

Guest Editorial Preface

Special Issue on Sustainable Development and Entrepreneurship: Developing Sustainable Entrepreneurial Thinking

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INTRODUCTION

Sustainable development has been widely discussed amongst academics and practitioners due to the importance of protecting the environment whilst sustaining the economic goals of organizations. Business growth and its connection with the success of the economy and welfare have been taken for granted throughout the history of industrialization and the globalization of the economies (Kyrö, 2001). This has led to researchers and practitioners currently dealing with the challenges of developing business and innovation models that integrate issues of competitiveness and sustainability.

Entrepreneurship has been recognized as a major conduit for sustainable products and processes, and new ventures are being held up as a panacea for many social and environmental concerns (Farinha, Ferreira, & Gouveia, 2014; Hall, Daneke, & Lenox, 2010; Pacheco, Dean, & Payne, 2010). Sustainable entrepreneurship is an emerging field that focuses on future innovations (Carayannis & Von Zedtwitz, 2005; Parrish, 2010). According to Miles, Munilla, & Darroch (2009), the focus of managers in sustainable management, may result in stimulating entrepreneurship, leading to the discovery or creation, evaluation and exploration of new market opportunities, converted to help organizations achieve a competitive advantage.

Sustainable development and entrepreneurship are increasing in significance as the global business economy focuses more on environmental issues. Thompson et al (2015, p. 609) states “academic inquiry that combines sustainable development and entrepreneurship is still quite nascent”. Sustainable entrepreneurship is different to other forms of entrepreneurship as it focuses on creating long term benefits for society. This involves focusing on the business environment, societal norms and community values (Thompson et al., 2015). By focusing on multiple aspects of economic development sustainable entrepreneurship helps to build societal well being. As global business looks more at economical use of scarce resources this is helpful in disseminating new information about potential innovations. This special issue helps to fill the gap in the literature by discussing sustainable development and entrepreneurship from international authors.

Sustainable entrepreneurship involves focusing on the preservation of the community and environment whilst pursuing business opportunities (Shepherd and Patzelt, 2011). This involves supporting the current environmental ecosystem by developing innovative products, services and processes. The goal of sustainable entrepreneurship is to include both economic and social goals in order to sustain current environments. Sustainable entrepreneurs focus on opportunities presented by market failures towards environmental behavior (Dean and McMullen, 2007). This market-oriented strategy means that entrepreneurs look to grass roots initiatives to provide solutions for environmental problems and to encourage socio-economic development by finding bottom up solutions (Thompson et al, 2015). Societal value is then created by innovating in an environmentally friendly manner (Cohen and Winn, 2007).

The sustainable allocation of environmental resources is important for facilitating growth but also protecting social wealth (Pacheco et al, 2010). Despite the interest in sustainable entrepreneurship and management there is little research on this dynamic business topic. It is important to have more dialogue about sustainable entrepreneurship to initiate change by providing examples and studies about this issue. This presents an opportunity to contribute to the interest in sustainability by taking an entrepreneurial posture to economic development. In addition, it is crucial in extending sustainable entrepreneurship to a range of business management topics.

IMPORTANT ISSUES IN SUSTAINABLE ENTREPRENEURSHIP

For this Special Issue, we have selected eight papers that make us think about how developing a sustainable entrepreneurial thinking and which offer insights to any organization where a sustainable entrepreneurship is a critical thinking.

The rich collection assembles worldwide contributions from several countries. We have split the papers into three clusters: 1) Social responsibility and sustainability; 2) Innovation, competitiveness and growth; and 3) Circular economy, green products, and sustainable resources.

Cluster 1: Social Responsibility and Sustainability

The first paper, “Universities’ Contributions to Sustainable Development’s Social Challenge” by A. Silva, J. Cunha and P. Benneworth, investigates the roles played by universities in driving several social innovations in order to deliver a sustain sustainable development. A case study approach is adopted. The study suggests that socially innovative university projects may contribute to community social sustainability maintaining social cohesion by increasing social capital and providing resources for empowerment of disenfranchised citizens. The authors argue that the role of universities in the context of fostering social innovation and promoting sustainable development falls in the wider context of universities’ third mission – community engagement and social development, recognizing universities potentially important roles around addressing important socio-economic and environmental problems.

The next paper “Corporate Social Responsibility - An Integrative Approach in the Mining Industry”, analyses the corporate social responsibility (CSR) practices in a Mining industry focusing particular on its environmental and social impacts and how these practices are integrated on management control system. A content analysis of the various interviews was carried out for this study. The authors, M. Alves and M. Rodrigues, highlight the influence of institutional and social-cultural factors for the implementations of the social responsibility practices. They also alert that CSR practices were studied in an industry with a great environmental impact and inserted in an international group represents a significant contribution in terms of knowing the Portuguese reality for the study of CSR in multinationals.

The last paper in this group is on, “Science parks approaches to address sustainability: A qualitative case study of the science parks in Spain”. N. Laguna and G. Durán-Romero present a qualitative snapshot of a set of selected Parks in Spain with the objective of analysing their general approaches on sustainability. This study has practical implications by highlighting the relevance of

STPs' sustainable performance and suggesting their potential as generators and disseminators of sustainable practices. The quintuple helix constitutes the theoretical framework of this study. According to the authors, multiple helix model relies on the circulation of the resource of knowledge through the subsystems (helices), new institutions are needed to facilitate cooperation and transferences. Scientific and Technological Parks (STP) arise in the centre of the triple helix model as key "hybrid agents of innovation".

Cluster 2: Innovation, Competitiveness and Growth

In the second group, we examine a further two papers about how Innovation, competitiveness and growth are connected to sustainable entrepreneurship. The first paper, by C. Fernandes, P. Veiga, M. Peris-Ortiz and C. Rueda-Armengot, entitled "What impact does innovation and sustainable entrepreneurship have on competitiveness?", intends to bridge the gap of the literature on the relationship between innovation and sustainable entrepreneurship. The authors used quantitative methods and deployed aggregate data at the national level gathered by the environment, population, international trade, labour and national accounts statistics, from the Organization for Economic Cooperation and Development (OECD) for the period 2005 and 2012 for the 35 member states of this organisation. This study demonstrates not only how innovation impacts on the launching of new companies but also nurtures environment connected innovation and therefore reflecting a rising concern about the needs of both surrounding ecosystems and the planet in general.

In "Conditions Supporting Entrepreneurship and Sustainable Growth", L. Farinha, J. Ferreira, S. Nunes and V. Ratten focus on the national framework conditions and entrepreneurial culture, which are important factors in providing territorial competitive advantage, resulting in higher innovativeness and entrepreneurship levels. The study aimed to clarify which macro and microeconomic variables from World Economic Forum, Global Competitiveness Index and Global Entrepreneurship Monitor variables contribute most to the explanation of the sustainable growth of nations and entrepreneurial activity. The results reveal that the relationship between innovation and entrepreneurship has different effects depending on geographic location.

Cluster 3: Circular Economy, Green Products, and Sustainable Resources

The first in the final section of papers is by O. Gulseven and J. Mostert, on "Application of Circular Economy for Sustainable Resource Management in Kuwait" and proposes to enhance the creative and innovative potential of Gulf Council countries, (particularly Kuwait) by introducing multidisciplinary field of circular economy in small and medium enterprises (SME). In this article, the concept of circular economy is discussed with potential specific applications that are feasible within the Kuwaiti enterprise system. The applications are based on circular economic framework and emphasizes recycling and resource efficiency. The authors argue that, in case of SME, the human role, particularly the manager/owner is essential for application of new production techniques that reduces waste. Therefore, the role of risk tolerance in circular economy also needs to be emphasized.

The second paper, "Enhancing Regional Produce as Green Products for the Global Market: An Exploratory Study in a Portuguese Region", developed by M. Gaspaer, j. Julião and B. Tiahjono, explores the sustainability dimension of the endogenous resources, which come from the Beiras region, in Portugal. The authors examine the proposed exportation claim to the global market, in order to determine if this factor increases their export potential. Data were collected through eight semi-structured interviews to academic researchers and decision-makers. The role of local ecosystem actors on a multi-helix point of view was discussed and their potential contributions to enhance a dynamic and competitive positioning of regional endogenous produce were identified. The authors suggest that beyond the role of local academia, the remaining actors of the local ecosystem also have to be assessed vis-à-vis identifying and developing the most promising strategy to effectively promote local distinctive endogenous products to the global market.

Our final paper is on “Sustainable entrepreneurship, family farms and the dairy industry: Sustainable entrepreneurship, family farms and the dairy industry”. V. Ratten and L. P. Dana aimed to contribute to the small business literature existing about family farms and rural entrepreneurship focusing on understanding of collaborative, social and sustainable entrepreneurial practices. A case study methodology using in-depth semi-structured interviews of 12 family owned dairy farms was conducted. The study supports the notion that family farm members should focus on how they can be rural entrepreneurs in order to adapt to global changes in the agricultural industry. Furthermore, the study highlighted how entrepreneurship will differ in rural regions and how managers can integrate better into their communities based on the entrepreneurial strategies of collaboration, social and sustainability.

CONCLUSION

Sustainable entrepreneurship and management will continue to grow as more businesses become interested in combining environmental, social and economical goals. There are a variety of ways business can be sustainable and a useful way to understand this is by focusing on development activities (Ratten and Ferreira, 2017). This special issue included a number of articles on sustainable entrepreneurship and development, which help to build the research dialogue around this important topic. More research still needs to be conducted in terms of understanding how entrepreneurs stimulate economic growth whilst improving social and living conditions. This might be understood by focusing on how innovation and entrepreneurial ecosystems develop to create sustainable outcomes. Alternatively it might be useful to look into the inter-connected challenges that make circular business models work in practice because of their sustainability outcomes (Ratten, 2011). An interesting future research avenue is also how to apply new projects based on a sustainable business model to stimulate innovation. We hope the articles included in this special issue will further encourage research in sustainable entrepreneurship and development.

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REFERENCES

- Carayannis, E. G., & Von Zedtwitz, M. (2005). Architecting gloCal (global-local), real-virtual incubator networks (G-RVINs) as catalysts and accelerators of entrepreneurship in transitioning and developing economies: Lessons learned and best practices from current development and business incubation practices. *Technovation*, 25(2), 95–110. doi:10.1016/S0166-4972(03)00072-5
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29–49. doi:10.1016/j.jbusvent.2004.12.001
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50–76. doi:10.1016/j.jbusvent.2005.09.003
- Farinha, L., Ferreira, J. J., & Gouveia, J. B. (2014). Innovation and Competitiveness: A High-Tech Cluster Approach. *Romanian Review Precision Mechanics. Optics & Mechatronics*, 45, 41–48.
- Hall, J. K., Daneke, G. A., & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing*, 25(5), 439–448. doi:10.1016/j.jbusvent.2010.01.002
- Kyrö, P. (2001). To grow or not to grow? Entrepreneurship and sustainable development. *International Journal of Sustainable Development and World Ecology*, 8(1), 15–28. doi:10.1080/13504500109470059
- Leydesdorff, L. (2012). The Triple Helix, Quadruple Helix, ..., and an N-Tuple of Helices: Explanatory Models for Analyzing the Knowledge-Based Economy? *Journal of the Knowledge Economy*, 3(1), 25–35. doi:10.1007/s13132-011-0049-4
- Miles, M. P., Munilla, L. S., & Darroch, J. (2009). Sustainable corporate entrepreneurship. *The International Entrepreneurship and Management Journal*, 5(1), 65–76. doi:10.1007/s11365-008-0074-3
- Neubert, M. J., & Dyck, B. (2016). Developing sustainable management theory: Goal-setting theory based in virtue. *Management Decision*, 54(2), 304–320. doi:10.1108/MD-05-2014-0312
- Pacheco, D. F., Dean, T. J., & Payne, D. S. (2010). Escaping the green prison; Entrepreneurship and the creation of opportunities for sustainable development. *Journal of Business Venturing*, 25(5), 464–480. doi:10.1016/j.jbusvent.2009.07.006
- Park, H. W. (2014). Transition from the Triple Helix to N-Tuple Helices? An interview with Elias G. Carayannis and David F. J. Campbell. *Scientometrics*, 99(1), 203–207. doi:10.1007/s11192-013-1124-3
- Parrish, B. D. (2010). Sustainability-driven entrepreneurship: Principles of organization design. *Journal of Business Venturing*, 25(5), 510–523. doi:10.1016/j.jbusvent.2009.05.005
- Provasnek, A. K., Schmid, E., Geissler, B., & Steiner, G. (2016). Sustainable corporate entrepreneurship: Performance and strategies toward innovation. *Business Strategy and the Environment*. doi:10.1002/bse.1934
- Ratten, V. (2011). Fundacion Maquipucuna: An entrepreneurial Ecuadorian non-profit organization. *International Journal of Business and Globalisation*, 6(2), 217–224. doi:10.1504/IJBG.2011.038491
- Ratten, V., & Ferreira, J. J. (2017). Future research directions for cultural entrepreneurship and regional development. *International Journal of Entrepreneurship and Innovation Management*, 21(3), 163–169.
- Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking what is to be sustained with what is to be developed. *Entrepreneurship Theory and Practice*, 35(1), 137–163. doi:10.1111/j.1540-6520.2010.00426.x
- Thompson, N. A., Herrmann, A. M., & Hekkert, M. P. (2015). How sustainable entrepreneurs engage in institutional change: Insights from biomass torrefaction in the Netherlands. *Journal of Cleaner Production*, 106, 608–618. doi:10.1016/j.jclepro.2014.08.011