The Influence of Regional and Local Characteristics on Sustainable Consumption and Production Patterns in Southeast Asia: Literature Review and Discussion

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Abstract

Sustainable consumption and production (SCP) patterns are inevitably based on human endeavors, including business models and lifestyles. Hence, regional and local characteristics are important factors in identifying SCP patterns and formulating SCP policies; however, SCP policies that originated in developed countries have tended to take a cosmopolitan or context-free position and neglect this aspect. In this study, we reviewed literature about cultural and geographical differences as well as the results of two workshops about SCP in Southeast Asia. We then discussed potential factors that affect SCP patterns and policies in Southeast Asia from a societal (context-dependent) approach. Factors identified include climate and nature, the existence and functions of business and infrastructure, economic growth and regional disparity, policy and regulation, religious rules, the relationship between government and industries, international trade, and people's cultural mindset (e.g., traditional versus secular, acceptance of inequality, self-expression and cultural context). We proposed a model structure to indicate how regional/local characteristics affect the constituents of consumption and production (CP) patterns (CP preferences and CP enablers) and SCP policies (policy needs and policy preferences). We then suggested CP-related regional/local characteristics and policy-related regional/local characteristics in Southeast Asia, presenting four general points regarding regional/local characteristics: that they are relative; that they are dynamic, historical and highly interrelated among each other; that culturalist approaches make meaningful generalizations difficult, necessitating a context-dependent societal approach; and that local characteristics can have a variety of influences on CP patterns.

Key words: cultural difference, policy design, policy transfer, sustainable consumption and production (SCP), Sustainable Development Goal 12 (SDG 12), sustainable lifestyles

1. Introduction

Since the Sustainable Development Goals (SDGs) were agreed upon at the UN General Assembly in 2015, ensuring sustainable consumption and production (SCP) patterns—the SDG 12 goal—has drawn global attention. Asia is a key region for this movement because its economies have been growing rapidly, and the resulting environmental pressures are large (c.f., IRP, 2019; PECoP-Asia, 2018). To ensure SCP in Asia, many efforts have been made. For example, Thailand (2017) developed its SCP roadmap for the period 2017–2036, and the SWITCH-ASIA program of the European Union has funded approximately 130 SCP projects across the region to date. However, according to the United Nations (UN ESCAP, 2019), progress on SDG 12 in Asia and the Pacific has lagged relative to the other SDGs in the region. Therefore, effective SCP policy implementation is needed.

SCP patterns are inevitably based on human endeavors, including business models and lifestyles. Hence, regional and local characteristics are important factors in identifying SCP patterns and also formulating SCP policies. According to Hantrais (2007), contextualization plays a central role in cross-national comparative research, and there are three research approaches: universalist (context-free), culturalist (context-bounded: the context cannot be changed and is the object of study), and societal (context-dependent: the context serves as an important explanatory variable and

an enabling tool). SCP policy has tended to take a universal or context-free position. For example, the United Nations Environment Assembly did not mention local or regional characteristics in its resolution on SCP (UNEA, 2019).

In the field of policy science, Dolowitz and Marsh (2000) discussed types of policy transfer and the reasons behind the increase of policy transfer. They also distinguished three types of failure in policy transfer: uninformed transfer, incomplete transfer, and inappropriate transfer. Failures caused by uninformed transfer are caused by biased/insufficient information about a transferred policy. Incomplete transfer occurs when important elements of a transferred policy are neglected. Inappropriate transfer results when not enough attention is paid to different values and contextual factors (cultural, political and/or economic) as well as the aims of policy targeted at a transferred area. Combinations of the three types of failure are also possible. Consideration of regional or local characteristics is therefore important to prevent failures in SCP policy, too. Minkman et al. (2018) constructed a detailed conceptual framework of policy transfer and identified groups of factors and subfactors related to policy transfer. These include the environment (circumstances of policy transfer) and adoptability, which consists of suitability (institutional fit and flexibility of policy), (adopting) capacity, (policy) resources, and ability to change policy course. However, concrete regional and local characteristics have yet to be considered in SCP policy transfer in the Asian context.

In this study, we therefore reviewed literature related to cultural and geographical (local/national/regional) differences and discussed important factors that could affect SCP patterns in Southeast Asia taking the societal approach. The structure of this article is as follows. In Chapter 2, we review literature about cultural and geographical differences. We also look at specific examples of regional, national or local characteristics (hereinafter, referred to collectively as "local characteristics") from workshops about consumption and production (CP) patterns in Southeast Asia (Tasaki et al., 2021). In Chapter 3, we discuss important localities that influence SCP patterns in Southeast Asia based on the insights from the previous two chapters. Chapter 4 is the conclusion.

2. Literature Review on Cultural and Geographical Differences

2.1 Cultural Differences

First, we reviewed studies about cultural differences. Cultural differences between different geographical areas have been pointed out by many practitioners and would appear to be the most important difference. The meaning of culture is, however, complex and its definition is diverse. For example, according to Kroeber and Kluckhohn (1952), who reviewed 164 definitions of culture and extracted the central idea, culture "consists of patterns, explicit or implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values." As the definitions made by scholars (c.f., Kluckhohn, 1951; Kroeber & Kluckhohn, 1952, Geertz, 1973; Kronenfeld, 2008; and Kronenfeld, 2018) denote, culture is a dynamically formulated pattern inherited and transmitted over a long time. The definition of culture is thus abstract, so we need to proceed to literature that more concretely explains cultural differences.

An early study that addressed cultural differences is Hall and Hall's *Understanding Cultural Difference* (1990). They compared three different cultural worlds based on their understanding that culture is communication, and identified common threads (categories): speed of messages (e.g., a headline is a fast message and a poem is a slow message), context in communication (high or low; how much information is enough to convey), space (e.g., wide or narrow personal space/territory), and time (monochronic or polychronic [doing many things at the same time]; past-, present-, or future-oriented). They also pointed out differences in terms of being fast or slow to respond to and interface with different cultures.

Research groups led by Ronald Inglehart and Geert Hofstede conducted intensive global surveys. The World Value Survey (WVS) founded by Inglehart has been investigating social, political, economic, religious and cultural values of people throughout the world since 1981. The latest (seventh) ongoing survey covers 80 countries. The famous "Inglehart–Welzel cultural map" has two major axes of cross-cultural variation—traditional values versus secular-rational values (the vertical axis) and survival values versus self-expression values (the horizontal axis). It is based on their concept of two major modernization processes: secularization of authority and emancipation of authority (Inglehart & Welzel, 2005). The latest map (WVS Association, 2020) shows that Asian countries are located around the center of the horizontal axis, between many Western countries on the right and orthodox European and African-Islamic countries on the left. A difference among Asian countries is that East Asian countries such as Japan and South Korea are located in secular areas, while other countries from the southeast to west are located in between secular and traditional. That is, Southeast Asian countries are characterized as having weak self-expression and a mixture of secular and traditional values.

Hofstede's cultural survey originated from a personnel survey at an international company, IBM, and was then extended. Hofstede et al. (2010) asserted six dimensions of national culture: power distance

(acceptance of unequal power distribution), individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence (against restraint). Table 1 shows index values for these six dimensions for Southeast Asian countries as compared to the world average. These countries tend to have notably higher power distance values, lower individualism values (i.e., stronger collectivism) and lower uncertainty avoidance values than the world average. The uncertainty avoidance and long-term orientation values, however, are relatively diverse.

Other researchers and practitioners have also made efforts to elucidate cultural differences. Meyer (2014) presented eight scales of cultural differences: communicating (low-context (simple and clear) vs. high-context (messages are between the lines)), evaluating (direct negative feedback vs. indirect negative feedback), persuading (principles-first vs. applications-first), leading (egalitarian vs. hierarchical), deciding (consensual vs. top-down), trusting (task-based vs. relationship-based), disagreeing (confrontational vs. avoiding confrontation), and scheduling (linear-time vs. flexible-time). For example, Americans, Australians and Netherlanders are low context while Japanese, Korean, and Indonesian are high context. Negative feedback tends to be direct for Russians, whereas it is indirect for Japanese, Thai and Indonesian people. Trust tends to be based on relationships in India, China, Thailand, and Japan. People in Indonesia, Japan, and Thailand tend to avoid confrontation while those in Singapore tend to be between confrontation and avoiding confrontation.

Kosaka (2008) explained differences between the West and the East. As shown in Table 2, practical, adjustable, holistic and less self-centered features of the East are described. Koren (1994) also pointed out differences between the modernized Western thinking and an Eastern way of thinking, a so-called *wabi-sabi* perspective. The differences respectively contrast logical and intuitive, absolute and relative, mass-produced and one-of-a-kind, faith in progress and no progress, control over nature and the uncontrollability of nature, adapting to machines and adapting to nature (in this group, the second element of each pair is a feature of the Eastern way).

The AsiaBarometer survey is the largest comparative survey in Asia and focuses on the daily lives of ordinary people based on the bottom-up principle (Inoguchi & Fujii, 2013). Inoguchi (2005) used principal component analysis on data from 10 countries and identified three major dimensions: (1) general trust, (2) trust in merit-based utility, and (3) trust in the social system. He asserted that the results were related to (1) a Confucian heritage, (2) English speaking, and (3) communist or

Table 1 Hofstede's six indices of national culture and their values in Southeast Asia.

	Index value (0 to 100)					
	Power distance	Individualism	Masculinity	Uncertainty avoidance	Long-term orientation	Indulgence
Indonesia	78	14	46	48	62	38
Malaysia	100	26	50	36	41	57
Philippines	94	32	64	44	27	42
Singapore	74	20	48	8	72	46
Thailand	64	20	34	64	32	45
Vietnam	70	20	40	30	57	35
Avg.	80	22	47	38	48	44
σ	±14	±6	±10	±19	±18	±8
Difference from world avg.	(21)	(−23)	(−2)	(−29)	(3)	(−2)
World average	59	45	49	67	45	45
Japan	54	46	95	92	88	42
China	80	20	66	30	87	24
South Korea	60	18	39	85	100	29

Data retrieved from Geerthofstede.com (2015), with averages calculated by the authors. East Asian countries are presented at the bottom for reference.

Table 2 Kosaka's dichotomization of Western and Eastern philosophy (Kosaka, 2008; summarized and translated by the authors).

	West	East
Philosophical motivation	Theoretical interests	Practical interests in life
Realism	Tendency to think metaphysically	Tendency to think intrinsically
Tendency to think separately	Reductionism	Holism
With and without	Thought of existence. The concept of "nothing" means to lack (something).	Thought of nothingness. "Nothing" can take any form and is not negative.
Positive and negative	Affirmation of human nature	Denial of human acts
Inner and outer	Nature should not be undeveloped	Humans should follow nature

former communist government, respectively. Furthermore, Inoguchi and Fujii (2013) categorized 28 Asian countries into five groups based on factor analyses. The three factors used for the categorization were: materialist (consisting of housing, standard of living, household income, education and job), post-materialist (friendship, marriage, neighbors, family life, leisure and spiritual life), and public-sphere (public safety, condition of the environment, social welfare system and democratic system). Cambodia, Laos, and Myanmar were in the group of countries whose primary factor was materialist and whose secondary factor was the public-sphere. The Philippines was the sole country whose primary factor was post-materialist and secondary factor was the public-sphere. In both of these two groups, the states exercise strong power and have the potential to influence SCP policy. Malaysia, Thailand, and Vietnam were categorized as countries with salient post-materialist features.

2.2 Other Regional/Local Differences

Some scholars have studied regional/local differences other than cultural ones. These include differences in demographics, family type, context, governance and other subjective factors as explained below.

Hoffmeyer-Zlotnik and Warner (2014) summarized demographic variables used to compare different countries. Suggested variables were sex, age, legal marital status, consensual union, ethnicity, education, employment, household size and household income. Esteve and Liu (2013) described a steady decline in household size in Asia from 1980. According to PRB (2020), household size was still relatively large at 4.1 persons/household in Southeast Asia in 2019, as compared to 2.4 and 2.6 persons/household in Europe and North America, respectively. Extended (large) families are more common in Southeast Asia. Macromill (2020a, b, c) elucidated differences between generations (age groups) in purchasing behavior in Thailand, Indonesia and

Vietnam (Table 3). Although differences exist in people's ages in the generational categories, many commonalities can be seen among the members of the same generation.

Hantrais (2007) put forward the most frequently examined contexts in comparative research. These are political institutions, administrative structure, economic system, legal framework, social institutions and structures, social protection system, the physical environment and information technology in addition to cultural environment and socio-demographic variables. Kawabata (2005) asserted seven contexts in which to consider retail businesses in Southeast Asia. These were climate, race/population, religion, market distribution, history, policy and income.

Family systems form the basis of society. Todd (1999) categorized family structure in different countries into seven types based on two axes: liberal or authoritarian for the relationship between parents and children (and equal or unequal among siblings) and acceptance of internal marriage. More authoritarian (or high power distance from Table 1) is a family characteristic in Asia, and Todd classified families in Japan and Korea as stem families (authoritarian families with unequal siblings) and those in China and Vietnam as community families (authoritarian families with equal siblings). Families in Southeast Asian countries such as Indonesia, Cambodia, Thailand, Malaysia, Laos, the Philippines and Myanmar were categorized as anomic families, somewhere between liberal and authoritarian. Itao and Kaneko (2020) demonstrated through the use of a simulation model that countries with stem and community families corresponded to countries with social democracy and communism, respectively.

The World Bank publishes a set of governance indicators ranging from −2.5 to 2.5 (the world average is zero). Governance is related to policy adoptability, which is an important factor of policy transfer failure (Minkman et al., 2018). Table 4 shows six indicators for several Southeast Asian countries. The average of the voice and

Table 3 Differences in purchasing behavior of four generations in three Southeast Asian countries.

Generation	Thailand	Indonesia	Vietnam
1st	Baby boomers (founders of modern Thailand), born 1940–1964, prudent shoppers	Independence War generation, born 1945–1964, seek supplementary income, frugal	War era generation, born up to 1976, stable-minded and prudent
2nd	Generation X (political instability generation), born 1965–1979, strong consumer motivation and conspicuous consumers, open to buying online but prioritize the opinions of families/friends	Orde Bal era generation (Suharto System generation), born 1965–1974, not thrifty but spend conservatively, potentially high spending	Doi Moi era generation (Generation X), born 1976–1989, strong consumer motivation and conspicuous consumers, prefer multinational brands
3rd	Millennials, also known as Generation Y (technology generation), born 1980–1999, hybrid of Internet and real consumers	Millennials, born 1975–1998, use services rather than things, digitally friendly	Millennials (free trade era), born 1990–1999, preference for product functionality and green products
4th	Generation Z (uninterested generation), born after 2000, native digital consumers	Generation Z, born 1998–2002, self-centered and impulsive consumption behavior, technology savvy, digital natives	Post-Millennials (Generation Z), born after 2000, practical and technology savvy, driven by price and convenience

Retrieved from Macromill (2020a–c) and summarized by the authors.

Table 4 Governance indicators of Southeast Asian countries from 2017 to 2019.

Country	Worldwide Governance Indicators (−2.5 to +2.5)					
	Voice and accountability	Political stability and absence of violence/terrorism	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
Singapore	−0.14	1.55	2.22	2.13	1.85	2.16
Brunei Darussalam	−0.91	1.19	1.24	0.68	0.63	0.77
Malaysia	−0.17	0.16	0.97	0.68	0.54	0.20
Thailand	−0.96	−0.69	0.36	0.12	0.06	−0.40
Indonesia	0.16	−0.51	0.13	−0.11	−0.33	−0.31
Philippines	0.05	−1.05	0.02	−0.01	−0.46	−0.53
Vietnam	−1.41	0.18	0.02	−0.34	0.02	−0.53
Lao PDR	−1.76	0.45	−0.61	−0.74	−0.89	−0.99
Myanmar	−0.86	−1.20	−1.09	−0.78	−1.01	−0.59
Avg.	−0.67	0.01	0.36	0.18	0.04	−0.03
Factor analysis						
Factor 1 (4.63)	0.16	0.88	0.94	0.92	0.96	0.92
Factor 2 (1.14)	0.92	−0.31	0.28	0.38	0.22	0.28
Japan	0.99	1.63	1.35	1.55	1.47	1.07
China	−1.52	0.47	−0.19	−0.25	−0.29	−0.25
Korea, Rep.	0.77	1.21	1.09	1.20	0.61	0.47

Data retrieved from World Bank (2020); three-year averages were calculated. The global average is zero. Values in parentheses next to the two factors indicate eigenvalues.   East Asian countries are presented at the bottom as reference.

accountability indicator, which indicates participation in selecting the government, freedom of expression and association, and a free media, is notably low (−0.67). The authoritarian culture of Southeast Asia is reflected in this indicator. The other five indicators range from positive to negative and do not show a large general deviation from the world average. Our factor analysis showed these five indicators form a different factor from the voice and accountability indicator, and have strong correlations with each other (correlation coefficients of greater than 0.9, except for political stability, whose coefficients are 0.69–0.76).

2.3 Specific Groups of Local Characteristics Influencing CP patterns

The previous sections highlighted many points of view about general cultural, geographical and other differences. In this section, we review the results of two workshops showing specific groups of local characteristics that are directly linked to CP patterns. Tasaki et al. (2021) held two workshops to discuss SCP patterns in Southeast Asia and obtained 170 local characteristics that could affect SCP patterns of six activity domains: cooling, doing housework, eating, moving short distances, purchasing, travelling and working.

Table 5 presents 14 categories of local characteristics. The local characteristics in each category are more specific perceptions and attitudes than those reviewed in the previous sections. Culture and customs, industry, and infrastructure were the top three major categories of local characteristics, each accounting for more than 15% of the

170 local characteristics, followed by climate and nature. It would be difficult to identify cultural characteristics without extensive local knowledge. The same is true of local industry. Even if outsiders (non-local people) can observe the existence of industries directly linked to consumption and production, it would be difficult for them to identify the industries' functions in a society. In contrast, outsiders may be better able to identify some areas, for example, infrastructure, climate/nature and economic growth. These may be taken for granted by insiders (local people) and be relatively difficult for them to become aware of. Both views—internal and external—are required to gain a precise understanding of local characteristics.

3. Discussion on Local Characteristics Influencing SCP Policy

Based on the knowledge and insights gained from reviewing the literature and workshops, we discuss local characteristics in the context of SCP policy in this chapter. We can distinguish two different types of local characteristics. One influences CP patterns that are formed in certain countries/areas (targets of SCP policy), and the other influences the choice and implementation of SCP policy (hereafter referred to as "CP-related local characteristics" and "policy-related local characteristics," respectively). These local characteristics have complicated interrelationships. To structure this complexity and facilitate our understanding and discussion, we put forward a simple model of the

Table 5 Local/regional characteristics presented at the two workshops on SCP patterns in Southeast Asia.

Category*	Main identifier**	Examples	Main focus
Culture/custom (37%)	Insider (+6%)	Role of wife as "good cook, good housekeeper"; Relaxed (flexible) attitude about time; Easy going; Dangerous driving behavior; Set temperature of air conditioners too low (e.g., 18°C); Service mind ("Siam Smile"); Care about their social image; Buddhist spirits; Less walking; People value face-to-face communication; Cars as status symbol; Culture of eating-out, even for breakfast; Chili fish sauce	Actual behaviors and perceptions
Industry (21%)	Insider (+8%)	Traditional, no meal delivery system; Non-material consumption (massage etc.); All variety of foods available; Street food available 24 hours; Too many food stalls; Informal transport sector; High-value-added brand bicycles	Existence and non-existence of certain industries, including their functions in society
Infrastructure (18%)	Outsider (+11%)	Greener transport; Easy access to food and free Wi-Fi; 5G (telecommunication); High CO_2 intensity of electricity; Bad pavement conditions; Narrow roads; Comfortable public space (green space); Conventional well-ventilated houses; Traffic congestion; Power shortage; No parking spaces for bicycles on sidewalk	Quantity and quality of infrastructure
Climate/Nature (9%)	Outsider (+8%)	Hot weather; High humidity; Heat island effect; Existence of rainy season; Abundant tropical food	Climate conditions and their service functions
Public policy (8%)	Insider (+9%)	No license needed to become a housekeeper; No strict law enforcement; Plastic bags/containers not allowed in national parks	Existence and non-existence of certain policies as well as their effectiveness
Working (7%)		Immigrants and unregistered workforce; Working support services (co-working spaces, free Wi-Fi, childcare); Inflexible working rules; Commuting time	Working and non-working conditions
Commodity prices (6%)		Cheap street food for low-income people; Relatively low cost of living; Electricity cost	Low prices and low incomes
Economic growth (5%)	Outsider (+8%)	Increasing wealth; Increases in ownership of electronic equipment; Expansion of urban areas; Income gap	Growth itself and its consequences
Technology (4%)		Undergoing innovation; Improvement in automatic translation; Use of chemical substances; Adoption of new technologies	Existence and social acceptance
Human resources (4%)	Insider (+9%)	Lack of education; Digital literacy; Lack of knowledge about specific topics	Knowledge level and abilities of people and workers
Demography (4%)		Population; Population density; Increasing immigrant population; Many white-collar/high-income workers	Population and class changes
Pollution and safety (3%)		Emissions from fuel combustion (e.g., PM2.5); Air pollution from outdoor cooking; Cost considered over environment	State of pollution and control; people's attitudes
Politics and society (2%)		Trust among neighbors; Resistance from individuals to change; Communist government	Government and governance
Sanitation (2%)		Some street venders are not safe or clean; Food safety (diarrhea)	Protection against viruses and bacteria

*   The percentages indicate frequency among all local characteristics raised at the two workshops (Tasaki et al., 2021).

** This column indicates the main group identifying the local characteristics. Insider and outsider refer to local and non-local people, respectively. The percentage values in parentheses indicate differences in the frequency rate between the two workshops in Thailand and Japan (no insiders attended the one in Japan); only differences >5% are shown.

relationships between CP patterns and SCP policy as shown in Fig. 1. It is based on two types of questions about *what* and *how*, with reference to the attitudes-facilitators-infrastructure (AFI) framework for SCP (Vergragt et al., 2014); five components of CP patterns (production, provision, consumption, products and services; Tasaki et al., 2021); and a policy cycle model (Cairney, 2012). This model shows the four constituent parts of CP patterns and SCP policy: CP preferences, CP enablers, policy needs and policy preferences.

3.1 CP-related Local/Regional Characteristics

CP preferences are influenced by local/regional characteristics. For example, family styles, such as extended (large) families and two-income families, allow family members to have different consumption patterns of eating (cooking or dining out) and purchasing (more or less). People's mindsets about satisfaction and materialistic/post-materialistic values also drive them to different consumption patterns. In Thailand, the former King, Bhumibol Adulyadej, advocated the idea of a "sufficiency economy" in which sufficiency meant a middle way—not too little and not too much—implying both self-reliance and frugality (Millet, 2011; Merle et al., 2017).

Climate and nature influence CP patterns. Southeast Asia has a hot, humid climate (the monthly average highest temperature is above 30°C all year), and it influences regional cuisine, for example, through the use of various spices, fish sources and aromatic ingredients even though food preservation technology and
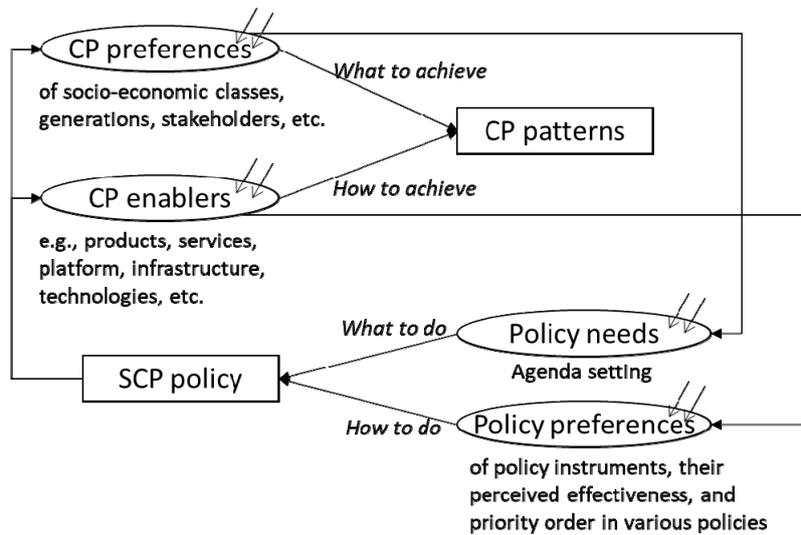
Fig. 1   Model of the relationships between CP (consumption and production) patterns and SCP
(sustainable consumption and production) policy, including their constituents (in ovals).
Local/regional characteristics influence all the constituents as shown by the double arrows.

globalization have made a variety of cuisines available. Climate also leads people to use more air-conditioning and energy, which is a concern of the IEA (2019). The use of air conditioners has spread to rural areas where traditional stilt houses can still be found, and even though people in rural areas tend to limit the time and period of use, younger generations tend to use air conditioners more than their elders (Yoshida et al., 2020). People in Southeast Asia regard cooling as a luxury and tend to set the temperature low. Kawabata (2005) explained features of markets in Southeast Asia as follows: there are no seasonal markets; clothing shops do not have to adjust their inventory as the seasons change (i.e., there are no winter clothes); people avoid walking even short distances (150 m is the average size of the trading area of convenience stores in Manila, whereas it is 500 m in Japan); and shopping centers with air conditioners are not just for shopping, but rather they are part of the urban space for daily life.

Businesses providing products/services and technology can be localized and regionalized; that is, they are directly influenced by local characteristics. For example, people living in rural areas in Southeast Asia have more contact with the soil in their daily life, and washing machines sold in rural areas have equipment for hand-washing clothing on the top (Watanabe et al., 2019). Street food venders enable people to eat out casually and support dual-earner families (c.f., Trafialek et al., 2017). Existing businesses' attitude towards competition or co-existence with new businesses is an important type of local/regional characteristic in forming a CP pattern. For example, conflicts between taxi businesses and new ride hailing/sharing services such as Uber and Grab and other mobility services prevent emergence of a new CP pattern (c.f., Ackaradejruangsri, 2015; Narupiti, 2019). Existence of an informal sector and relatively large secondhand and

repair markets, a typical regional characteristic of developing countries, influences possible CP patterns there. Kobayashi and Fukushige (2018) proposed a "living-sphere approach" to incorporate region-specific satisfiers for basic needs into product design.

Availability of infrastructure can limit or expand the number of options that consumers and producers/providers can use. For example, in urban areas, public transportation infrastructure is very important. If public transportation is limited, citizens are likely to use automobiles and motorcycles, which may cause road congestion and increase carbon dioxide and other pollutant emissions. Without mass public transportation infrastructure, it is difficult to commute in an environmentally friendly manner in large urban areas. The same can be applied to electricity. Availability of environmentally friendly electricity is needed for a city to transform its SCP patterns. The percentage of energy-efficient housing stock in an area also determines the level of energy consumption in a city. Digital infrastructure can serve as an enabler for digitalized CP patterns such as servicizing and sharing, and digital connection quality is a determinant of such CP patterns. Participants in the workshops mentioned in Section 2.4 discussed not only conventional kinds of infrastructure (e.g., roads and waste collection systems) but also alternative types that would be able to support new SCP patterns and lifestyles. Examples were roads for specific purposes such as walking and bicycling, open public spaces, and digital infrastructure such as online platforms and digital currency. Infrastructure transformation is thus important for SCP.

Rapid economic growth and the resulting regional disparities constitute underlying regional characteristics in Southeast Asia. Compressed development, a term coined and characterized by Whittaker et al. (2010), resulted in

workforce shortages in urban areas and an increase in migrant workers (Rattanapan, 2015). Availability of a cheap labor force (i.e., migrant workers) both enables and impedes SCP patterns; for example, proper protection of migrant workers is often insufficient and long-term poverty is a possibility. Such disparities occur geographically. According to Kawabata (2005), regional disparities in Southeast Asia have formed a mosaic pattern rather than a monotonically changing pattern. Coexistence of different levels of development and their geographical distribution/pattern thus can be a local characteristic in Southeast Asia. Oizumi (2011) pointed out another example of local characteristics of government: increased taxation is a key to development in rural areas in Asia because funding is required, whereas decreased taxation is a key concept of development in urban areas because of market competition.

Religion is also a local/regional characteristic affecting CP patterns. For example, religion can trigger changes in people's behaviors. Several temples in Thailand are calling on believers to donate secondhand goods and recyclable waste. The collected secondhand goods and recycled resources are sold to dealers and recyclers. The revenue is then used for temple maintenance and other contributions to society, such as scholarships for the poor. The Indonesian Ulema Council, Indonesia's top Muslim clerical body, has organized a campaign to use reusable bags to reduce the number of single-use plastic bags in collaboration with Greenpeace and the Ministry of Forestry and Environment (Nugraha & Purwaningsih, 2018).

Various existing regulations can hinder or promote adoption of new SCP patterns. Ride hailing/sharing services such as Uber and Grab are not popular in Japan because it is difficult for new service providers to fulfill the requirements of the Road Transportation Act and the Passenger Vehicle Transportation Business Act. Collection and recycling of end-of-life vehicles are promoted by the automobile tax structure and the Automobile Recycling Act in Japan, whereas they are hindered in countries without similar regulations or laws. Other examples of regulations hindering or promoting adoption of new standards include the following: Halal standards set by the Malaysian government prohibit the reuse of packaging materials previously used on non-Halal products, and regulations for food contact containers in Thailand prevent bottle-to-bottle recycling of PET resin.

3.2 Policy-related Local/Regional Characteristics

People's mindsets affect their relationships with the government and public policy as well as people's compliance with public policy. As noted in Chapter 2, local characteristics in Southeast Asia include a mixture of traditional and secular, an acceptance of inequality (a high power distance), a relatively low level of self-expression, a high-context culture, relationship-based trust, low uncertainty avoidance, holism and a preference for real practices over transcendental theory/rules. By reflecting upon these tendencies, we came upon the following policy implications. First, the traditional authoritarian view places importance on the government. People therefore tend to follow what the government decides, and government officials tend to perceive a low need for public participation in policy decisions as compared to Western countries. SCP policy can thus be stringent; however, the goals of SCP policy can deviate from people's needs, and policy decisions may not fit stakeholders' situations. Second, people tend to neglect impractical rules and to use double standards. This is a tactic of respecting authority while practicing one's own life and business. Implementation of SCP policy in this sense can be problematic in Southeast Asia. In addition, a high-context culture does not help explain whether a person or institution will comply or not with any given policy. Third, insufficient institutionalization, which is typically observed in developing countries, increases a government's difficulty in putting policy decisions into force. The size and capabilities of municipalities in Southeast Asia are still small. It is therefore difficult to introduce the same municipal policy used in developed countries in these areas.

There is often a preference to adopt an ambitious policy agenda without considering its local feasibility. Aid receivers in the context of international cooperation can urge governments to accept a donor's preferred policy. In addition, rivalries between ministries and agencies tend to lead them to pursue new policy areas where the governing institution has yet to be determined.

Trust between industries and government can be weak in Southeast Asia. As noted previously, governments often make policy decisions without consulting industries. In addition, policy decisions are often not followed up with implementation. Moreover, some industries do not view the domestic market as important if it is small, and international cooperation influences policy decisions. Thailand is an example of a country where relationships with industries and inter-ministry coordination are relatively good.

Business enterprises are also important actors for SCP, and business activities have drawn more attention, especially since the SDGs were agreed upon. In a study about corporate environmental management in Japan, Thailand and Vietnam (Yagi & Kokubu, 2021), the most important stakeholders were buyers and investors in Japan, whereas they were the community and employees in Thailand and Vietnam. That is, community-oriented management was observed in these Southeast Asian countries. This characteristic is in line with the cultural position of Thailand and Vietnam on the Inglehart–Welzel's cultural map where its position is in between traditional values and secular-rational values. In

the late 1990s, Shimizu (1998) pointed out that Japanese corporate management that was originally based on humanism, collectivism and trust had shifted towards Anglo-Saxon management based on individualism and market competition, but that it would not become exactly the same as Anglo-Saxon management. Thailand and Vietnam are more oriented to community and traditional values than Japan. Therefore, their community-oriented management probably would not be shifted towards Anglo-Saxon management so easily.

Physical and perceptual distance between producers and consumers (i.e., the international market structure) may affect the process of finding SCP solutions. In economically large countries, the trade dependency rate (the ratio of exports and imports of products and services in gross domestic product) is usually low. For example, the trade dependency rates of Japan, China, India and Indonesia are around 40% (calculated from the World Bank's World Development Indicators database). On the other hand, the trade dependency rates of Singapore and Vietnam are 319% and 210% in 2019, respectively. The rates of Malaysia, Cambodia, and Thailand also exceed 100%. Producers tend to pay attention to the preferences of consumers in large markets, neglecting consumer preferences in small markets. This could be a barrier for consumers and governments in the promotion of SCP.

3.3 Local Characteristics Reconsidered

Figure 2 summarizes the relationships and patterns discussed in the previous sections. Several points are noteworthy here. First, local characteristics are relative. Some local characteristics mentioned in this study are truly local ones, but they also are common at the global level. An example is the 5G telecommunication infrastructure in Bangkok. This is unique to Bangkok when compared with the infrastructure in other cities and towns in Thailand, but not when compared with other leading capital cities in the world. That is, local characteristics are identifiable only when a reference is provided and can vary depending on the reference point. The reference point can be either the whole (e.g., "*A* is unique among...") or in comparison (e.g., "*A* is more...than that in..."). In other words, the criticism that "it is not a local characteristic" is not sufficient if the reference point is not mentioned.

Second, local characteristics are dynamic, historical and highly interrelated among each other. Some local characteristics have causal relationships. For example, people use air conditioners because of the humid and hot climate, and weak policy enforcement has resulted in a habit of breaking rules and the emergence of the informal sector. In addition, local characteristics have a dynamic nature. On-going change in a certain local characteristic brings about changes in other localities. Once a CP pattern
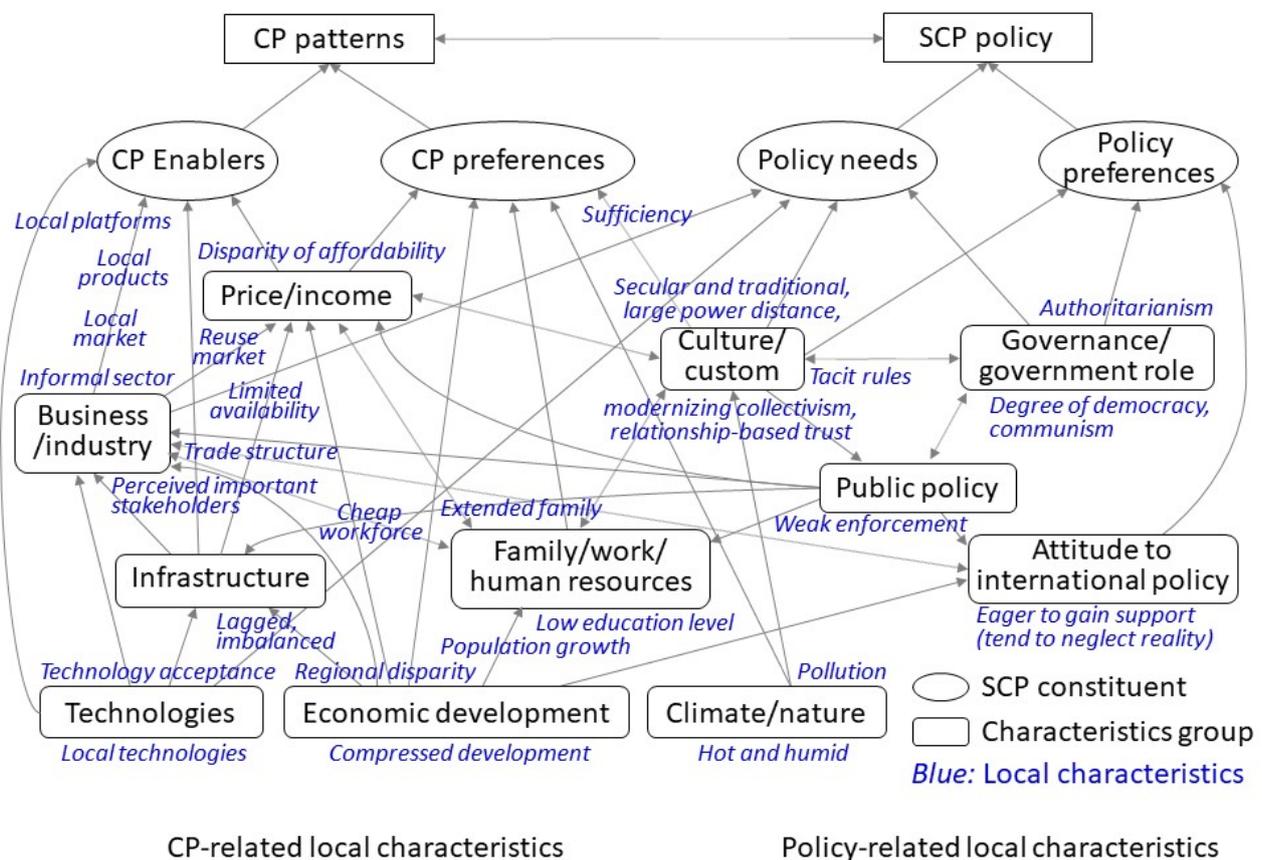

Fig. 2 Example of structured relationships between/among local characteristics and SCP constituents in Southeast Asia. The relationships between CP patterns, SCP policy and SCP constituents at the top are simplified. See Fig. 1 for the precise relationships.

or SCP policy is established, it influences culture, business and public policy. Therefore, localities cannot be clearly and precisely categorized.

Third, only local characteristics related to SCP patterns and policies are targeted by this study. As argued by Hantrais (2007), culturalist approaches make meaningful generalizations very difficult as they tend to illustrate diversity and divergence rather than similarity and convergence. In this study, we took a context-dependent societal approach and focused only on factors influencing SCP patterns and policy to guide SCP practitioners (including factors that would play an important role in the future). The SCP localities we discussed are thus not the same as the cultural/geographical differences discussed by culturists.

Fourth, local characteristics include both (1) those that act as a promoting/hindering factor influencing individual CP patterns and (2) those influencing whether a combination of multiple CP patterns can occur. For example, local regulation and local market conditions (including stakeholders' perceptions) can influence whether or not private cars, taxis, ride hailing/sharing, public buses and trains compete or coexist.

4. Conclusion

"Cultural difference" is a very convenient term to use. However, it prevents us from developing a deeper understanding of local characteristics and SCP policies. CP patterns are formed more or less in a regional and local context, and SCP policies have to be adjusted to these contexts to be effective and also to avoid policy transfer failure. This study reviewed literature about cultural and geographical differences and workshop results. We then discussed regional/local characteristics to be considered in SCP policy from a societal approach position. We proposed a model structure to indicate how regional/local characteristics affect the constituents of CP patterns (CP preferences and CP enablers) and SCP policies (policy needs and policy preferences). Our discussion based on CP-related regional/local characteristics and policy-related regional/local characteristics in Southeast Asia identified the following factors: climate and nature, existence and functions of business and infrastructure, economic growth and regional disparity, policy and regulation including religious rules, relationship between government and industries, international trade, people's cultural mindset characterized by a mixture of traditional and secular, high power distance (acceptance of inequality), relatively low self-expression, and high-context culture. These can be entry points for policymakers and practitioners to consider SCP policies and actions that are fitted to the local/regional context in Southeast Asia and that can enhance the effectiveness of SCP policies/actions.

Although these insights are informative for SCP practitioners in raising awareness about local characteristics and helping appropriate caution to be applied in policy transfer, we do not think they are sufficient as a rationale for taking specific actions. Every action has a specific context and has to take into account very specific elements of CP patterns and stakeholders. As discussed, local characteristics are relative and it is difficult for only insiders or only outsiders to be aware of all local characteristics. This can result in failure of SCP policy implementation. SCP practitioners need both to have a basic perspective and to make individual efforts to grasp regionalities/localities when designing and implementing SCP policies.

References

Ackaradejruangsri, P. (2015) Insights on GrabTaxi: An alternative ride service in Thailand. *Review of Integration of Business Economics Research*, 4 (3): 49–61.

Cairney, P. (2012) *Understanding Public Policy: Theories and Issues*. Palgrave Macmillan, Hampshire.

Dolowitz, D.P. and Marsh, D. (2000) Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance*, 13(1): 5–23. https://doi.org/10.1111/0952-1895.00121

Esteve, A. and Liu, C. (2013) Families in Asia: A Cross-national comparison of intergenerational co-residence. Presented at Strand 3. Demographic datasets in the first cyberseminar, 'Family demography: Advancing knowledge about intergenerational relationships and exchanges in low- and middle-income countries,' The University of Southampton, 10 January, 2014. Retrieved from http://blog.soton.ac.uk/intergen/files/2014/01/Esteve_Liu_Families-in-Asia_IUSSP_Cyberseminar.pdf (accessed 16 April 2021)

Geerthofstede.com (2015) *Dimension Data Matrix*. Retrieved from https://geerthofstede.com/research-and-vsm/dimension-data-matrix/ (accessed 28 March 2021)

Geertz, C. (1973) *The Interpretation of Cultures*. Basic Books, New York.

Hall, E.T. and Hall, M.R. (1990) *Understanding Cultural Differences*. Intercultural Press, Boston.

Hantrais, L. (2007) Contextualization in cross-national comparative research. *In*: Hantrais, L. and Mangen, S. (eds), *Cross-National Research Methodology and Practice*, Routledge, Oxon, 3–18.

Hoffmeyer-Zlotnik, J.H.P. and Warner, B. (2014) *Harmonising Demographic and Socio-Economic Variables for Cross-National Comparative Survey Research*. Springer, Dordrecht.

Hofstede, G., Hofstede, G.J. and Minkov, M. (2010) *Cultures and Organizations: Software of the Mind, Intercultural Cooperation and Its Importance for Survival, 3rd ed.* McGraw-Hill, New York.

Inglehart, R.F. and Welzel, C. (2005) *Modernization, Cultural Change, and Democracy: The Human Development Sequence.* Cambridge University Press, Cambridge.

Inoguchi, T. (2005) Chapter 12 social capital in ten Asian societies: Is social capital a good concept to gauge democratic, developmental, and regionalizing trends in Asia? *In*: Inoguchi, T., Basáñez, M., Tanaka, A. and Dadabaev, T. (eds), *Values and Life Styles in Urban Asia*. Institute of Oriental Culture Special Series 19, University of Tokyo, Siglo XXI Editores, Mexico. 234–248.

Inoguchi, T. and Fujii, S. (eds) (2013) *The Quality of Like in Asia: A Comparison of Quality of Like in Asia*. Springer, Dordrecht.

International Energy Agency (IEA) (2019) *The Future of Cooling in Southeast Asia 2019*.

IRP (International Resource Panel) (2019) *Global Resources Outlook 2019: Natural Resources for the Future We Want*.

Itao, K. and Kaneko, K. (2020) Evolution of family systems and resultant socio-economic structures. *arXiv preprint*, arXiv:2009.11035.

Kawabata, M. (2005) *Contexts of Asian Markets—Southeast Asia: from Fields of the Globalization*. Shinhyoron Publishing Inc, Tokyo. (in Japanese)

Kluckhohn, C. (1951) The study of culture. *In*: Lewer, D. and Lasswell, H. D. (eds.), *The Policy Sciences*. Stanford University Press, Stanford.

Kobayashi, H. and Fukushige, S. (2018) A living-sphere approach for locally oriented sustainable design. *Journal of Remanufacturing*, 8 (3): 101–113.

Koren, L. (1994) *Wabi-Sabi: for Artists, Designers, Poets and Philosophers*. Imperfect Publishing, Point Reyes.

Kosaka, K (2008) *Western Philosophy and Eastern Thoughts*. Kodansha, Tokyo. (in Japanese)

Kroeber, A.L. and Kluckhohn, C. (1952) *Culture: A Critical Review of Concepts and Definitions*. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, 47 (1), The museum, Cambridge.

Kronenfeld, D.B. (2008) *Culture, Society, and Cognition*. Mouten de Gruyter, Berlin.

Kronenfeld, D.B. (2018) *Culture as a System: How We Know the Meaning and Significance of What We Do and Say*. Routledge, Oxon.

Macromill (2020a) Economic background and purchase trends that influenced generational values. Expert Interview Report on Thailand. Retrieved from https://www.macromill.com/s/mail/docs/info_fri20200515_english.html?utm_source=merumaga&utm_medium=email-info&utm_campaign=HTML (accessed 11 April 2021)

Macromill (2020b) Economic environment and changes in purchasing behavior that influenced generational values. Expert Interview Report on Indonesia. Retrieved from https://www.macromill.com/s/mail/docs/info_fri20200626_english.html?utm_source=merumaga&utm_medium=email-info (accessed 11 April 2021)

Macromill (2020c) Economic background and purchase consciousness that influenced generational values. Expert Interview Report on Vietnam. Retrieved from https://www.macromill.com/s/mail/docs/info_fri20200529_english.html?utm_source=merumaga&utm_medium=email-info&utm_campaign=HTML (accessed 11 April 2021)

Merle, K. (2017) Thailand's Sufficiency economy and sustainable consumption and production, Chapter 12. *In*: Shroeder, P., Anggraeni, K., Sartori, S. and Weber, U. (eds.) *Sustainable Asia: Supporting the Transition to Sustainable Consumption and Production in Asian Developing Countries*, World Scientific Publishing.

Meyer, E. (2014) *The Culture Map*. Public Affairs, New York.

Millet, D. (2011) *King Bhumibol Adulyadej: A Life's Work*, Tien Wah Press.

Minkman, E., van Buuren, M.W. and Bekkers, V.J.J.M. (2018) Policy transfer routes: an evidence-based conceptual model to explain policy adoption. *Policy Studies*, 39(2): 222–250.

Narupiti, S. (2019) Exploring the possibility of MaaS service in Thailand: Implications from the existing conditions and experts' opinions on 'Who Should be the MaaS provider in Bangkok?' *IATSS Research*, 43: 226–234.

Nugraha, R. and Purwaningsih, A. (2018) Indonesia combines Islam with environmental activism. *Deutsche Welle*. Retrieved from https://p.dw.com/p/2zXiH (accessed 15 May 2021)

Oizumi, K. (2011) *Consuming Asia: Prospect and Concerns*. Chuokoron-shinsha, 237p. (in Japanese)

PECoP-Asia (2018) *Policy Report for Reconfiguring Consumption and Production in Asia and the Pacific: 12 Opportunities for Accelerated Achievement of SDGs*. https://doi.org10.13140/RG.2.2.28153.62568

PRB (Population Reference Bureau, U.S.) (2020) *2020 World Population Data Sheet*. Retrieved from https://www.prb.org/international/indicator/hh-size-av/map/subregion (accessed 16 April 2021)

Rattanapan, A. (2015) Migrant domestic workers in Thailand: employment situation and comparative study on regulations. *Mekong Institute Research Working Paper Series*, 6.

Shimizu R. (1998) *The Features of Japanese Top Management and Business: Based on 30 Years Field Researching*. Chikura Publishing co., 228p. (in Japanese)

Tasaki, T., Kishita, Y., Amasawa, E., Bunditsakulchai, P., Mungkalasiri, J., Hotta, Y. and Hirao, M. (2021) Co-designing workshops on sustainable consumption and production in Southeast Asia: Application of idea cards and structuring methods. *Sustainability: Science, Practice and Policy* (in print).

Thailand (2017) *Sustainable Consumption and Production Roadmap 2017–2036*. Office of Natural Resources and Environmental Policy and Planning.

Todd, E. (1999) *La Diversité du Monde: Structures Familiales et Modernité*. Le Seuil, Paris.

Trafialek, J., Drosinos, E., Laskowski, W., Jakubowska-Gawlik, K., Tzamalis, P., Leksawasdi, N., Surawang, S. and Kolanowski, W. (2017) Street food vendors' Hygienic practices in some Asian and EU countries – A survey. *Food Control*, 85: 212–222.

UNEA (United Nations Environment Assembly) (2019) *Innovative Pathways to Achieve Sustainable Consumption and Production*. UNEP/EA.4/L.2, Nairobi, 11–15 March 2019.

UN ESCAP (United Nations Economic and Social Commission for Asia and the Pacific) (2019) *Asia and the Pacific SDG Progress Report 2019*. 59p.

Vergragt, P., Akenji, L. and Dewick, P. (2014) Sustainable production, consumption, and livelihoods: global and regional research perspectives. *Journal of Cleaner Production*, 63: 1–2.

Watanabe, Y., Fukushige, S. and Kobayashi, H. (2019) Proposal of a design and assessment method based on living-sphere approach using virtual reality. *Proceedings of the Japan Society for Precision Engineering Spring Conference*, 603–604. (in Japanese)

Whittaker, D., Zhu, T., Sturgeon, T., Tsai, M. and Okita, T. (2010) Compressed development. *Studies in Comparative International Development*, 45: 439–467.

World Bank (2020) *Worldwide Governance Indicators*. Retrieved from http://info.worldbank.org/governance/wgi/ (accessed 15 December 2020)

World Bank. *Worldwide Development Indicators*. Retrieved from https://databank.worldbank.org/source/world-development-indica

tors (accessed May 5, 2021)

WVS association (The World Value Survey Association) (2020) *Inglehart-Welzel Cultural Map, Wave 7 Provisional Version.* Retrieved from https://www.worldvaluessurvey.org/WVS Contents. jsp (accessed 28 March 2021)

Yagi M. and Kokubu, K. (2021) Stakeholder mapping for corporate environmental management, Kobe University, Graduate School of Business Administration, Discussion Paper, 2021-14.

Yoshida A., Manomivibool, P., Tasaki, T. and Unroj, P. (2020) Qualitative study on electricity consumption of urban and rural households in Chiang Rai, Thailand, with a focus on ownership and use of air conditioners. *Sustainability*, 12 (14), 5796.

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