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Editorial

Multinational Enterprises, Sustainability and Innovation

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In recent decades, multinational enterprises (MNEs) have increasingly endeavored to establish foreign direct investments (FDIs) across the globe. Consequently, they must face diverse and differential sustainability agendas, due to the homogeneous and heterogeneous sustainability issues and policies emerging from both home and host countries [1]. In this vein, MNEs must realize superior methods of establishing sustainable development and innovation-based solutions in both home and host countries [2]. Furthermore, the number of studies on sustainable international business and innovative practices by MNEs in developed markets has rapidly increased in recent years, providing knowledge on shareholder values, environmental agendas, and processes for managing macroeconomic instability. Indeed, there has been a stream of literature focusing on sustainability-oriented innovation, relating to both the environmental and social aspects of sustainability. Of these two, the environmental aspect has been particularly driven by the market demand for more sustainable products, and by strengthening environmental regulations and the desire for cost reductions. Nevertheless, unfortunately, there has been lack of studies focusing on sustainable international business and innovative practices by MNEs in emerging and frontier markets [1,2]; however, Brazil, Russia, India, China, and South Africa (BRICS) have undeniably progressed in terms of sustainable development and innovation-based solutions, by virtue of the operation of MNEs inside and outside of their home countries [1]. Additionally, innovation has assumed a rather different form in the case of emerging market MNEs (EMNEs) [3]. As research and development possibilities are limited, learning by doing and organizational capabilities possess greater weight in EMNEs [4,5]. Although the innovation of some EMNEs from advanced emerging markets, for example, South Korea, Singapore, Taiwan, etc., is scientifically savvy, even when compared to those of developed countries [4,5], the innovation of other EMNEs, especially from less-advanced emerging markets, is scientifically less refined than those of developed countries and has generally not involved frontier technologies [6]. The alternative type of innovation pursued by EMNEs, especially considering sustainability issues, thus requires a deeper investigation; this looks at the creation of technology more comprehensively than by simply considering the sphere of research and the patenting activity [6]. Thus, the objective of this Special Issue is to overcome the limitations of the existing studies, which have mostly focused on developed markets, and to expand our relevant themes for research into the realm of international business sustainability and the search for innovative solutions by emerging and frontier market MNEs.

For this Special Issue, we invited both conceptual and (qualitative and quantitative) empirical articles, as well as literature reviews and meta-analysis articles from a range of fields; these included not only business and management, but also sociology, political science, psychology, economics, and economic geography, among others. Our examples of the relevant topics included in this issue are as follows:

- How do EMNEs shape sustainable development and the related innovations in home and host countries via sustainable processes and innovative solutions? How are they similar to or distinct from advanced market MNEs?

- What are the challenges or opportunities that these EMNEs are presented with when considering the unique political, cultural, religious, and commercial environments of their home and host countries, in order to achieve their sustainability and innovation objectives?
- How does context affect these EMNEs' sustainable practices and innovative solutions, especially for the country of origin and considering the domicile pressures in home and host countries?
- How do recent environmental disruptions, such as the global financial crisis of 2008 and the current COVID-19 pandemic crisis, affect sustainable international business practices and innovative solutions, based on the social and environmental responsibility of corporate enterprises in emerging and advanced markets?
- How do developed versus emerging/frontier market MNEs enhance their sustainability and innovation based on their human resources, transnational, or virtual teams when they face challenges to the enhancement of their sustainable practices and innovative solutions?
- Can the high-level internationalization of EMNEs lead to superior corporate sustainability, which encompasses various social issues, including stakeholder wellbeing and environmental protection?
- The legal guarantee of the sustainable development of the green economy; MNEs, political stability, and the risk of emerging capital markets; foreign executives, R&D innovation, and corporate social responsibility; green innovation efficiency; and path innovation for labor security and flexible employment.

This Special Issue on MNEs, Sustainability and Innovation contains a collection of thirteen papers that address several subjects that are related to the themes discussed above. The authors of these contributions study the boundaries of the previous literature on these relevant topics by providing insightful findings and review, as well as proposals for future research ideas in various contexts. We will elaborate upon the summary of these thirteen contributions to our Special Issue below.

Using an organizational learning perspective, Kim, Lee, and Shim explore the corporate activities of exploitation versus exploration in regard to firm performance (Contribution 1). These two contrasting activities require differential corporate structures, strategies, and environments. Kim et al.'s investigation into "how implementing organizational ambidexterity affects managerial performance in small- and medium-sized enterprises (SMEs)" can expand the existing literature on this topic. Kim et al. explore the impact of the ambidexterity strategy of SMEs on corporate performance. Kim et al.'s observation of the positive relationship between ambidexterity in SMEs and their managerial performance conforms with the previous literature on ambidexterity in larger organizations [7].

Kim, Choi, and Zhang explore the principal *ex ante* determinants of the staff localization of MNE subsidiaries, and locate the collective effects of cultural distance, local subsidiary experience, and local competition intensity (Contribution 2). In their study, Kim et al. extend the existing "home–host country" perspective to the "home–intermediary–host country" association; they used 520 observations from survey data collected by the Export–Import Bank of Korea during 2006–2013. Kim et al.'s research theoretically contributes to the subject of MNE behavior by expanding the existing perspective of cultural distance to the "home–subsidiary–subsidiary structure".

Zhou, Lei, and Jiménez explore the potential determinants of the international competitiveness of state-owned enterprises (SOEs) and locate the influence of foreign shareholders' corporate social responsibility and the moderating effect of R&D, based on a sample of internationalized Chinese SOEs during 2011–2019 (Contribution 3). Zhou et al. find that R&D innovation strengthens the relationship between foreign shareholders' corporate social responsibility and international competitiveness. Zhou et al.'s study contributes to the current debate and provides insight into the role and performance of foreign shareholders in the "mixed-ownership-reform" process.

By applying the longitudinal data of 11 provinces and cities in the Yangtze River Economic Belt during 2005–2018, Wu, Fu, Zhang, Wu, and Sindakis employ the "SBM-DEA efficiency model", with an undesired output, in order to measure the green innovation efficiency of the economic zone in China (Contribution 4). Wu et al. find that, while the Chinese government's environmental laws/rules and subsidies for green innovation technology can enhance the efficiency of regional green innovation, government investment in environmental governance aggravates the efficiency of regional green innovation. In particular, Wu et al. observe that, when government investment exceeds a certain threshold, the negative impact turns into an opposite impact.

Polloni-Silva, Roiz, Mariano, Moralles, and Rebelatto utilize the panel data econometrics, alongside Data Envelopment Analysis (DEA), in order to examine the environmental impact in regions that can attract FDIs; this includes, for example, more well-developed regions with robust infrastructures, via an investigation into the environmental cost of attracting FDIs (Contribution 5). With the new perspectives on the FDI–environment debate, Polloni-Silva et al.'s observations suggest that the FDI is heterogeneous, with its presence in peripheral regions being more inclined to harm the environment.

Müller-Pérez, Acevedo-Duque, Llanos-Herrera, García-Salirrosas, Ovalles-Toledo, Barraza, and Álvarez-Becerra seek to determine which factors are likely to have a more substantial impact on Mexicans' intention to buy green products, ecological awareness, or moral obligation, and to determine the extent to which moral obligation is influenced by ecological awareness (Contribution 6). Müller-Pérez et al. find that moral obligation and ecological awareness can provide some explanation regarding the intention to purchase green products. Müller-Pérez et al.'s study contributes to the literature on consumer behavior, based on an insight that encourages firms to manufacture sustainable products, and to understand and promote a "green consumer behavior".

Utilizing A-shares, a dataset of non-financial and non-real estate listed firms in Shanghai and Shenzhen markets between 2015 and 2020, Gao and Jin investigate the impact of financial technology on firm innovation and examine the influence of organizational characteristics on the association between financial technology and innovation through a moderation model (Contribution 7). Gao and Jin reveal that financial technology enhances the feasibility of serving enterprises; this technology reshapes financial services, which, in turn, augments organizational innovation, while the mechanism is heterogeneous.

Based on a dataset representing the Chinese stock market between 2014 and 2020, Gao, Lin, and Zhai evaluate the effect of digital transformation on a firm's international strategy (Contribution 8). Gao et al. confirm that digital transformation has a positive relationship with the international strategy of Chinese firms. The firms that increasingly pursue digital transformation, increasingly implement international strategy; they possess a higher level of internationalization, along with the mediation effect of corporate innovation.

Iwaloye, Im, Olarewaju, Gbadamosi, Alves, and Trimarchi argue that the Chinese firms' strategic choice is preferable, in order to avoid direct confrontation with established large firms from developed countries who possess superior ownership advantages on their own (Contribution 9). Iwaloye et al. examine the ownership advantages of resources seeking Chinese firms in the overseas markets and by applying the OLI theory; they contribute to explaining the specific advantages of Chinese MNEs when they enter emerging markets, with a focus on resources seeking Chinese MNEs operating in Nigeria.

Lin, Zhai, and Zhao empirically examine the effect of industrial poverty alleviation on the sustainable economic growth of the region, considering the regulatory effect of digital innovation (Contribution 10). Lin et al. observe that digital innovation produces a regulatory effect; if firms seek digital innovation and conduct a higher degree of digital innovation, their industrial poverty alleviation behavior is likely to have a more significant role in promoting regional economic growth.

Du, Shao, Jiménez, and Lee conduct a systematic review of the literature focusing on the corporate social responsibility of Chinese MNEs and extract six key constructs: "(1) the relationship between corporate governance and CSR practice, (2) the relationship between institutional environments and CSR practice, (3) the relationship between resources and capabilities and CSR practice, (4) the relationship between strategy/activity and CSR practice, and (5) the relationship between corporate performance and CSR practice" (Contribution 11).

Using the provincial data of China between 2005 and 2019, Li, Zhang, Jin, and Huang empirically investigate the influence and moderation mechanism of the reverse technology spillovers of outward FDIs on domestic-manufacturing Green Total Factor Productivity (GTFP) (Contribution 12). Li et al. find that absorptive capacity, characterized by human capital, economic development and financial development, can adjust the influence of the reverse technology spillover of outward FDIs on manufacturing GTFP; of these, financial development has the most significant positive moderation effect.

Lastly, Shin and Choi pursue empirical evidence regarding the way in which digital competency contributes to the innovativeness of medical research and the institutional environment; this has been a research gap (Contribution 13). Based on the data of 63 nations, Shin and Choi investigate how national-level digital competency influences the innovation of medical research and how it tests the moderation of the government and the economic environment.

Conflicts of Interest: The authors declare no conflict of interest.

List of Contributions

1. Kim, G.; Lee, W.J.; Shim, H. Managerial Dilemmas and Entrepreneurial Challenges in the Ambidexterity of SMEs: A Systematic Review for Execution System. *Sustainability* **2022**, *14*, 16550. https://doi.org/10.3390/su142416550.
2. Kim, C.B.; Choi, S.-J.; Zhang, L. Determinants of Staff Localization in Headquarters-Subsidiary-Subsidiary Relationships. *Sustainability* **2022**, *14*, 249. https://doi.org/10.3390/su14010249.
3. Zhou, Y.; Lei, C.; Jiménez, A. Foreign Shareholders' Social Responsibility, R&D Innovation, and International Competitiveness of Chinese SOEs. *Sustainability* **2022**, *14*, 1746. https://doi.org/10.3390/su14031746.
4. Wu, F.; Fu, X.; Zhang, T.; Wu, D.; Sindakis, S. Examining Whether Government Environmental Regulation Promotes Green Innovation Efficiency—Evidence from China's Yangtze River Economic Belt. *Sustainability* **2022**, *14*, 1827. https://doi.org/10.3390/su14031827.
5. Polloni-Silva, E.; Roiz, G.A.; Mariano, E.B.; Moralles, H.F.; Rebelatto, D.A.N. The Environmental Cost of Attracting FDI: An Empirical Investigation in Brazil. *Sustainability* **2022**, *14*, 4490. https://doi.org/10.3390/su14084490.
6. Müller-Pérez, J.; Acevedo-Duque, Á.; Llanos-Herrera, G.R.; García-Salirrosas, E.E.; Ovalles-Toledo, L.V.; Barraza, L.A.S.; Álvarez-Becerra, R. The Mexican Ecological Conscience: A Predictive Model. *Sustainability* **2022**, *14*, 7050. https://doi.org/10.3390/su14127050.
7. Gao, Y.; Jin, S. Corporate Nature, Financial Technology, and Corporate Innovation in China. *Sustainability* **2022**, *14*, 7162. https://doi.org/10.3390/su14127162.
8. Gao, F.; Lin, C.; Zhai, H. Digital Transformation, Corporate Innovation, and International Strategy: Empirical Evidence from Listed Companies in China. *Sustainability* **2022**, *14*, 8137. https://doi.org/10.3390/su14138137.
9. Iwaloye, O.O.; Im, H.K.; Olarewaju, A.D.; Gbadamosi, A.; Alves, J.; Trimarchi, M. The Emergence of Resources Seeking Chinese Firms' Specific Advantages in Emerging Market. *Sustainability* **2022**, *14*, 8345. https://doi.org/10.3390/su14148345.
10. Lin, C.; Zhai, H.; Zhao, Y. Industrial Poverty Alleviation, Digital Innovation and Regional Economically Sustainable Growth: Empirical Evidence Based on Local State-Owned Enterprises in China. *Sustainability* **2022**, *14*, 15571. https://doi.org/10.3390/su142315571.
11. Du, S.Y.; Shao, X.; Jiménez, A.; Lee, J.Y. Corporate Social Responsibility of Chinese Multinational Enterprises: A Review and Future Research Agenda. *Sustainability* **2022**, *14*, 16199. https://doi.org/10.3390/su142316199.
12. Li, Y.; Zhang, X.; Jin, C.; Huang, Q. The Influence of Reverse Technology Spillover of Outward Foreign Direct Investment on Green Total Factor Productivity in China's Manufacturing Industry. *Sustainability* **2022**, *14*, 16496. https://doi.org/10.3390/su142416496.

13. Shin, W.; Choi, B. Digital Competency, Innovative Medical Research, and Institutional Environment: A Global Context. *Sustainability* **2022**, *14*, 16887. https://doi.org/10.3390/su142416887.

References

1. Lee, J.Y.; Choi, J.; Xiao, S.S.; Lew, Y.K.; Park, B.I. How do the institutions matter for MNE subsidiaries' CSR in host countries? Evidence from Chinese overseas subsidiaries. *Bus. Res. Q.* 2023; *in press*. [CrossRef]
2. Lee, J.Y.; Ma, Y. The impact of the exchange of sustainable technological HR innovation knowledge within Chaebols on the performance of global subsidiaries. *J. Korea Trade* **2021**, *25*, 108–127. [CrossRef]
3. Lee, J.Y.; Choi, B.C.; Xiao, S.S. Unpacking the drivers of emerging market firms' international joint venture formation: The interplay between technological innovation strategies and home- and host-institutional pressures. *J. Bus. Res.* **2021**, *134*, 378–392. [CrossRef]
4. Lee, J.Y.; Yang, Y.S.; Park, B.I. Interplay between dual dimensions of knowledge sharing within globalized chaebols: The moderating effects of organization size and global environmental munificence. *Int. Bus. Rev.* **2020**, *29*, 101637.
5. Zeng, Y.; Song, S.; Lee, J.Y.; Choe, S. Investment attributes and learning from failure in foreign direct investments. *Long Range Plan.* **2022**, *55*, 102109.
6. Lee, J.Y.; Taras, V.; Jiménez, A.; Choi, B.C.; Pattnaik, C. Ambidextrous knowledge sharing within international R&D teams and MNE performance: The moderating effects of cultural gaps between teams and subnational regions in China. *Manag. Int. Rev.* **2020**, *60*, 387–425.
7. Lee, J.Y.; MacMillan, I.C. Managerial knowledge-sharing in chaebols and its impact on the performance of their foreign subsidiaries. *Int. Bus. Rev.* **2008**, *17*, 533–545. [CrossRef]