

Elsevier required licence: © <2019>.
This manuscript version is made available under the CC-BY-NC-ND 4.0 license

<http://creativecommons.org/licenses/by-nc-nd/4.0/>

The definitive publisher version is available online at

<https://www.sciencedirect.com/science/article/pii/S0959652619306766?via%3Dihub>

Collaborative consumption practices in Southeast Asian cities: prospects for growth and sustainability

Monique Retamal^{1,2}

¹ Fenner School of Environment and Society, Australian National University

² Institute for Sustainable Futures, University of Technology, Sydney.

Level 10, UTS Building 10, 235 Jones Street, Ultimo NSW 2007, Australia.

monique.retamal@uts.edu.au

Keywords: sharing economy, social practice theory, product-service systems, emerging economies

Abstract

Collaborative consumption and its alter ego “the sharing economy” have attracted significant attention in recent years due to the emergence of new business models, industry disruption, regulatory issues and the potential social, economic and environmental impacts of these consumption practices. Academic literature on collaborative consumption (CC) to date has focused on high-income countries, and there has been little examination of CC practices in emerging or developing economies. With the potential for CC to offer more sustainable consumption options, understanding its applications and impact is relevant to the sustainable development goals. This study examines the prospects for broader uptake of CC practices in Southeast Asia, using a social practice theory framework, and then considers these prospects with regard to their potential to offer more sustainable consumption options. The analysis draws on qualitative field data and the results from four studies examining the current use of CC in three cities – Bangkok, Metro Manila and Hanoi. CC services were found to be established and normalised, with strong prospects for further uptake due to alignment with existing practice configurations. However, shared-access CC practices currently face significant resistance in all three cities. In the future, growth in the middle classes and the development of a supportive institutional environment may help to normalise shared-access CC and create a shift in consumer perceptions.

Introduction and Background

Collaborative consumption of household goods and services has primarily been observed and studied in highly industrialised countries, in markets that are already saturated with consumer goods. In these settings, collaborative consumption offers consumers a shift from ownership to “access” (Botsman and Rogers, 2010). However, in emerging economies the situation is different, as rapidly growing middle classes are seeking to gain access or ownership to new consumer goods for the first time. By offering opportunities to share consumption, collaborative consumption (CC) businesses may have the potential to reduce the overall demand for material goods (Heiskanen and Jalas, 2003; Tukker and Tischner, 2006). CC is therefore a topic of interest for sustainable development agendas, and has been suggested as a strategy for shifting to more sustainable lifestyles (Akenji and Chen, 2016; Mont et al., 2014). CC is also related to product-service systems and access- or performance- based business models, which are expected to contribute to a circular economy (Bocken et al., 2014; Geissdoerfer et al., 2017). However, there is presently a lack of literature examining the use and impacts of CC in developing or emerging economies (Hira, 2017; Hira and Reilly, 2017). This study examines the prospects for collaborative consumption businesses in Southeast Asia, a region in which consumption is growing rapidly (Schandl and West, 2010), and is a focus of efforts for sustainable consumption and production (Hoballah, 2014).

Most definitions for collaborative consumption are broad, for example, Belk considers collaborative consumption to be “people coordinating the acquisition and distribution of a resource for a fee or other compensation” (Belk, 2014, p. 1597). Botsman’s (2015) definition of CC includes sharing of tangible and intangible resources (such as skills) via monetary or non-monetary exchanges. Botsman and Rogers (2010) find overlap between collaborative consumption and product-service systems (PSS), where customers pay to access goods, rather than owning them. This is also known in the literature as “access-based consumption” (Bardhi and Eckhardt, 2012). Martin (2016) equates collaborative consumption with the sharing economy, however, recent work suggests the sharing economy is defined more narrowly than CC. Codagnone & Martens (2016) and Frenken & Schor (2017) propose that the sharing economy refers specifically to consumer-to-consumer exchanges (C2C), where consumers share their idle resources and provide other consumers with temporary access. This definition excludes businesses that provide customers with shared-access to goods, for example through bikeshare or carshare. In this study, I am interested in businesses that enable consumers to

share goods through business-to-consumer (B2C) or consumer-to-consumer (C2C) exchanges, and consequently use the broader term collaborative consumption.

Of all of these concepts, the literature regarding product-service systems (PSS) is the most developed, and while historically PSS has tended to focus on business-to-business (B2B) applications (Tukker, 2015), the PSS literature offers useful insights regarding the sustainability of PSS models, as well as barriers to their uptake.

Considering the context for sustainability

In a major qualitative assessment of PSS, Tukker and Tischner (2006) identified business model types that are most likely to achieve gains in resource efficiency. Their findings are set out in Table 1. Accordingly, this paper has focused on the four business types that have a high potential for resource efficiency improvements, which are collectively referred to as “services to replace products” or “shared-access” businesses in this paper.

Table 1: Business model types and their expected resource efficiency

Business model type assessed by Tukker & Tischner (2006)	Resource efficiency improvement expected according to Tukker & Tischner (2006)	Referred to in this study as
1. <i>paying for a functional result</i> (e.g. performance contracting for lighting or cooling)	up to 90%	Services to replace products
2. <i>paying per unit of use</i> (e.g. shared laundries)	up to 50%	Services to replace products
3. <i>product renting and sharing</i> (e.g. bike share, clothing rental)	up to 50%	Shared-access
4. <i>product pooling</i> (e.g. ride-pooling)	up to 50%	Shared-access
5. other types of leasing and product-oriented PSS business types	up to 20%	Not investigated in this study

While these PSS business types are considered more likely to yield environmental benefits, research shows that outcomes are dependent on the context and business model (Demailly and Novel, 2014; Tukker, 2015). It is therefore important to understand the contextual factors that can enable CC businesses to prosper and operate more sustainably.

In a previous paper, a qualitative assessment was undertaken of the sustainability of CC business practices against six common sustainability pitfalls (see Retamal, 2017). That study found that CC businesses were generally using durable, quality goods and intensifying the use of those goods through their CC offerings. CC businesses undertook small repairs of their stock, and sold stock second hand for reuse. Transport sharing businesses were designed with sustainability in mind, but could better support multiple passenger rides. Across the different types of CC businesses examined, the two most uncertain and variable factors influencing CC business sustainability were whether they minimised motorised transport during service delivery, and whether their CC offerings replaced other consumption (Retamal, 2017). The circumstances in which CC businesses did minimise or avoid motorised transport were in high-rise neighbourhoods, where businesses could operate in close proximity to residences. That study also found that in neighbourhoods with small living spaces, the use of shared-access or services was more likely to be “replacing a purchase”, as space constraints in the home significantly limited available storage (Retamal, 2017). While sustainable outcomes for CC remain uncertain and context specific, these findings suggest that densely populated areas with small living spaces may facilitate relatively better outcomes. These contexts for sustainability are considered further in the discussion section, which integrates the prospects for growth with the prospects for sustainable outcomes.

Challenges for collaborative consumption

Literature regarding the challenges for shared-access businesses primarily derives from the field of PSS. The uptake of PSS practices is influenced by the dominant socio-technical regimes, institutional arrangements, and social norms as well as individual rationality (Mont and Plepys, 2008; Tukker and Tischner, 2006). Other barriers tend to be social or personal, which depend on context and cultural factors (Vezzoli et al., 2015; Wong, 2004). For example, social barriers may include a lack of awareness and acceptance (Laukkanen and Patala, 2014; Mont, 2004) and the dominance of an “ownership culture” (Vezzoli et al., 2015). In order to enable PSS uptake, businesses need an appropriate regulatory and legislative framework (Laukkanen and Patala, 2014; Mont, 2004). Businesses are likely to

face uncertainties with regard to financing and cash flows, and often need external infrastructure and technology to enable their operation (Vezzoli et al., 2015). Given the context specific nature, and the lack of literature examining the use of PSS and collaborative consumption in emerging economies (Vezzoli et al., 2015), this study set out to investigate collaborative consumption practices, associated with the provision and use of “shared-access”, and “services to replace products” in emerging economies in Southeast Asia.

Applying social practice theory

Social practice theory (SPT) is increasingly used in the field of sustainable consumption to improve understanding of the way consumption practices form, embed and change over time (Hargreaves, 2011; Huber, 2017; Sahakian and Wilhite, 2014; Shove, 2014). SPT has also recently been used to examine collaborative consumption (see Huber, 2017), and product-service systems (see Mylan, 2015). Mylan’s (2015) study did not explicitly analyse PSS, and instead examined other sustainable household practices, drawing insights for consideration within the PSS field. As Mylan (2015) and Tukker & Tischner (2006) explain, consumption dynamics tend to be neglected in PSS studies. Huber’s (2017) study uses SPT to examine peer to peer examples of collaborative consumption such as cohousing and P2P accommodation in Europe. With the limited number of academic articles examining PSS or CC with the social practice theory lens, there remains a broad opportunity to further experiment with SPT to better illuminate the consumption dynamics of practices involving sharing, renting, or service acquisition for the household. Several authors have used SPT to examine consumption practices in Southeast Asian cities, for food consumption in Metro Manila (Burger Chakraborty et al., 2016; Saloma and Akpedonu, 2016), and for energy and cooling in Metro Manila (Sahakian, 2014; Sahakian and Steinberger, 2011), however, these have not involved the use of PSS or CC. An exception is the study of laundering methods in Metro Manila (Retamal and Schandl, 2017), which uses SPT and is part of the body of work to which this paper refers.

This study focuses on collaborative consumption for households in three Southeast Asian cities – Bangkok, Hanoi and Metro Manila. These cities serve as examples of dynamic emerging economies, where consumption practices are changing rapidly. The primary research question is: What are the prospects for collaborative consumption practices to expand and offer more environmentally sustainable consumption in Southeast Asian cities? I address this question by drawing on interview data and the findings of four prior studies,

which have investigated different aspects of collaborative consumption and its context and sustainability in Southeast Asia. In addressing the prospects for CC practices, I seek to understand the practice configurations that enable or resist uptake of these practices and assess the likelihood for wider participation. Subsequently, I relate these prospects to CC practice configurations that may facilitate environmental sustainability, as identified in a previous study (Retamal, 2017).

Theoretical framework

Social practice theory

In social practice theory, consumption is framed as a component of every day practices, which include things such as cooking, sleeping, eating and travelling (Røpke, 2009). These practices are often habitual and routinized (Warde, 2005), so that the consumption of energy, water and appliances are unconsciously integrated in daily routines (Mylan, 2015; Shove, 2003a). In undertaking these daily practices, people also acquire skills and competencies (Warde, 2005), which further embed their consumption activities. Social practice theory (SPT) shifts the focus of consumption studies from the consumer to the practice (Spaargaren, 2011; Warde, 2005), where the practice is a reflection of individual habits, routines, available tools and resources and the social and material environment, rather than purely focusing on consumer decision-making. Practices are pre-structured by their context, however, performers of practices also have agency to shift their practices (Jaeger-Erben and Offenberger, 2014). McMeekin & Southerton (2012) compare SPT to the multi-level perspective approach, and find that SPT is better at explaining final consumption. SPT has been chosen as the analytical framing for this paper due to the potential to comprehensively articulate the factors influencing consumption practices.

While frameworks for SPT vary, most theorists conceive of three interlinked dimensions, such as: materials, competences and meanings (Shove, 2003b), where meanings can include values, norms and social meanings (Jaeger-Erben and Offenberger, 2014). Huber (2017) also adds rules or institutions as a fourth dimension. In this research, I draw on the conception of SPT proposed by Sahakian and Wilhite (2014), comprising “the personal” which refers to habits, individual dispositions, skills and cognitive processes; “the material world”, which refers to technology, infrastructure, resources and finances; and “the social world”, which comprises the social, cultural and economic context and formal institutions. These three

dimensions are depicted in Figure 1, and incorporate Huber's (2017) fourth dimension, as institutions are incorporated into the social world or social meanings.

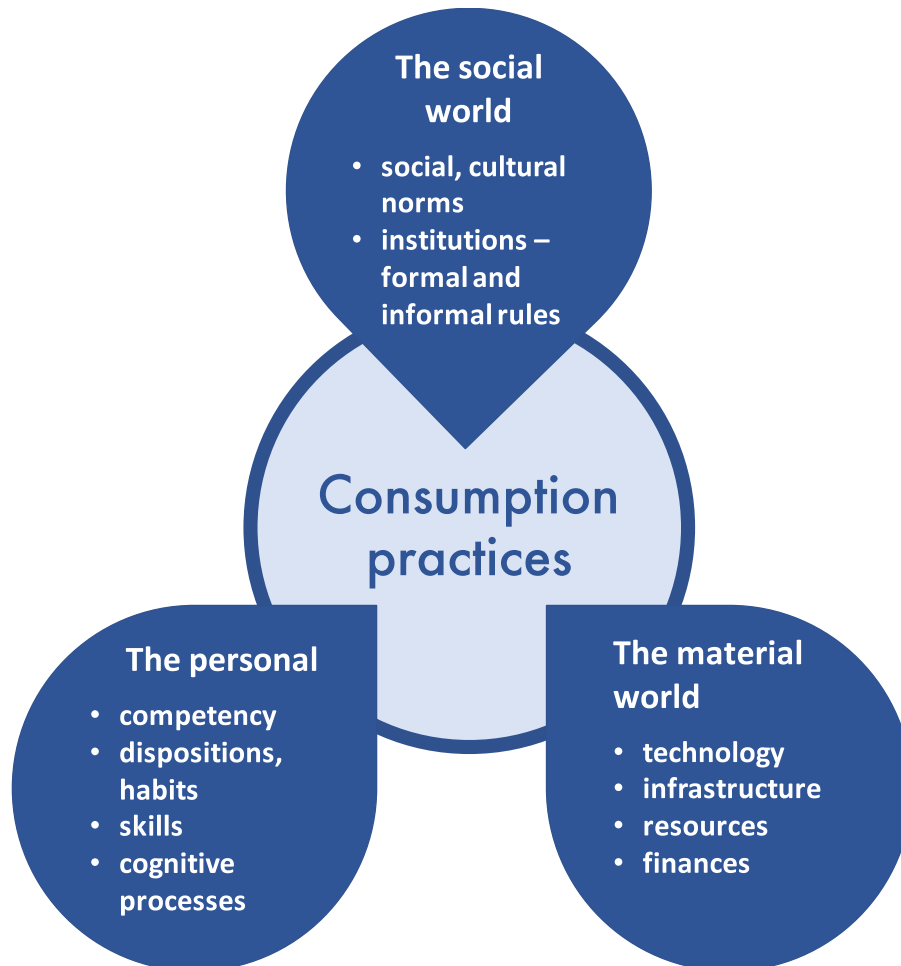


Figure 1: Factors influencing consumption practices - Elements constituting a social practice configuration with social practice theory. Terminology adapted from Sahakian and Wilhite (2014)

Investigating change with social practice theory

The SPT framework enables a comprehensive overview of factors influencing consumption. However, in this study, the intention is not just to understand the current influencing factors, but also to understand how consumption might change. As Mylan (2015) points out, the contribution of PSS depends on whether these business types can be widely diffused and replace existing modes of consumption. There are a variety of approaches to using SPT to understand change. Huber (2017) explains that practices consist of linked components that are interwoven in bundles and evolve together. This means that the three dimensions: “the

personal”, “the material world”, and “the social world”, shown in Figure 1 are inter-linked and change with respect to each other. As such, a practice cannot be reduced to any single factor (such as skills), but consist of configurations of linked components (Huber, 2017). An example of a practice configuration is where skills are linked to technology and cultural norms. To examine change in practices for this study, I have synthesised the theories presented by Mylan (2015) and Huber (2017) in Table 2, and have categorised them into three groups: “established configurations” – which focus on understanding existing CC practices; “reconfiguration” – which identifies where change might be occurring to enable greater uptake of CC; and “resistance” – which identifies configurations that present barriers to further uptake of CC practices. Using this synthesis, the analytical questions were developed for this study, shown in the final column of Table 2. These questions have been used to address the main research question, to understand whether CC practices have prospects for further uptake in Southeast Asia.

Table 2: Analytical questions to identify potential change with SPT, drawn from theory presented in Mylan (2015) and Huber (2017)

Analytical categories	Mylan (2015)	Huber (2017)	Analytical questions for this study
Established configurations of practices	<p>Practice change occurs due to three factors:</p> <ol style="list-style-type: none"> 1) the internal dynamics of practices; 2) the strength of linkages between different dimensions of SPT; 3) external links to other practices, as interlinked practices may be more stable and harder to change. 	<p>Recruitment to a new practice depends on three factors:</p> <ol style="list-style-type: none"> 1) A person’s frequency of exposure to a practice; 2) how that practice matches with their available capital (social, material) and their practice histories; 3) how that practice fits within arrangements of existing practices. 	<ul style="list-style-type: none"> • What are the internal configurations of CC practices, and external links to other practices? • What is the likelihood of recruitment based on frequency of exposure? • Where do CC practices align with existing practices, (material or social) capital and practice histories?
Reconfiguration of practice elements to support emerging CC practices	<p>The components comprising a practice may be loosely or tightly coupled, where the former may change readily and the latter require reconfiguration in order to change.</p>	<p>Two potential mechanisms of change, enabled by:</p> <ul style="list-style-type: none"> • reconfiguration of existing practices (or new formation) • the recruitment of individuals to a practice due to defection from another practice. 	<ul style="list-style-type: none"> • Is there any evidence of practice elements reconfiguring? Or of recruitment and defection occurring?
Resistance to CC practice configurations	<p>Links with external practices can create resistance to interventions for change.</p> <p>“innovations which are not aligned with ongoing dynamics are likely to encounter resistance” (Mylan...pp19)</p>	<p>Huber identified useful concepts from multi-level perspective (MLP) to complement SPT in understanding practice change, including “regime resistance”.</p>	<ul style="list-style-type: none"> • What practice elements cause resistance to CC practice configurations? • For which practices is there evidence of a mismatch between CC practices and material / social capital or practice histories? • Is there evidence of external linkages between practices causing resistance to CC?

Social inequalities influence the potential for uptake by new users (Huber, 2017). Acceptable practices are predetermined by historical and cultural conventions and social networks and are influenced by power relations between different social groups, so that some may reject or accept consumption activities depending on the association of the practice (McMeekin and Southerton, 2012). The formation or configuration of practice elements and the chance of uptake can predict the likelihood of a practice being normalised (Huber, 2017). This is important as practices will only make a significant difference to sustainability transitions if they become stabilized and recognized (McMeekin and Southerton, 2012). These frameworks for considering the potential uptake of a practice is useful for this study which seeks to understand the future prospects for CC practices. In addition, Huber (2017) argues that those investigating “upcoming changes” can investigate configurations of elements which fit together but are not yet linked in a common practice.

McMeekin & Southerton consider that practices are “a nexus between producers and consumers” (2012, p. 356) and in this study both sit at the centre of the analysis, as both are critical to the further expansion and environmental sustainability of CC practices. SPT is often applied at a micro scale to consider specific practices in context. However, SPT can be considered a “meso level analytical construct”, at the intersection of macro level configurations and micro-level performances of practices (McMeekin and Southerton, 2012, p. 350). This study attempts to understand the broader consumption influences for CC using a SPT framework, which means that it focuses on the macro-level configurations, rather than the micro level performances of practices. The application of SPT to examine a consumption phenomenon at a broad scale, across several cities and sectors is novel. Due to the macro level focus, the picture of CC practices can only be partial, however, this paper provides new insights into CC practices in emerging economies where there has been little research to-date. Further discussion of the limitations of the SPT approach and this study follow the results.

Methodology

This research is based upon data gathered during 2014-2015, and includes sixty-one semi-structured interviews carried out across the three cities – Hanoi, Manila and Bangkok. The initial data also included a database of existing CC businesses, developed through internet searches and supplemented by interviews. The database provides an overview of the types of CC businesses that were available in each city. Interviewees included a wide variety of stakeholders, such as: CC business operators, policymakers, academics, consultants, multi-

lateral organisations and individual consumers. Table 3 lists the number and type of participants interviewed in each city. Eight different types of CC businesses were interviewed across the three cities to gain insights regarding the broad nature of the CC phenomenon and the diversity of factors potentially influencing CC practices. These examples were chosen to represent the range of CC businesses that were available in each city, in line with purposive sampling approaches in qualitative research (Ritchie and Lewis, 2003, p. 83). The diverse sample enabled identification of cross-cutting themes, and configurations that may influence multiple types of CC practices. However noting that this broad approach limits the detail that could be gathered for specific sectors, and from individual consumers. This study relies more heavily on the perspectives of CC providers and a range of expert stakeholders.

Table 3: Number and type of interviewees across the three cities

	<i>Bangkok</i>	<i>Hanoi</i>	<i>Manila</i>
<i>CC business types investigated</i>	Bike share Tool rental Baby equipment rental Fashion rental Designer handbag rental	Ride-share & taxi-share (planned) Bikeshare Toy rental Laundry services (x 5)	Laundry services (x 8)
<i>Position / role of interviewees</i>	Small CC business owners (x 4) CC business manager (x 1) Senior policymaker (x 1) Policymakers (x 2) Staff at multilateral organisations (x 2) Academics (x 3) Consultants (x 2) Donor agency staff (x 1) Leaders at other associations (x 3) Large business owners (x 2)	Small CC business owner / operators (x 7) Senior policymakers (x 2) Policymakers (x 4) Senior staff multilateral organisation (x 1) Senior staff at NGO (x 1) Academics / consultants (x 5)	Small CC business owner / operators (x 8) People laundering at home (x 11)
<i>Total no.</i>	21	21	19
<i>Interview type</i>	Semi-structured	Semi-structured	Structured (quantitative) interviews, Semi-structured (qualitative) interviews, Participant observation
<i>Interview length</i>	Average 1 hour	Average 1 hour	20 mins structured, 20 mins semi-structured
<i>Other data inputs</i>	Official documents, websites	Official documents, websites	Official documents, websites

Table 4: Scope of four related studies and their findings that contribute to the initial synthesis using the social practice theory framework

	Geographical scope	Sectoral scope	Unit of analysis	Categories of findings with regard to the social practice theory framework		
				Personal	Material	Social
<i>Study 1 – Characterising CC businesses and users</i>	Hanoi, Bangkok and Metro Manila	Transport, food, housing, recreation, laundering and clothing	Context for CC practices		Material nature of shareable /serviceable goods	Social characterization of users
<i>Study 2 – Business sustainability practices</i>	Hanoi, Bangkok and Metro Manila	Transport, housing, recreation, laundering and clothing	CC business practices	Dispositions and skills of business owners	Sustainability of asset management	External factors influencing business practices
<i>Study 3 – Laundry practices in Manila</i>	Metro Manila	Laundering	Laundering practices (as a specific type of CC practices vs alternatives)	Householder dispositions	Resources consumed in three different laundering practices	Socio-economic context for different laundering practices
<i>Study 4 – Contextual barriers and enablers</i>	Hanoi and Bangkok	All sectors	Context for CC practices			Social norms and institutions influencing CC

This study draws on these interviews as well as the findings from four prior studies. Table 4 sets out the scope of these four studies and explains how their findings relate to the social practice theory (SPT) dimensions. The analysis involved a two-step process, firstly, the findings from the four prior studies were synthesized into the three key dimensions of the social practice theory framework – the personal, the social world and the material world (as illustrated in Figure 1). Where for example, under “the personal”, findings that related to skills, habits, and cognitive processes were extracted. This meta-synthesis of findings was useful to develop an overview of common practice configurations across the different CC practices that were investigated. This data was then examined according to the key analytical questions set out in Table 2, with regard to current CC practice configurations, reconfigurations, or resistance. These questions were intended to identify the likelihood and potential for uptake of CC practices using the SPT framework. In this step, the interview data was used to elaborate on specific practices and to complement the meta-synthesis of findings. The results are organised according to the three categories of analytical questions: examining current configurations, reconfigurations and resistance. Within the main sections, the sub-headings highlight the theme of key findings in relation to the personal, material or social dimensions. Practices for environmental sustainability are discussed in the introduction and discussion sections and are considered alongside the prospects for CC in Southeast Asian cities.

Results

Examining prospects for CC practices

Collaborative consumption providers in Bangkok, Hanoi and Metro Manila identified through the internet and interviews were found to be a mix of established and relatively new shared-access and service businesses. Established business types tended to be services such as meal deliveries, laundry services and collective taxis, particularly in Bangkok and Manila (Retamal, submitted), and these were numerous and widely used in each city. However, there were just a few examples of each “new” business type found in each city, including: bikeshare, rideshare, tool, toy and fashion rental (Retamal, submitted), suggesting that the practice of collaborative consumption in the sense of “shared-access” to goods was emergent, and not yet normalized. The small number of “new” business types may limit people’s exposure to shared-access types of collaborative consumption, which is essential for

recruitment of new practitioners. An exception to this is bikeshare, which is highly visible and enables wider exposure in the areas in which it operates.

The following sections explore the configuration of practice elements that enabled the more established CC practices; and the reconfiguration of elements that may be enabling or resisting the newer CC practices. The intent is to understand the likely prospects for CC business uptake, using a social practice theory framework. The sub-headings highlight key findings that emerged during the analysis and relate to the social, material or personal dimensions of SPT.

Configuration of elements supporting established CC practices

Services over shared-access: practice histories and inequality

The prevalence and established nature of service-based businesses, rather than shared-access businesses, highlights that the practice of service-seeking in these cities is normalized, while the practice of sharing and renting goods on a short-term basis is still emerging. For example: laundry services were ubiquitous in the three cities, while self-service or coin-operated laundries were rare; various types of rideshare were readily available, whereas carshare (where users drive themselves) was almost non-existent; and household repair services were common while tool rental was somewhat difficult to find (Retamal, submitted). Transport sharing appeared to be the most common and diverse type of collaborative consumption practice across the three cities, however, these predominantly involved the use of services. Van-pooling in Bangkok and SUV taxi-sharing in Metro Manila are established practices, while app-based transport sharing was relatively new, such as ride- and taxi-sharing options in Hanoi. The ready uptake of new ride-hailing and taxi-sharing apps in Southeast Asian cities in recent years (Do, 2014; Habito, 2015; Tanakasempipat and Thepgumpanat, 2017), is facilitated by these practice histories.

In Bangkok and Metro Manila, interviewees noted a long history of middle class families employing helpers to work in their homes. The greater availability of services in these cities reflects the practice history of service-seeking by the middle and upper classes; and the presence of socio-economic inequalities that facilitate relatively low-waged labour. However, in Hanoi a policymaker explained that service-seeking had only recently become socially acceptable, as during communism, there was a sense of everyone being equal and doing things for themselves (Retamal and Hussey, submitted). It appears that the shift towards a

market economy in Hanoi and a growing middle class has reconfigured some practices, where there is now greater availability and openness towards the practice of using services.

Configuration of the material dimension and time

Purchasing meals at street stalls and eating on the street is a common and established practice in all three cities. In Bangkok, interviewees referred to takeaway street meals as “the plastic bag housewife”. Formal food delivery services are also common, particularly in cities such as Bangkok and Metro Manila. Saloma & Akpedonu (2016) investigated the reasons for “eating out” and “ordering in” in Metro Manila, and found that the space constraints in apartments mean that urban dwellers have minimal cooking facilities. As such, street food, fast food and food delivery services have become a viable replacement for the practice of cooking at home (Saloma and Akpedonu, 2016). The practice of using food services is often interconnected with commuting practices. Academics interviewed in Bangkok explained that long commutes and traffic congestion made the use of street food a convenient option when time for cooking is scarce. Hence, the space and time pressures of the urban environment are key elements supporting food service practices. Similar pressures facilitate the practice of using laundry services in Metro Manila. A lack of laundry facilities in apartments, a lack of space for drying and a lack of time were repeatedly cited by laundry businesses as the reasons people use their services (Retamal and Schandl, 2017).

Household structure, class, and interconnections with women’s work

In a case study of laundering in Manila, single middle class people were most likely to use a laundry service, with poor people likely to do their own laundry and the wealthy more likely to have an in-house maid service (Retamal and Schandl, 2017). This suggests that both family structure and class contribute to the practice configuration for using services. This case study also highlights the importance of what Huber (2017) describes as practices matching social capital, and the likelihood that certain social groups would see some practices as “not for them”. This was emphasised by people laundering for themselves in Manila, who had no desire to use laundry services, even if they could afford it. The social distinctions in Manila also highlight the interconnectedness of household practices with work opportunities for women. Working women are more likely to use a service or have a maid helping at home, and in the future, more work opportunities for women may mean fewer are working as maids (Retamal and Schandl, 2017). This has been the situation in Thailand, where interviewees explained that in the past, employing household helpers was common. However, now Thai

women have more options for work, so there are fewer housemaids available and Thai households would now either employ foreign housemaids or seek external services.

Reconfiguration of practice elements supporting emerging CC practices

Technology reconfiguring the material environment

“New” collaborative consumption practices such as bikesharing, ridesharing via an app, and short-term rental of fashion items, toys and household tools align with global trends for the sharing economy. These practices also reflect recent shifts in the material world with regard to the wider use of smart-phones, electronic payments, and the practice of online shopping. However, while technologies such as smartphone apps and internet payment systems are often thought to be essential components of the sharing economy or collaborative consumption (Botsman and Rogers, 2010; Owyang et al., 2014); many businesses interviewed for this research operated partly online and partly as a shopfront (e.g. designer bag rental and fashion rental) and nearly all accepted cash payments (Retamal, submitted). In this way, CC businesses are aligning with established practices of paying with cash and shopping in stores, which is important for recruitment of customers in Southeast Asia, where many people still lack access to electronic/card payments (CCAP, 2015), or smartphones.

Intensifying space pressures in the home and on the road

Owners of newer shared-access style businesses such as tool and toy rental mentioned a lack of space in the home as an important reason for the use of short-term rental options. This is similar to the configuration enabling established food and laundry services, and suggests that increasing constraints in the material dimension are also important for shared-access CC. In addition to space pressures in the home, traffic congestion was an important motivation for transport sharing businesses, such as the ride-share scheme in Hanoi and the bike-share scheme in Bangkok (Retamal, submitted). The ready adoption of transport apps in these cities in the past few years can partly be explained by space pressures. However, transport sharing apps also align with practice histories, where a variety of transport sharing practices are already familiar, such as van- or SUV- pooling, and are interconnected with the practice of commuting in a congested city.

Aspirations for a consumer lifestyle

Shared-access business offerings were more numerous in Bangkok, with a number of businesses offering access to luxury goods or lifestyles, for example through rental of designer handbags or fashion outfits, and rental of winter coats and baby equipment for overseas travel. Businesses offering fashion rental explained that their “high class” customers would rent dresses regularly as they attend parties every week (Retamal, submitted). There were also a variety of toy rental options in Bangkok, with some targeting the “high society” or upper-middle classes (Retamal, submitted). These findings in Bangkok position shared-access practices with a particular socio-economic class, which already has access to consumer goods and seeks to access greater quality or convenience. Across the three cities, the majority of business operators described their customers as university students and office workers (Retamal, submitted), which suggests the primary use of CC is by the middle classes.

The business owners renting toys in Hanoi and designer bags in Bangkok separately described their customers in similar terms, with half of their customers gaining access to goods they cannot afford to buy, and the other half gaining access to a greater variety of goods “because they get bored quickly” (Retamal, submitted). This suggests that collaborative consumption practices can align with consumerism, such that practitioners gain access to a ready supply of “new” / different goods to use. However, there were other types of collaborative consumption businesses that serve more fundamental consumption needs, such as ride-share for commuting, toy rental for young families in Hanoi, and laundry shops providing services to students in Manila (Retamal, submitted). In the same vein, CC businesses cited “saving money” as a key cognitive choice for users of CC for toys, fashion, designer bags, ride share and bike share. These findings suggest that CC practices are recruiting users in specific niches, however with a different purpose according to the material nature of the good being shared.

Resistance to CC practice configurations

Clash with practice histories, and a lack of exposure

Policymakers and business owners reinforced that consumers in Hanoi and Bangkok are oriented towards buying new goods in the first instance. This highlights a lack of alignment with practice histories, where collaborative consumption would require the adoption of new habits. However, several CC business owners found that attitudes were changing and thought

that people would be more inclined to rent in the future when the option is more readily available (Retamal and Hussey, submitted). This hints at the need for greater exposure to foster recruitment of new practitioners. At present, interviewees noted a lack of awareness of both sustainable consumption and collaborative consumption practices.

Disinclination due to the personal dimension

Physically sharing goods entails a tangible and sometimes interpersonal interaction with strangers. In Bangkok, SCP experts explained that local people like to decorate their cars, which are considered a personal space. Due to this, and the fact that cars are considered a status symbol, SCP experts believed that Thais would not be inclined to adopt carsharing or peer to peer ridesharing (Retamal and Hussey, submitted). Concerns for personal safety were also raised by experts and the rideshare business in Hanoi. In order to mitigate safety issues, the rideshare business has a multi-step security registration process; however, ridesharing participants are not inclined to complete all the steps, which presents a barrier to participation. Interviewees in a study of laundering in Manila also expressed concerns about sharing machines or laundering with others (Retamal and Schandl, 2017). These examples illustrate some of the personal dispositions that may prevent participation in sharing practices.

Misalignment with material world

While transport sharing practices appear to have greater uptake than other types of collaborative consumption, there is significant resistance in the material environment. Inadequate public transport was cited by the rideshare business in Hanoi as a key limitation for greater adoption of ridesharing, as it needs to integrate with public transport (Retamal, 2017). In Bangkok and Hanoi, proponents of bike-share schemes highlighted a number of physical challenges to cycling, including: congested streets, difficult road conditions, a lack of cycleways, air pollution and hot climates (Retamal and Hussey, submitted). This lack of alignment with the material world currently limits recruitment of new transport sharing practitioners.

Lack of social trust and skills

Social trust is an important element of the practice configuration enabling short-term rental and shared-access in western economies (Botsman and Rogers, 2010). It also appears to be important in the Southeast Asian context. For example, a policymaker and an academic both suggested in interviews that people sharing vehicles would be fearful that components would

be changed or stolen. Businesses offering shared-access to toys and tools also highlighted asset damage as a key financial risk. A lack of social trust and skills may also be the reason why services predominate over shared-access for expensive machinery such as washing machines, power tools and cars. People who have never owned these items may lack familiarity and the skills or know-how required to operate the machinery. In the opposite sense, social trust is also required for people to employ help for household services. People laundering for themselves in Metro Manila indicated that they would not want to use laundry services, as they could not trust them to make their clothes clean, and they felt a sense of pride in their own laundering skills (Retamal and Schandl, 2017).

Resistance from formal institutions

Businesses offering collaborative consumption are beset by a number of challenges from formal institutions. Businesses that offer a combination of sharing, renting and selling in Thailand and Vietnam lack a specific legal definition, and therefore find it difficult to obtain appropriate business permits (Retamal and Hussey, submitted). A range of expert interviewees commented that business-to-business (B2B) models of renting and servicing were considered more established and trustworthy. According to interviewees running B2B and B2C (business to consumer) renting businesses in Bangkok, B2B offerings are also better supported by banks. B2C renting businesses in both Hanoi and Bangkok struggled to obtain finance from banks, and struggled to ensure that customers paid adequate deposits in case of asset damage (Retamal and Hussey, submitted). This risk was heightened by a lack of clarity in the law regarding the practice of deposit-taking (Retamal and Hussey, submitted). This highlights the lack of formal institutional provision for collaborative consumption practices. In addition, there have been some formal barriers to sharing businesses, such as the ban on taxi-sharing in Vietnam due to legal requirements specifying taxis can only take one passenger “contract” at a time (Ministry of Transport Vietnam, 2014). However, there is an apparent lack of enforcement and use of taxi-sharing apps has continued (Le, 2017; Nguyen, 2017).

Discussion

It is evident from this analysis that the prospects for services and shared-access collaborative consumption differ. Service-based collaborative consumption practices have strong prospects in all three cities due to alignment with practice histories, and new practice configurations

associated with the use of smartphone apps and electronic payments. The existence of socio-economic inequalities in Bangkok and Metro Manila, and the availability of low-waged labour also supports service-based CC; however, this raises questions about social sustainability, and likely limits recruitment to the middle to upper-middle classes. Recruitment to service-based CC may also be limited to single people or to households where women are working.

With regard to shared-access CC, there are future prospects in Southeast Asian cities, with intensifying space pressures in the home and on the road, and growing aspirations for consumer lifestyles. However, shared-access CC practices face significant resistance in the personal, social and material worlds. Sharing goods clashes with existing habits to purchase and own, and personal disinclinations to share with others may also limit uptake of CC for certain goods. Consumers who have never used certain equipment before may lack know-how, and this is interlinked with a lack of social trust in sharing expensive goods. While high density living environments can foster CC practices, and traffic congestion may facilitate uptake of transport sharing, some transport sharing practices such as bike share and rideshare may face challenges in the congested urban environment, due to a lack of public transport or cycling facilities. A lack of support from formal institutions in the form of legal frameworks and finance present significant resistance to new CC offerings, which may limit CC in the first instance.

Both service-based and shared-access CC are supported by the material environment in Southeast Asian cities - densely populated urban areas, small living spaces, and traffic congestion. These constraints on space and time can also encourage more environmentally sustainable forms of CC, where CC businesses are inclined to minimise motorised transport through congested streets, and to operate in close proximity to residential areas (Retamal, 2017). In these environments with space and time pressures, services can readily replace the need for certain home appliances (Retamal, 2017). However, this depends on the type of product and the way it is consumed and managed by the CC business (Retamal, 2017). These results suggest that there is some alignment between contexts that support growth of CC and those that facilitate more sustainable practices, however, noting that sustainable outcomes are not guaranteed.

The practice configurations that support collaborative consumption in Southeast Asian cities align with many of the configurations identified in advanced economies. In advanced

economies, sharing economy users are characterised as young, university educated and middle class or affluent (Havas Worldwide, 2014; Martin et al., 2010; Owyang et al., 2014). The users of CC in this study included single people and families with working women, and were limited to the middle and upper middle classes. This is similar to users in advanced economies, however, this study additionally identified family structure and the work status of women as important factors contributing to uptake. The aspirations for consumer lifestyles identified in this study have also been noted as part of the sharing economy in Europe (Demailly and Novel, 2014), however, noting that in Southeast Asia, they are more likely to be “new consumers”. Smartphones and electronic payments, and the rise of online shopping have also been noted as facilitators for the emergent sharing economy elsewhere in the world (Botsman and Rogers, 2010; Cohen and Kietzmann, 2014; Owyang et al., 2014). However, in Southeast Asia, CC businesses were more likely to operate both online and as a shopfront. The finding that space constraints within homes and time pressures arising from long commutes stimulate uptake of CC practices, may be new in this study, and may reflect the context of densely populated urban centres in Southeast Asia.

The small number of shared-access style businesses in each city means that the chance of exposure to the practice is still small. This lack of exposure and awareness to shared-access based CC practices has also been identified in the European setting (Laukkanen and Patala, 2014; Mont, 2004). In Huber’s (2017) study, P2P accommodation fits with existing practice histories for Europeans and has good chances for exposure, but co-housing has less chance for embodiment due to the skills and know-how required. This is similar to the finding here, that a lack of know-how in operating equipment may prevent wider use of shared-access CC for expensive equipment. Other personal and social factors inhibiting uptake have been noted in studies investigating CC and product-services systems in advanced economies, such as the inclination to buy and own (see Vezzoli et al., 2015); and a lack of social trust (see Botsman and Rogers, 2010). Concerns for safety in transport sharing have also been identified in a study of the sharing economy in the Philippines (Roxas, 2016). The need for supportive regulatory and legislative frameworks to enable wider uptake of CC have also been noted in European studies (Ceschin, 2013; Laukkanen and Patala, 2014; Mont, 2004; Tukker and Tischner, 2006); along with the need for access to finance (Vezzoli et al., 2015).

This study is novel in identifying and aggregating a broad set of practice configurations that support or resist collaborative consumption for households in Southeast Asian cities to provide an overall perspective regarding future prospects. It is also novel in using social

practice theory at a macro level to understand common features of CC practice configurations. The results of this study confirm that many of the macro-level configurations supporting and resisting CC practices in advanced economies are similar in the Southeast Asian setting. However, the densely populated urban environments, and the space and time pressures within it, as well as the rise of new consumers, may create a unique configuration that supports uptake of CC, and differs from other regions in the world. This study has also identified an alignment between the urban environments that support CC and those that support more sustainable outcomes.

Limitations and reflections

This paper addresses a broad question across three countries/cities and multiple sectors. Using the SPT framework with its macro and micro level aspects was challenging when considering this breadth. As such, it was not possible to present details of all the different CC practices that were originally investigated, and this study instead focused on practice configurations that appeared common across multiple practices. At this stage, the CC business model is nascent, there are few businesses, and the businesses that were interviewed are broadly representative of the diversity available at the time of study. Drawing on over sixty in-country interviews with knowledgeable stakeholders, this study offers a useful overview of the factors influencing CC and its prospects as an emerging and potentially environmentally sustainable form of consumption. As CC practices develop, further research will help to illuminate the prospects for different CC business models and specific sectors.

A criticism of SPT is that it can be blind to the impact of power (Hargreaves, 2011; McMeekin and Southerton, 2012). This may be the case as the personal, social and material worlds are seen to be equally influencing practices, and in this study, it was difficult to gauge the relative impact of one dimension over another. Huber (2017) reflects that SPT may be less suitable for understanding systemic changes that affect practices, and proposes to adopt multi-level perspective (MLP) as a complement to SPT. The lack of a systemic focus is a legitimate concern; however, this may depend on the level of detail that is afforded to the macro-level context. This paper is unusual in focusing on the macro-level context while using the SPT lens.

Conclusions

This paper has examined a body of research regarding collaborative consumption in three Southeast Asian cities – Hanoi, Metro Manila and Bangkok, using social practice theory to understand the prospects for collaborative consumption in Southeast Asian cities. The primary research question is: What are the prospects for collaborative consumption practices to expand and offer more environmentally sustainable consumption in Southeast Asian cities? The findings are separated by CC business type, as either “service-based” or “shared-access”.

This study found that CC services are already established and normalised and have strong prospects for expansion in particular niches. In contrast, CC shared-access practices face significant resistance in all three cities. The expansion of service-based CC has implications for social sustainability as it relies on low-wage labour. As the middle class grows and wages increase in the future, the balance may shift away from services towards greater use of shared-access CC. However, this would require a supportive institutional environment in order to normalise shared-access CC and shift consumer perceptions. As such the prospects for shared-access CC are dependent on shifting configurations, particularly in the personal and social world.

The urban environments that supported uptake of CC practices in this study, also supported more sustainable outcomes. Densely populated areas with traffic congestion meant that CC operators were inclined to limit motorised transport. Small living spaces meant that the use of CC services or shared-access was more likely to replace a purchase. This suggests there are good prospects for relatively more sustainable outcomes for both types of CC operating in these environments. However, these outcomes are not guaranteed as they depend on the practices of both CC provider and consumer. As such, interventions are likely to be required to ensure more environmentally sustainable outcomes.

This study is novel in identifying and aggregating a broad set of practice configurations that support or resist collaborative consumption in Southeast Asian cities to provide an overall perspective regarding future prospects. Further research will be required to explore the micro level detail of configurations for specific sectors and to understand their prospects differentially.

Acknowledgements

Thanks to Prof. (Anthony) Shun Fung Chiu, Dr Tran Van Nhan, Dr Somporn Kamolsiripichaiporn, Jem Baldesimo, Emee Tan, Thu Bui Minh and Piyanuch Sueb for their in-country assistance and translation. Thanks to Karen Hussey and Heinz Schandl for their support, reviews and advice; and to Tim Brennan for reviewing. The Australian Government Endeavour Fellowship, CSIRO and the Australian Government Research Training Program provided financial support. Thanks also to the anonymous reviewers for their constructive advice.

References

- Akenji, L., Chen, H., 2016. A framework for shaping sustainable lifestyles: determinants and strategies (No. DTI/1717/PA). United Nations Environment Programme.
- Bardhi, F., Eckhardt, G.M., 2012. Access-Based Consumption: The Case of Car Sharing. *Journal of Consumer Research* 39, 881–898. <https://doi.org/10.1086/666376>
- Belk, R., 2014. You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research* 67, 1595–1600. <https://doi.org/10.1016/j.jbusres.2013.10.001>
- Bocken, N.M.P., Short, S.W., Rana, P., Evans, S., 2014. A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production* 65, 42–56. <https://doi.org/10.1016/j.jclepro.2013.11.039>
- Botsman, R., 2015. Defining The Sharing Economy: What Is Collaborative Consumption-- And What Isn't? | Co.Exist | ideas + impact [WWW Document]. Fast Company. URL <http://www.fastcoexist.com/3046119/defining-the-sharing-economy-what-is-collaborative-consumption-and-what-isnt> (accessed 9.8.15).
- Botsman, R., Rogers, R., 2010. What's mine is yours: The rise of collaborative consumption. Harper Collins.
- Burger Chakraborty, L., Sahakian, M., Rani, U., Shenoy, M., Erkman, S., 2016. Urban Food Consumption in Metro Manila: Interdisciplinary Approaches Towards Apprehending Practices, Patterns, and Impacts: Urban Food Consumption in Metro Manila. *Journal of Industrial Ecology* 20, 559–570. <https://doi.org/10.1111/jiec.12402>
- CCAP, 2015. Credit cards over pawn shops. Credit Card Association of the Philippines.
- Ceschin, F., 2013. Critical factors for implementing and diffusing sustainable product-Service systems: insights from innovation studies and companies' experiences. *Journal of Cleaner Production* 45, 74–88. <https://doi.org/10.1016/j.jclepro.2012.05.034>
- Codagnone, C., Martens, B., 2016. Scoping the sharing economy: Origins, definitions, impact and regulatory issues.
- Cohen, B., Kietzmann, J., 2014. Ride on! Mobility business models for the sharing economy. *Organization & Environment* 27, 279–296.
- Demilly, D., Novel, A.-S., 2014. The sharing economy: make it sustainable (No. 3/14). IDDRI - Institut du developpement durable et des relations internationales, Paris, France.
- Do, A.-M., 2014. GrabTaxi enters Vietnam, intensifying the battle for mobile taxi booking apps. *Tech in Asia*.
- Frenken, K., Schor, J., 2017. Putting the sharing economy into perspective. *Environmental Innovation and Societal Transitions* 23, 3–10. <https://doi.org/10.1016/j.eist.2017.01.003>

- Geissdoerfer, M., Savaget, P., Bocken, N.M.P., Hultink, E.J., 2017. The Circular Economy – A new sustainability paradigm? *Journal of Cleaner Production* 143, 757–768. <https://doi.org/10.1016/j.jclepro.2016.12.048>
- Habito, C.F., 2015. The “sharing economy.” *Philippine Daily Inquirer*.
- Hargreaves, T., 2011. Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change. *Journal of Consumer Culture* 11, 79–99. <https://doi.org/10.1177/1469540510390500>
- Havas Worldwide, 2014. Prosumer Report: The new consumer and the sharing economy (No. Vol. 18), Prosumer Report.
- Heiskanen, E., Jalas, M., 2003. Can services lead to radical eco-efficiency improvements?—a review of the debate and evidence. *Corporate social responsibility and environmental management* 10, 186–198.
- Hira, A., 2017. Profile of the sharing economy in the developing world: Examples of companies trying to change the world. *Journal of Developing Societies* 33, 244–271.
- Hira, A., Reilly, K., 2017. The Emergence of the Sharing Economy: Implications for Development. *Journal of Developing Societies* 0169796X1771007. <https://doi.org/10.1177/0169796X17710071>
- Hoballah, A., 2014. Plenary speech at 11th Asia Pacific Roundtable for Sustainable Consumption and Production (APRSCP): “Paving the Way to the Future We Want in Asia and the Pacific.”
- Huber, A., 2017. Theorising the dynamics of collaborative consumption practices: A comparison of peer-to-peer accommodation and cohousing. *Environmental Innovation and Societal Transitions* 23, 53–69. <https://doi.org/10.1016/j.eist.2016.12.001>
- Jaeger-Erben, M., Offenberger, U., 2014. A Practice Theory Approach to Sustainable Consumption. *GAIA - Ecological Perspectives for Science and Society* 23, 166–174. <https://doi.org/10.14512/gaia.23.S1.4>
- Laukkanen, M., Patala, S., 2014. Analysing barriers to sustainable business model innovations: Innovation systems approach. Presented at the The XXV ISPIM Conference – Innovation for Sustainable Economy & Society, Dublin, Ireland.
- Le, D., 2017. Grab, Uber carpool services banned in Hanoi. *Vietnam Economic Times*.
- Martin, C.J., 2016. The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism? *Ecological Economics* 121, 149–159. <https://doi.org/10.1016/j.ecolecon.2015.11.027>
- Martin, E., Shaheen, S., Lidicker, J., 2010. Impact of Carsharing on Household Vehicle Holdings: Results from North American Shared-Use Vehicle Survey. *Transportation Research Record: Journal of the Transportation Research Board* 2143, 150–158. <https://doi.org/10.3141/2143-19>
- McMeekin, A., Southerton, D., 2012. Sustainability transitions and final consumption: practices and socio-technical systems. *Technology Analysis & Strategic Management* 24, 345–361. <https://doi.org/10.1080/09537325.2012.663960>
- Ministry of Transport Vietnam, 2014. Circular providing for operation and management of automobile transport and supporting services to road transport, No. 63/2014/TT-BGTVT.
- Mont, O., 2004. Institutionalisation of sustainable consumption patterns based on shared use. *Ecological Economics* 50, 135–153. <https://doi.org/10.1016/j.ecolecon.2004.03.030>
- Mont, O., Neuvonen, A., Lähteenoja, S., 2014. Sustainable lifestyles 2050: stakeholder visions, emerging practices and future research. *Journal of Cleaner Production* 63, 24–32. <https://doi.org/10.1016/j.jclepro.2013.09.007>

- Mont, O., Plepys, A., 2008. Sustainable consumption progress: should we be proud or alarmed? *Journal of Cleaner Production* 16, 531–537.
<https://doi.org/10.1016/j.jclepro.2007.01.009>
- Mylan, J., 2015. Understanding the diffusion of Sustainable Product-Service Systems: Insights from the sociology of consumption and practice theory. *Journal of Cleaner Production* 97, 13–20. <https://doi.org/10.1016/j.jclepro.2014.01.065>
- Nguyen, Q., 2017. MoT bans GrabShare. *Vietnam Economic Times*.
- Owyang, J., Samuel, A., Grenville, A., 2014. Sharing is the new buying: How to win in the collaborative economy. *Vision Critical*.
- Retamal, M., 2017. Product-service systems in Southeast Asia: Business practices and factors influencing environmental sustainability. *Journal of Cleaner Production* 143, 894–903.
<https://doi.org/10.1016/j.jclepro.2016.12.032>
- Retamal, M., submitted. Characterizing collaborative consumption in Southeast Asian cities: exploring the possibilities for “lifestyle leapfrogging.”
- Retamal, M., Hussey, K., submitted. Transitions to sharing? Barriers and Enablers for Collaborative Consumption in Southeast Asian cities.
- Retamal, M., Schandl, H., 2017. Dirty laundry in Manila: comparing resource consumption practices for individual and shared laundering. *Journal of Industrial Ecology* 22, 1389–1401. <https://doi.org/10.1111/jiec.12696>
- Ritchie, J., Lewis, J. (Eds.), 2003. *Qualitative research practice: a guide for social science students and researchers*. Sage Publications, London ; Thousand Oaks, Calif.
- Røpke, I., 2009. Theories of practice — New inspiration for ecological economic studies on consumption. *Ecological Economics* 68, 2490–2497.
<https://doi.org/10.1016/j.ecolecon.2009.05.015>
- Roxas, M.C.M., 2016. The sharing economy in the global south and sustainability transitions (Masters Thesis). Lund University IIIIEE, Sweden.
- Sahakian, M., 2014. Keeping cool in southeast Asia energy consumption and urban air-conditioning. Palgrave Macmillan, Basingstoke.
- Sahakian, M., Steinberger, J., 2011. Energy Reduction Through a Deeper Understanding of Household Consumption: Staying Cool in Metro Manila. *Journal of Industrial Ecology* 15, 31–48. <https://doi.org/10.1111/j.1530-9290.2010.00305.x>
- Sahakian, M., Wilhite, H., 2014. Making practice theory practicable: Towards more sustainable forms of consumption. *Journal of Consumer Culture* 14, 25–44.
<https://doi.org/10.1177/1469540513505607>
- Saloma, C., Akpedonu, E., 2016. Eating in vertical neighborhoods, in: Sahakian, M., Saloma, C., Erkman, S. (Eds.), *Food Consumption in the City: Practices and Patterns in Urban Asia and the Pacific*. Taylor and Francis.
- Schandl, H., West, J., 2010. Resource use and resource efficiency in the Asia–Pacific region. *Global Environmental Change* 20, 636–647.
<https://doi.org/10.1016/j.gloenvcha.2010.06.003>
- Shove, E., 2014. Putting practice into policy: reconfiguring questions of consumption and climate change. *Contemporary Social Science* 9, 415–429.
<https://doi.org/10.1080/21582041.2012.692484>
- Shove, E., 2003a. Converging conventions of comfort, cleanliness and convenience. *Journal of Consumer policy* 26, 395–418.
- Shove, E., 2003b. *Comfort, cleanliness and convenience: the social organization of normality, New technologies/new cultures*. Berg, Oxford.
- Spaargaren, G., 2011. Theories of practices: Agency, technology, and culture. *Global Environmental Change* 21, 813–822. <https://doi.org/10.1016/j.gloenvcha.2011.03.010>

- Tanakasempipat, P., Thepgumpanat, P., 2017. Thai transport authorities crack down on Uber, Grab drivers, seek ban. Reuters.
- Tukker, A., 2015. Product services for a resource-efficient and circular economy – a review. *Journal of Cleaner Production* 97, 76–91. <https://doi.org/10.1016/j.jclepro.2013.11.049>
- Tukker, A., Tischner, U., 2006. Product-services as a research field: past, present and future. Reflections from a decade of research. *Journal of Cleaner Production* 14, 1552–1556. <https://doi.org/10.1016/j.jclepro.2006.01.022>
- Vezzoli, C., Ceschin, F., Diehl, J.C., Kohtala, C., 2015. New design challenges to widely implement ‘Sustainable Product–Service Systems.’ *Journal of Cleaner Production* 97, 1–12. <https://doi.org/10.1016/j.jclepro.2015.02.061>
- Warde, A., 2005. Consumption and Theories of Practice. *Journal of Consumer Culture* 5, 131–153. <https://doi.org/10.1177/1469540505053090>
- Wong, M., 2004. Implementation of Innovative Product Service-systems in the Consumer Goods Industry (PhD dissertation). Cambridge University.