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# Planning with urban informality: a case for inclusion, co-production and reiteration

Based on an embedded case study of street vendor relocation and upgrading and multimodal transport planning in Solo, Indonesia, this paper explores the challenges and opportunities for democratic problem solving and shared value creation at the interface between the informal sector and formal urban planning and development apparatuses. Findings underscore the importance of incorporating diverse knowledge systems, existing forms of social organisation and collective action, and 'boundary organisations' in mediating collaboration between 'informals' and state planning agencies on inclusive, equitable and co-generative terms, along with policy experimentation, learning and adaptation in the face of urban complexity and uncertainty.

**Keywords:** informality, planning, progressive urbanism, development, global South, street vending, sustainable transport

## Introduction

In recent years, the urban and planning literatures have challenged dominant conceptions of urban informality as spatial categorisations and organisational forms associated with the urban poor and absence of capitalist development and state planning (Roy, 2004, 2005; Roy and AlSayyad, 2004; Yiftachel and Yacobi, 2003; McFarlane, 2012). Such studies contest binary, ordinal renderings of the relationship between urban informality and development and planning. However, frequent grounding in contexts where developmental states and their agencies of urban planning and development play adverse, violent roles in the lives of poor urban communities results in generalisations about the relationship between informality as associated with the urban poor and state planning in principally oppositional terms. Yet, cities vary in their local governance formations and policy innovations, with some undertaking progressive efforts to plan *with* informality, as illuminated by recent studies of Asian urbanism in contexts of democratic reform and administrative-fiscal decentralisation (Phelps et al., 2014; Douglass, 2013; Bunnell et al., 2013).

Among noted cases, Solo, a city of half a million residents in Central Java, Indonesia, relocated squatters from flood-prone riverbank areas to new housing developments (partly subsidised and complete with property rights) and converted

cleared sites to public parks, undertook street vendor relocations and upgrades as a part of a broader effort to build a ‘people’s economy’, and is now moving to integrate informal minibus and Bus Rapid Transit (BRT) systems as part of its sustainable transport and urban development strategy. Where neoliberal urban pathways and EuroAmerican urban antecedence continue to dominate urban and planning discourse and practice (Bunnell, 2013), Solo presents an alternative template of progressive urban governance and policy enhancing the capacities and livelihoods of historically marginalised communities, building grassroots organisations and power, and stabilising local economies as opposed to deepening inequality via displacement of the poor, land speculation and gentrification within a rapidly urbanising global South context.

Where scholarly and media accounts have widely hailed Solo as a ‘best practice’ of progressive urban governance and development, and other cities have tried to learn from and replicate the Solo model, this study undertakes a critical analysis of the city’s approach to planning with informality that illuminates differential components, experiences and impacts as well as related tensions, challenges and opportunities. Examining past relocations of street vendors to designated sheltered marketplaces and streets in conjunction with the recent multimodal transit planning effort at the city-regional level incorporating existing *angkots*, or ‘informal’ minibuses, with the BRT system, it seeks to distil lessons from the former to inform progressive urban governance and policy with respect to the latter. In seeking to contribute to theory



Figure 1 Solo. Location with Indonesia

and practice at the intersection of urban informality and progressive planning by illuminating constitutive or mediating factors of ‘positive hybridity’ between the informal sector and formal urban planning and development apparatuses, the paper makes two conceptual moves. First, it incorporates the concept of the boundary organisation to illuminate how such entities might help level inequalities of authority, power and resources, define shared interests and common cause, and facilitate trust and cooperation among state planners and informal operators. Second, it borrows from the planning tradition of social learning to accentuate correlative and iterative processes of experimentation, learning and innovation among diverse stakeholders and partners.

The next section presents the literature review, which is followed by a description of the research design and methodology. The paper then proceeds to an overview of the comparative cases, next presenting key findings on Solo’s urban transport system along with a case analysis as viewed through the lens of street vendor policy before concluding with a discussion.

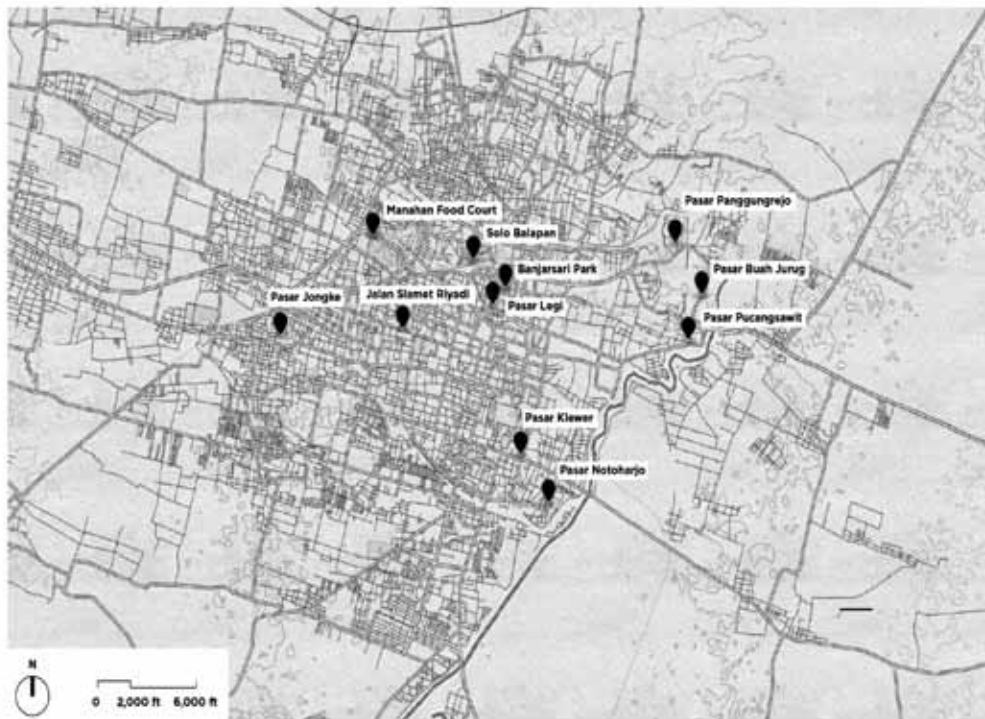


Figure 2 Solo city

## Review of the literature

### Critical policy epistemology of informality

In recent years, the urban and planning literatures have challenged dominant conceptions of urban informality as spatial categorisations and organisational forms associated with the urban poor and the absence of capitalist development and state planning (Roy, 2004, 2005; Roy and AlSayyad, 2004; Yiftachel and Yacobi, 2003; McFarlane, 2012). As delineated by Ananya Roy (2005), 'planning inscribes the informal'; in other words, informality arises as planning designates which activities are authorised or illicit. Moreover, Roy's research on slum clearance and planned development on the edges of Calcutta indicates that the state planning regime is itself an informalised, extra-legal entity, one that operates in a state of deregulation, ambiguity and exception as it alters land use, deploys eminent domain and acquires land for new middle-class housing and other private development. Such findings disrupt binary, ordinal renderings of the relationship between urban informality and 'formal' planning practices and processes at the local level, but continue to generalise the relationship between informality, as imbued and practised by the urban poor on one hand, and the state, on the other, in principally oppositional terms.

### Planning *with* informality

In turn, Vanessa Watson's 'Seeing from the South' (2009) frames the relationship between urban poverty and informality and state planning in more compatible terms. Problematising the increasing gap between dominant planning approaches and growing problems of poverty, inequality, informality, rapid urbanisation and spatial fragmentation in cities around the world, but especially those in the global South, the article stresses the need for planning systems and approaches to work with informality to become more pro-poor and inclusive. While viewing planning as a central tool through which government manages spatially defined territories and populations, Watson rejects the notion that power is necessarily one-directional or totalising, or negative or repressive. Rather, she recognises opportunities for resistance, struggle and institutional transformation at the interface between techno-managerial and marketised systems of government administration, service provision and planning and the survival efforts of the poor and marginalised. Among opportunities seeded by 'conflicting rationalities' between those of governing and capitalist development versus survival, she highlights instances where 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.

### Questions of positive hybridity

Watson touches on a central theme in both the planning and international development literatures, namely, the debate between participatory planning as a means to community empowerment, social justice and urban progressivism (Healey, 2003; Forrester, 1999) versus co-optation and depoliticisation (Mohan and Stokke, 2000; Kothari, 2001; Fainstein, 2010). The author builds on the work of development theorist Glyn Williams (2004), which argues that participation is not only a form of 'subjection', but also a means for voice, the emergence of alternative discourses and knowledge, and undetermined consequences benefiting the poor. In so doing, she imagines the zone of encounter and contestation between the conflicting rationalities of governing and survival as a site for open-ended and ongoing political struggles carrying unanticipated and unintended consequences, positive and negative. Still the question remains as to what sort of factors or conditions might mediate different outcomes and shifting circumstances. For instance, what terms of mutual engagement or formations of hybridity promote or impede the exercise of democratic power and the delivery of shared gains? How might existing forms of social organisation or third parties help mediate and broach gaps among differently situated and enabled decision-makers and stakeholders at the interface? Further, how might consideration of extended policy trajectories and impacts beyond immediate results inform alternative approaches towards planning with informality?

### Boundary organisations

In addressing questions about constitutive or mediating factors of 'positive hybridity', the concept of the boundary organisation can help illuminate the role of third-party mediators in supporting communication and collaboration across different social worlds while remaining accountable to each (Star and Griesemer, 1989; Guston, 2001). Deriving from the social studies of science, the literature on boundary organisations tends to highlight the bridging of epistemological and normative disagreements and inconsistencies among scientists and policy decision-makers to the neglect of structural considerations such as power and resource inequality among actors (Guston et al., 2000). Moreover, the notion of the boundary seemingly maintains limits between different sides, when in fact state planning and informality evolve in conversation with each other so as to continually blur and shift lines of distinction. Yet scholars like Thomas Gieryn (1983) and David Guston (2001) also depict boundaries between science and policy to be ambiguous, flexible, historically changing, contextually variable, internally inconsistent and sometimes of disputed nature. Extending and applying the concept of the boundary organisation to the interface between conflicting rationalities among formal urban planning and development apparatuses and the

informal sector thus also brings into clear relief their potential value in helping level inequalities of authority, power and resources between ‘informals’ and state planning agencies. Further, by helping define shared interests and common cause as well as facilitating trust and cooperation between the two sides, boundary organisations can help coordinate and achieve synergies among formal and informal planning practices to help renegotiate their terms of relation and interaction.

### Planning as social learning

As for assuming a longer-term, flexible, open-ended perspective on ‘positive hybridities’ between state planning apparatuses and the informal sector, the planning tradition of social learning can help overcome tendencies among dominant policy and planning approaches towards urban informality to treat effective spatial, regulatory and other interventions as one-off propositions. Interrogating urban policies and planning initiatives addressing urban poverty and informality in the global South, Roy problematises the emphasis on urban upgrading strategies whereby spatial designs and redevelopment overwhelm consideration of upgraded livelihoods, rights and political participation among the urban poor (Roy, 2004, 2005). In contrast to such narrow linear rationalities, complete with problem-solution and process-outcome binaries, the planning tradition of social learning instead emphasises the contingent, contentious, co-creative and continuous nature of planning and development practice (Friedmann, 1987; Healey, 2003; Forester, 2013; Albrechts, 2013). Its theory of change accentuates correlative and iterative processes of practice and learning among organisations, communities and movements that, beyond addressing the given policy issue, additionally seek to normatively restructure actor self-understanding, intergroup relations, authority structures and distributions of the costs and benefits of action (Friedmann, 1987).<sup>1</sup>

### Conceptual framework

In seeking to contribute to theory and practice at the intersection of urban informality and progressive planning, this paper applies Roy’s critical policy epistemology of informality as a theoretical basis to interrogate policy shortcomings while also premising an important and potentially constructive role of government in improving the material circumstances of the urban poor. In considering policy and planning improvements, it builds on Watson’s notion of the interface as a potentially creative and transformative space while additionally exploring constitutive or

<sup>1</sup> From this perspective, policy and planning interventions risk simply perpetuating the status quo if they fail to address the socio-economic, political and spatial disparities underlying urban informality, and to cultivate a well-informed and active base of local stakeholders and advocates to continually and iteratively wage progressive urban struggles and initiatives as needed.

mediating factors of ‘positive hybridity’. Incorporating the concept of the boundary organisation, I examine how such entities might help level inequalities of authority, power and resources, define shared interests and common cause, and facilitate trust and cooperation among state planners and informal operators. I also borrow from the tradition of social learning in planning to approach progressive planning with informality as correlative and iterative processes of experimentation, learning and innovation among diverse stakeholders and partners. Besides attending to structural considerations such as unequal access to power and relations of dominance and dependence among different groups, this approach also highlights the diffuse, multipronged diagnostic and troubleshooting capacities inherent in multisector partnership and co-production.

## Research design and methodology

Where scholarly and media accounts have widely hailed Solo as a ‘success case’ of progressive urban governance and development, and other cities have tried to learn from and replicate the Solo model, this study undertakes a critical analysis of the city’s approach to planning with informality that illuminates differential components, experiences and impacts as well as related tensions, challenges and opportunities.<sup>2</sup> In addition to helping expand templates for alternative urban pathways beyond neoliberalisation, particularly in conversation with popular urban contestations, participatory planning and progressive urban policy innovations (Douglass, 2013; Phelps et al., 2014), the Solo case study seeks to foster geographies of theory more commensurate with the increasing distribution of urban settlements, populations and practices in cities of developing countries and regions (Watson, 2009; Bunnell et al., 2013). Studies of informality policy in cities of the global South are frequently grounded in contexts where developmental states and their agencies of urban planning and development play adverse, violent roles in the lives of poor urban communities. Yet cities also vary in their local governance formations and policy innovations, and Solo undertook progressive efforts to plan *with* informality following democratic reform and administrative-fiscal decentralisation (Phelps et al., 2014; Bunnell et al., 2013). Therefore, the Solo case, besides informing politics of connectivity, inter-referencing and policy learning within the Asia Pacific region and the global South, offers implications for the numerous cities set in more advanced economic, traditionally liberal democratic contexts struggling to regulate proliferating informality (Mukhija and Loukaitou-Sideris, 2014).

<sup>2</sup> With growing prominence, Solo has drawn numerous official and unofficial study tours by local governments, international donor and development agencies, NGOs and other urban policy and planning enthusiasts throughout the country and larger region, and launched former mayor Joko Widodo (Jokowi) to the governorship of Jakarta (2012) and Indonesian presidency (2014).

The research was designed as an embedded case study, examining past relocations of street vendors to designated sheltered marketplaces and streets together with the recent multimodal transit planning effort at the city-regional level incorporating existing angkots, or ‘informal’ minibuses, into the BRT system. For the street vendor component of the study, four different purpose-built markets (Pasar Notoharjo, Pasar Manahan Food Court, Pasar Panggunrejo, Pasar Pucangsawit) and one street market (along Jalan Slamet Riyadi) were chosen as focal sites on the basis that they resulted from state planning processes that received considerable public attention. Due to the varying levels of success in removing street vendors from public spaces and upgrading their stall and market conditions along with their livelihoods, the research design aimed to illuminate how certain factors and mechanisms helped or hindered vendor relocation and resettlement. Likewise, the angkot component of the study was stratified by minibus line, to clarify overlaps and differences in historical trajectories and operator experiences along with mediating factors. The study gathered primary data from 17 one-on-one interviews (with street vendors; representatives of international development agencies, non-governmental organisations (NGOs) and community groups; local policymakers and planners; and academic experts) and nine focus group interviews (with the respective angkot lines/driver associations), together with participant observation of the different markets and transit corridors. It also incorporated historical and archival analysis and geospatial analysis.

A team of academic and community-based researchers conducted the research between July 2013 and December 2014 in two main stages, collecting primary and secondary data on street vendor relocations and the multimodal transit planning effort respectively. The local Indonesian NGO Yayasan Kota Kita, whose mission is to support the empowerment and inclusion of citizens in decision-making and the planning of their communities and cities, coordinated interviews and site visits in the first stage of the study, while spearheading the primary data collection for the entire second phase, which entailed conducting focus group interviews with angkot drivers; conducting informal interviews with representatives of the World Bank, Deutsche Gesellschaft für Internationale (GIZ), the Institute for Transportation and Development Policy (ITDP) and Solo City Department of Transportation (DISHUB); conducting on-board surveys ( $n=878$ ) and passenger counts; tracking and mapping buses; and making traffic counts at various transit corridors and times (the latter two falling outside the scope of this paper).

## **Case overviews**

### **Street vendor relocations and upgrades**

While the informal sector has long comprised a major part of the Indonesian economy, the last two decades of rapid urbanisation and integration into the global economy have augmented its size and significance (Dick, 2002; Peters, 2013; Vickers, 2013). As



the aftermath of the 1997 Asian Financial Crisis brought massive closures of local firms and unemployment, many laid-off workers and others struggling to find formal employment turned to street vending, pedi-cycle driving, scrap picking and the like, often crowding roads and public spaces with makeshift kiosks, supplies and customer traffic. The informal sector expanded further following the global financial crisis of 2007–8, as it absorbed returning migrant factory and construction workers from wealthier countries (Morrell et al., 2011). From 1998, the Solo municipal government faced complaints from residents about the growth of street trade. The tension rose with an almost six-fold growth in street vendors from 2001 to 2005, as factories and businesses shut down in the wake of deep economic recession, the collapse of the New Order government and waves of civil unrest spurred by rising oil prices, food shortages and unemployment along with partisan politics and religious extremism (Majeed, 2012).

When Joko 'Jokowi' Widodo became Solo city mayor in 2005, public uproar was focused on the historic Banjarsari Park, where an estimated 1,000 street vendors regularly congregated and plied their trade.<sup>3</sup> Former mayoral administrations had worked with local university-based researchers on studies of street vending and potential relocations, with the previous mayor establishing the Office of Market Management and selecting a site in the Semanggi area for relocating the Banjarsari Park vendors. Though he initially met with fierce resistance from vendors upon publicly announcing their planned removal from Banjarsari Park within two months, Jokowi held over 50 lunch and dinner meetings with vendors and city officials over a six-month period. The mayor, his deputy and city department heads additionally cycled around the city to hold informal conversations with street traders, gradually acquiring the latter's trust in the municipal government (Morrell et al., 2011). City officials further gathered data on street vendors with university-based partners, while the legislative council worked out the project's budget. After reaching an agreement with the City in December 2005, Banjarsari Park vendors moved to a newly built market in Semanggi six months later, with a commemorative procession. Partly thanks to facility improvement, many of the original Banjarsari vendors reported revenue increases at the new Pasar Notoharjo, even considering stall fees and taxes.<sup>4</sup>

While the Jokowi administration demonstrated a distinctly participatory and collaborative approach to relocating and upgrading street trade, different trade associations also held their part of the bargain. Organising various vendors and defining

3 Lobbying accusations of public disorder, criminal activity and property damage, middle-class residents of the area, together with other Solo citizens, organised a boycott of Independence Day celebrations in protest at the street vendors' presence. Meanwhile, street vendors complained of rampant abuse and extortion by police and government officials.

4 By 2009, the legislative council standardised fees and procedures, which were administered by the Office of Market Management.

their shared interests and demands for enhanced bargaining power, the more effective ones negotiated locational terms, urban design aspects of sites and facilities, times of operation, fees and even free advertising, albeit unevenly, across the board. At Pasar Notoharjo, the chairman of the market association described the iterative process by which the Banjarsari Park vendors first opposed relocation to the Semanggi site, which is in a remote part of the city known for its sex trade. The ensuing negotiations with city officials resulted in the latter's agreement to build connecting roads, provide resources for advertising and marketing, open a minibus terminal in the area and regulate the sex trade, in addition to offering temporary stall fee and tax remission and loans to each stall occupant. Likewise, a number of the cooked food vendors in Manahan and Jalan Slamet Riyadi emphasised the key role played by their trade and market associations in articulating and advocating shared demands and undertaking successful negotiations with the City. In both cases, the vendors held repeated meetings with the City to impose policy demands and alternative planning proposals.

Among street vendor relocations and upgrading projects with less satisfactory outcomes, interviewees widely faulted poor location and site design which, upon closer examination, often occurred in the absence of sustained dialogue, negotiation and troubleshooting between city planners and vendors. In 2012, when the City relocated a second round of street vendors from Jalan Veteran to the Pasar Notoharjo area with a conspicuous lack of engagement and participatory planning, the result was disappointing; the market extension was poorly connected to the original site and hard to find from the main road, and many of the relocated vendors consequently returned to the streets. At Pasar Pangungrejo, vendors complained that they had been relocated from a busy street beside the Sebelas Maret University campus to a purpose-built market with low visibility from the street, poor circulation, limited access to upper levels and cramped corridors, which in turn inhibited customer traffic and patronage. They also faulted weak government monitoring and a lack of communication between government officials and vendors, along with dispersal of the traders' association, which had mediated the relocation negotiations. At Pasar Pucangsawit, vendors attributed high rates of market abandonment and ensuing stall vacancies to poor transit connectivity and the relocation of a proximate riverbank community that had previously patronised the market. When asked about policy and planning engagement, vendors from both Pasar Pangungrejo and Pasar Pucangsawit expressed a preference for relying on regular customers and word of mouth rather than negotiating with or protesting against the City for potential improvements.

Among the unique, defining features of Solo, its robust and active civil society penetrates the poorest and most disadvantaged sections of society, including the homeless and disabled, and finds bold expression in the plethora of trade associations and NGOs that confer with public authorities and shape planning processes and policy

implementation, often in indirect and contentious ways (Aa, 2014). Where forcible removal prevails as the official response to informal street vending in Indonesian cities, the Jokowi administration was notable for entering into dialogue and negotiation with vendors in efforts to transfer them off the streets and into purpose-built public markets or designated selling zones. Couching the street vendor policy, along with regulations prohibiting the location of 'modern' shops (i.e. minimarkets, supermarkets, malls) within 500m of traditional markets, a moratorium on mall construction and an act to preserve and protect traditional markets, as part of a citywide shift towards building a people's economy partly based on local culture and the arts (Aa, 2014; Bunnell et al., 2013), the Jokowi administration incorporated street vendors from the margins of society. However, the content and outcomes of inter-party dialogues and negotiations were far from guaranteed. Where they were compelled to do so, city officials took extra time to troubleshoot complaints and work through ideas together, in some cases using financial incentives such as free trading licences and rent-free periods as bargaining chips. Due to a lack of enforcement mechanisms, however, where they could circumvent lengthy stakeholder engagement and participatory planning processes to expedite vendor relocations, they did.

Where previous studies have associated less successful street vendor relocations and upgrades with hasty implementation and insufficient stakeholder input (Majeed, 2012), our site visits and interviews additionally indicated the importance of vendor organisation and mobilisation, their continuous learning and engagement in the policy and planning process, and interactive, co-productive planning and management procedures at the municipal scale. In Solo, more organised and active groups such as the vendors at Banjarsari Park, Manahan and Jalan Slamet Riyadi were able to keep the attention of city officials and hold them accountable. Their continual assertion of policy demands and alternative planning proposals through various meetings with the mayor and his staff, along with their ability to recalibrate and redefine their demands in response to emerging conditions, further promoted favourable outcomes. Street vendors offered frontline knowledge and insights about market relocations, upgrades/design and management as well as projective, inventive capacities that were grounded in direct experience of the complexities, uncertainties and continuous changes characterising their line of work and business environments. Aside from sharing the burdens of decision-making and public goods and services delivery, the vendors helped promote policy and planning outcomes that were more responsive to stakeholder needs. Consequently, successful market renovations and relocations, complete with the renewal of licences and leases and the registration of new or undeclared traders, allowed the Department of Traditional Market Management to double annual government revenue from traditional markets and vendors (Majeed, 2012, 17).

## Multimodal transit planning

Like much of urban Indonesia, where the development of modern transit has occurred in conjunction with ‘informal’ modes of transportation (from historic animal-powered carts to present day pedicabs and informal minibuses), mass transit in Solo has developed as a plural, decentralised and adaptive system (Dick, 2000). Established in 1975, Solo’s first bus line comprised angkots or informal minibuses typically carrying 12 to 18 passengers<sup>5</sup> running between two markets, in the city’s eastern and southern parts respectively, with a stop at a third market along the way.<sup>6</sup> As the bus line grew in popularity and use, the municipal government decided to split the single route into two, and to extend them. In 1983, the City received a grant of 30 double-decker buses from England and Sweden, which were put under the operation of DAMRI, a state-owned bus company, on an inter-city line.<sup>7</sup> Two years later, the City added another DAMRI line, whose end points overlapped with one of the angkot lines but took a different route and used medium-sized buses. In 1988, a new bus company called Surya Kencana also began to use medium-sized buses to offer inter-city services but on a slightly different route from DAMRI.<sup>8</sup> By 1990, several private bus companies were operating inter-city routes, many of them overlapping. Meanwhile, angkots also expanded in response to gaps in the service network to reach 12 lines by 1998.<sup>9</sup> After half a year of organising rallies and undertaking negotiations with Solo’s Department of Transportation (DISHUB), angkot drivers gained official routes and permits.<sup>10</sup> Having steadily expanded until 1998, bus ridership subsequently declined, and two of the private bus companies were defunct by 2008. Some of the angkot lines resumed their routes and took on their passengers before themselves ceasing operation, bringing the present total of lines down to nine.

The next major set of changes for Solo’s transport system reverberated from the national level. In 2007, the Ministry of Transportation delivered a fleet of new, medium-sized buses to 17 of Indonesia’s largest cities with a mandate to develop and implement BRT systems.<sup>11</sup> Among the selected cities, Solo began BRT planning in

5 Angkot drivers initially used modified pick-up trucks with added roofs and seats before switching over to mini-vans a couple of years later.

6 The line ran between Jurug Market in the Jebres area and Jongke Market in Laweyan, with a stop at Klewer Market in Gajahan.

7 The line ran along Jalan Slamet Riyadi and served the Palur–Kartosuro route via the main road in Solo.

8 It went between Palur and Kartosuro but via Balapan train station and Manahan.

9 In 1992, two new angkot lines began serving Klewer Market and passing through Pasar Legi, and another seven lines followed in 1998.

10 Contrary to popular perception, angkots are not illegal or ‘informal’ in the sense of being outside the purview of state regulatory and formal institutional structures and mechanisms. In many cases, angkots compensate for the shortcomings of the state by contributing fees and taxes to public revenues, delivering essential public services and spurring job creation and employment. Often, government agencies sustain ‘informality’, whether to derive unofficial or extralegal payments, to avoid administrative responsibility and public accountability, or other reasons.

11 With the stated aim of improving public transportation systems and reducing emissions from older bus fleets, the

2009, its municipal government receiving technical assistance from GIZ through its Sustainable Urban Transport Improvement Project (SUTIP).<sup>12</sup> Along with GIZ's three other partner cities (Palembang, Bogor and Jogjakarta), Solo city officials and staff received training and advice on public transport restructuring, transport demand management, traffic impact control and non-motorised transport development among other areas. In seeking to develop an eight-corridor BRT system called Batik Solo Trans (BST), Solo's Department of Transport first implemented two east–west routes in July 2014,<sup>13</sup> before planning a third, north–south route to operate the following year.<sup>14</sup> Along with investments in bus infrastructure, including stops, shelters, road markings and signs, the City sought to incentivise public transit use by banning motorcycle use among minors (under age 17) commuting to school and enforcing more stringent parking regulations in city centre areas.

At present, Solo faces two major types of challenge in developing a sustainable urban transportation system, the first of which is organisational. Batik Solo Trans replaced recently defunct medium-sized bus companies and took over some existing bus and angkot routes. With the medium-sized bus companies, DISHUB sought to consolidate and merge the operators into the Batik Solo Trans system as one legal entity, receiving GIZ's assistance in preparing the agreement and organisational structure, business plan and Memorandum of Understanding between the consortium and the Solo city mayor. With the angkot lines, DISHUB sought to reorient them from providing parallel services to feeder status, proposing that angkot drivers form a single consortium from which they draw a salary and trade in their existing angkots as down payments on new vehicles. The municipal government further announced that angkot route licences would not be renewed past 2017. Many angkot drivers responded with reluctance given the questionable fiscal viability of focusing exclusively on shorter secondary and tertiary routes as feeders to tenuous BST trunk lines (more on this shortly). The prospect of industry rationalisation under the jurisdiction and oversight of the City also provoked disagreement in entailing a dramatic shift from the current diffuse, horizontal and self-governing structure. Each of the nine angkot lines is organised as a *paguyuban* or association into which each driver pays membership dues while being responsible for the lease or ownership, maintenance and licensing of his own vehicle. Associations have varying scopes and frequencies of activity, each adapted to conditions specific to their respective lines.

policy built directly on the perceived success of the TransJakarta BRT system, which reduced travel times and increased public transit use along several of Jakarta's busiest corridors, and received a bronze medal from ITDP's 2013 rankings of best performing BRT systems.

12 SUTIP deployed a two-tier approach of assisting central and local government agencies to develop sustainable urban mobility systems including multimodal public transport networks, walkability and cycling.

13 These were Corridor-1 Kartosuro–Palur via Slamet Riyadi street and Corridor-2 Kartosuro–Palur via Balapan Train Station.

14 This route would cover Solo Baru–Kadipiro via Semanggi and Mojosongo.

The second set of challenges is operational in nature, centring on the practical feasibility of BST-angkot integration in light of declining transit ridership in Solo. As perceived by many angkot drivers, the decline in angkot use over the past decade and a half partly results from faulty government policies. These include the over-provision of angkot licences on the same routes (for purposes of revenue generation),<sup>15</sup> the under-regulation of rogue operators (*taxi gelap*), failed oversight of inter-city buses from other cities in the surrounding metropolitan area operating in the centre city, shifting of angkot routes without prior notice or consultative engagement, lax parking regulations in the city centre and national fuel subsidies,<sup>16</sup> the latter two incentivising use of private transport in conjunction with the low costs of motorcycle ownership.<sup>17</sup> Moreover, despite claiming the best routes, benefiting from infrastructure investments and offering competitive fares (3,500 Rp.) thanks to the local government subsidy, the BST performs only marginally better than medium-sized bus or angkot lines in terms of ridership gains.<sup>18</sup> Meanwhile, the motorcycle increasingly dominates other modes of transportation, in part due to low vehicle costs, easy parking, affordable fuel and Solo's relatively small geographic size in addition to factors of ease, convenience, style and status. Such trends undermine the City's proposal of a trunk and feeder integration arrangement in which the BST would provide high-speed, -capacity and -frequency trunk services along major corridors, and angkots (along with taxis, pedicabs, motorcycles, bicycles, etc.) would offer transit services on lower-demand corridors and for local trips, mainly in residential areas and other zones with accessibility constraints. The lack of rapport and trust between the City and angkot drivers further compels the latter to continue competing on BST routes in addition to providing more specialised last-mile connectivity services.

### **Key findings on Solo's urban transport system as viewed through the lens of street vendor policy**

Manifestations of and policy responses to urban informality vary widely across sectors and, in some cases, even within the same sector. As a policy issue, multimodal transit planning entails a great deal of scientific, technological and engineering complexity,

15 DISHUB oversees angkot licensing and route planning, administering fees for five-year operating licences and vehicle inspections every six months.

16 Following his election as President of Indonesia, Jokowi cut the national fuel subsidy from the 2015 budget, increasing domestic gasoline prices by around 31 per cent, and diesel prices by 36 per cent.

17 Over the past decade and a half, Chinese motorcycles have flooded the Indonesian market, dramatically lowering the cost of ownership and enhancing the cost efficiency of travel by private motor vehicles relative to public transit usage.

18 Our traffic counts indicated very low levels of trips being taken on public transportation in general (including BST and angkots), with ridership diminishing in favour of motorcycle and car use.

involving multiple modes of transport, continuous movements of vehicles, people and goods; myriad routes between diverse points of origin and destination; and other dimensions. However, effective policy and planning responses are also contingent on social coordination among hitherto disparate and fragmented transport service providers along with government, businesses and civil society organisations, not to mention conceptual shifts and behavioural change among the wider public with respect to prioritising alternatives to individual motorised transport and supporting sustainable urban transport development more generally. Here, findings from street vendor relocation and upgrades can inform efforts to transform the prevailing ‘organizing urban logic’ in Solo’s mass transit sector (Roy and AlSayyad, 2004, 5). Interviewed local transport planning authorities indicate that they have benefited from the advice and assistance of technical experts and consultants the likes of GIZ and ITDP. However, given the aim of developing an integrative, inclusive and sustainable urban transport system, they may additionally leverage existing resources such as the angkots and pedicabs that already play a critical role in enhancing mobility and access between the city centre and other areas that are well-connected and served by transit and more isolated parts of the city-region with minimal burden on public resources and responsiveness to emerging conditions.

### Report on Batik Solo Trans and angkot integration

Yayasan Kota Kita’s study of angkot riders and routes, along with the needs, motivations and aspirations of angkot drivers, can help inform BST-angkot integration and sustainable transit policy and urban planning in Solo more generally (Yayasan Kota Kita, 2015). One of Yayasan Kota Kita’s key findings is that angkots already play an integrative role in the transportation system, where people commonly transfer across modes, but not necessarily between angkots and Batik Solo Trans. For instance, a survey of 900 angkot passengers found that 44 per cent of respondents also used a motorcycle on a trip involving an angkot, while another eight per cent also used a motorcycle taxi. Only four per cent combined angkot and BST, while five per cent of passengers reported relying strictly on angkots and walking. Given the low percentage of journeys combining angkots and BST and the significant portion of journeys combining angkots with motorcycles, simply dissipating and ceasing angkot licensing may have the unintended consequence of diverting mass transit users to private motorised travel rather than promoting BST ridership. Yayasan Kota Kita also found that different angkot lines attract different customers (i.e. market goers, long-distance travellers from outside of Solo, students, traders, business employees), suggesting the need for a variegated, nuanced approach to integrating angkots into the BST system. At the same time, the fact that over half (56 per cent) of angkot riders are women, over 70 per cent are working age and almost 20 per cent are school-age, and that most passengers earn a below average income underscores the integral role

of angkots in developing an inclusive and equitable urban transit system. Finally, angkots cover peripheral areas that fall outside of Solo's jurisdictional bounds and public transport system in a decentralising urban context often characterised by hardening local boundaries and 'negative parochialism' among neighbouring cities and regencies (Firman, 2009; Bunnell et al., 2013). While angkots deliver essential mobility and accessibility services to those unable to afford or drive motorised vehicles and those located outside of public bus routes, such needs of the population can fall into the margins and blind spots of official planning structures and processes.

### Focus group findings

Focus group interviews with drivers reveal significant potential for angkot associations to mediate driver engagement in a more constructive policy and planning capacity. Aside from past experience of organising rallies and undertaking negotiations for official routes and permits, and building enduring leadership and governance structures, a number of the associations run savings-and-loan programmes, revolving loan funds and insurance schemes – all of which require organisational and project management skills. Some have also experimented with operational and marketing strategies to enhance ridership and revenues: for instance, shortening intervals between /increasing frequency of angkots; lowering fares; instituting weekly payment schemes for regular customers; offering door-to-door services; customising vehicles with decorations; mini TVs and music; and even praying together (among angkot drivers). Yet interviewed drivers also indicated an absence of systems thinking whereby advance coordination among the various lines on ticket standardisation and revenue sharing would allow passengers to transfer between different angkot vehicles. The City's recent proposal to bring together the different angkot lines under the legal framework of a single cooperative, with the added 'carrot' of eligibility for municipal subsidies, appeals to some angkot drivers who seek greater business stability. However, the prerequisite of driver outreach, organising and mobilisation at the local scale is a daunting task for those already struggling to make ends meet on a daily basis. For some, the provision of municipal employment and oversight signals the potential elimination of supplemental income earned by owner-operators through vehicle rental to third parties outside of business hours. Scepticism is further fuelled by past experience of a citywide angkot cooperative (i.e. *Roda Sejahtera*) that facilitated the financing and purchase of angkot vehicles before allegations of corruption led to its dissolution. Consequently, the majority of angkot drivers have demanded that the municipal government simply extend their operating licences beyond 2017 and step up the regulation of rogue operators, inter-city buses operating in the centre city and parking regulations in the city centre, rather than supporting the development of a multimodal transport system in Solo as feeders to the BST.



## Prisoner's dilemma

In sum, key stakeholders of Solo's mass transit system appear locked in a prisoner's dilemma of sorts, where the rational pursuit of self-interest and non-cooperation leave everybody worse off. In continuing to service existing routes, including those served by Batik Solo Trans, and other bus lines, angkots contribute to the oversaturation of bus operators and declining average ridership and revenues, undermining their own business viability and livelihoods. The municipality, in seeking the efficiencies of top-down, technocratic decision-making and programme implementation to the relative neglect of angkot associations and drivers as well as the broader public, unwittingly stymies deeper system-wide changes. Batik Solo Trans has put in place 'low hanging' basic physical attributes of BRT systems, such as elevated boarding areas without the accompanying dedicated lanes, busway alignments (to avoid kerb-side traffic) or bus priority at intersections, which require public outreach and buy-in, hence precluding the high operating speeds and passenger volumes that distinguish BRT systems from regular bus services. Further, the City's failure thus far to engage angkots, pedicabs and other potential feeders to the BST on terms that resonate with their motivations and needs inhibits cooperation and fuels corrosive competition among diffuse transit service providers. The missed opportunity of multimodal divisions of labour and connectivity inhibits the spatial reach and scale of mass transit at the local-regional level, which only enhances the relative ease and convenience of private motorised vehicle usage.<sup>19</sup>

## Case analysis

### Existing forms of social organisation and collective action

The angkot associations seem an obvious resource for mediating more constructive and co-productive policy and planning engagements between drivers and the City given their pivotal role thus far in establishing and pursuing shared interests and common cause among members. Yet the lack of systems thinking and coordination among the different angkot lines and associations calls for an added layer of organising and mobilisation to define shared interests and common cause and to outline alternative planning proposals and policy demands as a first step in shifting towards more communicative and collaborative relations with the City. Not only can angkot drivers offer useful ideas for enhancing transit ridership and revenues, they share DISHUB's goals and policy preferences in terms of promoting public transportation and stemming the growing reliance on individual motorised vehicles.

19 Broader societal costs include higher levels of congestion, collisions and accidents, and air pollution; sociospatial discrimination against and exclusion of the poor, elderly, disabled and others disproportionately reliant on public transport; urban sprawl; and weakened local identity and culture.

### Boundary organisations

In trying to better understand and develop working relationships with angkot drivers, the City might seek assistance from NGOs or civil society groups such as Yayasan Kota Kita. Yayasan Kota Kita has already conducted a diagnostic study of the angkot sector in Solo and offers experience and expertise in community-based data collection and analysis as well as public education and outreach on urban policy and planning issues (i.e. the creation of neighbourhood-scale mini-atlases for participatory budgeting), which could enhance citywide efforts to understand and promote transit ridership (Bunnell et al., 2013). Such 'boundary organisations' can further communication and collaboration across the different social worlds inhabited by 'informals', city officials, administrators and other staff, and external technical experts and consultants by bridging epistemological and normative divides as well as supporting angkot associations in aggregating, coalescing and amplifying the voices and agencies of individual drivers for enhanced bargaining power. While Yayasan Kota Kita's engagement with Solo's angkots has thus far proceeded independently, without funding support from government or development agencies, programmatic incorporation and budgeting for such efforts is not only critical to their sustenance, it ensures that such efforts dovetail with citywide data collection, modelling and analysis to best inform larger policy and planning processes. In conjunction, the City might make data and other information about the sustainable urban transport development project more readily available to the public.

### Continued policy experimentation, learning and improvement

While gaining the trust, engagement and cooperation of angkot drivers is a keystone for the success of the proposed BST-angkot trunk and feeder system, and reviving public transport in Solo more generally, it is by no means all this is required. The logistical challenges of coordinating and achieving synergies among multiple modes of public transport, along with the intense and widespread appeal of individual motorised transport, not only requires widespread buy-in and tapping into diverse epistemologies, knowledge bases and problem-solving capacities, but also calls for continued policy experimentation, learning and improvement. Citywide integration and complementarity between BRT and feeder services is hindered by factors beyond the angkot sector, including low transit passenger volumes and high congestion levels on major corridors from private cars, motorcycles, taxis and other road users. Where wholesale shift to the new system would impose a high degree of risk, an alternative approach would be to focus initially on higher-demand or more profitable traffic corridors, putting in place dedicated lanes, busway alignments and bus priority at intersections, along with strict regulation of parallel services and parking along

the routes, to achieve higher capacities and/or frequencies, thereby concretising incentives for angkots to achieve integration and complementarity as feeders (Ferro et al., 2012). Likewise, the City might explore a more graduated and iterative approach to restructuring the angkot sector that accommodates the entrepreneurial propensity of drivers to earn supplemental income rather than insist bluntly on formalisation as a single consortium. Solo's angkots are highly responsive to emerging conditions, as indicated by their pioneering mass transit services from the 1970s in the absence of municipal transit investment and infrastructure, and many of the associations have experimented with operational and marketing strategies to enhance ridership and revenues. They thus appear well poised to support more flexible and adaptive governance approaches that leverage existing forms of social organisation and collective action, make explicit provisions for learning and experimentation and respond to changes over time, should the City initiate them.

## Concluding discussion

Where cities across the global North and South grapple with informal sectors, spaces, organisations, practices and sectors of the economy – and frequently in oppositional terms as with the urban poor – Solo has explored a different approach enhancing capacities and livelihoods of historically marginalised communities, building grassroots organisations and power, and stabilising local economies, though the outcomes are uneven. Celebratory accounts of Solo's mode of planning with informality frequently focus on Mayor Jokowi's enlightened leadership, much echoed by street vendors, activists and citizens interviewed as part of this study. However, a more critical and nuanced analysis of the Solo story also reveals the added importance of an informed, mobilised and active civil society to work together with local authorities agonistically, constructively and iteratively. Jokowi's touted style of inclusive and participatory local governance failed to extend to the case of Pasar Pangungrejo and the second round of vendor relocations to Pasar Notoharjo in the absence of engaged civil society or stakeholders. Therefore, decentralised governance, while critical to the ascendance of personalities like Jokowi and the possibility of policy and planning innovations, appears to require combination with active democratic politics to sustain progressive policy and planning trajectories.

Rationalistic, scientific, intellectual investigation and analysis constitute only one route among several to solving social problems; ordinary knowledge invoking common sense, casual empiricism or thoughtful speculation and analysis, along with social organisation and interaction incorporating various habits, traditions, customs or routines, are just as – if not more – vital to addressing public dilemmas (Lindblom and Cohen, 1979). Revisiting the various cases of street vendor relocation and upgrades in Solo has revealed at least two major takeaways for 'planning with informality'

with respect to the BST-angkot integration and larger multimodal transport planning project. The first centres on the potential role that angkot associations and ‘boundary organisations’ such as Yayasan Kota Kita might play in mediating more constructive and co-productive policy and planning engagements between drivers and the City, initially by helping define shared interests and common cause and outlining alternative planning proposals and policy demands among angkot drivers, and then facilitating trust and cooperation between the angkot sector and the municipal government. Aside from helping resolve epistemological and normative disagreements between different sides, mutual and boundary organisations appear especially valuable to progressive planning with informality in levelling inequalities of authority, power and resources between ‘informals’ and state planning agencies. The second takeaway from the uneven outcomes of city’s street vendor relocations and upgrades is the importance of continual policy co-production, learning and innovation among diverse stakeholders and partners. Where successful citywide integration and complementarity between BRT and feeder services is contingent on a wide variety of factors and components, it requires the incorporation of diffuse, multipronged diagnostic and troubleshooting capacities as well as continued policy experimentation, learning and improvement.

Ultimately, inclusive, co-generative and adaptive policy and planning guard against urban trajectories akin to those brought on by modernist planning projects, which foundered in the face of urban complexity and uncertainty, incomplete human understanding and unintended consequences of action (Scott, 1998). A ‘sustainable’ transport and urban development strategy goes beyond green, energy-saving, transit-oriented and density-enhancing measures to promote system resilience amidst evolving and unforeseen circumstances.<sup>20</sup> Even if angkots opt into the proposed trunk and feeder system with Batik Solo Trans, their sustained participation and the larger viability of Solo’s multimodal transit system will still rest upon the working order of the overall network, complete with effective vehicle operations and management, route design and management, intermodal transfers, revenue sharing and, of course, sufficient passenger volumes. Preparatory steps of rigorous transport modelling and forecasting, whether around demand, performance or revenues, and rigorous social, economic and environmental impact analysis notwithstanding, it is essential to develop a contextually embedded, well-informed and mutually effective network of local decision-makers and stakeholders in order to respond promptly to emerging issues and challenges. That intensifying economic globalisation and liberalisation perpetuate uneven spatial development, disparities of power and resources, and social polarisation only enhances the importance of expanding templates for planning with

20 In the case of Pasar Pucangsawit, the subsequent relocation of a proximate riverbank community depleted the traditional market’s client base and revenues, causing many vendors to go out of business. Likewise, many of the street vendors relocated to Pasar Pangungrejo went back to itinerant vending as the market’s poor site design resulted in low customer volumes.

informality in ways that are inclusive, equitable and co-generative, as well as cultivating an independent, vital civil sphere capable of continually waging progressive urban struggles and initiatives in both agonistic and constructive collaboration with public and private sector partners.

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