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EDITORIAL

Questioning biodiversity and sustainability management practices: Time for a change in thinking?

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Abstract
Protecting biodiversity on the planet through business involvement is a priority for many governments and citizens. To do this requires balancing different social, financial, and ecological objectives with economic output. This editorial questions what is the right way to do this based on considering different forms of capital, such as natural, human, social, manufactured, and financial. This enables renewed interest in the natural environment in terms of business involvement in issues such as climate change and the circular economy.

Keywords: biodiversity; climate change; circular economy; human capital; sustainability

Introduction

Issues about biodiversity are increasingly common in public discourse and academic study debates. This stems from businesses emphasising sustainability management practices in order to show the marketplace and regulators their commitment to environmental objectives (Dunphy, 2003). Sustainability means having the capacity to continue current natural environmental conditions into the future. This equates to sustainability being a process that can include a number of steps, from managers embedding a focus on the environment to innovative ideas surrounding resource usage (Thomas & Lamm, 2012). The goal for sustainable processes is to keep something in existence for an extended time period. Sustainability involves an intrinsic capacity or way of being. It is a need to persist despite hardships and change. The main pillars of sustainability involve the economy and business and the natural environment and human relationships. These pillars are interdependent and are based on human and social capitals being utilised in the natural environment.

Sustainable production is important to business management as it is often necessitated by consumer interest in environmental issues (De Lange, Busch & Delgado-Ceballos, 2012). Unsustainable production occurs when environmental damage results from an activity. This can include inefficient waste procedures and carbon emissions that affect the quality of life for people around the world. The triple bottom line (people, planet, profit) or the 3P's is a way of analysing sustainable production initiatives. People are humans who interact with the environment and consumer products. The planet is the soil, air, and water that comprises different ecosystem environments. Profit is the financial rewards for conducting business activities. Each of these functions of the triple bottom line influences sustainability and how it can be attained by organisations (Von Der Heidt & Lamberton, 2011). Management practices are guided by their perceptions regarding environmental footprints caused by production. Sustainable production tends to involve the creation of goods and/or services in an environmentally

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friendly way (Galbreath, 2011). This means using systems that are not harmful to the environment and consider future human needs. The goal of sustainable production is not to pollute or have low levels of pollution. The pollution activities can be evaluated using different criteria depending on industry standards. Normally, pollution involves emissions that can be quantified, such as air and water quality. Increasingly sustainable production is valued as an economically viable alternative to previous production methods. This means considering the rewards for people involved and how a safe environment can be achieved. Healthy environments are those that address waste management by integrating better energy usage. The natural environment, in terms of land and water usage, is part of sustainable production methods. This means emphasising the dynamic interactions that occur in all environmental systems. Sustainable production practices need to ensure user-friendly recycling practices. This means considering water and energy usage as well as social justice issues.

Waste is a pressing issue in the global economy, and there is increased interest in reducing it through more efficient supply chains. The circular economy considers how products are sold at the retail end but also their production process (Ratten et al., 2019a). This means it offers a transformative way to consider concurrently economic and environmental prosperity (Muhammad & Migliori, 2023). By doing so, it acknowledges that human well-being is subject to being able to obtain good products but also being able to live in a safe environment.

Sustainable capital development

There are five main types of capitals that influence sustainability: natural, human, social, manufactured, and financial (Parkin, 2000). Each type of capital is different and provides a way to understand sustainability initiatives. Different types of capital can be conceptualised in specific ways and have flow on benefits. Natural capital involves resources that are normally in the environment, such as air, soil, and trees. This type of capital involves different kinds of resources that have special qualities. For example, natural resources such as gold, silver, and bronze can be taken from the earth to be utilised to make other things. These resources might be limited in terms of once they are mined then they cannot be used again. Some resources, such as coal and gas, can be difficult to acquire as they are under the earth. This means some regions might have a lot of natural resources due to their climatic conditions. Resources such as crude oil might need to be acquired in a special way that influences the surrounding areas. Whilst the selling of these resources can provide immediate benefits, long-term consequences need to be considered. The flow on benefits from natural capital are enormous and are needed to maintain human habitats. This includes access to fresh and clean drinking water as well as food sources such as fruit and vegetables.

Human capital involves the knowledge people have based on their skills and experience. Each person has unique skills that can be used in different ways depending on their knowledge. This includes their intelligence in terms of ascertaining information in the business environment. Often, people have special abilities that are based on their educational experiences. The way these skills are utilised may depend on having access to the right kind of information.

People are motivated by numerous factors, including wealth and achievement (Wright & Bennett, 2011). This means each person's intrinsic goals and Dr reasons for being should be considered. Whether this is possible depends on time availability and access to resources. The benefits of human capital grow when there is a diverse group of people. Different experiences in terms of religion, age, and location can influence human capital. This requires a creative use of human capital in order to make the best usage of knowledge. Some people are naturally better at verbal interactions and more suited to creative endeavours. Others like numbers and prefer statistical and factual information. Whilst there are people who prefer both verbal and numerical communication, there are social benefits to human capital that arise from communication mechanisms. This is a cause of happiness for many due to the sense of belonging found in social interactions.

Social capital involves the knowledge derived from social situations. This can include different kinds of relationships based on mutual need or interest. Often, this means family friendship and

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work relationships. Community and regional groups can play a role in increasing the level of social capital. The benefits of social capital include a sense of shared experience in terms of inclusion. It can also help to share knowledge and discuss things in order to get other's opinions.

Manufactured capital involves the built resources that are essential to society. This can include infrastructure such as roads, railways, and ports that are built and developed over time. The type of manufactured capital will depend on what is needed in a region for business. This includes services related to water and electricity usage as well as land availability. The benefits of manufactured capital mean less time in developing new sites. Moreover, industry clusters can develop over time based on collaboration.

Financial capital involves money that is acquired that can be used for activities. It can be in a variety of forms, and this includes cash, shares, and investments. Some forms of financial capital are readily available, whilst others take time to liquidate. The benefits of financial capital are numerous but include having the capacity to invest in new projects.

The natural environment

The natural environment plays a prominent and important role in the food industry. Soil, water, and air are part of the natural environment and are required in order to produce products. The term 'natural environment' varies over time due to existing norms and beliefs. This means it is generally understood as the natural habitat that existed for a long time and is untouched. This means it is natural and free of human interference. Some natural environments will not be untouched by humans, so there may be human interference. This means the conditions in terms of biophysical and natural elements are more important. Human life depends a lot on the natural environment in order to survive. These ecological systems require certain conditions to exist in terms of temperature and climate. However, the way a natural environment is conceived may be based on philosophy. This is due to some natural environments being human-made. Accordingly, when considering the natural environment, there should be an emphasis on biodiversity, no matter how it was introduced. This means the natural environment is based on physical conditions in terms of habitat. Humans have an inextricable relationship with nature that is not always obvious from interactions. It can be based on past, present, or future interactions that emphasise societal needs. Human survival depends in many ways on achieving an ecological balance with nature.

Humanity is part of the natural world, but humans often forget that they are bound by environmental conditions. Tied to the natural environment are sustainable development practices (Soares, da Silva Braga, da Encarnação Marques & Ratten, 2021). Old civilisations recognised their part in the natural world but increased industrialisation changed this relationship. Environmentalists bought back a need to re-emphasise this human–natural environment linkage (Moon & Orlitzky, 2011). The environmental impacts of industrialisation in terms of health conditions led to increased attention on the natural environment. More emphasis on conservation strategies has resulted in terms of protecting the natural environment. This coincided with a global recognition of different ways to measure sustainability in the natural environment.

Green innovation is a specific type of innovation that reflects more emphasis on environmental sustainability issues. It is considered a strategy aimed at introducing new business ideas that facilitate positive environmental change. As it highlights the use of the colour green in innovation, there is an emphasis on trees and nature. This makes it different from similar forms of innovation, such as environmental innovation and sustainable innovation. The key reason why it is called green innovation is the need to regenerate the earth. This means considering low-carbon growth and other ways businesses can be more innovative. Climate crises and global warming have necessitated a need to be innovative. This makes it a distinctive strategic process that incorporates green thinking. By focusing on the green nature of innovation, it still incorporates an idea of profit maximisation.

Green innovation supplements the concept of sustainability by emphasising proactive environmental action. The goal of green forms of innovation is to enhance global awareness about the

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environment that can be achieved through innovation. At the core of green innovation is a pursuit of ecological change via business growth. This means emphasising humanistic values in terms of increasing economic growth via environmental change.

More consumers want businesses to act sustainably due to concerns about the environment (Rabbi & Amin, 2024). This can be achieved by incorporating sustainability into products, processes, and practices. Products can be made in a more sustainable way by considering growth conditions such as land, air, and water. Increasingly smaller products are made with the intention that they are consumed faster and result in less waste. The processes surrounding production, including technology services, can be done in a sustainable way. This means considering what kind of data input and analysis is required. The practices around production can be complex but need to be considered in a sustainable manner (Parkin, 2000). This includes the time from production to output, as well as marketing ideas.

Consumers are expecting businesses to move beyond just financial interest to incorporate more societal interests. This means a positive social impact can be achieved that takes into account different perspectives. Environmental transparency is being encouraged as part of the emphasis on sustainability (Ratten & Babiak, 2010). Achieving a balance between financial and social initiatives that take a pro-environmental approach is required. Sustainability is now more evident in product features and marketing. This enables food businesses to indicate the importance of sustainability initiatives to others. In the past, corporate social responsibility was emphasised in businesses (Ratten et al., 2019b). The trend towards social issues has continued with an increased importance placed on a wider definition of social responsibility. This led to sustainability as a practice gaining momentum in the marketplace. The traditional view of corporate performance was on financial gain, which changed when the word 'social' was added to views around corporate responsibility. The common thread in defining both corporate social responsibility and sustainability is raising awareness about social issues. This means thinking beyond the current time period to appreciate future concerns. This long-term view enables more holistic thinking regarding consumption, production, and distribution patterns.

Businesses, both small and large, grapple with multiple issues regarding how to incorporate sustainability. Globally, products are changing, so with this alteration comes a need to consider emerging consumer needs (Ratten & Braga, 2024). Broader societal recognition of the environment has resulted in increased consumer expectations. This means prioritising sustainability in terms of a business having unwavering support. To ensure businesses prioritise sustainability, they need to be committed to environmental causes.

In uncertain environments, businesses need to be resilient in order to overcome challenges. Ambiguity and heightened tensions influence a businesses ability to adapt swiftly. It is now paramount for businesses to anticipate and nurture change. This means engaging in proactive management strategies that respond to change. There is a tendency of businesses to be complacent and accept the status quo. This might not always be a good idea when there are future changes. By being affirmative about change and responding to it appropriately, a business can be more agile. Organisational resilience means devising protocols about future potential scenarios. Making investments in new technology is needed in order to become ready for future needs. Businesses should actively engage in communication about sustainability. By being transparent, businesses are better able to overcome crises. Sustainability is a strategic imperative in businesses that ensures their long-term survival.

Climate change

Climate change is one of the greatest challenges to the production process as soil conditions change. It is a complex process that considers alterations in water, wind, and energy usage. The global economy is significantly affected by climate change in different ways depending on where and how products are made. It is not only producers that are affected by climate change but also others in related industries, including education and tourism.

The adverse effects of climate change need to be continually re-evaluated with new information coming to light. Farmers and food producers are directly confronted with changes caused by climate

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change. Others, such as employees and transportation providers, are also impacted due to weather changes. This means all members of the business ecosystem need to be considered. This presents a challenge due to the trade-offs associated with climate change that may benefit some people but harm others. As a result, the positives and negatives should both be considered in a holistic manner. This results in gains to parts of the economy but losses to other parts. What is bad to some entities might be good for others.

Climate change causes both direct and indirect effects but in different ways. The direct effects are heatwaves, other extreme weather events, and UV radiation, with indirect effects being bacteria and viruses, allergens, and air pollutants (Schneider & Mücke, 2024). Heatwaves involve high temperate occurrences that can occur in a short, extended, or sporadic time period. Intense heat can cause crops to be destroyed and make the picking of fruit difficult. Due to changes in weather conditions, heatwaves typically involve higher than average or expected temperatures. Global temperatures have steadily increased over the years but with increased urbanisation the effects have become more evident. This is due to the use of concrete on streets and in buildings that retain heat. Concrete heats up quickly, but it also has other effects, such as rainwater quickly draining off an area instead of soaking the land. Just a small increase in temperatures can have big effects on food cultivation and human living standards that require certain temperatures. When the temperature alters, it can mean remodelling or changes to the food production system. The scope of heatwaves has changed, with some occurring at times previously not thought of as being possible. This has led to a re-evaluation of food systems in terms of how they are grown and transferred. When high temperatures exist, there may be a need for additional refrigeration. Without the appropriate climate for food, it may lose its effectiveness and need to be destroyed. Warmer air temperatures may be good for some food crops but there normally needs to be some planning in order to obtain these benefits. This is due to food being grown from seeds or cultivated in certain environments.

Environments such as those requiring coolness or shade are more affected by heatwaves. The changing temperature may result in a move to other types of environments. The unknown nature of heatwaves further makes it difficult in terms of planning. Increased temperatures may result in food being spoiled or unfit for usage. This can lead to further effects in the food ecosystem. The air temperature and humidity might also affect food in different ways. This can include the existence of water that can lead to mould and other bacteria growing. In storage spaces with food, the heat stress can cause problems. This means technology is needed in order to monitor heat.

Overheated spaces cause difficulties for the preservation of food but also for workers. Air conditioning and fans may be used in order to alleviate this change. Heatwaves affect outdoors grown food but also food grown indoors, such as that by hydroponics. Food tends to need specific temperatures to be grown properly, with some food only ripening under certain temperatures. Food does not necessarily have the ability to quickly change based on temperature alterations.

Extreme cold can affect food production systems, especially in terms of frost. When expected temperatures do not change, this causes unplanned events. Food systems may have some leeway regarding change but normally require specified temperatures. Cold temperatures may mean moving fruit to new locations or crops being destroyed. Preventative measures can be implemented to deal with extreme cold or heat but may take some time to implement. Furthermore, they can be costly to acquire and install. This means changes to profitability levels for food providers.

Circular economy

The circular economy is a concept central to the use of sustainability in society. It recognises the need to reuse and recycle things in order to contribute to economic development. The core aim of the circular economy is to consider the impact of production on others. Many organisations try to include a circular economy strategy as part of their sustainability initiatives. The circular economy has become a popular topic in terms of environmental management policies. It is defined as 'a regenerative system in which resource input and waste, emission, and energy leakage are minimised by slowing, closing

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and narrowing material and energy loops thanks to long-lasting design, maintenance, repair, reuse, manufacturing, refurbishing and recycling' (Geissdoerfer, Savaget, Bocken & Hultink, 2017:759). This means there is an emphasis on the continual flow of resources to make new things. By doing so, it promotes a rethink about waste and newness. This means businesses need to consider how to increase revenue whilst being sustainable. This opens up new possibilities and enables different forms of risk to be better managed.

The idea of a circular economy is not new, as it has been practised for some time. The name though is new in terms of emphasising reuse and regeneration. It is built on the foundations of ecological economics but also includes many other areas of interest in the natural sciences and environmental management. As a result, the term can be defined in multiple ways. Most definitions though highlight the need to consider resource usage with economic gain. This means the circular economy research focuses on resource efficiency and environmental health.

The circular economy is an umbrella term due to its incorporating consumption and industrial production concerns. Resources often cannot be fully destroyed, so it is important to consider future usages. This means resource usage can be created but also reused in different ways. It is hoped that, to facilitate better environmental management, resources should be converted into other forms. By doing so, the practical idea is in recycling.

Food waste contributes significantly to overall waste but there has been a change towards biodegradable food wastage that can be used for other purposes. A circular economy strategy tries to reduce food wastage by considering resource usage. Rabbi and Amin (2024:1) describe the circular economy as 'a flow of different materials and energy occurring in the circular economy (i.e., production, distribution, and consumption)'. The production of food means how food is grown and made. Typically, this has meant farming and agricultural methods, but recently, more sophisticated technological based methods have emerged. The distribution of food means how it is sourced and then transferred to consumers. This process typically involves different kinds of transportation methods. The consumption of food means how it is consumed by members of society. Mostly food is eaten, but it can also have a decorative form in terms of being displayed at ceremonies or events.

Adhering to a circular economy strategy involves considering how food is used at every stage of the value chain from production to consumption. Enhancing awareness of the circular economy is a way to minimise food wastage by educating others. This is important in building awareness in the community about a range of issues regarding good. Certain areas of the food production supply chain, such as water usage, may be more emphasised than other areas. This means social marketing and other forms of communication mechanisms can be used to increase awareness.

Conclusion

Biodiversity and sustainability is important to the environment and well-being of society. In order to meet the goals of the future, sustainable systems have been emphasised in terms of biophysical, economic, and social conditions. Sustainable systems should focus on facilitating a healthy environment in an economic profitable way. This can be achieved through both financial and social equity that emphasises a holistic approach. By doing so, products and outputs that are healthy but also affordable can be produced. It should also mean that the food is in a safe and natural form with few additives. This will enable a better way for growers, retailers, and consumers to work together.

Sustainable production is a politically complex issue due to its need to consider multiple points of view. This means using environmentally friendly systems that emphasise technology innovation but at the same time adhere to social guidelines. Consumers are increasingly placing emphasis on sustainability, and this means it plays a prominent role in marketing efforts. There are wider issues associated with sustainability related to ethical and moral issues that further complicate issues.

The future of the global business industry is affected by environmental problems that are intertwined with economic issues. Due to the preponderance of sustainability problems reported in a range of contexts, there is an urgent need to understand their effects. Sustainability plays a key role in

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facilitating growth but also ensuring humanity survives. The extent and magnitude of environmental problems can differ. A number of fruits and vegetables, as well as livestock, are under threat from changing environmental conditions. The duration of these threats differs due to the approach humans take. The growth of human activities regarding food has increased, with different geographical conditions being affected. The notion of sustainability differs, so new approaches bridging old with new techniques are required.

Sustainability is now the subject of much debate and discussion. This is due to the challenges the global supply chain industry and the global population face in meeting new demands. Any environmental change is likely to be bested on a number of factors, including human and weather conditions. The overall consensus regarding sustainability is that it needs to be considered in different ways. Many environmental problems are caused in some way by humans, and this includes air pollution and land degradation. The decline in fresh water and rising tide levels further complicates conditions. Ocean and river acidification affects the types of food available in society. This has created unprecedented change in terms of biodiversity conditions.

Sustainability production systems exist across a number of sectors, including profit and non-profit. Any activity involving food includes a tangible element that is edible. Food, due to its relationship with the natural and business environment, is a topical subject. Despite the relevance of food in terms of its societal need, there is still a lack of literature on food sustainability and entrepreneurship. There is a number of articles, books, and web references on the topic but they are written based on the context. This means a more entrepreneurial perspective is required regarding biodiversity and sustainability. A pivotal change is needed in recognising entrepreneurship as the saviour of embedding biodiversity and sustainability goals into business. This will acknowledge entrepreneurship as a positive influence and gradually expand its role into management practices. Given the array of associated research on sustainability, it is natural to see a linkage with entrepreneurship. The urgency of increasing production means there is a call for the introduction of entrepreneurial thinking.

Government and non-government organisations recognise the relationship between sustainability and entrepreneurship. Global production directly and indirectly contributes to sustainability concerns. The natural environment is needed for production, so governments recognise a stakeholder approach. This means considering business, citizens, consumers, and society together in decisions.

A more sustainable thinking approach is required to facilitate growth. A growing proportion of research is focusing on biodiversity, sustainability, and entrepreneurship. This includes more emphasis on sustainability in the broader management and entrepreneurship literature but there still needs to be more creative approaches. Sustainability plays a strategic role in community actions and best practices. This means that the successful implementation of innovative biodiversity and sustainable entrepreneurship in a business context is required.

References

De Lange, D. E., Busch, T., & Delgado-Ceballos, J. (2012). Sustaining sustainability in organizations. *Journal of Business Ethics*, *110*(2), 151–156.

Dunphy, D. (2003). Corporate sustainability: Challenge to managerial orthodoxies. *Journal of Management & Organization*, *9*(1), 2–11.

Galbreath, J. (2011). Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *Journal of Management & Organization*, *17*(1), 17–38.

Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The circular economy–A new sustainability paradigm? *Journal of Cleaner Production*, *143*, 757–768.

Moon, J., & Orlitzky, M. (2011). Corporate social responsibility and sustainability education: A trans-Atlantic comparison. *Journal of Management & Organization*, *17*(5), 583–603.

Muhammad, H., & Migliori, S. (2023). Effects of board gender diversity and sustainability committees on environmental performance: A quantile regression approach. *Journal of Management & Organization*, *29*(6), 1051–1076.

Parkin, S. (2000). Sustainable development: The concept and the practical challenge. In *Proceedings of the Institution of Civil Engineers-Civil Engineering* (Vol. 138, No. 6, pp. 3-8). Thomas Telford Ltd.

https://doi.org/10.1017/jmo.2026.10096 Published online by Cambridge University Press

Rabbi, M. F., & Amin, M. B. (2024). Circular economy and sustainable practices in the food industry: A comprehensive bibliometric analysis. *Cleaner and Responsible Consumption*, *14*, 100206.

Ratten, V., & Babiak, K. (2010). The role of social responsibility, philanthropy and entrepreneurship in the sport industry. *Journal of Management & Organization*, *16*(4), 482–487.

Ratten, V., & Braga, V. (2024). Internationalization through digital empowerment for women filigree jewelry artisan entrepreneurs in Portugal. *Thunderbird International Business Review*, *66*(5), 419–427.

Ratten, V., Braga, V., Álvarez-García, J., & Del Rio, M. D. L. C. (2019a). Tourism innovation: The role of technology, sustainability and creativity. In V. Ratten, V. Braga, J. Alvarez-Garcia, & M. Del Rio (Eds.), *Tourism Innovation* (pp. 1–13). London: Routledge.

Ratten, V., Jones, P., Braga, V., & Marques, C. S. (2019b). Sustainable entrepreneurship: The role of collaboration in the global economy. In V. Ratten, P. Jones, V. Braga, & C.S. Marques (Eds.), *Sustainable entrepreneurship: The role of collaboration in the global economy* (pp. 1–7). Cham: Springer International Publishing.

Schneider, S., & Mücke, H. G. (2024). Sport and climate change—how will climate change affect sport? *German Journal of Exercise and Sport Research*, *54*(1), 12–20.

Soares, G. G., da Silva Braga, V. L., da Encarnação Marques, C. S., & Ratten, V. (2021). Corporate entrepreneurship education's impact on family business sustainability: A case study in Brazil. *The International Journal of Management Education*, *19*(1), 100424.

Thomas, T. E., & Lamm, E. (2012). Legitimacy and organizational sustainability. *Journal of Business Ethics*, *110*(2), 191–203.

Von Der Heidt, T., & Lamberton, G. (2011). Sustainability in the undergraduate and postgraduate business curriculum of a regional university: A critical perspective. *Journal of Management & Organization*, *17*(5), 670–690.

Wright, N. S., & Bennett, H. (2011). Business ethics, CSR, sustainability and the MBA. *Journal of Management & Organization*, *17*(5), 641–655.

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