

The Adoption of Circular Business Models in Small Island States: Challenges and Opportunities

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Received: 1. August 2024 / Accepted: 25. December 2025 / Published: 5. January 2026
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Abstract

Circular economy (CE) practices create solutions to environmental challenges facilitating commercial, financial and social benefits. Despite the considerable research about barriers and enablers to adopting circular business models (CBM) little is known about small and micro businesses operating in small island states. We address this gap by a qualitative study conducted with owner-managers in the Mediterranean island state of Malta. It emerges that the specifics of an island context – history, values and culture – may create challenges to the adoption of CBM in these states. Yet there are also opportunities which if used in policymaking will accelerate the CE shift. This study provides empirical data which, whilst complementing previous research, adds further knowledge about the adoption of CBM. It will assist policymakers and support educational programmes, aiding this island state, and regions with similar small business economies, in their CE transition.

Keywords Circular Economy · Circular Business Models · Small Island States · Owner-Managers · Challenges and Opportunities.

1. Introduction

CE is currently seen as a significant way for nations to improve their economies sustainably. The development of intergovernmental policy on sustainable production and consumption such as the European *Green Deal* and the United Nations *17 Sustainable Development Goals*, led governments to develop national circular action plans which impact business operations (UN, 2020; EC, 2019).

While developed countries are progressing well in the CE shift the transition is more challenging for small island states whose economy is dependent on small and micro businesses. In Malta such firms make 98% of registered businesses, employ 77.7% of the workforce and constitute the largest gross value-added share of the island's economy (NSO, 2024). As stated by Bowen *et al.* (2023) these businesses, key actors in small islands' circular transition, often lack resources, research and development, and CE expertise. These regions have distinctive characteristics including their economic and environmental vulnerabilities, and reliance on non-diversified industries such as tourism (UN, 2022).

Literature on CBM opportunities and barriers is extensive. Some authors focus on different geographic areas (e.g. Italy (Ghisellini *et al.*, 2016), Romania (Onicioiu *et al.*, 2018), developing countries (Cantu *et al.*, 2021)) but exclude small island states. There are authors who research specific sectors (e.g. automobile industry (Urbani *et al.*, 2021), hospitality (Bowen *et al.*, 2023), manufacturing (Upadhyay *et al.*, 2019)), or types of CBM (e.g. Vermunt *et al.* (2022), Geissdoerfer *et al.* (2020)). Further studies relate to SMEs (e.g. Dey *et al.* (2020) and Bowen *et al.* (2023)), but none studied only small and micro businesses. Neither have studies focused on exploring such businesses in small island states. Studies which are set in small islands primarily deal with sustainable tourism, waste management and energy planning and overlook the role of small business

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in the CE shift of these regions (Christensen *et al.*, 2022; Sciacca, 2020; Uche Soria and Rodriguez-Monroy, 2019;). In their systematic literature review Geissdoerfer *et al.* (2022) and Schultz and Reinhardt (2022) recommend further research on barriers and drivers in geographic contexts. Authors such as Sciacca (2023) and Hina *et al.* (2023) suggest the need for additional studies on small islands because of their heterogeneity. While Tura *et al.* (2018), state that research into owner-managers' individual factors as source for barriers and opportunities is scarce.

Therefore this study addresses such literature gap, investigating what hinders or enables small and micro businesses operating in a small island state from adopting CBM. We conducted 39 semi-structured interviews with owner-managers in Malta who were purposively selected. Emphasis is made on owner-managers because as stated by Bridge and O'Neill (2018) they are change agents in small businesses. The research was guided by Charmaz's (2014) constructivist grounded theory. The transcribed interviews were coded using the qualitative research software MAXQDA2024. Coding was done following Corbin and Strauss's (2015) three-stage exercise – the initial open coding was followed by axial coding to cluster related codes into subcategories and finally theoretical coding combined subcategories into main categories. To improve validity the constant comparison method was employed, where each interview was transcribed, coded and analysed before conducting the next interview.

2. CE Adoption – Challenges and Opportunities

The model in Figure 1, which derives from the study, indicates that the adoption of CBM is influenced by external, organisational, and personal factors. External factors influence owner-managers' personal factors which affect organisational factors. Turner and Endres (2017) also state that in small businesses owner-managers determine corporate values, culture, policies and strategies. Tables 2, 3 and 4 in the appendix present the challenges and opportunities emerging from these influences.

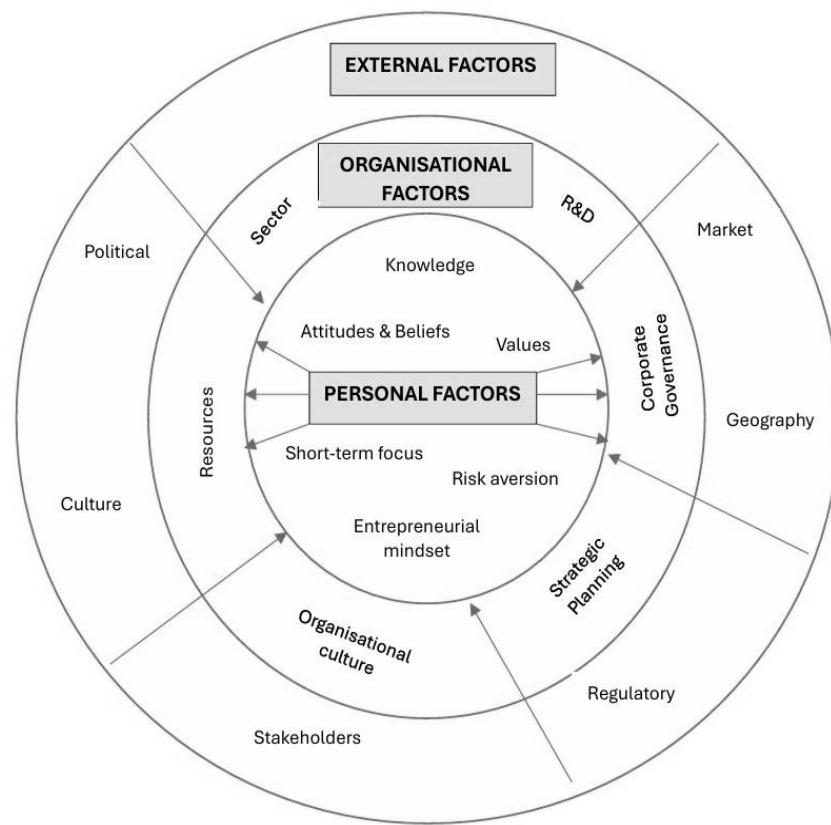


Figure 1. Challenges & Opportunities to the adoption of CBM by small & micro enterprises in small island states: a conceptual framework

There are similarities between the conceptual framework proposed by this study (see Figure 1) and the literature. For instance, similar to Korhonen *et al.* (2018), Geissdoerfer *et al.* (2020), and Schultz and Reinhardt (2022) the framework indicates sources of barriers and enablers originating from stakeholders (such as value chain actors) and from political, regulatory, and organisational factors. Similar to Cantu *et al.* (2021) the study indicates external and internal influences. External factors arise from outside the business, from regulatory frameworks, markets, supply chains and infrastructure. Whereas internal factors originate from within, from knowledge, resources and organisational matters (Tura *et al.*, 2022; Schultz and Reinhardt, 2022; Hina *et al.*, 2022; Blundel and Hampton, 2021; Vermunt *et al.*, 2019).

However, differences are observed which derive from the context of small businesses in a small island that offers notable challenges and opportunities. The challenges are primarily linked to these firms' lack of resources, limited innovation, and restrained CE expertise. Further challenges are created by the island's small size, limited biodiversity, resource constraints, high population density, economic dependence on importation, and reliance on tourism. The opportunities stem from resilience in recovering from external shocks such as the Covid-19 pandemic. These arguments lead to one conclusion: in small island states the context in which businesses align their business models to CE is different than those in other, larger, countries.

For example, culture is a significant influence, a factor which in literature about barriers and enablers in larger countries is given restrained attention (e.g., Geissdoerfer *et al.*, 2020; Schultz and Reinhardt, 2022). In fact the study indicates that a primary challenge springs from the colonial culture often characterising small island states. The looking to foreign rulers for validation and initiative has resulted in lack of confidence and dependence on others. This conservative culture tends to focus on preserving the status quo, is reactive, and limits innovation. It is an individualistic culture, based around family or the small local community. Lingering attitudes such as these make people indifferent to wider national or supra-national environmental problems like waste management. They are considered as distant issues and the job of "government" to solve. This links to another characteristic: that of expecting "free services" from government. Such cultural attitudes are also manifested in consumers who are largely still reluctant to adopt recycling and environmentally friendly consumption.

Geographic restrictions related to the island's small size is another challenge. They prohibit businesses from enjoying cost benefits emanating from economies of scale, which are required to make CBM economically viable for small and micro businesses. Yet the island's small size allows for quick adoption of best practices, encouraging changes needed for CBM. Governmental incentives and government's collaborations with professional associations in recycling and waste management help address the lack of economies of scale.

Although studies such as that of Chandra and Ismail (2023) address barriers arising from the absence of a robust policy frameworks, limited attention is given to implications of too much governmental intervention, a situation generally characterising small island states. Governmental support is required to overcome challenges related to constrained resources. Some examples are subsidies on utilities' prices and the exemption of small firms from policies in fuel consumption and waste management. However the study shows that too much governmental intervention reduces owner-managers' motivation to innovate or change their linear processes.

Owner-managers' mindset emerges as a major influence on CBM adoption. It is particularly significant because being economically dependent on small and micro businesses, the circular shift of islands is dependent on owner-managers. CBM adoption is only possible where there is an entrepreneurial mindset that favours change, problem solving, moderate risk-aversion, innovation, and continuous improvement (Kumar *et al.*, 2019). The study indicates that it is a challenging list for small business owners many of whom are more inclined to retain the status quo and avoid risk. Their priorities are short-term profitability and cost reduction, avoiding investments with payback periods longer than 3 years. This contradicts literature which concludes that small businesses foster entrepreneurship (Bridge and O'Neill, 2018; Daspit *et al.*, 2021).

Owner-managers feel to neither have time nor human resources to deal with environmental issues, which they consider the responsibility of government and of large organisations. They hold negative attitudes towards CBM, associated with additional cost burdens and regulatory requirements. With limited knowledge of circularity managers are unable to recognise the financial benefits of innovative CBM projects. Their mindset thus poses a significant challenge to CBM.

Nevertheless, the sustainable values of some, coupled with a mindset open to innovation in younger owner-managers familiar with digitalisation, is a primary opportunity. Another significant opportunity includes those who facing scarce resources, are already adopting recycling, even though they are unaware of using CE initiatives. The findings imply that owner-managers are at varying stages of adoption. Five types of owner-managers emanate from the research as described in the following table.

Table 1. Brief description of the five types of owner-managers

Alignment state	Description
Reluctant Adopters	These are owner-managers who lack entrepreneurial tendencies and have a low risk tolerance. They are not ready to take the risks that adopting CE might involve because they fear losing even what limited resources they now have. Their focus is on operational matters and their main priority is customer service. These owner-managers are ready to change their organisational practices only if constrained by major changes in the business environment such as in consumers' trends and regulations. They perceive the CE shift as a cost burden and as the responsibility of large businesses and government. Hence, they are ready to find loopholes in the law as long as costs are saved.
Traditionalists	Normally older in age, these owner-managers are conservative who preserve the traditional practices of doing business. Not necessarily consciously aware of CE practices they have been using recycling and re-use practices for a long time to maximise the use of their limited resources and to save costs. Such 'unconscious' sustainable-innovative instinct derives from Malta's history, which has had to manage with scarce resources to remain in business. Their priorities centre on survival and earning an income to sustain their family.
Semi-greens	These owner-managers tend to be less conservative and do exhibit some entrepreneurial traits. Their green values are prominent but their priorities remain short term profitability and cost savings. Therefore they will forgo CE practices if cheaper options such as packaging material are available.
Opportunists	These owner-managers have an entrepreneurial philosophy and are interested in research and innovation. They identify the economic benefits of CE and use CE initiatives to gain publicity. They consider this as a competitive advantage and their corporate vision aims for growth.
Eco-preneurs	Generally young, open-minded, and enthusiastic these owner-managers are more academically qualified than the other groups. High risk tolerance, passion, innovation, and a high level of entrepreneurial aptitude characterise these owner-managers. They place significant emphasis on growth, including international expansion. Their firms are extensively implementing CE initiatives by undertaking innovative design of eco-products.

3. Conclusion and Implications

This paper contributes to the debate around CBM in small businesses in the context of small island states. It shows that island states' specific context presents challenges and opportunities which differ from other regions. Prominent challenges are culture, geographic size and owner-managers' mindset. Yet there are potential opportunities related to islands' agility to change and the native efficient use of scarce resources. The study offers practical pointers to policymakers in developing educational programmes, incentives, resources, and regulatory frameworks to aid in the transition. These would create the enabling conditions for the implementation of CBM in businesses whilst reducing challenges. Clearly the heterogeneity of owner-managers stand out, showing that a 'one-fits-all' approach is unhelpful in dealing with the challenges. Further research may test the framework's conclusions and relevance in other small island states.

Acknowledgements The authors would like to thank all participants for their time, experiences and insights. Also, they would like to thank Dr. Ronald Aquilina for his expertise on the Grounded Theory methodology. Furthermore, the authors are grateful to the anonymous reviewers for their valuable feedback.

Author Contributions Carmelina Frendo contributed to the idea conceptualisation, the design of the study, data collection, data analysis and interpretation, and the original draft of the manuscript. Dr. Peter Packer reviewed and edited the manuscript. Both authors read and approved the final manuscript.

Funding Not Applicable.

Data Availability Not Applicable.

Declarations

Competing Interests The authors declare no competing interests

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Appendix

Table 2. Challenges & Opportunities Related to External Factors

Challenges	Opportunities
Political & Regulatory	
<ul style="list-style-type: none"> • Absence of a robust political & legal framework • Lack of law enforcement • Lack of eco-certification • Lack of recycling infrastructure • Administrative burden of grants/schemes systems • Grants/schemes favour medium and large firms • Government intervention limits innovation • Education system discourages innovation & entrepreneurship 	<ul style="list-style-type: none"> • Government financial and non-financial incentives • New regulations encourage recycling and reuse • Government's mechanisms for sectoral collaboration
Culture	
<ul style="list-style-type: none"> • A culture that favours tradition and status quo • High risk avoidance • An individualistic mindset • Indifference to national issues • Feeling of inferiority to foreign counterparts • Sense of non-collaboration 	<ul style="list-style-type: none"> • Shift in attitude which favours the environment due to extreme weather
Market/ Stakeholders	
<ul style="list-style-type: none"> • Majority of consumers prefer price over the environment 	<ul style="list-style-type: none"> • Young consumers' preference for green products • Stakeholders asking small firms for sustainability credentials
Geography	
<ul style="list-style-type: none"> • Lack of economies of scale • Insulated from Europe by sea 	<ul style="list-style-type: none"> • Agility to adapt to external stimuli • Good practices get imitated quickly

Table 3. Challenges & Opportunities Related to Organisational Factors

Challenges	Opportunities
Resources	
<ul style="list-style-type: none"> • Lack of financial and human resources • Lack of CE expertise 	
Strategic Planning	
<ul style="list-style-type: none"> • Lack of long-term planning • Prioritising short-term issues 	
Corporate Culture/ Research & Innovation	
<ul style="list-style-type: none"> • Preference for maintain current state • High resistance to change • Limited interest in research and innovation • Sustainability still considered a PR tool • Finding loopholes in the law • CBM considered as additional cost burden • Unwilling to seek external expert help 	<ul style="list-style-type: none"> • Flexibility to change • Customer-centred
Sector	
<ul style="list-style-type: none"> • Most small businesses operate in retail where CBM is limited to re-use and recycling • CE legislation is present only in few sectors • Some sectors are unrepresented by an association 	<ul style="list-style-type: none"> • A small number of manufacturers who are becoming aware of the economic benefits of CE
Corporate Governance	
<ul style="list-style-type: none"> • Lack of corporate governance structures and administrative skills lead to non-compliance and illegibility for grants 	

Table 4. Challenges & Opportunities Related to Owner-Managers' Personal Factors

Challenges	Opportunities
Knowledge	
<ul style="list-style-type: none"> Owner-managers lack knowledge about CE and most do not differentiate between CE and sustainability 	
Attitudes & Beliefs and Values	
<ul style="list-style-type: none"> CBM are thought to be relevant to medium and large firms Owner-managers expect solutions from government for macroenvironmental challenges Reluctant to collaborate with competitors Lack of green values 	<ul style="list-style-type: none"> Change in attitude towards the environment Young owner-managers feel the need for change Value cost savings techniques
Risk aversion & Entrepreneurial spirit	
<ul style="list-style-type: none"> Lack of entrepreneurial spirit Limited interest in research and innovation High resistance to change 	<ul style="list-style-type: none"> Only few owner-managers have an entrepreneurial mindset Entrepreneurs gain from CE's economic benefits
Planning & Short-term focus	
<ul style="list-style-type: none"> Only few owner-managers have planning skills They concentrate on short-term profitability Lack time to focus on the firm's strategic direction 	