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Promoting sustainable consumption in China: a conceptual framework and research review

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ABSTRACT

Various theories and approaches have been introduced in the debate on how to address sustainable consumption. In this study, we first discuss different theoretical perspectives on sustainable consumption, particularly developed in the fields of economics, social psychology and environmental sociology. We argue that neither an 'individualist' nor a system- or structural perspective alone is sufficient for understanding and analysing the transition towards sustainable consumption. Therefore, we propose to apply the Social Practices Approach (SPA) that combines both human agency and social structures to understand sustainable consumption issues. Following the SPA framework, we review and summarize research on sustainable consumption in China in particular on three consumption fields: food, housing energy and mobility. It is found that introducing more efficient production technology is commonly taken as the focal point in these sectors when sustainable consumption was introduced to China. Despite a rising interest in consumers' perceptions of products' sustainability in recent years, research has rarely paid any attention to consumers' behavioural change or to the transition dynamics towards sustainable consumption. In general, 'individualist' perspectives have largely dominated Chinese sustainable consumption research. This paper proposes to move attention to a better understanding of Chinese consumption issues by emphasizing the link between the provision of sustainable products and the diverse sustainable consumption practices. Also, images of food, energy, mobility and other consumption products that are undergoing transitions need to be considered in future research as these have consequences for socio-technical changes, material infrastructures and for 'lifestyle' innovations.

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1. Introduction

When the world convened in 1992 at the UN Conference on Environment and Development in Rio de Janeiro, sustainable consumption and production (SCP) has been recognized as an overarching theme to link environmental and development challenges. In 2012, the United Nations adopted the Ten-Year Framework of Programmes on SCP to integrate policies and actions on SCP. Worldwide, many academics, civil society organizations and business groups are getting involved into activities to enhance the sustainability of production and consumption, particularly in Europe and the USA. As yet, China is not that visible in the knowledge and research networks on sustainable consumption

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although these networks are becoming more global in scale. However, as the largest developing country, it is especially important for China to get involved into this global SCP network, in order "to 'leapfrog' to more resource-efficient, environmentally sound and competitive technologies and consumption practices, allowing the country to bypass inefficient and polluting phases of development", as stated by UNEP.¹

Unsustainable production and consumption are major causes of global environmental problems such as global warming, air and water pollution and reduction of biodiversity. In recent decades, globally production was taken as the focal point for global efforts to promote sustainable development and significant progress has been achieved in alleviating pollution through production-side control and cleaner production technologies, including in China. However, such achievements tend to be overtaken or offset by the

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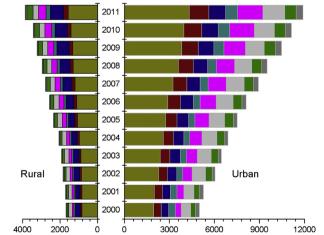
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http://www.rona.unep.org/about_unep_rona/SCP/index.html.

consequences at the consumption side, through consumption growth and unsustainable consumption patterns (Noorman, 1998; Midden et al., 2007).

In the last decade, Chinese household consumption expenditures have increased dramatically and this growth is expected to continue. As shown in Fig. 1, both urban and rural household consumption expenditures increased about three fold between 2000 and 2011. This high-speed economic growth can be attributed to an investment-led national strategy reinforced by industrialization, urbanization and the emergence of a new middle class (Steinbock, 2010). However, it is likely this development path is going to be changed, as projected by McKinsey & Company, "the country will maintain its growth momentum by transitioning from an investment-led economy into a consumption-driven and service-driven economy by 2030" (McKinsey and Company, 2012). Accordingly, a strategic adjustment in economic growth is recognized by the government (as emphasized by prime minister Keqiang Li in annual 'state of the nation' work report 2015), the consumers' contribution to GDP growth should be accelerated.

Increasing consumption is not always accompanied by positive social effects such as accelerated income growth, while unsustainable consumption patterns may cause large pressures on the environment. Many studies have related environmental problems such as growing carbon footprints, rising emissions of SO₂, NO_X and COD with booming household consumption in China (Liu and Wu, 2013; Zhang, 2013; Fan et al., 2012). It has been proved that household consumption accounts for a large proportion of these pollutants and carbon emissions, especially when consumption induced indirect (e.g. carbon) emissions are also taken into consideration. Considering both the direct and indirect environmental impacts, the greenhouse gas emissions resulting from household consumption in China are higher than in most other parts of the world except for the USA and Europe (UNEP, 2010). Although the per capita carbon footprint in China is still lower than for those OECD countries, the figure has dramatically risen in the past decade and there is evidence that in 2012 per capita emissions of China were already comparable to those in EU countries and almost half of those in the US (PBL NEAA, 2013). The ecological footprint of the Chinese is expected to continually increase considering that urbanization is expected to increase in the future



Annual consumption expenditures per capita (Yuan)

Fig. 1. Annual per capita consumption expenditures between 2000 and 2011. (Data source: China Statistical Yearbook, 2001–2012; the prices are corrected for inflation, taking 2000 as the base year).

Household Facilities. Articles and Services

Education, Cultural and Recreation Services

Residence

Transport, Post and Communication Services

and the national income to continue to grow while so far the footprints of the rural population are much lower than for urban residents. Consumption patterns in China are also changing from meeting basic life needs to pursuing higher quality life needs. For example, according to data on household consumption expenditures (see Fig. 1), the share of expenditures for transport services increased from 7.9% to 14.2% and from 5.6% to 10.5% for urban and rural residents respectively, between 2000 and 2011.

Expanding consumption and increased environmental concerns in China are calling for the promotion of sustainable consumption, however, so far scholars or policy makers have not paid much attention to it. In an effort to fill this gap, this research makes an assessment of scientific research on 'China and Sustainable Consumption', conducted so far. This assessment is done in order to identify the themes that are put centre stage at the moment as well as the major gaps that come to the fore when taking an international, comparative perspective. With this assessment we aim to contribute to framing the future research agenda on China and SCP.

In the following section, we discuss the concept of sustainability. Then, in section 3, we review different theoretical perspectives to consumption behaviour, followed, in section 4, by the introduction of an integrated conceptual framework for sustainable consumption analysis. In section 5, we review sustainable consumption research in China on the basis of three themes. Finally, we conclude by discussing research gaps and a research agenda.

2. Defining sustainable consumption

Sustainability or sustainable development has been defined in many ways. The most well-known and frequently referred to definition is from the Brundtland Report (WCED, 1987), which states that sustainable development is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs". This definition has become a starting point to build sustainability knowledge. Environmental impacts are defined as the influence of humandominated systems of production and consumption on the Earth system as a result of restructured biophysical resources. These impacts can be measured with instruments such as lifecycle analysis (LCA) and material flow analysis (MFA). Sustainability interferes in economic development through the environmental consequences of economic activities. Early definitions of sustainable consumption therefore clearly favour a concentration on production processes and consumer products, suggesting that the route to sustainable consumption lies mainly in more efficient production of more sustainable products (Jackson, 2006. pp. 4). However, it has become evident that purely product-oriented approaches are not sufficient to achieve sustainable development and that we need to focus on lifestyle and consumer behaviour as well (UN, 2002). When households or citizens are involved in ecologically modernizing the economy, indicators have to be reformatted according to the rationale of their life-world to make policy targets recognizable and perceptible for citizen-consumers (Spaargaren, 2003). Together the life-world of consumers and the economic rationales of production and distribution codetermine behaviour that leads to environmental impacts. Sustainable consumption is not only the consumption of sustainable products, but involves various activities along the different stages from primary production to final consumption. Therefore, there is need for social science research that goes beyond production and technology and that includes lifestyle and household behavioural practices. The study of sustainable consumption is embedded in an extensive and complex literature involving disciplines as diverse as consumer research, psychology, sociology, social philosophy, anthropology and economics (Jackson and Michaelis, 2003).

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