households. In addition, mRFEI scores were collected for the applicable census tract of each school,¹³ as was the aggregate number of bicyclist and pedestrian collisions within 1/2 mile of each school from 2007 through 2009.¹⁴ Compton emerged as the ideal comparison environment because it was the only jurisdiction to offer close matches to South Los Angeles school neighborhoods for each of the environmental variables. Elementary schools from these jurisdictions were then matched based on close similarities for one of the previously mentioned environmental variables.

¹³ mRFEI data are accessible at <http://www.cdc.gov/obesity/>.

¹⁴ These data were compiled from the Safe Transportation Research and Education Center, Transportation Injury Mapping System, Safe Routes to School collision map viewer (2007 through 2009), accessed November 2013.

Field Data Collection

School environments selected for the assessment were observed during March and April 2014 each for a 60-minute period beginning at the closing bell, which earlier studies documented as the time when sidewalk vendors make most of their sales near schools (Goetz and Wolstein, 2007). Observations took place only on midweek days (Tuesday through Thursday), but days with irregular bell schedules were avoided. In most cases, observations for matching schools took place on the same day or on consecutive days, so that conditions between the comparison schools would be most similar.

During each observation period, an assessor walked the periphery of the school campus and adjacent streets within a two-block radius to record the presence of any sidewalk food vendors and the general content of snacks and beverages offered. Two to four additional assessors were placed at key observation points, as needed, to tally the number of pedestrians and bicyclists present during the observation period.

Student surveys were administered from October through December 2014 at the four elementary schools in South Los Angeles where field observation had occurred previously. CHC was not able to coordinate with school personnel to administer surveys at comparison schools in Compton. Survey respondents (anonymous 4th and 5th grade students) indicated the general frequency (never, occasional, or frequent) for which they obtained snacks from eight types of access points within the wider nutrition environment and how often they obtained items from sidewalk vendors from five categories. Students also indicated how often they ate lunch or snacks provided at school.

Results

Overall, results did not show noticeable differences between the two jurisdictions for sidewalk vendor presence. The quantity of observed vendors ranged from the highest (eight) to the lowest (zero) in South Los Angeles, while Compton had a more moderate range (exhibit 1). The permissiveness of the regulatory environment does not seem to clearly influence vendor presence near schools in these communities.

The analysis of socioeconomic factors, however, suggests that poverty and language might influence the presence of sidewalk vendors near schools. Elementary S1 and Elementary S3 had the highest number of vendors (eight and six, respectively) and also the highest percentage of people living in poverty (32.1 and 31.5 percent, respectively). By comparison, Elementary S2 and Elementary S4 had no vendor presence and the lowest population of Spanish speakers (42.6 and 46.8 percent, respectively). A similar pattern was not evident in Compton, where differences in poverty rates between schools were smaller and rates of Spanish speakers were higher.

Results also did not reveal a clear relationship between sidewalk vendor presence and the quality of the retail food environment or bicyclist and pedestrian safety (exhibit 1). Underdeveloped retail food environments might be expected to correlate with higher sidewalk vendor activity, but schools in this assessment with the highest local mRFEI scores (Elementary C2 and Elementary C4) had only moderate vendor presence (two and three observed, respectively), whereas schools with the lowest local mRFEI scores (Elementary S4 and Elementary S1) had highly differentiated vendor

Exhibit 1

Sidewalk Vendors and Environmental Conditions Within 1/2 Mile of Schools

School	City	Sidewalk Vendors	Students per Vendor ^a	Spanish-Speaking (%)	Population < Poverty (%)	mRFEI Score	Bike/Pedestrian Collisions
Elementary S1	LA	8	104	58.2	32.1	2	24
Elementary S3	LA	6	126	58.8	31.5	10	12
Elementary C1	C	4	136	59.4	23.9	13	3
Elementary C4	C	3	211	74.6	25.0	19	11
Elementary C2	C	2	202	54.2	22.5	29	1
Elementary C3	C	1	466	65.1	24.4	10	4
Elementary S2	LA	0	—	42.6	22.9	7	13
Elementary S4	LA	0	—	46.8	26.8	0	11

C = Compton, California. LA = Los Angeles, California. mRFEI = Modified Retail Food Environment Index.

^a *Calculated based on 2013–14 enrollment statistics. Accessible at <http://dq.cde.ca.gov/dataquest/>.*

Sources: Health Impact Assessment field assessments and student surveys; Missouri Census Data Center, Circular Area Profiles, American Community Survey version (2007 to 2011); Centers for Disease Control and Prevention, Children’s Food Environment State Indicator Report (2011); Safe Transportation Research and Education Center, Transportation Injury Mapping System, Safe Routes to School collision map viewer (2007 through 2009), accessed November 2013

presence (zero and eight observed, respectively). Another expectation could be that higher vendor presence leads to safer or less safe bicyclist and pedestrian environments, but schools with the lowest local collision rates (Elementary C2 and Elementary C1) had moderate vendor presence (two and four observed, respectively), and schools with the highest local collision rates (Elementary S1 and Elementary S2) had highly differentiated vendor presence (eight and zero observed, respectively).

South Los Angeles survey responses indicate that 62.8 percent of students at least occasionally obtain snacks and beverages from sidewalk vendors. Although this percentage represents a significant rate of patronage by students and caretakers, it is less than the rate with which they, not surprisingly, even more regularly patronize formal commercial sources within the wider nutrition environment (exhibit 2). By comparison, 84.1 percent of students patronize fast-food restaurants at least occasionally, and 76.7 percent patronize corner stores at least occasionally. These two access points are routinely highlighted as a source of high-calorie food and sugary beverages in underdeveloped food retail environments (Bassford et al., 2012; Borradaile et al., 2009). Although snack and beverage purchasing trends vary somewhat between schools, sidewalk vendors appear to compete for student and caretaker patronage on relatively close terms with mobile food trucks, which offer many of the same items, and with vending machines, which are healthier food sources in some cases because of tighter inventory regulations at schools and other public facilities. Survey responses also indicate that households remain a highly prevalent source of the snacks and beverages that students consume.

The frequency of snack and beverage purchases from sidewalk vendors, in general, is consistent with the degree of vendor presence observed in field observations. As vendor presence moved from a high of eight observed at Elementary S1 to zero observed at Elementary S2 and Elementary S4, the rate of at least occasional student patronage also fell from 84.5 to 40 percent. Indeed, the school with the highest vendor presence had a percentage of students patronizing vendors (84.5 percent) that was higher than the patronage of corner stores (77.3 percent) and near that of

Exhibit 2

Student/Caretaker Patronage of Food Access Points

Access Point	Elementary S1 (%)	Elementary S3 (%)	Elementary S2 (%)	Elementary S4 (%)	Overall (%)
From home	90.7	91.8	95.4	93.2	92.5
Fast-food restaurants	92.8	80.7	83.9	78.6	84.1
Corner stores	77.3	80.7	72.9	71.2	76.7
Mobile food trucks	66.0	78.4	63.5	60.3	69.3
Vending machines	62.9	72.8	66.3	66.7	68.0
Sidewalk vendors	84.5	59.7	58.1	40.0	62.8
Someone else	43.3	57.7	56.0	56.4	53.5
School lunch	36.5	40.9	48.9	49.2	42.9
School snack	36.5	30.7	31.8	44.6	34.6
School stores	5.2	46.7	22.0	39.3	29.9

Source: Health Impact Assessment student surveys

fast-food restaurants (92.8 percent). Results of the student survey suggest, however, that Elementary S2 typically may have more sidewalk vendors than was observed in the assessment, because rates of vendor purchases there are very similar to those at Elementary S3 (exhibit 2).

Student responses also raise questions about the competition between home and school foods, which researchers have consistently found are healthier sources, and neighborhood food (Lachat et al., 2012). An inverse relationship was found between sidewalk vendor presence and participation in school meal programs and obtaining snacks and beverages from students' households. Overall, only 42.9 percent of elementary school students reported eating school lunches at least occasionally. The rate of at least occasional school lunch patronage, however, rose within the school sample as sidewalk vendor patronage decreased. Elementary S4 had the highest rate of frequent snacks and beverages obtained from home (72.9 percent), and it also had the lowest rate of at least occasional sidewalk vendor patronage (40.0 percent) and the lowest rate of at least occasional fast-food restaurant patronage (78.6 percent). Elementary S1 conversely had the lowest rate of frequent snacks and beverages obtained from home (34 percent) and had, by far, the far highest rates of at least occasional sidewalk vendor patronage (84.5 percent) and occasional fast-food restaurant patronage (92.8 percent).

As seen in previous studies (Tester, Yen, and Laraia, 2010), unhealthy snack food (for example, chips, cookies, candy, ice cream, elote) was, by far, the likeliest item sold by sidewalk vendors in this assessment (exhibit 3). Sugar-sweetened beverages (for example, soda, sports drinks, fruit punch, hot chocolate) were offered by all but two of the observed vendors found in South Los Angeles. Hot or prepared foods (for example, tamales) and healthy beverages (for example, 100 percent fruit juice, water) were offered by vendors at only one school (Elementary S3). Despite the popularity of fruterios throughout the city, no vendors at any schools observed in this assessment offered fruits or vegetables.

As expected, survey responses indicated that unhealthy snack food was purchased at least sometimes by 92.3 percent of occasional vendor patrons and purchased often by 60.9 percent of frequent vendor patrons (exhibit 3). Each of the previously mentioned product categories, however, was purchased at least sometimes by 72.8 to 92.3 percent of occasional vendor patrons

Exhibit 3

Sidewalk Vendor Inventories and Reported Item Purchase Frequency

Item	Sidewalk Vendors (South LA)	Occasional Vendor Patrons		Frequent Vendor Patrons	
		Purchased ≥ Sometimes (%)	Purchased Often (%)	Purchased ≥ Sometimes (%)	Purchased Often (%)
Unhealthy snack food	13	92.3	12.4	97.8	60.9
Fruits and vegetables	0	72.8	25.6	75.6	40.0
Hot/prepared foods	3	77.3	17.5	84.8	39.1
Sugar-sweetened beverages	11	81.3	18.8	84.8	41.3
Healthy beverages	3	85.3	38.7	87.0	56.5

LA = Los Angeles, California.

Source: Health Impact Assessment field assessments and student surveys (limited to responses indicating occasional or frequent sidewalk vendor purchases)

and purchased often by 39.1 to 60.9 percent of frequent vendor patrons, including products that were rarely or never observed during field assessments. A lack of clarity in the survey question or recall difficulty may have skewed survey response data toward a less accurate depiction of snack and beverage purchases from sidewalk vendors.

Field assessments indicated that one-half of the sidewalk vendors observed near schools caused sidewalk congestion among pedestrians (because of the crowding of waiting customers). In no instance did observers note that vendor-related congestion caused pedestrians to walk into the street or otherwise come into conflict with vehicles.

Observations indicated that a range of 22 to 82.5 percent of students at each elementary school walked home and a very small number of students bicycled home at the conclusion of the school day (see exhibit 4). During each observation period, 38 to 271 adult pedestrians (most of whom accompanied exiting students) and 1 to 9 adult bicyclists were noted in the vicinity of school campuses. Schools with higher sidewalk vendor presence in either jurisdiction were not likelier to have more or fewer pedestrians or bicyclists active in their vicinity. Schools with the lowest student pedestrian rates (Elementary S4 and Elementary S3) had highly differentiated vendor presence (0 and 6 observed, respectively), and schools with no vendor presence (Elementary S4 and

Exhibit 4

Bicyclist/Pedestrian Counts and Sidewalk Vendors Observed Near Schools

School	City	Sidewalk Vendors	Pedestrians		Bicyclists	
			Students (%)	Adults	Students	Adults
Elementary S1	LA	8	35.7	156	2	1
Elementary S3	LA	6	27.5	122	4	1
Elementary C1	C	4	40.0	100	0	4
Elementary C4	C	3	73.9	271	11	9
Elementary C2	C	2	52.7	62	1	2
Elementary C3	C	1	80.3	216	0	1
Elementary S2	LA	0	82.5	165	6	8
Elementary S4	LA	0	22.0	38	2	3

C = Compton, California. LA = Los Angeles, California.

Source: Health Impact Assessment field assessments

Elementary S2) had highly differentiated student pedestrian rates (22.0 and 82.5 percent of school enrollment, respectively). Schools with moderate vendor presence (Elementary C4 and Elementary C1) had highly differentiated student bicyclist rates (11 and 0 observed, respectively).

Discussion

The evidence gathered for this assessment does not suggest that citywide prohibitions against sidewalk food vending are functioning as a protection of good-quality nutrition environments surrounding school campuses. Whether enforcement resources are inadequate to consistently enforce the prohibitions or the income-generation needs of low-income people are acute enough to justify the risks, school environments in South Los Angeles appear as likely to include an abundance of sidewalk vendors selling snacks and beverages as those in Compton, which has more permissive regulations. Assessment data appear to confirm other research suggesting a higher presence of sidewalk vendors in areas where residents have a more tenuous foothold in the formal economy and where the cultural context is more accustomed to informal enterprise in the public realm (Devlin, 2011; Dunn, 2014). As a result, reasonable, legitimized forms of sidewalk vending would be adaptable and socioeconomically beneficial in many sections of Los Angeles. Because the prohibition does not appear to discourage vendor activity near schools, permitted sidewalk vending would not likely amplify the hazards from nutrient-poor snacks and sugary beverages that already exist within the wider food ecology occupied by students.

Combined results of the observations and surveys reveal that more vendors generate sales from students by offering items that are less healthy than food and beverages offered by schools. If sidewalk vending were legalized, these results suggest that efforts should be made to limit the presence of vendors near schools or encourage those offering healthier items.

This assessment does not clarify whether sidewalk vendors have a positive effect on bicycle and pedestrian safety or the creation of defensible space. The study, however, does not support unsubstantiated views that the presence of sidewalk vendors contributes to unsafe and unkempt conditions in a neighborhood. More specific evidence is needed to assess the relationship of sidewalk vendors to a variety of environmental factors, such as crime prevention, food safety, and ancillary business activity.

Future studies can improve the understanding of sidewalk vending as a commercial activity and component of the environment with access to a broader school and student sample and more detailed transaction data. Single observation periods of four elementary schools provide a small picture of the vendor transactions that occur in each community. Assessing a greater proportion of school environments in each jurisdiction and conducting repeated observations at each location has the potential to reveal more consistent trends and clearer relationships. Including more jurisdictions in the assessment can also provide additional comparison opportunities based on differing regulatory and socioeconomic factors.

Studies that can coordinate with willing vendors and ample observer staffing have the potential to gather data that more directly measure the nutrition content of snacks and beverages purchased by students and caretakers. The current political sensitivity of the issue made it difficult to reach out to vendors for purposes of research. Tracking sales for individual vendors and, perhaps, the

purchase history of segmented consumer groups can help determine the proportion of students who are only supplementing their daily nutrition needs through vendor snacks and beverages and those who may be skewing their diets toward the more acute end of caloric overconsumption. Gathering primary data at the point of sale would also provide more reliable information on sidewalk vendor transactions than what can be gathered through survey responses. Although classroom surveys employed by this assessment were helpful in outlining a general student perception of the off-campus nutrition environment, answers regarding individual purchases and preferences were subject to recall fatigue and respondent bias.

Conclusion

Reforming the regulatory environment of sidewalk vending offers an opportunity to focus closer on the food access challenges that students and caretakers in South Los Angeles face. To address the child obesity epidemic locally, a comprehensive policy and programmatic approach is evolving that includes restrictions on the proliferation of unhealthy food sources (for example, fast-food density limitations) and development initiatives to scale the presence of healthier food sources (for example, corner store conversions, nutrition benefits matching, food retail financing initiatives). Both approaches have implications for the regulation of sidewalk vending.

Although vendors in many areas make authentic and valued contributions to the city's emergent food culture, observations confirmed that students and caretakers represent a market niche that is served by vendors largely with unhealthy snack and beverage choices. Survey evidence suggests that a large majority of elementary school students in South Los Angeles participate in this market on a regular basis. Although exercise can mitigate some of the negative health effects from these snack and beverage purchases, in many cases they are contributing to varying degrees of caloric overconsumption (Goetz and Wolstein, 2007). The continued prohibition of this sidewalk vending mode in proximity to school campuses should, therefore, be a distinct consideration within the wider legalization of sidewalk vending. New permitting structures that would be implemented with these regulatory reforms may also include revenue sources that can be allocated for more consistent enforcement. If this funding were applied with student nutrition as a primary concern (as opposed to with business as a major concern), it could make school-proximal regulations of sidewalk vending more effective than yet seen.

Our findings should encourage policymakers to consider avenues that promote, even mandate, the selling of healthier food near schools. Vendors who elect to sell healthy food provide a compelling justification for allowing approved modes of sidewalk vending near schools that complement campus-based nutrition efforts. Definitions of "healthy vending" can vary based on cultural perceptions, but an enforceable definition agreeable to nutrition and vendor advocates and food regulators would likely commence with a minimum of drinking water, raw fruits and vegetables, and packaged "smart snacks."¹⁵ Research suggests that this type of health-oriented sidewalk vendor can be sustained independently (Tester, Yen, and Laraia, 2012), but their economic prospects could

¹⁵ The USDA Food and Nutrition Service provides guidance for "smart snack" nutrition standards, to which distributors are increasingly adapting.

be significantly enhanced if granted exclusive access to a regulated environment near schools, offered other regulatory incentives (for example, fee waivers, permit expediting), and supported by a public or philanthropic vendor incubation initiative.

The assessment's data on student nutrition behaviors do provide outlines of a multifaceted food resource environment containing multiple challenges to healthy eating. Based on the patronage rates indicated in student surveys, addressing the presence and product offerings of fast-food restaurants, convenience stores, and ice cream trucks operating near schools, all of which are larger sources of nonnutritious snacks and sugary beverages, may be more imperative than considering the nutrition impacts of sidewalk vending.

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Authors

Robert Baird is a policy analyst for food systems and land use at Community Health Councils, Inc.

David C. Sloane is a professor in the Sol Price School of Public Policy at the University of Southern California.

Gabriel N. Stover is the Director of Research and Evaluation at Community Health Councils, Inc.

Gwendolyn Flynn is a policy director for nutrition resources development at Community Health Councils, Inc.

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Point of Contention: Declining Homeownership

For this issue's Point of Contention, we asked scholars with substantial knowledge of the topic to argue for or against the following proposition—"By 2050, the U.S. homeownership rate, currently about 64 percent of households, will have fallen by at least 20 percentage points." Please contact alastair.w.mcfarlane@hud.gov to suggest other thought-provoking areas of controversy.

On the Plausibility of a 53-Percent Homeownership Rate by 2050

Arthur C. Nelson
University of Arizona

America's homeownership rate has been drifting steadily downward since 2004, when it reached its historic peak of more than 69 percent. By 2010, the rate had fallen to 66.9 percent¹ and, by 2015, it fell further to 63.4 percent. According to the Urban Institute (Goodman, Pendall, and Zhu, 2015), Myers and Lee (2016), and the Joint Center for Housing Studies of Harvard University (2015), the homeownership rate will continue to fall during the next several years. But how far will it drop by mid-century? To answer this question, I review several trends that are poised to drive down homeownership rates, extrapolate trends to 2050, and offer implications for planning and policy.

Reasons for Declining Homeownership

I count many reasons for declining homeownership rates. Without being exhaustive, they include more stringent mortgage underwriting requirements than seen in the middle 2000s (Chan, Haughwout, and Tracy, 2015); reduced confidence that homeownership will generate equity sufficient to justify the commitment (Randazzo, 2011);² the desire to be mobile to move to new economic opportunities without having to sell a home first (The Council of Economic Advisors, 2014); stagnating median household income in real dollar terms (Kochhar, Fry, and Rohal, 2015);³ student debt loads that can make it difficult to qualify for a mortgage (Harney, 2015); and an increase in multigenerational households (Fry et al., 2014), which may dampen total new housing demand. In my view, these trends will be difficult to reverse.

¹ These figures are from the U.S. Census Bureau's annual Housing Vacancy Surveys, which report different homeownership rates than the decennial census. In 2010, for instance, the decennial census homeownership rate was 65.1 percent.

² Randazzo challenged conventional wisdom that homeownership will automatically create wealth through equity appreciation over time. My observation is that prospective homeowners are coming to that conclusion on their own.

³ My interpretation of Kochhar, Fry, and Rohal is that, although median household income may be rising, the United States is becoming more bifurcated as fewer people below the median income level qualify to buy homes now than in the past because of their income.

Extrapolations

I extrapolate homeownership trends from 2015 to 2050. Doing so, I divide households into those headed by a White non-Hispanic (hereafter, White) householder and all others whom I call New Majority householders. I use the term “New Majority” recognizing that, soon after 2040, most Americans will belong to minority race/ethnic populations.

To estimate households by race/ethnicity to 2050, I divide Woods & Poole Economics (2015) projections of White persons and all others (comprising the New Majority) by the 2014 average household size for those populations from the 1-year American Community Survey. I thus assume constant household size to 2050; future work can refine this estimate. I also assign all people to households, again something that future work can refine.

I then extrapolate homeownership rates for White and New Majority households. For this extrapolation, I estimate the average annual rate of change in homeownership among White and New Majority households between 2000 and 2014 (the latest year for which data are available). The analysis period thus moderates effects of the ownership bubble of the middle 2000s. Using this constant-change (reduction) in homeownership, I estimate future homeownership for White and New Majority households separately, then combined. Results are reported in exhibit 1.

I estimate that, by 2050, America’s homeownership rate may be 53.5 percent or roughly what Germany’s rate was in 2015.

How do my projections compare with others’? Although no other estimates of homeownership rates extend to 2050, we may be guided by projections of some into the 2030s. Exhibit 2 reports middle projections for 2020 and 2030 by the Urban Institute (Goodman, Pendall, and Zhu, 2015) and “Scenario 2” projections in 5-year increments from 2017 through 2032 by Myers and Lee (2016) interpolated to 2020 and 2030 compared with mine based on exhibit 1. My estimates for 2030 are lower but seem in the range of others’.

Of course, many things can change future homeownership rates. They include, but are not limited to, unforeseen changes in economic conditions, national or global health or environmental catastrophes, wars or other forms of significant social change, changes in policies that alter incentives for homeownership, and changing attitudes of the benefits and burdens of homeownership, among others.

I consider this projection to be preliminary. Future analysis should be conducted to assess the change in homeownership among individual population and household groups based on age, income, education, household type, race, ethnicity, and metropolitan area, among other factors.

Although the projected homeownership rate may seem alarming, it is actually just about what it was in 1950—55 percent—the first full year after implementation of the federal Housing Act of 1949.⁴ Historical and projected homeownership rates are illustrated in exhibit 3.

⁴ Public Law 81-171, Title V.

Exhibit 1

Projected Homeownership Rates by Race/Ethnicity, 2000–2050

Year	Households	Owner Rate	Owners	Renters
White non-Hispanic				
2015	80,488	72.5	58,366	22,122
2020	81,653	71.4	58,288	23,365
2025	82,600	70.3	58,045	24,555
2030	83,217	69.2	57,567	25,650
2035	83,440	68.1	56,822	26,618
2040	83,306	67.0	55,846	27,459
2045	82,921	66.0	54,722	28,199
2050	82,449	65.0	53,563	28,886
New Majority				
2015	45,066	47.1	21,243	23,824
2020	49,635	46.4	23,032	26,603
2025	54,684	45.7	24,979	29,705
2030	60,197	45.0	27,069	33,128
2035	65,917	44.3	29,179	36,738
2040	71,684	43.6	31,237	40,447
2045	77,487	42.9	33,240	44,247
2050	83,330	42.2	35,189	48,141
Total				
2015	125,554	63.4	79,608	45,946
2020	131,288	61.9	81,319	49,968
2025	137,285	60.5	83,024	54,260
2030	143,414	59.0	84,636	58,778
2035	149,357	57.6	86,001	63,356
2040	154,990	56.2	87,084	67,906
2045	160,408	54.8	87,962	72,446
2050	165,779	53.5	88,752	77,027

Note: Figures in thousands.

Source: Arthur C. Nelson

Exhibit 2

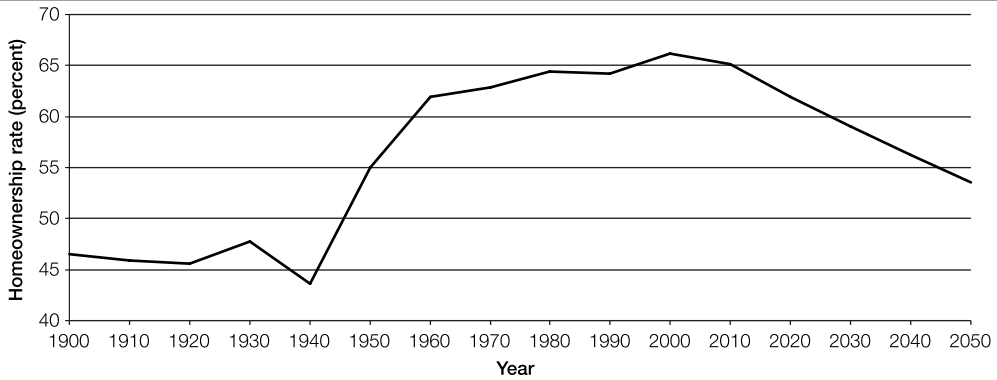
Comparative Homeownership Projections

Year	Urban Institute	Myers and Lee	Nelson
2020	62.7	61.0	61.9
2030	61.3	59.8	59.0

Sources: Goodman, Pendall, and Zhu (2015); Myers and Lee (2016); Arthur C. Nelson

Exhibit 3

Historical and Projected Homeownership Rates, 1900–2050



Sources: U.S. decennial censuses to 2010; Arthur C. Nelson

Implications

The projected reduction in homeownership will certainly change the nature of housing needs. For one thing, there may be fewer White homeowners in 2050 than in 2015; indeed, all net change in housing demand among Whites may be for rental housing. Overall, the increase in rental housing may be equivalent to about 77 percent of the net change in households to 2050 (see exhibit 4). Although there may be more homeowners in 2050 than in 2015, they may account for only about 23 percent of the net change in housing demand.

I suspect that by 2020 we will know much more than we do now about drivers of homeownership change. If the homeownership rate in 2020 roughly matches the projections of the Urban Institute (about 62.7 percent), Myers and Lee (about 61.0 percent), or me (about 61.9 percent), we may need to accept the downward homeownership trend as a long-term given. We will then need to adjust our community plans—and perhaps federal and state housing policies—to recognize this new reality. Maybe we should not wait.

Exhibit 4

Change in Tenure by Race/Ethnicity, 2015–2050

Household	Household Change	Owner Change	Renter Change	Renter Share (%)
White	1,962	(4,803)	6,764	100
New Majority	38,264	13,946	24,317	64
Total	40,225	9,144	31,082	77

Note: Figures in thousands.
Source: Arthur C. Nelson

Author

Arthur C. Nelson is a professor of planning and real estate development and associate dean for research and discovery in the College of Architecture, Planning & Landscape Architecture at the University of Arizona.

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Cohort Momentum and Future Homeownership: The Outlook to 2050

Dowell Myers

Hyojung Lee

University of Southern California

It would seem preposterous that the national homeownership rate could fall by 20 percentage points or more during the next 35 years. Homeownership is an accumulated status tied to the adult life-cycle and its aggregate changes are very slow moving, unlike indicators such as the unemployment rate. During the past 40 years, excepting the brief bubble interlude of the early 2000s, the U.S. homeownership rate has not varied more than 4 percentage points, ranging from 62 to 66 percent, depending on sources.¹ In addition, after the national rate fell from its bubble peak of 69 percent into its more typical range, analysts were quick to declare that the homeownership rate would now remain constant for the future at its 2013 Housing Vacancy Survey (HVS) level of 65 percent (Gabriel and Rosenthal, 2015). What, then, is to keep the momentum from carrying this decline further?

Only a cataclysmic disruption could produce a very large shift in the homeownership rate, and those changes would need to accumulate over many years. Forecasting to the distant year of 2050, with market conditions unknowable, resembles science fiction. Yet the financial crisis (beginning in 2007), the Great Recession (2008 and 2009), and the prolonged aftermath (through 2012 or even longer) have had cataclysmic impacts on the housing market, and, even if it is unclear how long these effects will linger, their mark may be indelible and long term for at least some cohorts of housing consumers.

A longer view clearly is warranted, one that is built on the forces of cumulative change, rather than on current factors that are unknowable even 5 years into the future. Make no mistake, home purchases occur in the moment, but homeownership is a quasicumulative status acquired over

¹ Four different sources are commonly used to measure homeownership rates, but their estimates vary slightly, and thus the sources are not interchangeable in the analysis of trends. The most frequently cited source of national trends is the Housing Vacancy Survey (HVS) derived from the Current Population Survey (CPS). This source yields the highest estimates and is the source of the widely cited 69.2 percent estimate of the peak homeownership rate in 2004 and 2005. Closely related are the estimates based on the Annual Social and Economic Characteristics (ASEC) file, also derived from the CPS. In 2010, the HVS and ASEC both estimated the nation's homeownership rate at 66.8 percent. In the same year, the American Community Survey (ACS) estimate of the homeownership rate was 65.4 percent, nearly 1.5 percentage points lower. The decennial census of that year yielded another homeownership estimate, 65.1 percent, slightly lower than the ACS. Different studies use the alternative sources, which have different strengths, for different purposes. All are referenced in this article, but we are careful to not confuse trend analysis by combining the data inappropriately.

decades of a housing career, and changes in the national homeownership rate are aggregated over time from many cohorts, most of whom bought their homes more than 10 years earlier. For such a long-range view, a demographic-based approach has particular advantages due to its emphasis on temporal momentum of cohorts. Here we adopt a view of homeownership accumulation that is rooted as much as 80 years in the past and extending 40 years into the future.

Background

A homeownership rate in the low 40-percent range is not unheard of in the United States. That is where the nation stood in 1940, with 43.7 percent homeowners at the end of the decade of the Great Depression. That homeownership rate was surprisingly only 4.1 percentage points lower than the rate reported in the census taken in April 1930—47.8 percent—a rate still reflecting the heights of the 1920s before the effects of the stock market crash in the late fall of 1929 could dislodge many homeowners. If the housing malaise of the depression decade had continued another 25 years, the decline might be extrapolated to 14.4 percentage points, still well short of a prospective 20-point decline in 35 years.

Many forces have worked to expand the nation's homeownership rate in recent decades, and current market and financing conditions, if they continued, could severely undermine the national rate. Yet, because of its nature, that damage would be wrought incrementally and cumulatively across the decades. Older people are a great stabilizing force, while young people are most at risk.

During the past century, at least since 1920, age groups older than 55 have held very high ownership rates, ranging from 60 to 85 percent in recent decades. Older households are relatively impervious to current market conditions, having purchased their homes in earlier decades, and given the accumulation of wealth and Social Security insurance later in life.² Inertia is another powerful force, expressed through the typical reluctance of older people to make any move from a long-time home. Even though homeownership rates continue to rise slowly as cohorts grow older, what has most increased the ownership level of older age groups in recent decades is the entry of former middle-aged cohorts who carry higher homeownership rates accumulated during high prosperity decades of the postwar era. The long-range risk is that this process that has bolstered homeownership at older ages might run in reverse when disadvantaged cohorts from the recent decade begin to arrive at older status in the future.

By contrast with the older age group, young people once had very low rates of homeownership attainment but that rapidly increased after 1940. Before the institutional financial innovations of the 1930s and 40s, young people had to save many years to acquire as much as a 50-percent downpayment. Many would grow middle aged before they could buy a home. With new federally insured FHA and VA mortgage programs, however, requiring very low downpayments, the age at which families could buy a home was greatly accelerated (Fetter, 2013; Goodman and Nichols, 1997). In addition, the institutionalization of mortgages amortized over 30 years, rather than the 10 years that was often common, led to monthly carrying costs that were affordable to families

² Current family income also has one-fourth as much influence on tenure choice among people who are between the ages of 50 and 65 as among people who are age 30 (Gabriel and Rosenthal, 2015: Figure 3, panel A).

with more modest incomes. These mortgage innovations, combined with rapid postwar income growth, spurred an 18.3-percentage-point rise in the national homeownership rate by 1960. The sharpest picture of the impact these mortgage innovations had on young people is seen in the increases among 35- to 39-year-olds, whose ownership rate at the end of the Great Depression, 33.5 percent, rose more than 30 percentage points, to 64.6 percent, by 1960. This rate was even higher than the overall national rate at that time. The momentum in the future of these rising cohorts would support a continued rise in the national rate in subsequent decades.

Moving Forward From the Great Recession

Young people have proven to be very vulnerable in recent years. Homeownership for ages 35 to 39 topped out at 69 percent in the 1980 census. From that point forward, homeownership attainment began to very slowly recede, likely under the pressure of growing affordability problems and also the effects of declining marriage and increasing diversity, both of which added people from groups with historically lower homeownership. The decline accelerated dramatically, however, following the financial crisis. Between 2008 and 2015, the homeownership rate of this age group fell from 64.6 to 55.1 percent (-9.5 points). Meanwhile, for those ages 70 to 74, the rate declined only slightly in the same time period, from 81.7 to 80.7 percent (-1.0 point).³ The low rates among today's young adults, unless they were to accelerate well beyond the normal pace of increase in future years, have potential to depress the U.S. homeownership rate as these cohorts begin to replace their elders later in the century.

Young adults are most sensitive to current market conditions because they are newly purchasing homes. In contrast to this young cohort, households with members over the age of 55 typically bought their homes a decade or two earlier, well before the housing bubble. In fact, the first to be impacted by the recent crisis were the new buyers at the height of the boom, households that purchased when prices were most inflated and that had very high debt ratios enabled by a lax regulatory regime that permitted very loose underwriting and even predatory lending. Casualties of the 4.4 million foreclosures from 2007 to 2013 were most concentrated among households that were unfortunate to be the right age to buy homes in this dangerous period. These householders were members of Generation X (born between 1965 and 1979), then aged 25 to 39. Also harmed were minority households and moderate-income families who used life savings to finally enter the ranks of homeowners late in middle age. These groups stretched to purchase homes at the worst possible time, and they suffered the most in the subsequent collapse. When the housing market began to falter and ultimately crashed, these new owners, who were the last to make it in, had very little equity and were the first to be ejected from homeownership. Having lost all their equity and with damaged credit, a significant portion of these cohorts may never rebuild their housing assets.

The Millennials (born between 1980 and 1999) following behind Generation X were much less damaged in the crisis, as noted by Kolko (2014), Emmons and Noeth (2014), and the Joint Center for Housing Studies of Harvard University (2015). That is largely because the Millennials were fortunate they were mostly too young to buy during the bubble and so they avoided equity and

³ These annual homeownership rates are taken from the HVS that is taken in conjunction with the CPS. The historical time series by age group is in Table 12; <http://www.census.gov/housing/hvs/data/histtabs.html>.

credit losses in the foreclosure crisis. Viewing the carnage of homes purchased by older brothers and sisters and suffering their own crises of unemployment might have left the Millennials psychologically risk averse and reluctant to take on the mortgage obligations of homeownership. Available research (Drew and Herbert, 2013) finds that the Millennials' desire for homeownership, as expressed in Fannie Mae surveys, remains strong and their knowledge expressed of the Generation X setbacks does not curb their desire to purchase a home. Nonetheless, their economic resources remain very limited in the post-recession period, and, at the same time, the mortgage underwriting standards are much stricter.⁴ It is too early to say that the Millennials have established a clear track record of home purchase, so any projection of their future is still circumspect.

The difference between old and young age groups sheds light on the future, but not in the way envisioned by Mankiw and Weil (1989), who assumed age differences would be preserved into the future. Their modeling embedded the assumption that the Baby Boomers (born between 1946 and 1964) were destined to descend to lower housing consumption after 1990, when they began to cross age 45, because that was implied by the current lower status of their elders (observed in 1970 and 1980 census age cross-sections). What is faulted as the "age cohort fallacy" (Pitkin and Myers, 1994) lay at the root of the Mankiw-Weil error and is not a safe guide to the future. Instead, we should rely on cohort legacy and momentum, assessing each generation by its own level and trajectory of homeownership and carefully considering shifts between earlier and later cohorts.⁵ Whereas middle-aged people in 1980 did not *fall* to the level exhibited by their elders when they reached that age in 2005, neither will today's young people necessarily *rise* to their elders' level by 2050. The difference is that today's senior generation has accumulated a legacy of advantage from buying their homes before the rapid gains in house values and before income growth began to stagnate. These economic advantages or disadvantages are accrued by cohorts, and broad generations, and are not fixed in the age groups through which they travel over time.

Insights From a Cohort-Based Projection

Our conclusions on the prospective future homeownership rate of the nation are rooted in the long-term, dynamic perspective just described. We draw on the cohort tradition of forecasting housing demand first developed in the late 1970s and 1980s by George Masnick and John Pitkin at the Joint Center for Housing Studies of Harvard University (Pitkin and Masnick, 1980). Following this tradition and our own extensions of housing demography, we develop a method for long-range, cohort-based projection of homeownership that was first presented in a June 2014 conference hosted by the Lincoln Institute of Land Policy, the research sponsor (Myers and Lee, 2014).⁶ Our method, unlike other demographic-based forecasting models, takes explicit account

⁴ One indication of stricter mortgage credit access is provided by the Mortgage Bankers Association's Mortgage Credit Availability Index, which stood at 126 in September 2015 compared with 850 in 2006 at the height of the bubble and 400 in 2004. <https://www.mba.org/news-research-and-resources/forecasts-data-and-reports/single-family-research/mortgage-credit-availability-index>.

⁵ The general advantages of the cohort-longitudinal approach adopted here are detailed in Myers (1999) and Pitkin and Myers (1994).

⁶ The Myers and Lee (2014) Lincoln study of changing housing and urban demography was later expanded and published in a volume of conference proceedings (Myers and Lee, 2016).

of the housing bubble, the Great Recession, and the prolonged recovery. This article benefits from 2 years of additional source data that reveal continued slow recovery in the housing market, leading us to modify our near-term view and discard previous, overly optimistic scenarios that required faster recovery. The projections also are extended to 2050 for current purposes, and we reestimate the model on the basis of Current Population Survey (CPS)/Annual Social and Economic Characteristics (ASEC) data,⁷ rather than census/American Community Survey (ACS) data, to accommodate the challenge of projecting homeownership decline from the 69-percent peak in the CPS/HVS data. As noted previously, use of census/ACS data would exaggerate homeownership decline relative to the CPS/HVS peak. The CPS/ASEC data also allow us greater flexibility and historical depth in the selection of time periods for measuring cohort progress.

Our method, introduced in Myers and Lee (2014), is built on 5-year segments of cohort progress, measuring the increment in homeownership that is achieved when, for example, a cohort passes between ages 30 to 34 and 35 to 39, as observed in 1995 and 2000. The increments (or decrements) measure the net acquisition of homeownership by each cohort in the passage through time between periods spaced 5 years apart. These segments are observed both during the recession-downturn and aftermath of 2007 to 2012 and in earlier segments back to 1985. We deliberately skip 2 years between our intervals of 1995 to 2000 and 2002 to 2007 because of a significant revision in the source data series in 2002, which could distort calculations that straddle old and new series. The 2002-to-2007 interval corresponds well to the housing bubble commencing after the 2001 recession and ending with the sharp downturn beginning in late 2007.⁸ The 5 years from 2007 to 2012 then serve as our period for market downturn and falling homeownership rates, with 2012 to 2017 marking the period of recovery, slow as it has been, and 2017 to 2022 representing the presumed new period of normalcy. Subsequent periods through 2052 are assumed to yield the same rate of cohort progress as 2017 to 2022.

Projections launch from observed values in 2012 that pertain to each cohort at its given age in that year. The strength of cohort projections is that the method builds on the accumulated status unique to each cohort at their age in the launch year, building on the established base. A weakness of cohort projections, however, is in regard to cohorts that have not yet entered young adulthood and, therefore, for whom no cohort observations exist on which to build. In the special case of these entry-level cohorts, cross-sectional comparison of 15- to 24-year-olds is made across survey

⁷ The analysis in this article is based specifically on the ASEC file issued each March from the CPS (also the source for the HVS widely used by housing analysts). The Joint Center for Housing Studies of Harvard University (McCue, Masnick, and Herbert, 2015) found this source to be the most reliable for analysis with a long time series. The previous Lincoln model (Myers and Lee, 2014) relied on ACS data linked to decennial census data, creating some small discrepancies and posing difficulty in creating 5-year cohort intervals before 2000. A total population universe was estimated from the ASEC file based on the ratios of age-specific total population to civilian household resident population from the 2000 census. In addition, 3-year moving averages were used for headship and homeownership rates to smooth year-to-year fluctuations.

⁸ More specific matters of timing may be relevant. The ASEC data are collected in March of each year, but we use a 3-year moving average centered on the designated year. Data from March 2008 accordingly form a portion of the 2007 estimate. Although this date is past the peak of the housing bubble, it precedes the onset of the recession and sharp homeownership declines. Moreover, tenure status recoded in March 2008 lags tenure choices made the previous year. In the second quarter of 2008, the national homeownership rate was still 68.1 percent (HVS).

years from 1985 to the present, and adjustments are made for the changing demographic mix of the cohort occupying the age group in future years, as projected by the U.S. Census Bureau. The large Millennial generation currently occupies this entry position, and the unusual degree of uncertainty about the housing and economic behaviors that can be expected of this group in the next several years makes analysis challenging.⁹ Added to the uncertainty for projection purposes is a growing discrepancy between data sources with regard to the homeownership status of the 15-to-24 and, to a lesser extent, the 25-to-29 age groups.¹⁰

We contrast three scenarios for estimating the future homeownership gains to be added to each cohort as it passes through successive age groups in future time periods.

Scenario A assumes that household formation and homeownership increase within cohorts at close to the same pace as the average of 1985 to 2007; that is, before the Great Recession. In the initial recovery period of 2012 to 2017, the model uses a weight of 25 percent prerecession cohort progress and 75 percent based on 2007 to 2012, which seems to track experience to date. From 2017 to 2022 (and beyond), rather than assume a full return to boom times, the model uses a weight of 75 percent prerecession and 25 percent based on the 2007-to-2012 period. This scenario is both bullish and moderately restrained.

Scenario B assumes a more modest return to the former pace of homeownership growth within cohorts, adopting the same assumption in the recovery period as Scenario A, but imposing a post-2017 mix of cohort progress that is equally weighted between recession and pre-2007 boom periods. This scenario affords a distinctly more cautious or even pessimistic outlook for the long-term future.

Scenario C assumes no recovery from the recession period. The cohort gains in the 2007-to-2012 period are repeated every 5 years through 2052. The one adjustment is that negative net gains within cohorts are transformed to zero change (as they are in other scenarios). Rather than compound expected losses in each interval, the explanation given is that the negative progress in older ages is assumed to be an adjustment to the excessive expansion in the immediately preceding bubble period. Such adjustments would not be warranted in the absence of a bubble in future forecast periods and so we have not projected these negatives. Nonetheless, the assumption of no recovery from the recession-era housing market and no increases in the rate of homeownership acquisition in future periods, and the results portrayed here, are both extremely pessimistic and very unrealistic.

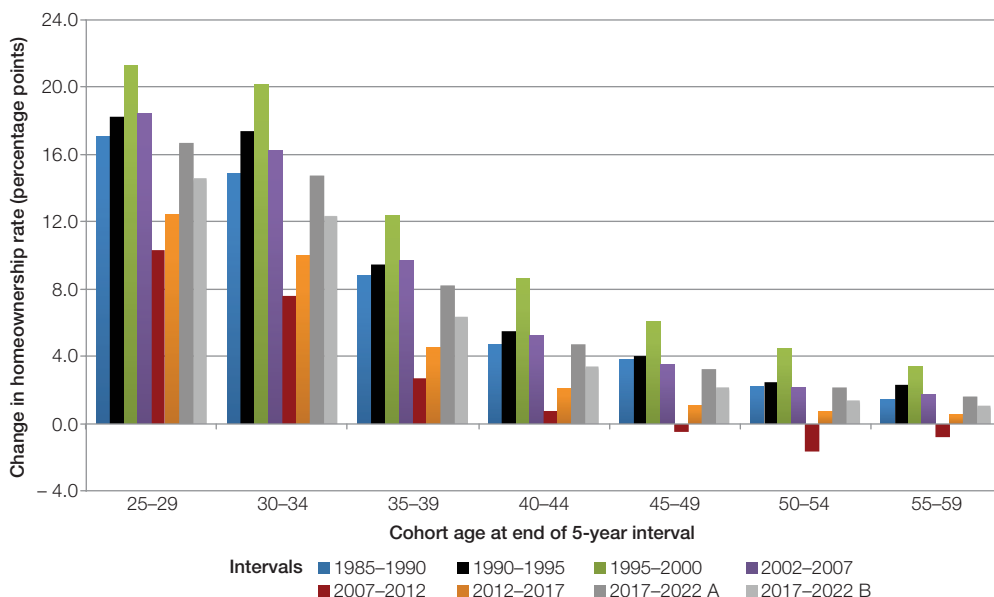
The key insight into these alternative projections is supplied in exhibit 1. The pace of homeownership accumulation is much more rapid when cohorts pass through young ages and it steadily declines through middle age. (Ages older than 59 are not shown for reasons of space.) This pace has not been constant in all historic periods but quickens in every age group simultaneously under favorable conditions (such as better prices and financing terms, stronger investment expectations,

⁹ The unexpectedly long recovery from the Great Recession has created the greatest uncertainty for the Millennial generation, with great debate over how much of its current behavior represents new preferences by young people versus temporary economic disruptions because of the recession (Myers and Lee, 2016).

¹⁰ The ACS and ASEC data reveal very different levels of homeownership and a growing divergence between 2010 and 2014. The percentage of homeowners in 2014 was 21.3 in ASEC but only 12.6 in ACS. Between 2010 and 2014, the ASEC homeownership rate declined by 0.4 and the ACS rate declined by 2.1 percentage points. A modeling decision was made to “borrow” the ACS trend and apply it to the ASEC data for the 15-to-24 age group.

Exhibit 1

Five-Year Increments of Homeownership Progression by Cohorts in Different Historic Intervals



Notes: Includes projection alternatives of Scenario A (strong recovery) and Scenario B (moderate recovery); see text for definitions. The data deliberately skip 2 years between the intervals of 1995-2000 and 2002-2007 because of revisions in the source data series in 2002, which could distort calculations that straddle old and new series.

Source: Authors' analysis based on the 1984-2013 Current Population Survey/Annual Social and Economic Characteristics

and greater economic optimism), while slowing in others. As shown in exhibit 1, the cohort passing to ages 30 to 34 from ages 25 to 29 in each interval made the greatest gains in the interval of 1995 to 2000 (20.2 percentage points added to their homeownership rate). The pace of accumulation had quickened since 1985, but it actually slowed during the housing bubble (16.2-point gain) and slumped badly during the recession interval (7.6-point gain). We project a 10.0-point gain in this age interval through 2017, after which we project a 14.8-point gain under Scenario A and a 12.4-point gain under Scenario B. Scenario C assumes the same gain as in the recession (7.6 points in this age interval). The same pattern of acceleration and deceleration of homeownership accumulation in the different time periods is played out synchronically across successive age groups. In sum, exhibit 1 shows the dynamics of cohort gains that are greater when passing through younger than older age groups, and that are greater in some time intervals than others, with anticipated postrecession recoveries that vary by scenario.

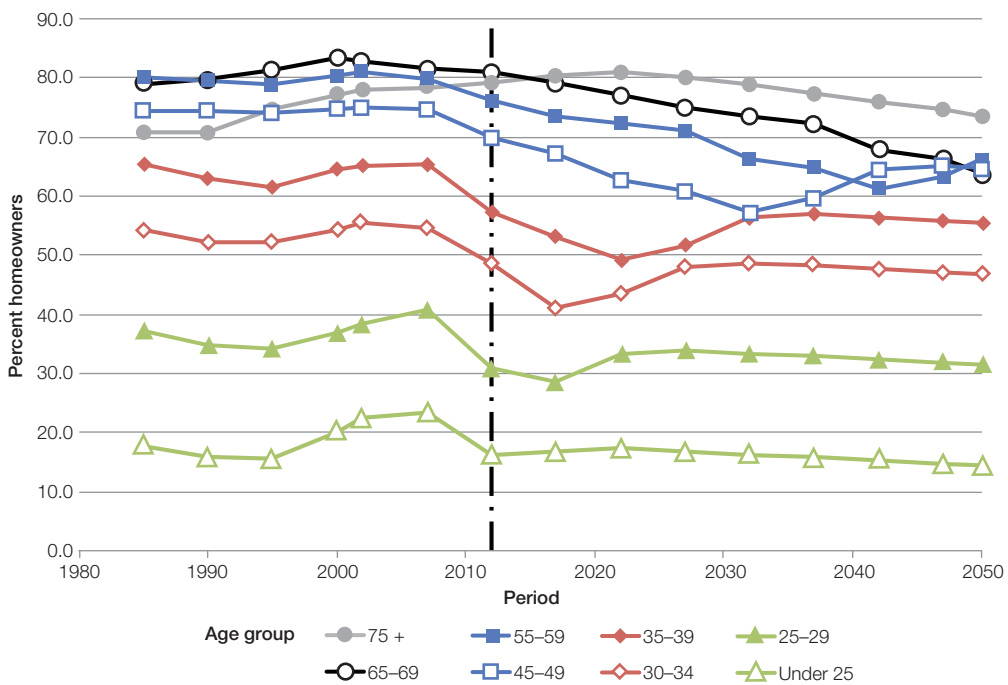
An alternate view of the projection results and actual data for preceding time periods is the age cross-section of homeownership rates recorded or projected in different periods. These projected rates emerge from the cohort modeling that launches from the 2012 observed data and applies the Scenario A schedule of incremental advancement as each cohort passes through successive age groups in the future. (For greater clarity, some of the older age groups are not shown in the exhibit.)

Noteworthy in exhibit 2 is the upward bulge in homeownership rates that occurred in all ages younger than 45 during the late 1990s and the 2000s' housing bubble. This bulge was followed by a sharp drop in these age groups between 2007 and 2012, creating a downward "notch" in the time series of each age group. The notch broadens in middle age groups to include 2017 and 2022 in our projections because cohorts entering the age in 2017 and 2022 arrive bearing a diminished amount of homeownership that accrued during the recession when they were younger. In effect, cohort momentum carries the losses of the past into older age groups in later periods. According to these projections, the homeownership rate will continue to decline at ages 45 to 49 until 2032 and at ages 55 to 59 until 2042. The rate may also decline until 2022 at ages 35 to 39, but cohorts passing into this age group could rapidly respond to new policies and more favorable economic incentives.

Effects of the recovery toward normalcy in the housing market, anticipated after 2017, are greatest for the youngest age group because entering cohorts bear less handicap of historical legacy. The homeownership status of young cohorts is most uncertain because they are most responsive to current economic incentives and policies, as witnessed with the new housing programs after World War II, but such are unknown in future years. Unexpected policy changes or major new economic opportunities could once again accelerate the pace of homeownership attainment of young people relative to those who are older.

Exhibit 2

Homeownership Rates of Selected Age Groups, Actual and Projected, Across Periods



Note: Based on the Scenario A (strong recovery) projection; see text for definition. To preserve clarity, the exhibit presents the homeownership rates of selected age groups, omitting every other group beginning with ages 40-44.
 Source: Authors' analysis based on the 1984-2013 Current Population Survey/Annual Social and Economic Characteristics

Racial change is a demographic factor of which many are aware (Frey, 2014), and it has the effect of slowly declining the homeownership rate. On average, homeownership rates are much higher for non-Hispanic White people than for others. And the White share of the population will decline, for example, at ages 25 to 29, from 56.8 to 42.3 percent of the population between 2014 and 2050, according to Census Bureau projections. If race-specific homeownership rates at this age are held constant at their level observed in 2014, and only racial shares of the population are allowed to shift, the homeownership rate at this age would decline by 2.1 percentage points over 36 years. To account for differences in household formation that underlie the homeownership rate (Yu and Myers, 2010), we have elected to assume an even greater racial shift effect on homeownership of 3.6 percentage points in our new cohorts entering young-adult age groups. Based on this long-term expected decline in the young homeownership rate due to racial mix, we impose a slow homeownership rate decline of 0.1 percentage point per year on the young age groups, and that begins to dominate after the presumed recovery period from recession-related decline. For older ages, the cohort structure of the model already embeds actual racial composition of the existing cohorts. Racial shift occurs at older ages through the aging of these existing cohorts and their replacement of older cohorts that are relatively more White.

The bottom line questions are these: How do all these changes add up for the overall homeownership rate? Is it possible that the U.S. homeownership could decline 20 points or by some other large amount by 2050? Our model may shed light on this possibility. Beginning with the 2014 National Population Projections produced by the Census Bureau, we populate the size of each cohort, run it through household formation and homeownership schedules projected for that cohort, aggregate all cohorts in each period, and then compute a total homeownership rate for each period.¹¹ The findings on the overall U.S. homeownership rate are portrayed in exhibit 3, showing both the historical trend since 1950 and our three projections stretching out to 2050.

Our most dire projection, Scenario C, assumes zero recovery will occur from the slow homeownership acquisition during the Great Recession, stunting overall homeownership accumulation to a greater degree each passing year. Using these assumptions, the homeownership rate is driven down to 43.0 percent by 2050, and this rate would be even lower, by 3.7 percentage points, if the aggregate population had not shifted its weight to older age groups that have higher ownership rates. Scenario C indicates what might be required to approach a 20-point decline in the national homeownership rate.

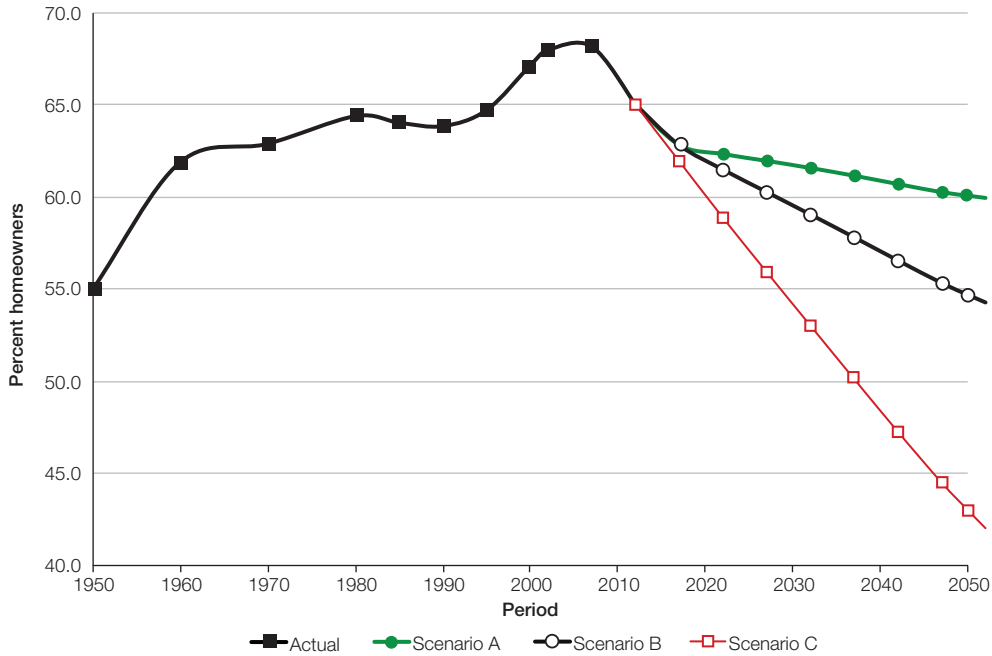
A more realistic model, Scenario B, produces a national homeownership rate of 54.7 percent, falling another 2.6 percentage points lower if not for population aging. This outcome results from following the assumption of only halfway recovery between the slow homeownership gains by cohorts in the recession and the average pace of the 20 years preceding the Great Recession.

Scenario A is also a realistic possibility for the future, producing a national homeownership rate of 60.1 percent in 2050, falling to 58.0 percent, except for the 2.1-percentage-point boost due to population aging. This model assumes a three-fourths recovery from the pace of housing progress of each cohort during the recession to the average pace of the 20 years before. The question

¹¹ We modeled homeownership after first translating population into households or, alternatively, by modeling homeowners per capita. In communicating our analysis for present purposes, however, we express findings in terms of the conventional homeowners per household.

Exhibit 3

A Century of Actual and Possible U.S. Homeownership Rates



Notes: Scenario A assumes a strong recovery, closing three-fourths of the difference between the average rate of cohort homeownership accumulation in the 20 years before the recession and the period of 2007–12. Scenario B assumes a moderate recovery, closing one-half of the difference. Scenario C assumes no recovery, with the slow accumulation during the recession continued perpetually.

Source: Authors' analysis and projections based on input data from the 1950 through 1980 decennial censuses, 1984–2013 Current Population Survey/Annual Social and Economic Characteristics, and the 2014 National Population Projections

might be—Why should we not expect a full recovery to what was normal before? A multitude of factors make housing acquisition likely to be more difficult than earlier, ranging from higher prices and faltering incomes to weaker availability of credit and an uncertain future structure of mortgage finance. Increasing immigration in future decades may also slow gains in the future but to a lesser degree than sometimes assumed, given the rapid improvements in homeownership attainment among Latinos over time, even net of income gains (Myers, Megbolugbe, and Lee, 1998) and given the greater future weight of Asians who have higher prospects for homeownership. Overall, caution is advised in assuming that homeownership trends will fully bounce back to those of an easier time.

From Projections to Policies

Scenarios A and B should be considered both realistic and probable. Further research directed toward their assumptions could help us better understand the sensitivity of homeownership rates to alternative factors, as referenced previously. Policymakers can learn from the implied outcomes

emerging from our projection model built on the track records of the past and the model's emphasis on the future information implied by cohort momentum. The next step is to choose the most likely assumptions and make judgments about most likely outcomes in order to transform this modeling from a set of alternative *projections* to a *forecast*.

Whether maintaining a higher homeownership rate is a desired goal for the nation is not addressed in this analysis. Demographic considerations will be paramount. What is to be done about the eventual, massive sell-off by the Baby Boomer homeowners who (or whose estates) will all be looking for buyers among the younger generation (Myers and Ryu, 2008)? How should the growing diversity of the younger generation be managed; do we help neglected minorities to achieve more equal access to homeownership, and how necessary is that for enough young people to qualify to purchase 54 million homes from so many Baby Boomer and older sellers? Following public discussion and debate about these factors and others, we ultimately require a *policy choice* of which path is preferred, followed by development of a *plan* for how to ensure the achievement of that outcome over the other possibilities (Isserman, 1984). Projections cannot make policy choices or devise strategic plans, but counting things up in the most plausible way possible is an essential part of the evidence base.

Conclusion

Cohort momentum has a powerful impact in homeownership accumulation, and the effects of the Great Recession are projected to echo forward for decades. Yet we also find enormous stability built into the nation's homeownership rate because of the aggregation across many cohorts and with increasing weight placed on older ages that typically have high accumulation.

The overall conclusion is that massive change in the homeownership rate appears highly unlikely, unless the nation were to fall unintentionally into perpetual recession for 35 years, as in Scenario C, or, more radically, by intention, if the federal government rolled back its Great Depression-inspired housing policy innovations and thus erased much of the gain in homeownership after 1940 (Chambers, Garriga, and Schlagenhauf, 2014). Neither of these events is likely to occur.

Important questions for research should be addressed around key assumptions in our projection model, which might inform the choice between the two realistic scenarios, A and B. First, how much can now-middle-aged Generation X households bounce back and make up for deficits sustained when their cohort was 10 to 15 years younger? Second, how much will the diverse Millennials recover from the slow start in their economic careers and translate that into accelerated accumulation of homeownership as they move into middle-age years? Finally, how might policy be designed to assist these groups and move the national homeownership more on the path of Scenario A, or better, than Scenario B? The future ahead of homeownership, because it is quasicumulative, is built on the momentum of today, not easily modified by last-minute programs to correct deficiencies at some distant date, and certainly not wished for out of whole cloth. The projections offered here provide an outlook to build on.

Acknowledgments

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Authors

Dowell Myers is a professor of policy, planning, and demography in the Sol Price School of Public Policy at the University of Southern California.

Hyojung Lee is a doctoral candidate in the Sol Price School of Public Policy at the University of Southern California.

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A Renter or Homeowner Nation?

Arthur Acolin

University of Southern California

Laurie S. Goodman

Urban Institute

Susan M. Wachter

The Wharton School, University of Pennsylvania

Between the 1940s and the 1960s, the U.S. homeownership rate increased by nearly 20 percentage points, from mid-40 to mid-60 percent. The self-amortizing 30-year, fixed-rate mortgage, introduced by the Federal Housing Administration/Veterans Administration (VA—now the U.S. Department of Veterans Affairs) transformed the United States from a nation of renters to a nation of homeowners (Acolin and Wachter, 2015; Fetter, 2013).

For three decades, from the mid-1960s through the mid-1990s, the homeownership rate remained stable, at around 64 percent (U.S. Census Bureau, 2015a), until recent volatility. Although aggregate homeownership rates were remarkably steady, so were gaps across demographic groups. The “majority-minority” gap is about 20 percentage points (U.S. Census Bureau, 2015a). The persistence of this gap has important consequences for the national homeownership rate in the future, because the United States is expected to become a majority-minority nation in the next 20 years.¹

In this article, we look back to explain the decades of homeownership stability and ask whether, after housing markets complete their recovery from the excesses of the housing market expansion and collapse, we will return to the post-WWII normal in which nearly two out of three households own or whether homeownership is likely to continue its postrecession fall over the coming decades, with an end result that we are no longer a nation of homeowners.

To be specific, this article addresses this proposition: “By 2050 the U.S. homeownership rate... will have fallen at least 20 percentage points.” If this proposition is true, it will mean that within less than 40 years, the United States will transform once again, this time from a nation of homeowners to a nation of renters. Is this scenario possible? Is it likely? To address these questions, we undertake a forecasting exercise based on demographic predictions of the composition of U.S. households. In two separate scenarios, we assume the persistence of rents and prices and the lending conditions of 1990 to 2000 and 2000 to 2010, and we then assume a scenario of rising rents

¹ Based on census projections (U.S. Census Bureau, 2015d).

and prices to capture the possible impacts on homeownership of more recent trends in housing costs that may persist going forward. While it is not our base case, a set of circumstances exists under which the homeownership rate could fall below 50 percent.

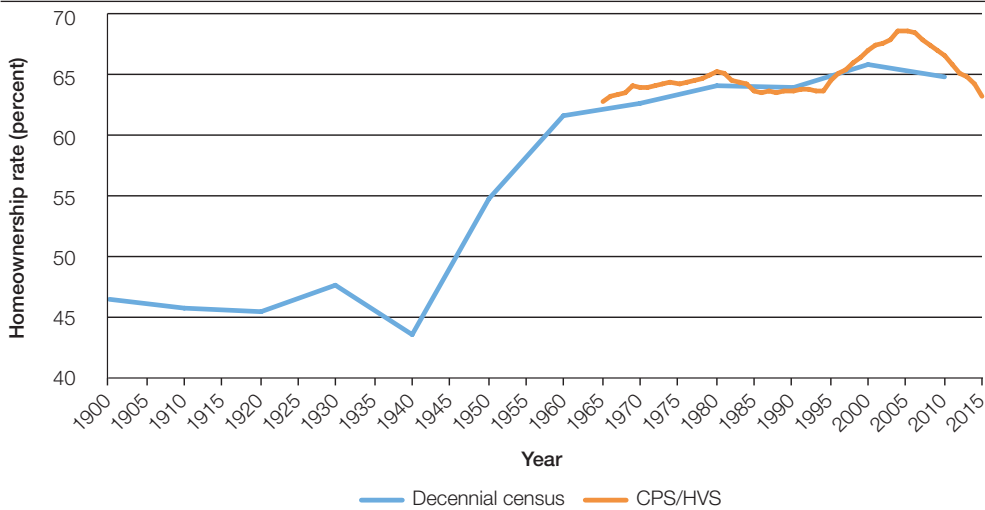
The first section of this article reviews the literature on recent historical trends in the homeownership rate in aggregate and by region and demographic category. The second section describes baseline scenarios for homeownership, starting with a framework put forth by Goodman, Pendall, and Zhu (2015) and developing that to forecast homeownership to 2050. The third section discusses how rising rent trends may affect the base cases. A final section concludes.

Historical Changes in Homeownership, by Region and Demographic Group

After increasing from 44 to 62 percent between 1940 and 1960, the homeownership rate remained relatively stable through the 1990s (exhibit 1).² It then increased from 64 to 69 percent between 1994 and 2004 and maintained that level until 2006 and fell back to 64 percent in 2009, declining to 63.4 percent in 2015.³ Both periods of stability and volatility are the outcomes of multiple and

Exhibit 1

Homeownership Rate, U.S. Decennial Census (1900–2010) Versus CPS/HVS (1965–Q2 2015)



CPS = Current Population Survey. HVS = Housing Vacancy Survey. Q2 = second quarter.
Sources: U.S. Census Bureau (2015a, 2015b)

² These figures are based on data from the U.S. Census Bureau's decennial census.

³ These figures are based on data from the Census Bureau's Housing Vacancies and Homeownership Survey. The survey provides quarterly and annual estimates of the housing stock by tenure, region, income, and minority status. The series goes back to 1965 (1994 for the estimates by income, race, and ethnicity). Despite the large sample size for this survey, results differ from those obtained using the Census Bureau's decennial census and American Community Survey (ACS) data shown in exhibit 1. For the projections, we use the decennial census and ACS data.

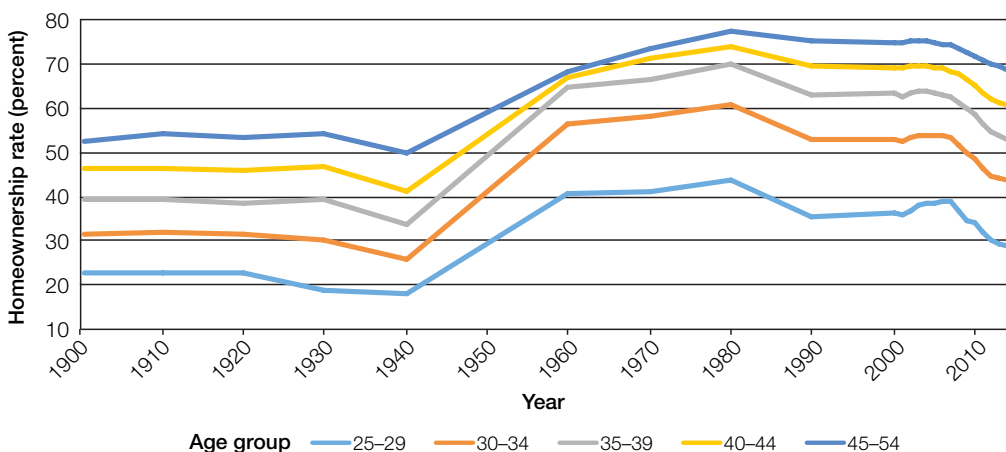
diverging demographic and economic forces. The literature on homeownership emphasizes both the role of demographic changes that occur over the long run and of market forces that can result in relatively fast adjustments (Fetter, 2013; Gabriel and Rosenthal, 2005, 2015; Goodman, Pendall, and Zhu, 2015; Green, 1996).

Fetter (2013) provided evidence of the role of changes in the mortgage market in the rise in homeownership rate that occurred in the post-WWII period. This increase took place in part through households' accessing homeownership earlier in the lifecycle (exhibit 2) as shown by the shift from a linear to a concave relationship between age and the homeownership rate during that period. An important contributor was the home loans benefits given to WWII and Korean War veterans, broadening the potential homeowner base. Structural changes in the mortgage market implemented in response to the Great Depression also contributed through the newly available fixed-rate, long-term mortgage with a downpayment of 20 percent. Fetter (2013) estimated that about one-half of the increase in homeownership in the post-WWII period can be directly attributed to changes in the mortgage market. The remainder of the increase is attributed to increasing income, favorable age structure, and earlier household formation, which itself may be due to policy shifts, along with declining transportation costs that expanded access to newly formed suburbs (Baum-Snow, 2007).

The stability of the homeownership rate between the mid-1960s and the mid-1990s has received limited attention. Nonetheless, the literature is clear on the factors that determine the underlying demand for housing and homeownership. The demand for housing services is determined by socio-economic characteristics, such as income (determined in part by skills), age, and household size, with which households are "endowed." After the level of demand for housing services is determined, the user cost of owning relative to renting (Goodman, 1988; Henderson and Ioannides, 1983) provides a

Exhibit 2

Homeownership Rate by Age Group, U.S. Decennial Census and American Community Survey (1900–2014)



Sources: 1900–2000 decennial censuses (excluding census data on homeownership for 1950, which are not available); American Community Survey 2001 through 2014, extracted from Ruggles, Steven, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. 2010. *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota.

framework to analyze tenure choice. Equilibrium in the housing market is reached when the marginal household is indifferent between owning and renting, requiring the cost of obtaining housing services through either tenure to be equal. In addition, for households, the decision to own or rent is affected by household characteristics and, importantly, expected mobility, because moving and transaction costs are higher for owners than for renters. Borrowing constraints also affect tenure outcomes if they delay or prevent access to homeownership (Linneman and Wachter, 1989).

Offsetting demographic and market forces explain the relative stability of the homeownership rate from the 1960s to 1980s. The increase from 62 to 65.5 percent during the 1970s was due in part to demographics (the entry of the Baby Boomers and the increase in the younger-than-35 age group from 23.5 to 31.2 percent of household heads). In addition, high inflation in this period was accompanied by lower real mortgage rates, with the result that homeownership rates increased somewhat across all age groups.⁴ This increase was followed in the 1980s by decreases in the aggregate and age-specific homeownership rates when mortgage interest rates increased and wage growth slowed among low- to moderate-income first-time homebuyers (Wachter, 1990).

Homeownership rates started increasing again in the late 1990s. Gabriel and Rosenthal (2005) analyzed the drivers of this increase with probit models of homeownership, taking into account the existence of borrowing constraints (through self-reported answers on ability to obtain credit). Given the relative stability in borrowing constraints, they found that socioeconomic changes rather than housing market changes are the main reason for the growth in homeownership in the late 1990s, with changes in individual demographic and economic attributes predicting a 4.5-percentage-point increase in homeownership between 1989 and 2001, from 63.0 to 67.5 percent. By contrast, Gabriel and Rosenthal (2015) examined the change in homeownership rate in 2000, 2005 and 2009. They found that changes in headship rates and access to homeownership among young households drove the changes in homeownership during that period, contrary to their finding for the previous decade (Gabriel and Rosenthal, 2005). This finding is consistent with results in Barakova, Calem, and Wachter (2014), which show the impact of the loosening of credit constraints from 2004 to 2007. It is also consistent with findings of a positive relationship between the supply of nontraditional mortgages and homeownership during the housing boom, particularly in areas with a concentration of younger households (Acolin et al., 2015a). Recent work (Acolin et al., 2015b) estimates the impact of the tightening of credit in the aftermath of the housing bust. Findings indicate that the tightening in mortgage credit have played a substantial role in the recent decline in homeownership.⁵

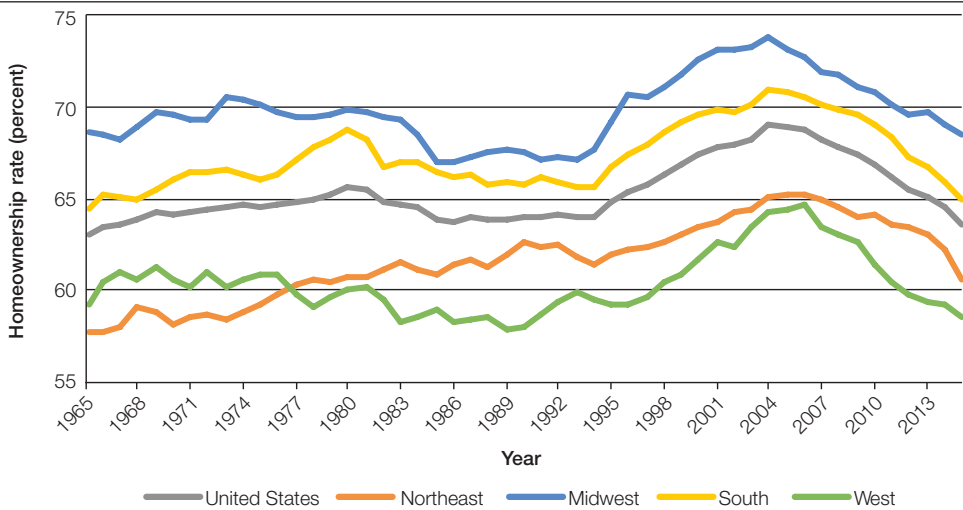
⁴ Regulated deposit rates effectively lowered mortgage interest rates through the 1970s while also causing periods of financial disintermediation (Green, 1996; Wachter, 1990).

⁵ Between 2007 and 2014, the United States added 5.9 million new renter households but lost 0.7 million owner households (U.S. Census Bureau, 2015a). The increase in the number of renter households is formed from new households and former homeowners who lost their houses in foreclosures. It is estimated that, between 2007 and 2014, in the aftermath of the housing bust, in addition to borrowers having difficulty in obtaining credit, 7.5 million borrowers' mortgages (both owner-occupiers and investors) were liquidated (HOPE NOW, 2015), which contributed to the decline in homeownership through a forced transition to rentership for these borrowers who were owner-occupiers. Given the impact of going through a distressed sale or a foreclosure on their credit scores and on their savings, many of these borrowers likely will not be able to obtain credit to repurchase a home for a number of years (Brevoort and Cooper, 2013). As shown in Goodman, Pendall, and Zhu (2015), these forced transitions essentially moved rates more quickly to the lower levels that prevail as of today, with declines forecast to continue. In addition, household formation rates declined during the crisis, resulting in an estimated 2.4 million households not forming by 2013 (Kolko, 2013).

Despite these changes in the overall homeownership rate during the past two decades, two types of variations have remained relatively stable and have implications for the future of the U.S. homeownership rate: wide regional differences (exhibit 3) and large homeownership gaps between minority and majority households (exhibit 4), with homeownership rates for White households at 72 percent compared with 45 percent for Hispanic and 43 percent for Black households as of 2015.

Exhibit 3

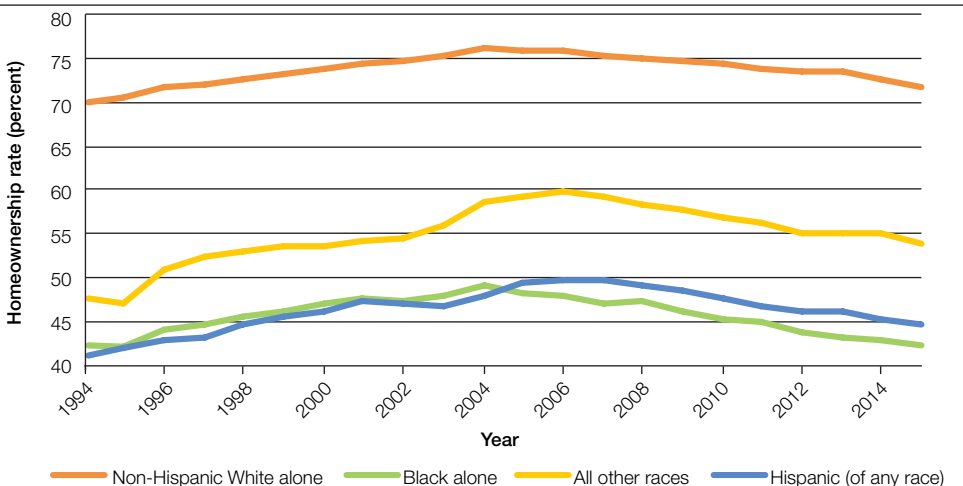
Homeownership Rate, United States and by Region, 1965–Q2 2015



Q2 = second quarter.
Source: U.S. Census Bureau (2015a)

Exhibit 4

Homeownership Rate, by Race and Ethnicity, 1994–Q2 2015



Q2 = second quarter.
Source: U.S. Census Bureau (2015a)

The Midwest and South have persistently higher levels of homeownership than the Northeast and West, with the homeownership rate in the Midwest exceeding that of the West by more than 10 percentage points. Across states, homeownership rates range from lows of mid-50 percent in New York and California to highs of mid-70 percent in states of the Midwest and South.

These differences point to the role of housing market conditions and also to demographics in homeownership outcomes. If the U.S. housing market is to become more similar to the West rather than to the South in terms of housing costs and demographics, the homeownership rate would be expected to decrease further.⁶

The homeownership gap between White and minority households is another feature of the U.S. housing market that has experienced limited changes during the past two decades. The homeownership gap between White households and Black and Hispanic households remains at more than 20 percentage points. Using 1989 data, Wachter and Megbolugbe (1992) estimated that about 80 percent of the gap between White households and Black and Hispanic households can be explained by differences in endowment (including differences in income, education, age, gender, and family type). Gabriel and Rosenthal (2005) found relatively constant compositional differences over time.⁷

In summary, the decades since the 1960s have seen a stable homeownership rate in the aggregate and across demographic groups, until recently. The recent increase and decrease have brought us back to the homeownership rate of the 1960s. The question is whether this rate heralds a new period of stability or whether fundamental forces are at work that will drive homeownership lower in the long term.

The Future of Homeownership

When examining the 15-year period from now to 2030, Goodman, Pendall, and Zhu (2015) predicted a decreasing U.S. homeownership rate to 61 percent. We extend this methodology based on demographic forecasts to 2050 and estimate further declines. The methodology that we use is based on historical decennial census data and projected population by age, race, and ethnicity provided by the U.S. Census Bureau. We capture the potential impact of differing borrowing constraint regimes based on recent headship and homeownership transition rates. Changes in the headship rate and homeownership rate by racial/ethnic and age groups combined enable us to predict the overall homeownership rate based on individual group population projections. We model lending and economic conditions based on two scenarios: (1) a slow transition scenario to headship and homeownership is calculated using the transition rates for 2000 to 2010, while (2) the fast scenario is

⁶ Coulson (2002) estimated the impact of differences in housing market characteristics (housing value to rent, density, vacancy, share of the population living in suburbs) and socioeconomic characteristics (income, household type, educational attainment, number of children, race and ethnicity, immigration status) in explaining the difference in the homeownership rate across these four regions—Midwest, South, Northeast, West—and across states.

⁷ Gabriel and Rosenthal (2005) estimated that differences in credit constraints account for about 5 percentage points of the homeownership gap for Black households and are nearly nonexistent for Hispanic households. Gyourko, Linneman, and Wachter (1999) also found that compositional differences explain a large share of the homeownership gap but that differences reappear when differences in location between White and minority households within metropolitan regions are taken into account.

calculated using the transition rates based on the average of the 1990-to-2000 and 2000-to-2010 transition rates. The slow scenario assumes the continuation of the relative difficulty of young households attaining homeownership in the decade of 2000 to 2010, while the fast scenario uses the average of the past two decades, which includes the 1990 to 2000 decade, in which transitions to headship and homeownership were faster (Goodman, Pendall, and Zhu, 2015). These two scenarios reflect different credit conditions resulting from lending practices and economic circumstances that particularly affect the transitions of young households.

Headship and homeownership figures are estimated for nine age groups (each decade from 15 to 24 through 75 to 84, and 85+) and four racial/ethnic groups (White non-Hispanic, Black non-Hispanic, other non-Hispanic, and Hispanic), using the census population projections (U.S. Census Bureau, 2015c). In summary, the projected age- and race-specific headship and homeownership rates from 2020 to 2050 are calculated using the following formula.

$$Y_{arst} = Y_{arst-1} + Transition_{ars},$$

with Y being the homeownership or headship rate for age group a of group r in scenario s (fast or slow) in decade t (2020, 2030, 2040, and 2050) and $Transition$ being the change in the headship rate for a cohort of a given subgroup between 2000 and 2010 or the average of that transition rate between 1990 to 2000 and 2000 to 2010. The predicted headship rates for each subgroup and scenario in a given decade, Y_{arst} , are then multiplied by the census population projections for each subgroup, X_{art} , to estimate the projected number of households by subgroup, scenario, and decade. These estimates are then used as weights to estimate the overall homeownership rate by scenario and decade.

The slow scenario (exhibit 5) predicts that the homeownership rate will decline 4.8 percentage points between 2010 and 2030 (from 65.1 to 60.3 percent) and the fast scenario predicts the rate will decline 2.9 percentage points (to 62.2 percent), with the average scenario predicting the rate will decline 3.85 percentage points (from 65.1 to 61.25 percent). This projected decline

Exhibit 5

Historical and Projected Homeownership Rates, 1990–2050

	Historical (%)	Projected Scenarios (%)								
		National Scenario			California Scenario			National-California Average		
		Average	Slow	Fast	Average	Slow	Fast	Average	Slow	Fast
1990	65.3	—	—	—	—	—	—	—	—	—
2000	66.2	—	—	—	—	—	—	—	—	—
2010	65.1	—	—	—	—	—	—	—	—	—
2020	—	62.7	62.3	63.0	55.2	54.9	55.6	59.0	58.6	59.3
2030	—	61.3	60.3	62.2	53.6	52.5	54.6	57.5	56.4	58.4
2040	—	59.3	57.1	61.4	51.8	50.0	53.5	55.6	53.6	57.5
2050	—	57.9	54.8	60.9	50.2	47.7	52.6	54.1	51.3	56.8

Sources: 1990–2010 decennial censuses; 2010–2013 American Community Survey extracted from Ruggles, Steven, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. 2010. *Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]*. Minneapolis: University of Minnesota

is driven by a decline in homeownership for most racial/ethnic and age groups, particularly for younger households. It is accentuated by the projected increase in diversity as the homeownership gap remains large, even when considering that the Hispanic homeownership rate is expected to increase slightly in both slow and fast scenarios. These effects more than offset the positive effects on homeownership of an aging population.

Applying this methodology to 2050, the homeownership rate is predicted to decline to 57.9 percent in the average scenario (a 7.2-percentage-point decline from the 2010 level). This prediction is based on the average of a decline to 55 percent by 2050 in the slow scenario, in which the transition rate into household formation and homeownership access remains similar to what has been observed from 2000 to 2010 and a decline to 61 percent in the fast scenario based on the average of the transitions from 1990 to 2000 and from 2000 to 2010 (exhibit 5). Although not insignificant, these projected declines are not consistent with estimates of a 20-percent decline.

Substantial uncertainty surrounds both the census population projection to 2050 and the projection of the headship and homeownership rates for specific groups. The methodology developed by Goodman, Pendall, and Zhu (2015), however, provides some sense of what the homeownership rate might be, based on projected demographic changes and recent historical trends in transition rates from renting to owning that reflect lending condition. These or similar scenarios would play out if, for a given age and racial subgroup, households have similar outcomes in the future as they have had in either the past 10 or 20 years.

One risk to this outcome is an increase in rental and housing costs relative to income. While rents and house price increases historically have tracked inflation, more recently they have exceeded both inflation and median income. Commentary on the likelihood that rents and house prices in the future may increase, relative to inflation and income, points to increases in supply inelasticity in many housing markets as a potential cause for these shifts.

A possible way to incorporate the effect of potential changes beyond variations in demographic and transition rates is to find a case that can serve as a counterfactual if the United States evolves to have consistently more expensive housing costs (both rental and owner) relative to income as a result of increasing housing supply inelasticity. In such a scenario, the homeownership rate is expected to be significantly depressed, because households would be less able to accumulate the downpayment needed to become homeowners.

California today provides an example of what the U.S. housing market might look like in 2050, both in terms of demographics and housing costs if current trends continue over the long run. As of 2010, California's homeownership rate was 55.9 percent, when the U.S. rate was 65.1 percent. Coulson (2002) shows that this low level of homeownership is a function of housing market determinants. The rent-to-income ratio is particularly high in California, where, as of 2010, households spent 33.4 percent of their income on rent on average compared with 29.5 percent nationwide. Also, as of 2010, the median house value in California was \$370,900 compared with \$179,900 nationwide and the median rent was \$1,066 compared with \$713. For the United States to reach California levels, house rent would need to increase 1.2 percent on average in real terms during the next 35 years. For perspective on the possibility of this scenario, during the past 5 years, rental

costs, in fact, increased at an annual rate of 1.2 percent in real terms, while increasing at an annual rate of 0.7 percent since 1981 (ratcheting up in the latter half of the 1990s), according to the Consumer Price Index (Bureau of Labor Statistics, 2015).

In the United States as a whole, household growth has been much more rapid than the construction of new housing units, driving up both rents and home prices. These trends seem likely to continue, at least for the near term. The latest numbers for the 2014-to-2015 period, averaging data from the American Community Survey and the Housing Vacancy Survey, indicate household formation of 1.16 million units. The 2014 starts for private single-family and multifamily units were 1.00 million. If we add to those units government-subsidized housing (100,000 units) and manufactured housing (75,000 units), and if we assume a reasonable obsolescence rate (300,000 units), we find that nearly 300,000 fewer units are being produced than the rate of household formation. Although we do not know whether there has been a long-term sectorial shift in housing supply elasticity, if there has been, there will be significant consequences for homeownership outcomes. The baseline scenario assumes an increase in rents or house prices at historic rates, which have been near zero in real terms over the very long term, but which have increased since the second half of the 1990s. We develop the “California scenario,” assuming that these more recent rent and house price trends continue.

The reduction in discretionary income associated with higher rental costs relative to income observed in California can contribute to the development of a “discouraged renter effect.” Households in metropolitan areas with high incomes, high amenities, and high housing costs (Diamond, 2015) pay a larger share of their income on rental costs, reducing their discretionary income and limiting their ability to save for a downpayment. In addition, these households face high housing prices (and requisite downpayments) if they want to purchase in the location where they work. That is, in order to access the location they value at that point in their life cycle (access to job, consumption amenities), households can either share a dwelling with other family or nonfamily members to limit the share of their income spent on rent and/or save less, taking longer to save for a downpayment. Even if the household accesses one of the low-downpayment programs and can save for that, they may not have the income to qualify for the mortgage at current prices. Thus, the combination of high rental and purchase costs can lead households to remain renters longer, delaying both household formation and homeownership and potentially precluding their ever becoming homeowners. Although California is currently a relative outlier in terms of homeownership, with only the state of New York having a lower homeownership rate, by 2050 the United States is expected to have a similar demographic makeup to the one found in California today. We have taken account of the changes in demographic makeup into our projections, but we have not taken into account a sharp increase in rent-to-income and house price-to-income ratios. If the United States experiences the same housing cost-to-income ratios as California, the nation might reach similar or lower levels of homeownership—what we call the California scenario.

For the California scenario, we combine the California headship and homeownership levels by age and racial groups and its historical transition rates (the same variables used at the national level discussed previously, but for California) with the projected individual population data for the United States to predict the U.S. homeownership rate. In these scenarios, in which the United States experiences headship, homeownership, and transition rates similar to California’s, the national

homeownership rate is projected to decrease to 52.6 percent by 2050 in the fast scenario and to 47.7 percent in the slow scenario. In this case, the United States would be a nation of renters by 2050. Although not a 20-percentage-point decrease from the 2015 homeownership rate, this decrease does represent a more than 20-percentage-point decline from the highs of the early 2000s. Such a scenario would create a drastically different housing landscape in the United States from today's.

Factors That May Affect the Predicted Homeownership Rate

Projection of homeownership rates requires making predictions about the effects of many uncertain parameters. The standard user cost model provides a framework to identify household tenure decision based on maximizing utility, but it still requires making assumptions about the evolution of variables such as the relative price of housing services. In addition, the user cost only partially predicts household decisions, which are also influenced by credit availability.

A number of socioeconomic trends could result in much higher or lower rates of homeownership than those predicted purely based on demographic changes. Positive changes in fundamentals such as income, employment, and mobility could contribute to stabilization or even rebound of the homeownership rate. If income increases faster than it has during the past decades, and particularly if income increases faster than rents and home prices for the marginal buyer, that will increase the demand for housing and homeownership. This scenario, together with financial changes that return borrowing constraints to where they were in the 1990-to-2000 period could contribute to an increase in homeownership rates to rates beyond the predicted level of 61 percent under the fast scenario. The change in the homeownership rate among Hispanic households will be particularly impactful because of their projected contribution to household formation (Goodman, Pendall, and Zhu, 2015). The transition from most Hispanic individuals being foreign born to most being native born has the potential to result in substantially higher homeownership rates among Hispanic households than has been observed in the past (Coulson, 1999) and a higher aggregate homeownership rate. To some extent, this change is captured through the transition rates used for these scenarios, because homeownership rates have already increased for Hispanic households in the last decades, but this increase would accelerate with greater income gains.

Other factors might accentuate the decline of homeownership by contributing to a discouraged renter effect and the realization of the California scenario discussed previously. In the United States, household growth has exceeded the construction of new housing units, driving up both rents and home prices. These trends also may herald a long-term shift away from an elastic housing supply for the United States as a whole. We develop the California scenario to incorporate this long-term outcome. Moreover, the areas that have experienced higher population and job growth are also areas that have experienced a higher increase in housing costs (Diamond, 2015; Moretti, 2012). As central cities, in which homeownership is lower and the stock more adapted to renting, experience a renewal (Capperis, Ellen, and Karfunkel, 2015), we should expect faster population growth rates in cities relative to suburban areas, which, in turn, has the potential to raise housing costs and decrease homeownership rates as well. Regional divergence, with metropolitan areas having high housing costs growing faster than elsewhere, could contribute to a further decline in the homeownership rate. Costs of housing may continue to increase relative to incomes in these

desirable markets, without necessarily reaching California levels. A scenario in which rents increase somewhat faster than inflation, however, is likely. With an increase in supply inelasticity, the outcome is likely to be somewhere in between the slower long-term rent increase and California cost scenarios, an outcome, which as shown in exhibit 5 under the slow scenario, would yield a homeownership rate of roughly 50 percent.

Conclusion

This article performs an exercise in which we identify the potential impact of key drivers of homeownership rates on future homeownership rate outcomes. We take no position on whether these key determinants in fact will come about. Rather we perform an exercise in which we test for their impact.

We demonstrate the result of shifts in three key drivers for homeownership forecasts: demographics (projected from the census), credit conditions (reflected in the fast and slow scenarios), and rents and housing cost increases (based on California). Our base case average scenario forecasts a decrease in homeownership to 57.9 percent by 2050, but alternate simulations show that it is possible for the homeownership rate to decline to around 50 percent by 2050, 20 percentage points less than at its peak in 2004. This projected level of homeownership is not substantially different from the situation experienced by California or a number of high-income European countries today.

To undertake these simulations, we use a methodology based on demographic forecasts, differing credit conditions, and an economic forecast of rising housing costs resulting from supply inelasticity that reflects recent trends. Projected declines in homeownership are about equally due to demographic shifts, continuation of recent credit conditions, and potential rent and house price increases over the long term.

The current and post-WWII normal of two out of three households owning may also be in our future if credit conditions improve, if (as we move to a majority-minority nation) minorities' economic endowments move toward replicating those of majority households, and if recent rent growth relative to income stabilizes. A drop in the homeownership rate to around 50 percent is most likely to occur if increasing housing costs relative to income discourage household saving for downpayments. Limited income growth, constrained credit, and persistent rent and housing cost increases over the long term may result in a new economics of housing and less attainable homeownership.

Authors

Arthur Acolin is a doctoral student at the Price School of Public Policy at the University of Southern California.

Laurie S. Goodman is the Director of the Housing Finance Policy Center at the Urban Institute.

Susan M. Wachter is the Albert Sussman Professor of Real Estate and Finance at The Wharton School and Co-Director of the Penn Institute for Urban Research at the University of Pennsylvania.

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The Future Course of U.S. Homeownership Rates

Donald R. Haurin

The Ohio State University

The U.S. homeownership rate fell from 69.2 percent in the second quarter of 2004 to 63.4 percent in the second quarter of 2015, reversing the rise from 63.8 percent in the second quarter of 1994 (U.S. Department of Commerce, 2015). The question for this article is whether the rate will plunge another 20 percentage points, or by nearly one-third, by 2050. The largest previous recorded U.S. decline was a bit less than one-tenth during the Great Depression (from 1930 to 1940).

Cross-sectionally, the homeownership rate varies substantially among developed countries (2013 data), ranging from 83.5 percent in Norway to 77.7 percent in Spain, 64.6 percent in the United Kingdom, and 53.3 percent in Germany. Similar substantial variation among U.S. states (2015 data) ranges from 74.9 percent in Michigan to 51.2 percent in New York. Thus, a lower rate is not infeasible, but a 20-point fall is implausible.

During the period from 2015 to 2050, the main drivers of the U.S. homeownership rate will include changes in the age distribution of the population, age-specific cohorts' ownership rates, and the tenure decisions of future new households. Changes in the supply of mortgage funds, public policies related to homeownership, rents, and household formation are also likely to have an effect. I argue that a 20-point decline would require a combination of plunging housing rents, surging user costs of ownership, and adverse demographic changes. None of these changes appears likely.

Some of these factors can be forecast with substantial accuracy. The U.S. population is aging and will continue to do so. Assuming lifetimes are not substantially extended, the Census Bureau projects the U.S. population will grow from 321 to 398 million in 2050. Compared with now, the cohort of adults who are younger than age 64 will fall 8.2 percentage points, while that for seniors will rise by that amount, including a 3.4-percentage-point rise in the 85-and-older population. Homeownership rates rise with age. These two facts yield a predicted increase in U.S. homeownership of about 2 percentage points, assuming the 85-and-older cohort retains a high ownership rate. If not, then the changing age distribution will raise the ownership rate by about 1 percentage point.

Age-specific homeownership rates are listed for three time periods in exhibit 1. Data columns one and two are the peak rate and year, columns three and four are the rates in the fourth quarter of 2012, and columns five and six are the rates in the second quarter of 2015. A boom in homeownership corresponded to the boom in house prices. After the peak, age-adjusted rates fell rapidly through 2012 and rates continued to decline through 2015.

Exhibit 1

Age-Specific Homeownership Rates

Age	Peak Rate	Peak Year-Quarter	2012-4 Rate	Change	2015-2 Rate	Change
Younger than 25	27.0	2005-3	21.9	- 5.1	22.7	0.8
25-29	42.8	2006-3	34.9	- 6.9	31.3	- 3.3
30-34	58.0	2004-4	48.6	- 9.4	45.2	- 3.4
35-44	70.1	2005-1	60.4	- 9.7	58.0	- 2.4
45-54	77.4	2004-4	72.1	- 5.3	69.9	- 2.2
55-64	82.4	2004-2	77.6	- 4.8	75.4	- 2.2
65 and older	81.8	2004-3	80.7	- 1.1	78.5	- 2.2

Source: U.S. Bureau of the Census (2015a)

The total reductions by age group are 10.2, 12.8, and 12.1 percentage points for the cohorts ages 25 through 29, 30 through 34, and 35 through 44, respectively, followed by 7.5 and 7.0 percent for the middle-aged cohort and by 3.3 percentage points for the senior cohort. These large decreases in homeownership of households age 44 and younger have recently reduced the U.S. rate, and they will reduce the future rate if the cohort rates remain below the typical age-homeownership profile. I estimate the result will be a further reduction in the U.S. ownership rate by 4.1 percentage points. The total effect of these two demographic factors will yield a reduction in the aggregate ownership rate of about 2 to 3 percentage points.

Why has the homeownership rate recently declined and will it continue to fall? Consider six causal factors. (1) The underlying preference for homeownership or privacy could have decreased—but no evidence supports this hypothesis. (2) The risk premium associated with house price volatility has increased, raising user costs; however, the premium should fall in the future as house prices stabilize. (3) Although mortgage lending practices tightened following the Great Recession, they changed little after 2012. Households take time to adjust to requirements for higher credit quality and larger down payments, but a decade should be sufficient for this adjustment to occur. (4) An increase in households' expected mobility raises the transaction cost component of user costs, but recent changes indicate mobility has fallen in both the general and the young adult populations (U.S. Bureau of the Census, 2015b). (5) Rents have risen recently, but this rise should increase homeownership rates. (6) Perhaps the most important factor causing the recent decline in age-specific homeownership rates is the hangover of negative credit events, such as foreclosures, short sales, and bankruptcies. The impact on credit scores of these derogatory credit effects, however, is unlikely to last beyond 2020. Consideration of these six factors suggests that age-specific homeownership rates will stabilize no later than 2025, then will rebound, but not to the previous, boom-inspired peaks. Thus, while falling age-specific ownership rates may lower the aggregate rate for a few more years, over the long term I expect increases in their levels to positively affect the U.S. homeownership rate by 2050.

Another important question is—What homeownership rate will young households attain in the future? A worst case scenario is that they achieve the same low rate of ownership as the current youth cohort, implying only about 25 percent will own a home. A factor depressing the likelihood of homeownership among current and future young adults is college debt. Recent data indicate the total outstanding student debt is \$1.2 trillion, held by 40 million individuals, averaging \$30,000. Thus,

instead of beginning adulthood with near-zero wealth, many youths have large debt, lowering their credit scores and requiring repayment, thus lowering their ability to accumulate a downpayment. The total impact of continuation of a low age-specific ownership rate among youth on the U.S. rate by 2050 would be a reduction of 7 percentage points. Combined with the most negative demographic scenario, the total reduction in the U.S. rate by 2050 would be about 10 percentage points.

There are multiple caveats to the previous analysis. It assumes that household formation rates remain relatively constant and that net immigration and public policies affecting homeownership remain stable. Household formation is difficult to predict because it is a function of the timing of home leaving (and return rates) by youth, and the rates of divorce, remarriage, partnering, living in groups, and seniors' tenure decisions. The rate of net immigration, especially of low-income households, influences the ownership rate. Painter, Gabriel, and Myers (2001) showed that most immigrants assimilate slowly, tending to lower the homeownership rate. Current public policies favor homeownership, but these policies could change.

In summary, the aging of the population will slowly increase the U.S. homeownership rate. This increase will be more than countered by the aging of young cohorts that have relatively low ownership rates. The reduction in age-specific ownership rates will attenuate, however, when derogatory credit events are deleted from credit histories as time passes. Thus, I expect the current level of homeownership to fall by 1 to 3 percentage points by 2020, then stabilize, and then slowly rise. If age-specific rates were to rise to their previous peaks, the aggregate rate would rise to about 70.5 percent in 2050 because of the effect of the aging of the population. Age-specific rates should remain below their previous boom-period peaks, however, yielding an ownership rate in the 66 to 68 percent range.

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Author

Donald R. Haurin is a professor emeritus of economics at The Ohio State University.

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Coercive Sexual Environments: Exploring the Linkages to Mental Health in Public Housing

Susan J. Popkin

Janine Zweig

Nan Astone

Reed Jordan

Urban Institute

Chantal Hailey

New York University

Leah Gordon

Oregon Health & Science University

Jay Silverman

University of California, San Diego School of Medicine

Abstract

Previous qualitative research from the U.S. Department of Housing and Urban Development's Moving to Opportunity for Fair Housing demonstration program suggested the positive effects on girls, and not boys, of moving out of poor neighborhoods may be related to girls' reduced exposure to coercive sexual environments (CSEs). In this article, we use a new measure of CSE. Our aim is to test the hypothesis that living in a CSE is associated with poor mental health outcomes, especially for young women. Data for this study are from a survey of 124 adult and 79 youth respondents living in public housing in Washington, D.C. We found significant associations between perceptions of CSE among adults and exposure to CSE among youth with poor mental health. These results establish that the CSE appears to have an independent effect on mental health as the qualitative findings suggested. They point toward community-level interventions that aim to reduce the CSE in public housing and other poor communities.

Introduction

A large number of observational studies have established an association between residing in neighborhoods of concentrated disadvantage and negative physical and mental health outcomes for children and youth (Brooks-Gunn and Duncan, 1997; Ellen and Turner, 1997; Leventhal and Brooks-Gunn, 2004; Popkin and McDaniel, 2013; Sampson, 2012; Sampson, Morenoff, and Gannon-Rowley, 2002; Sampson, Sharkey, and Raudenbush, 2008; Wodtke, Harding, and Elwert, 2011). Moreover, experimental evidence from the U.S. Department of Housing and Urban Development's (HUD's) Moving to Opportunity for Fair Housing (MTO) demonstration program indicates that moving out of high-poverty neighborhoods may be especially helpful for the well-being of young women (Ludwig et al., 2011). One possible reason for this indication is that, in some neighborhoods, concentrated disadvantage and chronic violence may lead to the emergence of a coercive sexual environment (CSE) that results in chronic fear of sexual harassment and sexual violence (Briggs, Popkin and Goering, 2010; Popkin, Acs, and Smith, 2010; Popkin et al., 2015; Popkin, Leventhal, and Weismann, 2010; Smith et al., 2014). If living in a community with a high level of CSE has negative effects on young women's mental health, this phenomenon may explain why moving away from severely disadvantaged neighborhoods has positive effects for girls but not boys.

Concentrated poverty and disadvantage pose well-established risk factors to youth: developmental and cognitive delays; poor physical and mental health; and the likelihood of dropping out of school, engaging in risky sexual behavior, and becoming involved in delinquent and criminal activities (Brooks-Gunn and Duncan, 1997; Ellen and Turner, 1997; Leventhal and Brooks-Gunn, 2004; Sampson, 2012; Sampson, Morenoff, and Gannon-Rowley, 2002; Sampson, Sharkey, and Raudenbush, 2008; Wodtke, Harding, and Elwert, 2011). Neighborhoods mired in chronic disadvantage suffer a range of social ills, including high rates of violent crime, social disorder, and domestic violence (Kawachi, Kennedy, and Wilkinson, 1999; Sampson, Raudenbush, and Earls, 1997). In these disadvantaged communities, violence is pervasive, both within and outside the home (Fox and Benson, 2006; Hannon, 2005). The chronic violence both stems from and helps to perpetuate low levels of collective efficacy; that is, "social cohesion among neighbors combined with their willingness to intervene on behalf of the common good" (Sampson, Raudenbush, and Earls, 1997: 918). Research has shown collective efficacy can reduce both intimate homicide rates and nonlethal partner violence (Browning, 2002).

We have theorized that when disadvantage and violence are great and collective efficacy is low, a gender-specific neighborhood mechanism can emerge that has differential effects on male and female youth (Smith et al., 2014). To be specific, some communities develop what we have termed a *coercive sexual environment*, or CSE, wherein threats of sexual harassment, sexual exploitation, and sexual violence of women and girls, even those very young, are part of everyday life (Popkin, Acs, and Smith, 2010; Popkin, Leventhal, and Weismann, 2010; Popkin and McDaniel, 2013). For girls in the inner city, experience with early and coerced sex can combine with structural deprivations to promote a life trajectory marked by school dropout, early motherhood, little or no connection to the labor market, and unstable family formation (Dunlap, Golub, and Johnson, 2004).

Previous research supports the idea that girls and boys experience the effects of chronic disadvantage in very different ways, especially as they enter adolescence. In the 1990s, Anderson argued that young men in inner-city neighborhoods felt pressured to act tough to maintain respect, following the “code of the street,” and girls gained status and respect through getting pregnant (Anderson, 1999). In a more recent example, one study of African-American youth growing up in high-crime communities found that young men focus on maintaining respect and avoiding the risk of gun violence, whereas young women focus on the fear of being the object of predatory behavior (Cobbina, Miller, and Brunson, 2008). In her graphic portrayal of life for low-income, urban, African-American girls, Miller (2008) emphasized how neighborhood environments place girls at risk, noting that teens often believe that the girls are to blame because of the way they behave or dress (Miller, 2008).

HUD’s experimental MTO program found strikingly different outcomes for adolescent girls and boys whose families received special vouchers to enable them to move from distressed public housing to lower poverty communities. Girls in the experimental group fared unexpectedly better in terms of mental health and their level of engagement in risky behavior (Ludwig et al., 2011; Sanbonmatsu et al., 2011). This result first appeared at the MTO Interim Evaluation (Orr et al., 2003); we conducted subsequent qualitative studies to explore this unexpected finding. That work suggested key differences in how neighborhood safety matters for male and female adolescents, with girls in high-poverty, high-crime communities also coping with pervasive sexual harassment and constant fear of sexual violence—in essence, a CSE (Briggs, Popkin, and Goering, 2010; Popkin, Leventhal, and Weismann, 2010). We conducted additional qualitative studies and used data from the MTO Final Evaluation Survey (Sanbonmatsu et al., 2011) to explore the relationship between perceptions of neighborhood violence and disadvantage, reports of unwanted sexual attention, and mental health outcomes for girls. This research revealed that, in neighborhoods of concentrated disadvantage, young women live with chronic fear of sexual harassment and intimate partner violence, including rape, which has negative consequences for both their behavior and their mental health (Briggs, Popkin, and Goering, 2010; Popkin, Leventhal, and Weismann, 2010; Smith et al., 2014). We hypothesize that relief from these environmental threats to girls’ sexual safety and the fear related to these threats account for the female-specific positive effect of moving away from distressed neighborhoods.

In this article, we build on this work to examine whether a CSE is associated with poorer mental health outcomes and with victimization, specifically, sexual harassment. We use new data to show that scales measuring CSEs appear to have an independent effect on mental health. We observed this outcome in our analysis of the MTO Final Survey, but we are able to demonstrate it more strongly with our new CSE scales. We specifically examine the association between CSEs and mental health outcomes for both adults and young people living in public housing in Washington, D.C. Our first hypothesis is that perception of living in a CSE is associated with poor mental health for both adults and young people. Our second is that these associations will persist when other indicators of neighborhood quality are held constant. Our third is that these associations will be weaker for adolescent boys than for adolescent girls.

Methods

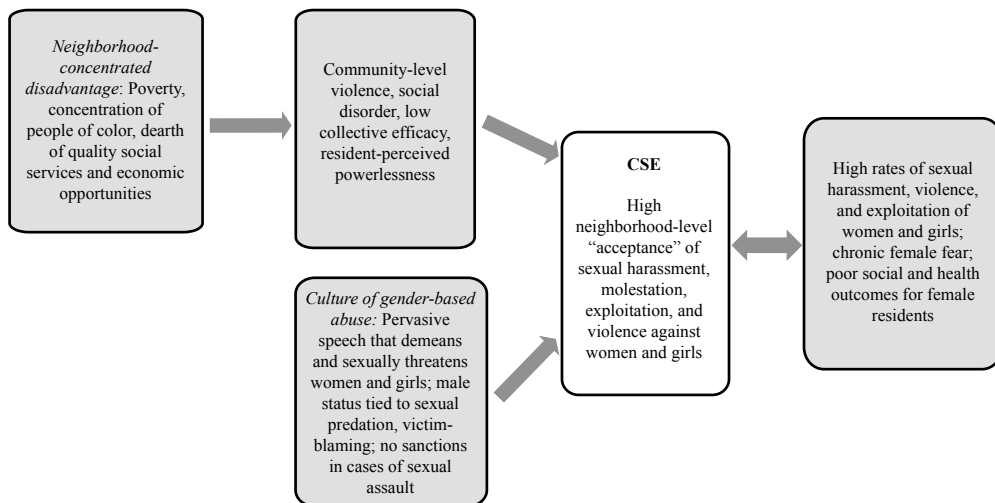
Conceptual Model

The conceptual model that emerged from our previous work and guided the current research is illustrated in exhibit 1. According to this model, neighborhoods of chronic disadvantage (Sampson, 2012) whose residents are nearly all people of color, that are characterized by high rates of poverty and a dearth of basic amenities such as libraries, playgrounds, parks, medical facilities, and grocery stores lead to bad outcomes for children and adults (Turner, Popkin, and Rawlings, 2009; Wilson, 1987). These neighborhoods have high levels of community violence and social disorder, and low levels of collective efficacy (Sampson, 2012). Our past work demonstrated that an additional dimension of neighborhood distress is the emergence of a CSE. In further work, we developed a scale with good psychometric qualities and high construct validity to measure this dimension of neighborhood quality (Popkin et al., forthcoming).

The CSE scales are designed to measure perceptions of and exposure to CSEs for adults and youth, respectively. For youth, items include how often respondents had seen the following in their neighborhood: prostitution, men or boys making unwanted sexual comments toward or touching women or girls, and men or boys physically hurting women or girls. The adult scale items include perceptions of how big a problem in the respondents' neighborhood are rape, prostitution, men or boys making unwanted sexual comments toward women, and men or boys hurting girls or women. Our psychometric analysis indicated that the CSE scales we developed for adults and youth have high Cronbach's alpha values (more than 0.75) and, therefore, good internal consistency. Our analyses of construct validity also suggest that CSEs fit into our model of neighborhood processes as we hypothesized (Popkin et al., forthcoming).

Exhibit 1

Conceptual Model



CSE = coercive sexual environment.

Data

HOST Demonstration

The data are from an evaluation of a demonstration project called Housing Opportunities and Services Together (HOST). HOST uses public and mixed-income housing as a platform for two-generation or whole family focus interventions. HOST tests the efficacy and cost-effectiveness of targeting the most vulnerable families with intensive, wraparound services. The HOST demonstration's goals are (1) improving employment, education, and physical and mental health outcomes for families and (2) reducing the level of violence and disorder for the community (Popkin and McDaniel, 2013). The HOST demonstration was fully implemented in three public and assisted housing communities in Chicago, Illinois; Portland, Oregon; and Washington, D.C. Each participating housing authority selected target participants from its list of leaseholders at the target site. Eligibility for the HOST program required the household to have children and, depending on the site, additional risk factors such as failure to comply with agency work requirements, an unemployed head of household, lease violations, or being at risk for eviction (Popkin and McDaniel, 2013; Popkin et al., 2012). The number of households targeted for HOST varied across sites, from more than 200 in Chicago to approximately 140 in Portland. In the first year of the demonstration at each site, we attempted to complete surveys with an adult and target youth in each HOST household to capture baseline measures for each target household; across the sites, response rates for adults exceeded 80 percent and for youth, 90 percent (Scott et al., 2013).

Our study focuses on adult and youth respondents from the Washington, D.C. HOST site because the survey measures in Washington benefited from substantial revisions made after it was fielded in Chicago and Portland. We measure exposure to CSE for youth because youth are more likely able to appropriately identify sexually exploitive acts rather than general perceptions of neighborhood problems related to sexual activity.

Survey Data

During the first HOST implementation year, we fielded two surveys—an adult survey and a youth survey—to capture baseline characteristics for HOST families and their communities. The adult survey asked heads of household about themselves and up to two focal children—one between the ages of 6 and 11 years and another between the ages of 12 and 18 years. Parents with a child in the older age range could then consent for that child to participate in a separate youth survey. The youth survey asked adolescents between the ages of 12 and 18 years about themselves.

The survey was fielded in Washington, D.C.'s Benning Terrace public housing development in the summer of 2013. Adult interviews were conducted on site in the homes or apartments of respondents, using Computer-Assisted Telephone Interviewing (CATI). Because of the sensitive sexual experience questions included in the youth survey, we adopted a bimodal method for conducting the youth interview. This approach entailed a CATI interview supplemented by a hardcopy completion of the sensitive sexual experiences questions.

Households were eligible for participating in HOST if they had at least one youth between the ages of 9 and 18 years. We attempted to survey all eligible households, conducting interviews with an adult and one youth in our target age range. If more than one youth in the household was eligible,

we selected a focal youth at random. Our response rate for the survey in Benning Terrace was 81 percent of the eligible adults and 87 percent of the eligible youth. We describe the 124 D.C. adult respondents and 79 D.C. youth respondents in exhibits 2a and 2b. Like the other residents in Benning Terrace, the adult respondents are very low-income African-American women (97 percent). The average adult respondent's age is 40. The youth respondents are all African-American teenagers who are, on average, 15 years old.

Exhibit 2a

Descriptive Statistics of Study Variables—Adult Sample

Study Variable	Percent of Sample	Mean Adult CSE Perception
All	100.0	3.95
Adult perception of neighborhood violence		
Neighborhood problem shooting and violence		
Big problem	67.7	4.82***
No or some problem	32.3	2.10
Neighborhood problem people being attacked or robbed		
Big problem	44.0	5.55***
No or some problem	56.0	2.70
Adult anxiety		
Anxious according to MHI-5 Scale		
Yes	34.4	4.84*
No	65.6	3.47
Adult depression		
Depressed according to CIDI Scale		
Yes	21.5	5.35**
No	78.5	3.56
Adult worry		
Worried a lot more than most people in past 12 months		
Yes	48.9	4.64**
No	51.1	3.36
Head of household sex		
Female	94.6	3.85
Male	5.4	5.00
Head of household marital status		
Married	10.8	4.50
Not married	89.2	3.87
Head of household employment status		
Worked in past 12 months		
Yes	43.0	4.00
No	57.0	3.90

CIDI = Composite International Diagnostic Interview. CSE = coercive sexual environment. MHI = Mental Health Inventory.

*p < .05. **p < .01. ***p < .001.

Source: DC HOST Adult Survey (2013)

Exhibit 2b

Descriptive Statistics of Study Variables—Youth Sample (1 of 2)

Study Variable	Percent of Sample	Mean Youth CSE Exposure Scale
All	100.0	1.97
Youth exposure to neighborhood violence		
Saw someone shoot or stab another person		
Never	86.1	1.75*
Once or more	13.9	3.36
Heard gunshots		
Never	20.3	0.43**
Once or more	79.7	2.36
Youth neighborhood violence victimization		
Someone pulled a knife or gun on you in past 12 months		
Never	91.1	1.81*
Once or more	8.9	3.57
Has been shot in the past 12 months		
Never	88.6	1.77*
Once or more	11.4	3.55
Has been cut or stabbed in the past 12 months		
Never	96.2	1.84**
Once or more	3.8	5.33
Has been jumped in the past 12 months		
Never	74.7	1.64*
Once or more	25.3	2.95
Youth exposure to neighborhood social disorder		
Saw someone dealing drugs out in the open in past 12 months		
Never	62.0	1.53*
Once or more	38.0	2.70
Saw drug paraphernalia on the ground/in public in past 12 months		
Never	59.0	1.21**
Once or more	41.0	3.06
Saw gang activity in past 12 months		
Never	60.8	1.16***
Once or more	39.2	3.22
Youth perceptions of neighborhood trust		
People look out for each other		
True	80.0	1.60**
False	20.0	3.53
Youth engagement with neighbors		
Know most of the people in neighborhood		
True	63.3	2.08
False	36.7	1.79
Have stopped on the street to talk with someone in past month		
True	82.3	2.07
False	17.7	1.50
Youth long-term anxiety		
Yes	17.7	2.50
No	82.3	1.86
Youth short-term anxiety		
Yes	43.0	2.67*
No	57.0	1.44

Exhibit 2b

Descriptive Statistics of Study Variables—Youth Sample (2 of 2)

Study Variable	Percent of Sample	Mean Youth CSE Exposure Scale
Youth worry		
Yes	54.4	2.48*
No	45.6	1.36
Head of household sex		
Female	97.4	1.98
Male	2.6	2.00
Head of household marital status		
Married	7.6	1.97
Not married	92.4	2.00
Head of household employment status		
Worked in past 12 months		
Yes	46.8	1.91
No	53.2	2.02
Youth gender		
Female	40.5	1.93
Male	59.5	2.00

CSE = coercive sexual environment.

*p < .05. **p < .01. ***p < .001.

Source: DC HOST Youth Survey (2013)

Variables

Exhibits 2a and 2b contain descriptive statistics on all variables in the analysis. Exhibit 3 provides detailed descriptions of the item wording for each variable.

Exhibit 3

Descriptions of Variables for Construct Validity Analysis (1 of 3)

Variable Name	Item Wording or Description	Scale
Coercive Sexual Environments Perceptions Scale (Adult)	Index of how big of neighborhood problems are rape or sexual attacks, women or girls trading sex for money, men or boys making unwanted sexual comments or gestures toward girls or women, and men or boys hurting women or girls	Index ranges from 0 (respondent does not perceive their neighborhood as having a problem with sexually coercive actions) to 8 (respondent perceives their neighborhood as being highly sexually coercive)
Coercive Sexual Environments Exposure Scale (Youth)	Index of how often in the past year the respondent experienced someone making unwanted sexual comments, jokes, or gestures; someone touched, grabbed, or pinched them in a sexual way that they did not want; someone spread sexual rumors about them; and someone e-mailed or texted them sexual pictures, photographs, or messages that they did not want	Index ranges from 0 (no exposure to a coercive sexual environment in their neighborhood) to 8 (high exposure to a coercive sexual environment in their neighborhood)

Exhibit 3

Descriptions of Variables for Construct Validity Analysis (2 of 3)

Variable Name	Item Wording or Description	Scale
Collective Efficacy Scale (Adult)	Index of whether people in neighborhood are willing to help, share the same values, are close knit, can be trusted, and generally get along with each other, and the likelihood that neighbors do something if saw children skipping school, spray-painting graffiti, showing disrespect toward an adult, or if a fight breaks out in front of their home or the fire station closest to their homes was going to be shut down	Index ranges from 1 (respondent does not agree or it is unlikely) to 4 (respondent strongly agrees or it is very likely)
Social Disorder Scale (Adult)	Index of how big of a problem were groups of people hanging out, people selling drugs, people using drugs, and gangs	Index ranges from 1 (respondent believes it is no problem at all) to 3 (respondent believes it is a big problem)
Violence Scale (Adult)	Index of how big of a neighborhood problem are shootings and violence, and people being attacked or robbed	Index ranges from 1 (respondent believes it is no problem at all) to 3 (respondent believes it is a big problem)
Adult perception of neighborhood violence		
	How big of a neighborhood problem are shootings and violence?	Dummy variable, equals 1 when problem is considered big
	How big of a neighborhood problem are people being attacked or robbed?	Dummy variable, equals 1 when problem is considered big
Youth exposure to neighborhood violence		
	During the past 12 months, how often did you see someone shoot or stab another person?	Dummy variable, equals 1 when once or more
	During the past 12 months, how often have you heard gun shots?	Dummy variable, equals 1 when once or more
Youth neighborhood violence victimization		
	During the past 12 months, how often did someone pull a knife or gun on you?	Dummy variable, equals 1 when once or more
	During the past 12 months, how often did someone shoot you?	Dummy variable, equals 1 when once or more
	During the past 12 months, how often did someone cut or stab you?	Dummy variable, equals 1 when once or more
	During the past 12 months, how often were you jumped?	Dummy variable, equals 1 when once or more
Youth exposure to neighborhood social disorder		
	During the past 12 months, how often did you see someone dealing drugs out in the open?	Dummy variable, equals 1 when once or more
	During the past 12 months, how often did you see drug paraphernalia on the ground/in public?	Dummy variable, equals 1 when once or more
	During the past 12 months, how often did you see gang activity (graffiti, selling drugs, violence)?	Dummy variable, equals 1 when once or more

Exhibit 3

Descriptions of Variables for Construct Validity Analysis (3 of 3)

Variable Name	Item Wording or Description	Scale
Youth perceptions of neighborhood trust		
	People in this neighborhood look out for each other	Dummy variable representing true/false response
Youth engagement with neighbors		
	You know most of the people in your neighborhood	Dummy variable representing true/false response
	In the past month, you have stopped on the street to talk with someone who lives in your neighborhood	Dummy variable representing true/false response
Adult Anxiety	Anxious according to five-item mental health inventory (MHI-5) Scale	Dummy variable representing yes/no response
Adult Worry	People differ a lot in how much they worry about things. Did you have a time in the past 12 months when you worried a lot more than most people?	Dummy variable representing yes/no response
Adult Depression	Depressed according to Composite International Diagnostic Interview (CIDI) Depression Scale	Dummy variable representing yes/no response
Youth Long-Term Anxiety	Did you ever have a period lasting 1 month or longer when you were anxious or worried most days?	Dummy variable representing yes/no response
Youth Short-Term Anxiety	Did you ever have a time in your life when you were much more nervous or anxious than most people with the same problems as you?	Dummy variable representing yes/no response
Youth Worry	Did you ever have a time in your life when you were “a worrier”—that is, when you worried a lot more about things than other people with the same problems as you?	Dummy variable representing yes/no response
Head of household sex	What is your/his/her sex?	Dummy variable equals 1 for female
Head of household union status		Dummy variable equals 1 for married or living in a marriage-like situation
Head of household employment status	Respondent worked in the past 12 months	Dummy variable representing yes/no response
Youth gender	Focal child sex	Dummy variable, equals 1 for female

Dependent Variables: Mental Health. Three mental health outcome variables were measured for adults and three for youth. For adults, the variables are *anxiety*, *worry*, and *depression*.¹ For young people, the variables are *short-term anxiety*, *long-term anxiety*, and *worry*.²

¹ *Anxiety* is a five-item scale from the National Survey of America’s Families, which adapted the questions from the Mental Health Inventory: http://www.urban.org/uploadedPDF/Methodology_6.pdf. *Worry* is a single question taken from the National Health Interview Survey: https://www.ihs.us/ihs-action/variables/WORMORE#survey_text_section. *Depression* is the seven-item scale Composite International Diagnostic Interview—Short Form used in the National Health Interview Survey. A score of 3 or more classifies as a probable case of major depression with dysphoric mood or anhedonia: <http://www.hcp.med.harvard.edu/wmhcid/about.php>.

² All three youth mental health indicators are single items from the 2004 National Comorbidity Survey: Adolescent Supplement: <http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/28581>.

Independent Variable. The independent variables for the analysis are the measures we have developed of CSEs (Popkin et al., forthcoming). Examples of items capturing this construct are adult perceptions of how much of a problem in their neighborhood are rape, or men or boys hurting women or girls, and youth neighborhood exposure to transactional sex and unwanted sexual advances. The adult measure of perceptions of CSE and the youth measure of exposure to CSE each have alpha values of more than 0.75. (Descriptive statistics on the distribution of the adult and youth CSE scales are provided in exhibit 4.) The mean CSE perception scale score was 3.95, demonstrating that, on average, adults perceived all four CSE actions as somewhat of a problem, two CSE actions as big problems, or one CSE action as a big problem and two CSE actions as somewhat of a problem. The mean youth CSE exposure was 1.97, meaning youth were, on average, exposed to one CSE action more than once in the past year or two CSE actions once in the past year. The lower 50 percent of youth were exposed to only one CSE action in the past year.

Exhibit 4

Distribution of CSE Scales

	Mean	SD	Minimum	Quar- tile 1	Median	Quar- tile 3	Maxi- mum	N	Standardized Chronbach Coefficient Alpha
Adult CSE perceptions	3.94624	2.6677	0	2	4	6	8	93	0.855
Youth CSE exposure	1.97468	2.25306	0	0	1	3	8	79	0.765

CSE = coercive sexual environment. SD = standard deviation.

Control Variables. In the multivariate models, we control for both neighborhood and individual factors that may confound the association between CSEs and the dependent variables. The neighborhood measures are adult and youth exposure to violence, youth neighborhood victimization, adult and youth exposure to neighborhood social disorder, and adult and youth perceptions of neighborhood trust and engagement with neighbors (collective efficacy). At the individual level, we control for adult age, union status (married or in a marriage-like relationship or not), and employment status. In the youth multivariate models, we control for the same characteristics of the youth's parent as in the adult models and also for youth gender.

Regression Methods

To assess the association between CSEs and our outcomes, we regressed the mental health indicators on the CSE scale with and without confounders. We used logistic regression because the outcomes are dichotomies.

First, we used regression to estimate the unadjusted association between CSEs and the outcomes (model 1). Next we estimated the association adjusted for the individual control variables (model 2). Then we estimated the association net of neighborhood violence (model 3), social disorder (model 4), and collective efficacy (model 5) in turn. Finally, for youth only, we estimated a model with CSEs, the control variables, and an interaction between CSEs and being female (model 6).

Results

Our first hypothesis is that a CSE is associated with poor mental health outcomes. In the second column of exhibit 5, the odds ratios, which are the unadjusted estimates of the association between the CSE and the outcomes, indicate support for this hypothesis. For adults, the perception of a CSE is associated with an increased likelihood of anxiety, worry, and depression. A 1-point increase on the adult neighborhood CSE perception scale is associated with a 1.2 times increased likelihood of being anxious and worried and a 1.3 times increased likelihood of being depressed. For youth, exposure to a CSE is associated with short-term anxiety and worry. A 1-point increase in the CSE exposure scale relates to a 1.2 times increased likelihood of having short-term anxiety and 1.3 times increased likelihood for being worried. The second hypothesis is that these associations persist in the face of controls for individual characteristics and other neighborhood characteristics (violence, social disorder, collective efficacy). The numbers in columns three through six in exhibits 5 and 6 provide partial support for this hypothesis. Among adults, the association between CSE perception and mental health is eliminated when controls for social disorder (model 4) are introduced; this is also true of the association between youth exposure to CSE and short-term anxiety.

The third hypothesis is that, among youth, the association between CSEs and the outcomes would be stronger for girls than for boys. We tested this hypothesis by running model 2 (CSE plus individual controls) with an interaction term between being female and CSE. Exhibit 7 contains the results. CSE is not more strongly associated with negative mental health outcomes for girls than for boys—in fact, in the models containing an interaction, the estimate for both is not significantly different from zero.³

Exhibit 5

Odds Ratio of Mental Health Outcomes on CSE for Adults and Youth by Model

	Model 1 (Unadjusted)	Model 2 (CSE + Controls)	Model 3 (M. 2 + Neighborhood Violence)	Model 4 (M. 2 + Social Disorder)	Model 5 (M. 2 + Collective Efficacy)
Adults					
Anxiety	1.23*	1.24*	1.33*	1.13	1.27*
Worry	1.21*	1.21*	1.12	1.18	1.19*
Depression	1.33*	1.32*	1.39*	1.22	1.33*
Youth					
Short-term anxiety	1.29*	1.28*	1.39*	1.24	1.34*
Long-term anxiety	1.13	1.09	1.05	1.11	1.27
Worry	1.28*	1.27*	1.32*	1.33*	1.27*

CSE = coercive sexual environment.

*p < .05.

³ We tested for collinearity using tolerance statistics, and the model tolerated all independent variables, meaning the variables are not collinear.

Exhibit 6

OLS Coefficients for Sexual Harassment Scale on CSE for Adults and Youth by Model

	Model 1 (Unadjusted)	Model 2 (CSE + Controls)	Model 3 (M. 2 + Neighborhood Violence)	Model 4 (M. 2 + Social Disorder)	Model 5 (M. 2 + Collective Efficacy)
Sexual harassment scale adult	0.16***	0.18***	0.14*	0.15*	0.17**
Sexual harassment scale youth	0.68***	0.73***	0.75***	0.47*	0.54**

CSE = coercive sexual environment. OLS = ordinary least squares.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Exhibit 7

Association of CSE With Outcomes for Youth by Gender (model 2)

	Male ^a	Female ^b
Short-term anxiety ^c	1.22	1.15
Long-term anxiety ^c	1.00	1.30
Worry ^c	1.11	1.57
Sexual harassment scale ^d	0.48*	0.65*

CSE = coercive sexual environment.

* $p < .05$.

^a Main effect in presence of interaction may be interpreted as effect for male respondents.

^b Interaction term.

^c Odds ratios.

^d Ordinary least squares coefficients.

Discussion

The hypotheses tested lend additional weight to experimental, qualitative, and psychometric evidence that a CSE is a distinctive aspect of neighborhoods of concentrated disadvantage that may have deleterious effects on the mental health and experiences of young people who reside there. Our results show that CSE perceptions among adults and CSE exposure among youth are associated with poor mental health. For the most part, these associations persisted in the face of controls for other, related aspects of neighborhood quality, although controlling for social disorder diminished the associations between CSE perceptions and adult mental health and CSE exposure and youth short-term anxiety. This finding suggests that CSE is more closely related to social disorder than are other aspects of neighborhood quality.

We did not find that exposure to CSE was associated with poor mental health more so for girls than boys as we hypothesized.

Our study has some important limitations. It is cross-sectional, so no inferences about causality are possible. We also have a small sample, which might have interfered with our ability to observe the gender interaction we hypothesized. Moreover, our respondents were from one neighborhood

and public housing development and are not generalizable. In addition, our adult sample is nearly exclusively women, making it impossible to draw conclusions about men in this community. Our scale did not include any items about the harassment of gender minority people, which might be part of CSE (Higa et al., 2014).

Despite these limitations, our findings represent an important step forward in understanding how CSE relates to health and mental health outcomes. Further, the importance of these findings is greater when considered in combination with other results. Experimental and qualitative results strongly suggest that girls who leave neighborhoods of concentrated disadvantage experience improvements in mental health and that those improvements are due to a reduction in exposure to a CSE (Briggs, Popkin, and Goering, 2010; Popkin, Leventhal, and Weismann, 2010; Smith et al., 2014). Our own psychometric work has established that exposure to neighborhood CSE can be measured and is distinct from, but related to, other indicators of neighborhood disadvantage. In this study, we show that, net of other indicators of neighborhood disadvantage, exposure to CSE is associated with poor mental health among both adults and children and the experience of sexual harassment, the latter for girls more so than boys. These results establish that the mechanism we theorized to explain the positive effect of moving out of poor neighborhoods on girls is plausible.

The finding that the association between CSE and mental health is reduced or eliminated when social disorder is controlled suggests that CSE is more closely related to social disorder than the other indicators of neighborhood characteristics that we examined. These results point toward community-level interventions to reduce CSE as an important component of interventions to improve neighborhood conditions in public housing developments and other disadvantaged neighborhoods. Such interventions are distinguishable from others that are aimed at reducing social organization—with which CSE is highly correlated, because they will contain specific components that address the issue of gender norms and gendered behavior.

The finding that the negative association between CSE and mental health is not stronger for girls was a surprise; it may be the consequence of small sample size. Nevertheless, the theory of CSE posits that this component of social disorder has differential effects on boys and girls, rather than no effects on boys.

Important next steps include examining CSE and its relationship to outcomes in the context of longitudinal research and with larger and more generalizable samples. The findings from this body of research have important implications for public health and social service interventions in such disadvantaged neighborhoods and for the ability of individuals living there to lead healthier lives.

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Authors

Susan J. Popkin is the Director of the Urban Institute's Program on Neighborhoods and Youth Development and a senior fellow in the Metropolitan Housing and Communities Policy Center.

Janine Zweig is a senior fellow in the Justice Policy Center at the Urban Institute.

Nan Astone is a senior fellow in the Center on Labor, Human Services, and Population at the Urban Institute.

Reed Jordan is a research associate in the Policy Advisory Group at the Urban Institute.

Chantal Hailey is a doctoral student at New York University.

Leah Gordon is a project director at the Oregon Health & Science University.

Jay Silverman is a professor of medicine at the University of California, San Diego School of Medicine, Division of Global Public Health.

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Departments

In this issue—

- *Data Shop*

Data Shop

Data Shop, a department of Cityscape, presents short articles or notes on the uses of data in housing and urban research. Through this department, the Office of Policy Development and Research introduces readers to new and overlooked data sources and to improved techniques in using well-known data. The emphasis is on sources and methods that analysts can use in their own work. Researchers often run into knotty data problems involving data interpretation or manipulation that must be solved before a project can proceed, but they seldom get to focus in detail on the solutions to such problems. If you have an idea for an applied, data-centric note of no more than 3,000 words, please send a one-paragraph abstract to david.a.vandenbroucke@hud.gov for consideration.

Using the Panel Study of Income Dynamics To Analyze Housing Decisions, Dynamics, and Effects

Katherine McGonagle

Narayan Sastry

University of Michigan

Abstract

The Panel Study of Income Dynamics (PSID) is the world's longest running household panel survey. It started in 1968 and has followed the same families—and their descendants—for nearly 50 years. PSID was conducted annually from 1968 through 1997 and has been conducted biennially since 1997. As of 2015, 39 waves of data have been collected. In 2015, interviews were completed with more than 9,000 households and information was collected on about 25,000 household members. PSID has achieved high wave-to-wave response rates throughout most of its history. Since the beginning of the study, detailed information has been collected on family composition, income, assets and debt, public program participation, and housing. At the beginning of the recent housing crisis, PSID began collecting information about mortgage distress and foreclosure activity. PSID currently includes several major supplemental studies. The Child Development Supplement and the Transition into Adulthood Supplement collect detailed information about behavior and outcomes among children and young adults in PSID families, such as educational achievement, health, time use, family formation, and housing-related decisions among young adults. PSID data are publicly available free of charge

Abstract (continued)

to researchers; some data available only under contract to qualified researchers allow linkage with various administrative databases and include information such as census tract and block of residence that can be used to describe neighborhood characteristics. PSID data have been widely used to study topics of major interest to Cityscape readers, including housing decisionmaking, housing expenditures and financing, residential mobility and migration, and the effects of neighborhood characteristics on a variety of measures of child and family well-being. This article provides an overview of PSID and its housing- and neighborhood-related measures. We briefly describe studies using PSID on housing-related topics. Finally, we point readers to resources needed to begin working with PSID data.

The Panel Study of Income Dynamics

The Panel Study of Income Dynamics (PSID) is the world's longest running, nationally representative household panel study, with information collected on sampled families and their descendants for nearly 50 years. PSID began in 1968 to gauge the success of President Lyndon Johnson's "War on Poverty" and to track the economic well-being of U.S. families. Housing and neighborhood characteristics are key indicators of family economic well-being and have been included in the study since its inception.

PSID began with a national sample of about 5,000 households with approximately 18,000 individuals (Hill, 1992). The study has followed these individuals and their descendants at each wave, leading to sample growth over time. PSID's 2015 wave includes about 10,000 households containing 25,000 individuals. Respondents have been interviewed by telephone since 1973, with interviews conducted annually from 1968 to 1997 and biennially thereafter. Wave-to-wave core reinterview response rates typically range between 96 and 98 percent. PSID data are available free of charge to the public and have been used for approximately 4,000 peer-reviewed publications, including more than 700 dissertations. The study's design has been replicated in many countries around the world. PSID is regularly used for policy analysis by U.S. federal government agencies. On the National Science Foundation's (NSF's) 60th anniversary, it named PSID as 1 of the 60 most significant scientific advances ever funded by NSF.

PSID's unique features include its national representativeness, the long duration of the panel, its genealogical design, and its broad and deep content. PSID includes adult respondents of all ages and follows individuals across the entire lifecourse. Adult children are interviewed in their own family units after they achieve economic independence from their parents' households. This unique self-replacing design means that, for many families, PSID includes self-reported information on three (and occasionally four, or even five) generations of the same family at various points in their lifecourse. PSID is the only survey ever collected on lifecourse and multigenerational economic conditions in a long-term panel representative of the full U.S. population (see McGonagle et al.,

2012). With sample weights, PSID data are nationally representative of U.S. families. Results based on analyses of PSID data can therefore be used to make statements about the entire U.S. population and also major demographic subgroups defined by age, gender, income, and race/ethnicity.

In addition to collecting rich information on housing and neighborhood characteristics, PSID collects data on a wide array of economic, social, demographic, geospatial, health, and psychological factors, supporting multidisciplinary research. In 2015, the 76-minute interview collected data on employment; earnings; income from all sources; education; expenditures; transfers; health; emotional well-being; mortality and cause of death; marriage and fertility; housing; residential location; participation in government programs; financial distress, including problems paying debt such as mortgages and foreclosure; vehicle ownership; wealth and pensions; and philanthropy.¹ Many of these areas have been included in the PSID instrument since 1968 and measured consistently over time. Hundreds of additional variables in other domains have been collected in various waves throughout the history of PSID. Most of the data are publicly available on PSID's online Data Center (<http://www.psidonline.org/>), with certain sensitive or disclosive variables available under contractual arrangements.

Substantial data on home learning environments, neighborhood characteristics, and housing-related decisionmaking are collected in the PSID Child Development Supplement (CDS) and the PSID Transition into Adulthood Supplement (TAS), major ongoing studies of children and young adults in PSID families. CDS began in 1997, with the goal of providing researchers with a comprehensive, nationally representative, prospective database of young children and their families for studying how family, neighborhood, and school characteristics influence cognitive and behavioral development and health. Children and caregivers were reinterviewed 5 years and 10 years after the original interview. Between 2005 and 2015, the same children were followed into young adulthood once they turned 18 years of age in the six-wave TAS. TAS bridges the period between childhood, when data were collected as part of CDS, and economic independence in adulthood, when sample members become eligible to be interviewed as household heads in PSID. Together, the resulting CDS-TAS archive of this original cohort of CDS children provides up to 18 years of prospective information on a cohort of 3,500 children. A new round of CDS was launched in 2014 (CDS-2014) and will collect information on all children in PSID households every 5 years. Children from CDS-2014 will continue to be followed into adulthood in future waves of TAS and PSID.

Information on Housing and Neighborhoods

Considerable information about housing and neighborhood characteristics has been collected in every wave of PSID (see exhibit 1). Topics include dwelling characteristics, housing utilities, residential mobility and migration, housing-related financial information and consumption expenditures, mortgage distress, and neighborhood characteristics based on geospatial identifiers and administrative data. Information on home and neighborhood characteristics and the emergence of financial independence and housing-related decisionmaking has also been collected in CDS and TAS.

Since the start of PSID, data have been collected on *dwelling characteristics*, including dwelling type and number of rooms. Information is also collected about characteristics of retirement and senior

¹ The 2015 Core PSID questionnaire is available at <ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2015.pdf>.

Exhibit 1

Housing and Neighborhood-Related Questionnaire Content in PSID-CDS-TAS

PSID Housing-Related Content

Dwelling characteristics

Housing type: house, duplex, apartment, condominium, townhouse, mobile home.

Number of rooms.

Number of individuals sharing living space.

Whether retirement or senior community and services offered.

Housing utilities: type, cost, and frequency of payments

Home heat, water, sewer, electricity, telephone service, air-conditioning, cable television, Internet connection.

Use of government programs for utility costs.

Housing finances

Whether owns or rents.

Current market value of dwelling.

Rental agreement detail.

Mortgage detail.

Property tax amounts.

Home insurance amounts.

Use of government programs for housing.

Housing consumption expenditures

Annual expenditures for home repairs and maintenance and for household furnishings and equipment.

Mortgage distress

Falling behind in housing payments.

Foreclosure activity.

Mortgage modifications.

Second mortgages.

Expectations about housing payment difficulties in coming year.

Residential mobility, reasons for moving, moving intentions

Residential change timeline, including timing and address of all residential moves occurring during past 2 calendar years.

Reason for moving, including changes in employment, school attendance, or marital status; for an improved living situation; to save money; or because of a financial shock, such as bankruptcy, foreclosure, or eviction.

Likelihood of moving in near future and reason.

CDS and TAS Housing and Neighborhood-Related Content

Neighborhood characteristics and home environment (CDS)

Ratings by primary caregiver on neighborhood stability, social cohesion, safety, and satisfaction.

Ratings by interviewer on HOME Inventory, including availability of reading material, technology, musical instruments, and toys; features of play areas; lighting adequacy; clutter; cleanliness; space; noise; and condition of nearby homes and buildings.

Location and economic independence (TAS)

Where living during different parts of year, including parent's home, college dormitory, apartment or rented home, military base, or other institution.

Whether moved for an employment opportunity.

Help received from parents and relatives for housing payments and amounts received.

Restricted Use Data

Assisted housing administrative linkages (PSID)

Receipt of government housing subsidies (waves 1968, 1970 through 2009).

Type and class of subsidy, including public housing, low-income housing tax credit, Farmers Home Administration, other federal, other state, other project-based housing, other tenant-based housing.

Geospatial data (PSID-CDS-TAS)

For all waves: FIPS county and place; 5-digit ZIP Code; MSA and CBSA; census tract, block, and block group; match-quality indicators.

CBSA = Core Based Statistical Area. CDS = Child Development Supplement. FIPS = Federal Information Processing Standard. HOME = Home Observation Measurement of the Environment. MSA = metropolitan statistical area. PSID = Panel Study of Income Dynamics. TAS = Transition into Adulthood Supplement.

housing communities. Since the earliest waves, information has been collected on the *type and cost of utilities*, including source of home heat, air-conditioning, and the use of government subsidies for utility costs. Questions were added more recently about cable television and Internet connections.

Data on *residential mobility, moving intentions, and reasons for moving* have been collected throughout the study. For each wave, information is obtained on all recent residential moves and their timing. Specific reasons for each move are also collected. Respondents provide estimates of the likelihood of moving in the near future and describe life events that may trigger potential moves.

Detailed *housing finance* information has been obtained since the earliest waves of PSID, including current market value of the dwelling, details of rental agreements and mortgages, and the use of government subsidies. Starting in 2005, data have been collected on *housing-related consumption expenditures*, including annual costs of home repairs and maintenance and of household furnishings and equipment as part of a complete series on consumption expenditures.

At the onset of the 2009 housing crisis, PSID began collecting extensive information about *mortgage distress*, including falling behind in payments, mortgage modifications, foreclosure activity, and expectations about housing payment difficulties in the coming year. This information has been used extensively to describe and analyze families' difficulties with home mortgages during the Great Recession (December 2007 to June 2009), including by the Federal Reserve Board (for example, Sherlund, 2010) and by others (for example, Lin, Liu, and Xie, 2016).

Although nearly all the data are freely available in the public domain, certain information about housing and geography is available only through a restricted data use contract to maintain the confidentiality of PSID respondents, including *geospatial identifiers* below the level of state and *administrative linkages* to external databases. These geospatial identifiers and administrative data have been widely used as a means of characterizing the neighborhoods in which respondents live. Three levels of geospatial data are available: census tract, block group, and block. Residential addresses have been geocoded for all waves of the study using four different versions of census geography: addresses from 1968 through 1985 were geocoded using both the 1970 and 1980 census geography; those from 1968 through 1999, using the 1990 census geography; those from 2001 through 2009, using the 2000 census geography; and those since 2011, using the 2010 census geography.

Linkages of PSID data to administrative records, including the receipt of government housing subsidies, are also available. These linkages are generated through a process that matches addresses of PSID families in each wave with those in the Assisted Housing Database collected by the U.S. Department of Housing and Urban Development (HUD). Information is available regarding whether a PSID address in a given year corresponds to an assisted housing address, and, if so, the type of assisted housing, including whether subsidized by HUD, by the former Farmers Home Administration, by tax credits administered by the U.S. Department of the Treasury, or through state-level housing subsidy programs.

Other administrative data include identifiers for primary and secondary schools attended by children in CDS and TAS. These school identifiers link PSID children to detailed information about their schools from the Common Core of Data and Private School Universe Survey prepared by the U.S. Department of Education's National Center for Education Statistics (NCES). PSID and TAS

sample members who have attended college, university, or technical and vocational postsecondary institutions have identifiers that can be linked to data from the NCES Integrated Postsecondary Education Data System.

With a central goal of providing information about how child health and well-being are influenced by home and neighborhood environments, CDS has collected particularly rich information on these latter topics. All waves include detailed information collected from the child's primary caregiver on neighborhood stability, social cohesion, safety, and satisfaction. The Home Observation Measurement of the Environment Inventory (Caldwell and Bradley, 2003), designed to measure the quality and quantity of stimulation and support available to a child in the home environment, has been included in all waves of CDS.

Finally, TAS collects housing-related content that reflects the high rates of mobility and emerging financial independence characteristic during young adulthood. For instance, information is obtained about where young adults live "most of the time," including in parent's home, a college dormitory, an apartment or rented home, a military base, or other institution. Because young adults move frequently, this information is collected for different parts of the year (October through April and May through August); information regarding whether a move occurs for an employment opportunity is also captured. TAS also assesses young adults' economic independence by collecting information about help received from parents and relatives in paying rent or a mortgage. Additional data are collected across many other domains, such as self-perceptions; future expectations for schooling, careers, and employment; and information regarding health, wealth, and income that can support rich models of housing decisions and their effects on social and economic outcomes during young adulthood.

Studies Using PSID on Housing-Related Topics

Data collected in PSID, CDS, and TAS have supported a large body of scientific work across a variety of topics related to housing and neighborhood characteristics. A comprehensive bibliography of PSID publications is available on the project's website.

Assisted Housing

A number of studies have used the PSID Assisted Housing Database to examine the consequences of receiving subsidized housing. Newman and Harkness (2000) found that the lower educational attainment of children who lived in public housing disappeared once measured characteristics were taken into account. In another set of analyses, also exploiting PSID's longitudinal design, Newman and colleagues have examined the effects of housing assistance on employment outcomes and welfare receipt (Harkness and Newman, 2003; Newman and Harkness, 2002; Newman, Holupka, and Harkness, 2009). This research shows no negative effects on employment outcomes, although public program participation rates are higher in the future. In a paper that exploits the intergenerational richness of PSID, Kucheva (2014) found that adults who grew up in subsidized housing had a higher probability of residing in subsidized housing in adulthood.

Neighborhood and Housing Choice

PSID provides a rich data source for examining choices about neighborhood and housing choices. A number of studies examined the dynamics of housing tenure choices by families, examining transitions between homeownership and rental tenure and the factors associated with these transitions (Bajari et al., 2013; Boehm and Schlottmann, 2014; Börsch-Supan and Pollakowski, 1990; Carter, 2011; Henderson and Ioannides 1989; Ioannides, 1987; Kan, 2000). Ties between housing and neighborhood choice were examined using PSID data, focusing, for instance, on the process of “downsizing” of housing and retirement moves among the elderly (Banks et al., 2012; Bian, forthcoming; Painter and Lee 2009; Sabia, 2008; VanderHart, 1998). PSID was used to examine the effects of neighborhood characteristics on housing decisions (for example, Lee, 2014) and also the consequences of individuals’ residential decisions on neighborhood dynamics (for example, Bruch, 2014).

Effects of Neighborhood Characteristics

PSID has been used extensively to investigate the effects of neighborhoods, as evidenced by hundreds of publications on this topic. PSID was one of the earliest data sources for studying contextual effects on socioeconomic status (Corcoran et al., 1990; Dachter, 1982) and remains one of the most important and widely used sources across multiple disciplines for examining neighborhood effects on a variety of outcomes, including child, adolescent, and young adult development (Dearing et al., 2009; Jackson and Mare, 2007; Sastry, 2012; Sharkey and Elwert, 2011; Timberlake, 2009a, 2009b; Wimer et al., 2008); health (Do and Finch, 2008; Do, Wang, and Elliott, 2013; Halliday, 2007; Halliday and Kimmitt, 2008; Johnson, 2012; Wen and Shenassa, 2012); education (Brooks-Gunn et al., 1993; Crowder and South, 2011, 2003; Galster et al., 2013, 2007; Harding, 2003; Wodtke, Harding, and Elwert, 2011); income and earnings (Islam, 2013; Sharkey, 2012, 2008); the intergenerational transmission of neighborhood context (Dawkins, 2005a; Sharkey, 2008; Sharkey and Elwert, 2011; Solon, Page, and Duncan, 2000); family migration and labor force outcomes (Blackburn, 2010; Shauman, 2010; Shauman and Noonan, 2007; Swain and Garasky, 2007); and fertility behavior (Clark and Withers, 2009; South, 2001a, 2001b; South and Crowder, 2011, 1999; Wodtke, 2013). With an oversample of African-American families, PSID is a key data source for examining levels and trends in residential segregation by race (Crowder and Downey, 2010; Crowder and South, 2005; Dawkins, 2005b, 2006; Freeman, 2008, 2005a, 2005b; Pais, South, and Crowder, 2012; Sharkey, 2012, 2008; South and Crowder, 2005; South, Crowder, and Pais, 2011; Timberlake, 2007; Vartanian, Buck, and Gleason, 2007; Wagmiller, 2013; White et al., 2005).

There are many opportunities for new research on the effects of neighborhood characteristics. In particular, the continued collection of data in PSID and new data from CDS will support new studies that build on previous research by Crowder and South (2011), Harding (2003), Wodtke, Elwert, and Harding (2012), Wodtke, Harding, and Elwert (2011), and others who used PSID to examine contextual effects on high school graduation and found important effects of neighborhood concentrated disadvantage. The information obtained from the new cohort of children in CDS and young adults participating in TAS will enable researchers to examine how health, development, and well-being today are shaped by several key features of parents’ and grandparents’ past

environments—especially the consequences of growing up in poor neighborhoods. PSID has collected unparalleled nationally representative data every 1 or 2 years during the past four decades that enable researchers to accurately characterize, using contemporaneous measures, children's, parents', and grandparents' experiences of growing up in a poor family and in a poor neighborhood. As a result, PSID and its supplemental data on children and young adults provide essential information for studying the replication of poverty and advantage across generations and the life-course. Further, with the rich data on the home, neighborhood, and school environments available today, researchers can examine the pathways through which developmental outcomes are affected by poverty and socioeconomic status. Results of these analyses will provide valuable information for policymakers to improve the lives of disadvantaged children in the United States.

Effects of the Great Recession and Housing Crisis

Research to date using PSID has described the direct economic consequences of the Great Recession and associated housing crisis on wealth, job losses, consumption expenditures, and retirement decisions (for example, Attanasio and Pistaferri, 2014; Bosworth, 2012; Parent, 2015; Pfeffer, Danziger, and Schoeni, 2013); residential mobility (Coulson and Grieco, 2013); charitable giving (Marx and Carter, 2014); and household formation (Lee and Painter, 2013). Other work has used PSID data to describe foreclosure risk for individual households and disparities in this risk by race and ethnicity (for example, Hall, Crowder, and Spring, 2015).

PSID data can be used to study how the economic effects of the Great Recession and housing crisis translate into lifecourse decisions about schooling, employment, and residential preferences and consequences for educational attainment, health, and well-being. For example, recent work shows that change in a household's housing wealth in the 4 years prior to a child being of college age reduces the likelihood that the child will attend college (Lovenheim, 2011). The ongoing data collected through PSID and TAS provide an unprecedented opportunity to examine how these national financial adversities, combined with secular changes in federal financial and mortgage policies, will ultimately shape residential preferences of young adults. Moreover, recent data collected from children in the new CDS-2014 were drawn from a population that lived through the Great Recession and that experienced higher levels of parental unemployment and poverty than during any time since the early 1990s (Isaacs, 2011). The circumstances of these children can be compared with a previous generation of children who participated in the original CDS from before the financial crisis to study questions such as the impact of the housing and foreclosure crisis on outcomes such as child behavioral problems through family experiences or neighborhood exposures.

How To Access the Data

Most PSID data and documentation are freely and publicly available on the PSID website (<http://www.psidonline.org>). Information is currently available on more than 70,000 variables, on nearly 75,000 individuals, and for all waves of the PSID and its supplements. Users can create customized data extracts from any set of waves by searching or browsing for variables, can obtain customized codebooks specific to their data extract, and can archive data extracts for shared and future use. They can “load” their data carts with variables by wave. They can view variable descriptions,

including univariate statistics and names of the same variable in other waves, by clicking an “open-book” icon next to each variable. They can edit their cart by removing or adding variables through a return to the “data aisle.” Users may save data carts, enabling them to share specific extracts with colleagues, reviewers, and students. A range of file formats is available when the user is ready to “check out,” including SAS, STATA, SPSS, dBase, Excel, and ASCII. The PSID website provides a cross-year variable index that facilitates searching and browsing all variables across the full archive from 1968 to the most recent wave and for all waves of CDS and TAS. Organized by content domains, the index is integrated with the online Data Center so that users can view the codebook and add variables directly to their data cart from the index. Geospatial data below the level of state and linked administrative data may be obtained after establishing a data use agreement between a user’s institution and the University of Michigan.² PSID has also made available a set of user tutorials and webinars on a variety of topics, including an introduction to the PSID for the new user³ and provides a Help Desk that gives rapid responses to users’ questions.

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Authors

Katherine McGonagle is a research scientist in the Survey Research Center at the University of Michigan’s Institute for Social Research and is the Assistant Director of the Panel Study of Income Dynamics.

Narayan Sastry is a research professor in the Survey Research Center and the Population Studies Center at the University of Michigan’s Institute for Social Research and is an associate director of the Panel Study of Income Dynamics.

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² Information about PSID restricted data may be found at the PSID Data center (<http://www.psidonline.org>).

³ Tutorials available on the PSID website explain the content of the survey, how to access the data, and how to use the PSID online Data Center; see <http://psidonline.isr.umich.edu/Guide/tutorials/default.aspx>.

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