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Critical Evaluation of Key Challenges to the Sustainable Development: Case Study of Brazil and China

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Abstract

In summary, limited accountability for action represents other key challenge preventing emerging market economies from successfully promoting sustainable development. The underlying reason can be found in the relatively under-developed institutions which fail to enhance the level of transparency and accountability. Distinct approach towards accountability has been uncovered in China and Brazil, depending on the underlying societal values. While a bottom-up approach has been revealed in Brazil resulting in the public-led accountability pressures, a top-to-bottom approach based on government actions has been pointed out in the case of China. Active collaboration with non-governmental organisations in Brazil has been highlighted as one of the key policy measures which allowed the country to at least partially overcome this challenge tied to sustainable development in emerging market economies. The following section of the presented essay focuses on rapid urbanisation as the next challenge preventing developing countries from effectively pursuing sustainable development.

Keywords: Sustainable development; Economic; Accountability; Critical evaluation; Social values

Introduction

Over the recent decades, the notion of sustainable development has attracted an increased amount of attention from academics, policy makers as well as general public [1-3] paradigm [4]. In this context, the term sustainable development can be defined as an extension of economic metrics of growth and considering social as well as environmental aspects of growth [1] according to which the capability of future generations to attain their well-being should be sustained" [2]. The normative perspective on sustainable development highlights some of its key objectives, including economic prosperity, social inclusion, environmental sustainability and good governance [3]. Overall, the very notion of sustainable development seems to be multi-faceted and complex construct. In line with this level of complexity, sustainable development can be associated with several challenges impeding nations' progress in this direction [4].

Patterson [5] highlighted the inherent trade-off between economic and environmental or social values as one of the key challenges impeding the level of sustainable development, particularly in the context of developing countries. A practical example can be made of China, where economic growth still represents a key priority despite the considerable effort put on the notion of sustainability [6]. The second main challenge can be found in the process of building in accountability for action [5] referring to the fact that sustainable development requires active participation of a wide range of different stakeholders, obscuring the level of responsibility and accountability which impedes the level of progress [2]. The third main challenge, especially in the context of emerging market economies, relates to the high levels of urbanisation which often undermines the sustainability efforts [7].

The presented essay seeks to critical evaluate these three key challenges to the sustainable development and national responses to these challenges, using case studies of Brazil and China. Although both of these countries are classified as emerging market economies or developing countries, significant differences between them affecting their approaches towards sustainable development can be uncovered. On the one hand, Brazil relies heavily on its service sector to fuel national economy [7] and the need for sustainable development is widely acknowledged by the local population [8]. On the other hand, China still represents a manufacturing-based country [7] where the notion of sustainability was in the recent past associated merely with providing enough food to eradicate extreme poverty [6]. The critical analysis and discussion encompassed in this essay thereby highlights the extent to which the three key challenges affect respective case study countries in their achievement of sustainable development and explores the differences in national responses to these challenges. Overall, the socio-cultural perspective embedded in the analysis within this essay enhances the level of understanding of the studied phenomenon and provides the underlying explanations for the different approaches adopted by respective countries.

Managing Difficult Trade-offs

As pointed out in the recent World Economic and Social Survey [9], the economic and social as well as environmental progress remains uneven. The underlying mega trends in the form of globalisation, inequalities, demographic diversity and environmental degradation all highlight the urgent need for change [9]. Patterson [5] emphasised the challenge in managing difficult trade-offs between economic, social and environmental objectives encompassed within the sustainable development framework. An example can be made of the continued use of fossil-fuel subsidies in China that support domestic economic growth, yet result in substantial negative impacts on the environment [10]. The complex nature of achieving a balance between energy security and environmental protection in the case of China has been further pointed out by Cui et al., [11]. While some of the proponents of the renewable sources of energy suggested that recent growth in the photovoltaic industry in China can be considered to represent a clear sign of a more sustainable development [12], the underlying

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economic factors should not be neglected [13]. This also represents one of the key differences between Brazil and China in terms of how management of difficult trade-offs affects sustainable development in respective countries. As pointed out by Brubaker [6], economic growth remains the uppermost priority in China, yet the level of awareness about social and environmental issues in Brazil encourages a positive action [8]. Since the focus on sustainability in Brazil is primarily driven by consumers and corporations [8] substantial differences between individual industries can be observed. Camioto et al. [14] explored these differences and revealed that while the textile sector contributes greatly towards sustainable development, metallurgical and some of the other manufacturing sectors provide the lowest level of contribution towards sustainable development. In relation to the composition of economies of China and Brazil, the dominance of manufacturing sector in China predisposes the country towards greater challenges in terms of promoting sustainable development.

In terms of responding this challenge for sustainable development, fundamentally different approaches can be uncovered in China and Brazil. On the one hand, a top-to-bottom approach regulated by the government prevails in China [13]. On the other hand, a bottom-up strategy driven by the public and private sector corporations can be found in Brazil [8]. As pointed out by Abreu et al. [15] the higher level of awareness and responsiveness of sustainability practices in Brazil can be attributed to the presence of coercive and normative forces within the society, which are currently still lagging behind in China. The main development in China in this regard therefore revolves around the inclusion of both "eradicating poverty" and "protecting the environment" as strategic objectives within the China 2030 Agenda for Sustainable Development [16]. In practical terms however, this strategic commitment has so far failed to translate into practical implications and trade-offs between economic, social and environmental objectives are still resolved in favour of the economic objectives.

An associated challenge can be found in the report published by Swanson and Pinter [17] who highlighted the practical difficulties in providing an effective feedback mechanism that would ensure monitoring, learning and adaptation. Essentially, although the vast majority of nations have their respective statistical offices that provide data and information regarding the key indicators related to sustainable development, Swanson and Pinter [17] revealed that only very few of these offices have developed integrated sets of indicators that would enable them to assess the trade-offs between economic, social and environmental dimensions as part of the broader sustainable development. Building on the argument that monitoring and evaluation represent key steps towards understanding the situation and devising potential improvements, effective assessment of the progress in terms of sustainable development and its various dimensions is needed in order to allow nations to manage the difficult trade-offs more effectively. An example can be made of the assessment methods proposed by Holden et al., [18] which include four main elements: long-term ecological sustainability, basic needs satisfaction, intergenerational and intergenerational equity. Respective metrics and consequent analysis are however largely missing in both China and Brazil, undermining their potential to overcome the challenge in terms of managing difficult trade-offs.

To conclude, the notion of a trade-off between economic, social and environmental objectives is well-acknowledged in the existing body of literature on the topic of sustainability [1-3]. While the on-going academic debate on corporate social responsibility has provided a strong business case for the alignment of economic, social and environmental objectives [4] for sustainable development. The analysis within this section revealed that distinct approaches towards sustainability in Brazil and China predispose individual countries towards different effects of this particular challenge. Essentially, the lower level of environmental and social awareness embedded in the Chinese society results in the fact that economic objectives are typically favoured against social and environmental goals. A considerable step forward in this regard can be found in the 2030 Agenda for Sustainable Development which seeks to combine economic, social and environmental objectives within a single framework of sustainable development. The following section of this essay builds on the outcomes of the discussion on the management of difficult trade-offs in promoting sustainable development and evaluates the second main challenge-accountability for action.

Accountability for Action

The second main challenge can be found in the process of building in accountability for action [5], referring to the fact that sustainable development requires active participation of a wide range of different stakeholders, obscuring the level of responsibility and accountability which impedes the level of progress [2]. From a comparative point of view, a considerably greater pressure for promoting accountability for action exists in Brazil than in China. Building on the outcomes of public surveys, the population of Brazil seems to be highly concerned about environmental issues, with over 90% of them perceiving key issues (e.g., air pollution, climate change, biodiversity loss) as very serious problems [19]. Public-led pressures towards promoting sustainable conduct can also be associated with the exceptional performance of Brazil-based companies in terms of their sustainability performance as demonstrated by a number of Global Reporting Initiative awards received by these companies [19]. Echegaray [19] went even further and revealed that Brazil represents one of the very few countries that came close to meeting the GHG emissions targets set at the COP-15 meeting. The level of accountability for action in terms of sustainable development has been therefore very high in Brazil over the past decades, primarily due to the high level of awareness and public's involvement. A particular measure that allowed Brazil to overcome this challenge even further can be found in the close collaboration with a number of non-governmental organisations, such as Green Choice Alliance, that advocate for increased transparency in environmental performance [8].

A different approach can be found in the case of China where corporate social responsibility guidelines have been first published in 2008, a year when Brazil-based companies have already been winning Global Reporting Initiative awards [8]. Corporate social responsibility codes established by multinational organisations have been typically stricter in promoting accountability for action than any of the domestic laws and regulations in China [8]. Additional example can be found in the context of GHG emissions. As the world's largest emitter of GHG, China has included the development of an effective carbon-trading market into its strategic objectives [20]. This action was based on the argument that a functional carbon-trading market allows for the management of a difficult trade-off between economic and environmental objectives and supports the general goal of reducing GHG emissions. However, as revealed by Liu et al. [20], the carbon-trading market currently operating in China is far from being functional and one of the key reasons for this failure can be found in the lagging legislation. Essentially, the case study provided by Liu et al. [20] on carbon-trading market in China reveals that although accountability for action in China tends to be driven by the governmental policies, institutional failures impede the extent to which China has been able

to overcome this particular challenge associated with sustainable development.

Rapid Urbanisation

The third main challenge impeding the progress in sustainable development within emerging market economies as discussed in this essay revolves around the rapid pace of urbanisation. Although this challenge is apparent in both of the studied countries, the practical context of China and Brazil respectively represent distinct issues for sustainable development. The rate of urbanisation measured as a percentage of population living in cities has increased significantly in both of these emerging market economies. In the case of Brazil, a growth in urbanisation from 46% in 1960 to 86% in 2015 can be observed [21]. A similar rate of increase can be associated with China where the rate of urbanisation increased from 16% in 1960 to 56% in 2015 [21]. On the one hand, the absolute rate of urbanisation is considerable higher in Brazil than it is in China. In Brazil, the main challenge associated with rapid urbanisation lies in the form of Amazon forest in the northern region of the country [7]. Essentially, given the limited land, further urbanisation in Brazil can be linked to a negative impact on the conservation of the country's biodiversity and eco-environment, particularly in the area of the Amazon forest [7]. On the other hand, although the absolute rate of urbanisation is considerably lower in China than it is in Brazil, seven out of ten post polluted cities in the world are located in China [22], highlighting the negative impacts of rapid urbanisation on the environment and the general goals of sustainable development. Increasing energy demands, demands for transportation infrastructure combined with the lack of water sources further exacerbate the challenges faced by China as a consequence of rapid urbanisation [22].

In response to these challenges posed by a rapid pace of urbanisation, distinct responses have been introduced by Brazil and China. While China developed a systematic effort for mitigating the negative environmental and social aspects associated with the rapid urbanisation (e.g., high level of air pollution in large cities) as codified in terms of 2030 Agenda for Sustainable Development [16], questions can be raised about the shift in Brazil's response towards these challenges. As pointed out by Ferreira et al. [23] recently announced major infrastructural projects in combination with the natural resource extraction projects promoted by the newly elected government in Brazil suggest a divergence from the long-established practice in protecting the environment. The necessity for major infrastructural projects stems from the increasing urbanisation in Brazil, however, it would seem that considerably greater emphasis was put on balancing the economic and environmental needs in the past [23]. Given the greater severity of the situation, Chinese response in this regard can be found in city-related regulatory measures, such as banning traffic in major cities during selected days. Broader and more strategic policies in terms of energy production and regulation are however largely missing and hence, China continues to be the largest energy consumer as well as CO_2 emitting country [24]. As pointed out in the previous sections of this essay, a trade-off between economic and environmental objectives can be identified in this regard in terms of the widely acknowledged need for adoption of renewable energy production systems [12] and the negative impact of abandoning fossil-fuel energy production in terms of economic growth and levels of employment [10].

Overall, rapid urbanisation has been pointed out by Zeng et al. [7] as another key challenge impeding the progress of emerging market economies in terms of sustainable development. The underlying reason can be found in the inadequacy of existing infrastructures and regulations to support the broader move of the population into the cities. This challenge has been particularly significant in China as the rate of urbanisation has triple over the last 50 years [21]. Although the population growth has been continuously declining in both countries over the recent years [25], it is the continued urbanisation that leads to air pollution, major infrastructural works and other environmental and social issues impeding the potential for sustainable development. Particular shortcomings in strategic responses of both Brazil and China have been pointed out in this section of the presented essay, linking the issue of rapid urbanisation with previously discussed trade-off between economic and environmental objectives. As pointed out by Cobbinah et al. [26], "managing urbanisation and poverty is essential to achieving sustainable development".

Conclusion

The aim of the presented essay was to critically evaluate three of the main challenges impeding the progress of emerging market economies in terms of sustainable development. Moving beyond the underlying economic paradigm, the concept of sustainable development has been defined in this essay as the consideration of economic, environmental and social objectives at the same time to support development and growth that can be sustained for future generations. Two case study countries, namely China and Brazil, have been selected to provide a practical context for the assessment of the three key challenges and the national responses towards these challenges. Some of the key characteristics predispose China to experience greater difficulties in promoting sustainable development, with its reliance on manufacturing sector playing a key role. A more significant difference between the two nations can however be found in the social attitudes towards sustainability. While sustainability is playing a key role in Brazil and its importance is widely acknowledged and promoted by the general public as well as corporations in the private sector, the notion of sustainable development in the Chinese context has been for long associated merely with reducing the extent of extreme poverty and hunger. In line with the first of the three main challenges discussed in this essay, the trade-off between economic and social and environmental objectives as part of the sustainable development thereby plays a more significant role in China and influences the policy towards economic rather than social and environmental objectives. Although China has adopted a number of policies and regulations addressing this challenge and promoting sustainability as the key factor of the future developmental efforts, the inclination towards economic objectives can be observed from the relatively limited extent of these policies as well as the limitations in their practical implementation.

Building on this general conclusion drawn in the discussion relating to the first of the three main challenges impeding sustainable development in the context of emerging market economies, the second challenge (accountability for action) has been examined. On the one hand, the accountability for action can be defined as bottom-up in Brazil, referring to the fact that the general public expects their government to promote sustainability goals and to be held accountable for its conduct. On the other hand, a top-to-bottom approach prevails in China as the vast majority of developments in terms of sustainability have been driven by governmental policies.

The third and the final challenge impeding sustainable development as discussed in this essay revolves around the high pace of urbanisation in emerging market economies. This challenge has been shown to exacerbate the environmental issues as well as key challenges discussed in the previous sections of this essay. The main outcome of the discussion

within the presented essay however relates to the fact that these three challenges are highly interlinked as evidenced from the trade-off between economic and environmental objectives which is exacerbated by the high pace of urbanisation. Overall, not only have the individual emerging market economies (Brazil and China) have responded to the examined challenges in a different way but also the very impact of these challenges has varied between the studied countries. The underlying socio-cultural perspective allowed the researcher to explore the social and environmental values prevailing in respective countries, revealing that the process of overcoming challenges and promoting sustainable development depends on the values embedded within a particular society.

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