Business model innovation and Industry 5.0: a possible integration in GLAM institutions

Antonio Botti and Giovanni Baldi
University of Salerno, Salerno, Italy

Received 29 September 2023
Revised 21 December 2023
11 January 2024
Accepted 24 January 2024

Abstract

Purpose – This research delves into the realm of Business Model Innovation (BMI), integrating it with the human-centric, sustainable, and resilient principles of Industry 5.0, proposing a new theoretical framework.

Design/methodology/approach – An abductive approach has been chosen to expand existing knowledge developing new ideas based on emerging phenomena. Data were gathered via semi-structured interviews with directors, managers and curators of public institutions in Italy, Switzerland, Germany and Spain encompassing Galleries, Libraries, Archives, and Museums (GLAM). These data were subsequently subjected to thematic analysis.

Findings – The findings indicate that the main enablers for Business Model Innovation (BMI) in combination with Industry 5.0 encompassed stakeholder, customer and organizational engagement, collaborative environment, knowledge and innovation management, and sustainability. These drivers were effectively leveraged through three pivotal facilitators-inhibitors: technology, resources, and leadership.

Research limitations/implications – The principal constraints are rooted in the narrow contextual focus and the limited participants number. However, upcoming research efforts may broaden the horizons of this multifaceted and extensive investigation.

Originality/value – This study is groundbreaking as it fills a significant gap in the existing literature by integrating Business Model Innovation (BMI) with the Industry 5.0 paradigm, a novel approach that has not been explored previously. Additionally, the inclusion of GLAM institutions in this research adds a unique dimension, as they have been largely overlooked in both research domains.

Keywords Museums, Cultural heritage, Innovation, Business model innovation, Industry 5.0

Paper type Research paper

1. Introduction

The impetus for innovation can be ascribed to two fundamental factors. Firstly, blue-sky research often leads to pioneering discoveries that have the potential to bring about fundamental changes in existing practices (Kilduff *et al.*, 2011; Troise *et al.*, 2022; Corvello *et al.*, 2022a, b; Fukuyama, 2018; Nambisan *et al.*, 2019). Secondly, the evolution of society creates a demand for fresh solutions, motivating individuals to explore and implement innovative approaches (Roco and Bainbridge, 2013). Moreover, exceptional events such as disasters and crises can serve as a third driver of innovation, as a resilient response (Dahles and Susilowati, 2015). In such situations, urgent needs and emerging challenges drive individuals to seek innovative solutions to address the pressing issues such as companies that turn crises into opportunities by developing new products or launching new collaborations, building antifragility behavior (Corvello *et al.*, 2022a, b). Nevertheless, it's important to note that these events do not consistently act as a constant driver of innovation, as their impact and occurrence can vary. To ensure that innovation is harnessed for the

European Journal of Innovation Management
Emerald Publishing Limited
1460-1060
DOI 10.1108/EJIM-09-2023-0825

greater benefit of society, it is imperative for both economic and political systems to establish optimal conditions from a top-down perspective but simultaneously must consider the critical aspects of inclusiveness and environmental sustainability, aligning with the principles of the evolution of Industry 5.0 which is bottom-up, merging harmoniously into a new perspective (Zhu, 2017). In the process of moving toward the realization of Society 5.0, the social entrepreneurship and especially cultural sector emerge as a pivotal lever upon which to build this transformative journey, yielding positive externalities for both the present and future society (Short *et al.*, 2009; Serpa and Ferreira, 2019).

The cultural sector encompasses a diverse range of enterprises, including those engaged in the creative industry and heritage conservation, such as Art Galleries, Libraries, Archives, and Museums (GLAM) (Cunningham, 2022; Stuart, 2021). These organizations serve as prime examples of social innovation due to their frequent encounters with social and environmental challenges (Eid, 2019; Camarero *et al.*, 2011). These challenges encompass the promotion of cultural diversity and accessibility, the preservation of cultural heritage, the mitigation of environmental impacts, and the facilitation of opportunities for local communities (Logan, 2016; Loach *et al.*, 2017). Furthermore, entities within the cultural sector frequently adopt innovative business models, such as resource sharing, collaborative partnerships, and extensive networking, all of which prove instrumental in addressing these social and environmental issues (Eid, 2019; Coblence and Sabatier, 2014). Indeed, the cultural sector has experienced significant transformations in recent years. These changes range from a surge in visitor numbers, abruptly - and temporary - disrupted by the Covid-19 pandemic, to the growing need for value creation and engagement with the visitors (Burton and Scott, 2007; Raved and Yahel, 2022; Tranta *et al.*, 2021). These shifts have necessitated the adoption of innovative museum management methods and strategies with a significant assist from new technologies (Healy and Witcomb, 2006; Black, 2020). Nonetheless, notable challenges endure, particularly as GLAM institutions primarily operate under public management or funding, safeguarding cultural heritage for the common good and social purpose (Davis and Howard, 2013). Furthermore, their increasing reliance on digital and virtual platforms as well as new immersive experiences, carries the potential to diminish their traditional significance (Langley, 2018). Consequently, challenges remain an ongoing concern for managers, curators, government bodies, and researchers operating within this sphere. Thus, this subject maintains its enduring relevance and importance.

Therefore, GLAM institutions must adapt and re-evaluate their business models through a 5.0 approach, with the aim of harmonizing and integrating innovation principles from both top-down and bottom-up perspectives. Given the central role that GLAM institutions play as leaders in the cultural sector, responsible for the preservation of artistic and cultural heritage on one hand, and on the other hand for advancing education and social progress, a meticulous conservation approach is sought after. By examining these types of social enterprises, valuable lessons can be extracted and applied to all other sectors of the economy. This overarching impetus served as the foundation for an initial exploration of the literature, which revealed a dearth of such research. Subsequently, the study delved into the fundamental principles of Industry 5.0 and focused on business model innovation (BMI) to identify a new framework capable of seamlessly amalgamating and adapting these principles within the context of GLAM institutions.

This exploratory study aims to integrate Business Model Innovation (BMI) and Industry 5.0 frameworks and to apply the up-and-coming one within the context of the cultural sector by conducting an empirical research.

To achieve this purpose, the paper is structured as follows: section 2 initiates with a comprehensive literature review encompassing Industry 5.0 framework, BMI framework, and Business Models (BMs) within GLAM institutions. Section 3 outlines the methodology and findings are subsequently presented in section 4. The paper concludes with discussions

in section 5 and conclusions in section 6, which includes study limitations and implications (6.1).

2. Literature review

2.1 Industry 5.0 framework

Industry 5.0 represents an evolution of last fourth industrial revolution (Industry 4.0) that falls within the scope of innovation driven by research, responding to emerging societal needs, and promoting environmental sustainability. Whereas Industry 4.0 has a mainly techno-economic vision and focuses on the automation of industrial processes through the use of advanced digital technologies such as the internet of Things (IoT) and Artificial Intelligence (AI), Industry 5.0 goes beyond and seeks to integrate these technologies with workers to create innovative solutions that serve humanity and the environment (Leng *et al.*, 2022). In other words, Industry 5.0 represents a more holistic and human-centered vision of Industry 4.0, aiming to use technology to improve the quality of life to be more human-centric, resilient and sustainable (Breque *et al.*, 2021; Ivanov, 2023).

Human-centricity and socio-centricity denote a paradigm in which human beings are beckoned to engage in synergistic collaboration with machinery, robots, and emerging technologies. The resulting value is expressly oriented towards the fulfillment of human requirements, with a view to advancing societal well-being, encompassing the welfare of employees, customers, and the broader populace. An indispensable prerequisite for the realization of this approach is the perpetual commitment to the education, training, re-skilling, up-skilling, and safeguarding of individuals within organizational structures (Breque *et al.*, 2021; Aheleroff *et al.*, 2022).

Resilience in the realm of business pertains to an organization's capacity to proactively foresee, ready itself for, effectively react to, and adapt in the face of disruptions, all with the overarching goal of sustaining uninterrupted operations and achieving long-term prosperity (Sheffi and Rice, 2005). This concept intricately intersects with several facets of the organization, including its cultural ethos, leadership efficacy, aptitude for innovative process and product development, commitment to investing in cutting-edge technologies, diversification of business through the establishment of novel revenue streams, and astute management of knowledge resources (Linnenluecke, 2017).

Sustainability, fundamentally conceived as a state of well-being, reflects a deeply rooted belief that humans can coexist harmoniously with the natural world, all with the ultimate objective of promoting overall well-being (Dodds, 1997). Nevertheless, in recent years, business sciences have recognized three pivotal dimensions: economic, social, and environmental. The economic dimension pertains to aspects such as growth, development, productivity, and long-term survival. The social dimension encompasses concepts of equity, empowerment, accessibility, participation, sharing, cultural identity, and institutional stability. Lastly, the environmental dimension is concerned with the preservation of ecosystem integrity and the sustainable management of natural resources.

In addition, Ivanov (2023) further dissects the three-tier structure of Industry 5.0, encompassing the plant level (micro), network level (meso), and society level (macro), with a specific emphasis on the supply chain. In this context, identifies four critical areas of focus: *organization*, *management*, *performance*, and *technology*.

Moreover, Industry 5.0 is driven by innovations and societal evolution, which reflects the paradigm of Japanese *Society 5.0* (Fukuyama, 2018) as they are closely interconnected. There would be no Industry 5.0 without Society 5.0 because the holistic and humanistic vision of this industrial revolution aims to achieve maximum integration and engagement of all stakeholders for the co-creation of shared and widespread value based on human needs and interests in all the sector of the society (Özdemir and Hekim, 2018; Maddikunta *et al.*, 2022).

The tenets of Industry 5.0 necessitate both the modification of existing business models and the creation of novel ones, aiming to enhance their resilience, sustainability, and human-centricity by incorporating fresh organizational principles, management perspectives, and digital technologies (Ivanov, 2023).

2.2 Business model innovation

Business model innovation (BMI) refers to significant changes in a company's approach to creating, delivering and capturing value by making novel, non-trivial changes to key elements or architecture of a business model (Teece, 2010). Every company, regardless of its structure, has its business model and despite the various definitions and classifications, it is essential to consider the factors involved in selecting and implementing different types of BMI in different organizations from diverse backgrounds and industries (Teece, 2018). In general, a business model fulfills two important functions: value creation and assimilation. It defines a well-defined set of activities, from the procurement of raw materials to the satisfaction of the end consumer who creates a new product or service, so that the value created stems from the various activities (Chesbrough, 2007). BMI can be achieved through technological innovation (Zott and Amit, 2010), customer observation (Chesbrough, 2010), collaboration with partners (Teece, 2007) and adaptation to market changes (Johnson *et al.*, 2008). The creation, refinement, implementation and transformation of business models are the result of dynamic capabilities, as well as organizational and managerial skills, understood as the ability to integrate, build and reconfigure internal skills to face business changes (Teece, 2007). The design of new business models requires an important balance between customer needs and technological capabilities consistent with the organization (Leih *et al.*, 2015). The business environment is changing dramatically due to the rapid globalization of technological advances. To cope with these changes, business models must also evolve rapidly by relying on innovative processes to survive. This economic landscape, characterized by IoT and Industry 5.0, requires the continuous introduction of new products and services to create value for enterprise, customers and the society (Aslam *et al.*, 2020; Reficco *et al.*, 2021). The analysis of innovative models and frameworks has shown that companies have difficulty innovating products and services in line with the needs of users, as there is a considerable gap between the business strategy and the innovation process (Wadho and Chaudhry, 2018). In this study we do not focus on the design of BMI through the stages of value creation, value delivery and value capture but on the key factors that are the antecedents and preconditions for a BMI to be implemented and succeed given the changes in society moving towards Industry 5.0 (Chesbrough *et al.*, 2018).

2.2.1 BMI antecedents. Huang and Ichikohji (2023) have categorized the antecedents of Business Model Innovation (BMI) into five distinct perspectives: technology-driven, strategic-driven, demand-driven, system-driven, and top-management-driven. It is widely known in the literature that changes in business models are a byproduct of the rapid evolution of information technology (Pateli and Giaglis, 2005). To compel users to embrace technology devoid of inherent objective value, companies must judiciously select the appropriate BMI strategy for introducing said technology to the market, as expounded upon by Chesbrough and Rosenbloom (2002). BMI necessitates adaptation to the specific operational environment of the company. Furthermore, a company's operations are inevitably shaped by political and governmental influences to varying degrees (Huang and Ichikohji, 2023). Research has revealed that variables such as regulatory frameworks and policy combinations can either foster or hinder a company's capacity for innovation, as demonstrated by Huijben *et al.* (2016). Several pivotal considerations influencing the adoption of Business Model Innovation (BMI) encompass a company's pre-existing internal resources and competencies, alongside its dynamic capabilities. Additionally, the effectiveness of its internal and external knowledge

management systems plays a significant role (Li *et al.*, 2022), particularly in the context of increasingly decentralized and fragmented global value chains. The shift from external customer knowledge has transitioned towards a demand-driven perspective in Business Model Innovation (BMI). Under this framework, the inception of BMI centers on value creation through activities designed to address the diverse needs of target or potential customers across different global regions (Prandelli *et al.*, 2016). Furthermore, certain studies have delved into the influence of preferences and behaviors exhibited by various stakeholders, both internal and external to the industry, in steering BMI efforts (Siebold, 2021; Guo *et al.*, 2022). From an intra-organizational standpoint, it is important to consider the pivotal role of top management. This includes considerations such as cognitive abilities, narrative skills, leadership styles, managerial competence, managerial relationships, and dynamic capabilities (Bitetti and Gibbert, 2022; Colovic, 2022). Secondly, research has also examined the impact of organizational design on BMI (Foss and Saebi, 2017). The system approach perspective regards BMI as a dynamic and intricate system comprising diverse interrelated components, including the environment, organizational structure, resources, human capital, technology, and markets (Ruggiero *et al.*, 2021). From this standpoint, the BMI process is conceptualized as a system of activities, with various activities being added, modified, or discarded over time (Tykkyläinen and Ritala, 2021).

2.2.2 BMI barriers. The process of implementing Business Model Innovation (BMI) is not always straightforward. Companies often encounter a variety of constraints related to cognition, resources, and capacity that can pose significant hurdles to the successful execution of BMI. While existing models can serve as sources of inspiration for new BMs, they can also constrain management's perspective on BMI to some extent. Management itself can become a barrier to BMI implementation, as narrow, industry-centric viewpoints and information overload can lead management to overly focus on direct competitors and incremental improvements (Vuori and Huy, 2016). Furthermore, research by Richter (2012) illustrates instances where the implementation of a new BMI failed in German utilities due to management's misunderstanding of solar energy, while Egfjord and Sund (2020) highlight how perceived differences between members of the innovation department and the company's core business can hinder the implementation of a new BMI. Additionally, developing a new business model involves considerable uncertainties and risks, which often make firms hesitant to invest their existing resources and capabilities in a new BMI in order to maximize profits and it all depends on the culture of innovation management (Hock-Doepgen *et al.*, 2021; Sund *et al.*, 2021). Although researchers have extensively explored potential barriers to BMI implementation, including factors related to perception, capabilities, and resources, they tend to overlook sociocultural factors such as customer awareness and behavior, as well as political, legislative, and economic challenges characterized by stability and ambiguity (Huang and Ichikohji, 2023).

2.2.3 BMI contexts of study. Business model innovation (BMI) as extensively discussed has therefore been the subject of extensive studies in the academic literature, focusing on a wide range of organizational types. These studies have encompassed traditional established companies, multinational corporations, small and medium-sized enterprises (SMEs), family businesses, start-ups, and social enterprises. Additionally, there has been a growing body of research that examines BMI within the context of emerging economies. This comprehensive exploration of BMI across diverse organizational forms and geographical settings has contributed to a richer understanding of how different factors and dynamics influence the process and outcomes of business model innovation. Huang and Ichikohji (2023) explicitly mentioned that scholars should analyze how the BMIs of different companies in different contexts have changed over time, including technology, customer needs, high-level capabilities and corporate resources in the BMI. In particular, no study has ever been conducted in the public context, and likewise in the public cultural sector, which is certainly

undergoing change due to changes in the environment and, at the same time, can influence changes and benefits to the society in which the companies operate.

2.3 Business models in GLAM institutions

Over the last 3 decades, the development of museums and galleries has exploded worldwide. The number of museums has increased, and visitor numbers have soared (Scott, 2009). The growth of the sector and the need to innovate are at the heart of a review of the business models of these organizations (Coblence and Sabatier, 2014) and Camarero *et al.* (2011) found a correlation between innovation and the economic performance of museums. The relevance of researching business models is on the rise, particularly in the context of cultural heritage management (Bonini Baraldi and Ferri, 2019). This growing significance is driven by the ongoing digital transformations in various sectors, including the creative industries (Lyubareva *et al.*, 2014) and the museum domain (Coblence and Sabatier, 2014; Lazzeretti and Sartori, 2016). One prominent area of investigation centers around the influence of digital technology on museum revenues, with a specific focus on online sales processes. In a broader perspective, the existing body of literature indicates that cultural organizations confidently place their trust in the impacts of Information and Communication Technology (ICT) on the sustainability of their business models (Pateli and Giaglis, 2005). Another emerging viewpoint revolves around the creation and dissemination of digital collections. Bertacchini and Morando (2013) scrutinize how the economic attributes of a museum's digital collections can shape its business models, particularly in terms of online accessibility and distribution. A third area of interest pertains to the interplay between business models and the enhancement of partnerships. This perspective draws insights from two iconic case studies: the Louvre Museum in France (Coblence and Sabatier, 2014) and the Uffizi Gallery in Italy (Lazzeretti and Sartori, 2016). Regarding the Louvre, Coblence and Sabatier (2014) delineate six analytical drivers, encompassing *technology*, *competition*, *environment*, *customers*, *profitability*, and *organizational design*. The Louvre Museum has transitioned from a growth-oriented business model, characterized by an emphasis on the exceptional quality of its permanent collection, to a global and innovative business model. This transformation leverages ICT technologies to enhance processes such as digitization, networking, and user-generated content. In the Italian context, reservations about investing in dedicated human resources for digital strategy, coupled with the organizational rigidity of the Italian administrative system, prompted the museum to contemplate *long-term partnerships* with local research institutions, creative ICT companies, and technical collaborators (Lazzeretti and Sartori, 2016). Both the Louvre Lens and Uffizi cases underscore the significance of value co-creation involving *multiple stakeholders* as a fundamental aspect of museum business models. Flexible partnerships are indispensable for ensuring that digital innovation remains responsive to evolving circumstances (Borin, 2017). Consequently, active participation in new digital business ecosystems (DBEs) is deemed essential. These ecosystems are defined as *collaborative environments* comprising diverse entities that co-create value through ICT (Senyo *et al.*, 2019). In the literature the link between this sector and the BMI framework is missing, remaining somewhat related to long-standing research on Business Models (BMs) more generally.

2.4 Integrating BMI and Industry 5.0

The comprehensive examination of existing literature has illuminated the significant alignment between BMI and the Industry 5.0 framework, showcasing a multitude of convergent aspects. Consequently, we propose a novel, integrated, and all-encompassing theoretical framework aimed at the analysis of the implementation process of emerging business models that impeccably encapsulate the three-fold, human-centric, sustainable, and resilient approach, as eloquently depicted in Figure 1. The components were extrapolated

KEY DRIVERS		
Human-centricity	Stakeholder engagement	*Lazzeretti and Sartori, 2016*
	Customer engagement	*Prandelli et al. 2016*
	Organizational engagement	*Cheah & Ho, 2021*
Resilience	Collaborative environnement	*Senyo et al., 2019*
	Knowledge management	*Von Delft et al. 2019; Li et al. 2022*
	Innovation management culture	*Hock-Doepgen, et al. 2021*
Sustainability	Environmental sustainability	*Rantala, et al. 2018*
	Social sustainability	*Reficco et al. 2021*
	Economic sustainability	*Madhavan et al. 2022*
		Franceschelli et al. 2018
FACILITATORS		
	Technology	*Pateli et al. 2005*
		Coblence and Sabatier, 2014
	Resources & capabilities	*Sund et al. 2021*
		Bitetti & Gibbert, 2022
	Organizational design	*Foss & Saebi, 2017*
		Coblence and Sabatier, 2014
	Government & politics	*Huang & Ichikohji, 2023*

Source(s): Author's own work

Figure 1.
Business model innovation and Industry 5.0 proposed framework

from the two reference frameworks and the museum context studies. They were then selected and adapted in the conceptualization process.

With respect to *human-centricity*, the literature has unequivocally underscored the paramount significance of involving the *organization*, cultivating, training, and enhancing human capital, workplace environments, and individual skills as pivotal drivers of success (Cheah and Ho, 2019; Guo *et al.*, 2013). The second challenge lies in comprehending the needs and desires of *customers* with whom to establish genuine relationships and in crafting novel, technology-augmented experiences for them (Prandelli *et al.*, 2016; Pironti *et al.*, 2015). On a broader scale, it is imperative to generate positive network externalities by engaging all actors within the economic and social environment, fostering robust relationships not only with business partners and customers but also with diverse *stakeholders* such as local communities, citizens, universities, research centers, local and supra-local institutions, governments, associations, and all those who have a vested interest in the organization (Hollebeek *et al.*, 2022; Lazzaretti and Sartori, 2016).

In the literature, *business resilience* has been identified as an abstract concept manifested through a culture of adaptability, a proclivity for risk-taking, and the ability to adapt and strive for survival even in the face of the most profound crises (Sheffi and Rice, 2005). Indeed, it is essential to start this effort by focusing on the *culture of innovation* from the top management (Hock-Doepgen *et al.*, 2021). This entails the ability to establish a *knowledge management* system, both internally, pertaining to internal business processes, customers, and resources, and externally, to leverage open and shared knowledge through long-term yet flexible partnerships (Von Delft *et al.*, 2019; Li *et al.*, 2022). Resilient long-term goals to better manage the *competition* can also be to have more museum branches and to initiate new

alliances with other museums abroad (Coblence and Sabatier, 2014). Such collaborations are directed toward the creation of a *collaborative and co-opetition environment* in which multiple stakeholders collectively co-create value (Senyo *et al.*, 2019).

Sustainability, encompassing the triple dimensions of economic, social, and environmental considerations, is pivotal both as a precursor and an outcome of the Business Model Innovation (BMI) implementation process. The performance and *economic* resources, while vital, can also pose significant barriers throughout this process, with sustainability of projects being achievable only through the cultivation of a strong innovation culture, a propensity for risk-taking, and the adept utilization of all available drivers (Franceschelli *et al.*, 2018; Boons *et al.*, 2013; Pedersen *et al.*, 2018). The recognition of the *social* and *environmental* purpose that businesses must embody is further underscored by the awareness that enterprises are not solely responsible for pursuing their economic interests, but they must also actively contribute to the betterment of society and the environment (Reficco *et al.*, 2021; Pedersen *et al.*, 2018). Moreover, it is imperative to acknowledge the corporate responsibility in sustainable resource utilization and the necessity to drive change in consumption, utilization, and recycling patterns (Rantala *et al.*, 2018). This holistic perspective highlights the intricate interplay between economic, social, and environmental dimensions in the pursuit of sustainable business practices and successful BMI. Facilitators-inhibitors also emerged from the integration of the two frameworks and include: *technology* (Pateli and Giaglis, 2005; Coblence and Sabatier, 2014), *organizational resources and capabilities* (Sund *et al.*, 2021; Bitetti and Gibbert, 2022), *organizational design* (Foss and Saebi, 2017; Coblence and Sabatier, 2014), and finally, *government regulations and policies* (Huang and Ichikohji, 2023).

The new conceptualized framework integrating BMI and Industry 5.0 was tested in the cultural sector. As previously mentioned, this sector was chosen due to its strong social purpose and the fact that museum institutions (GLAM) are in part or in full overseen by public entities.

3. Methodology

3.1 Approach and interviews

In this study an abductive approach has been chosen. Abduction allows for the generation of new ideas and the expansion of our knowledge by starting from identified factors and attempting to uncover any emerging ones (Hobbs *et al.*, 1993). To achieve this, in-depth interviews were selected as the data collection method. In-depth interviews are characterized by a high degree of structure and a minimum level of direction and standardization. This method enables an understanding of the underlying motivations behind the attitudes, behaviors, and viewpoints of the interviewees, offering valuable insights into identifying emerging factors. During the interviews, the interviewer poses open-ended questions and encourages participants to share their experiences and opinions related to the phenomenon under investigation (Morris, 2015; Legard *et al.*, 2003).

Therefore, a predefined interview-sketch was not created upstream; instead, discussions were initiated for each of the factors and facilitators identified by merging BMI and Industry 5.0, including: *technology*, *resources and capabilities*, *organizational design*, *government*, *stakeholder engagement, customer engagement, organizational engagement, collaborative environmental, knowledge management, innovation management culture, environmental sustainability, social sustainability,* and *economic sustainability.*

The interviewees were initially reached via direct email in late April 2023. Subsequently, interviews were scheduled and conducted between May and September 2023. These interviews were carried out over the phone and recorded using another smartphone, with an average duration of 45 min each. At the beginning of each interview, it was explicitly stated

that the call was being recorded, and a brief, general explanation of the study's objectives was provided before delving into the questions. In many cases, additional probing questions were necessary to extract relevant information. Data collection was concluded once data saturation was achieved.

3.2 Partecipants

Three GLAM institutions were approached in the initial phase of our study, comprising a curator based in Switzerland and two directors in Italy. Following these initial contacts, a chain of introductions was established to find the participants in this study, both by convenience and cascade. Then, another Italian and a Spanish museum institution joined in. Our study culminated in engagements with a total of 4 Italian, 2 Swiss, 1 German and 1 Spanish institutions. The study participants are shown Table 1.

Reaching out to these institutions proved to be a challenging effort, particularly due to their public management and the protracted and labor-intensive nature of the process. However, once we successfully engaged with one institution, a network of introductions facilitated subsequent contacts with relative ease through their established connections. It is noteworthy that we encountered distinct administrative and procedural dynamics, especially within the Italian context, characterized by a pronounced bureaucracy and stringent email-based formalities. In Italy, we were required to submit formal requests via email and provide our inquiries in advance. In contrast, the situation in Switzerland presented itself differently, allowing for a more informal approach to conducting interviews. In Germany, after an initial email exchange, we secured appointments, albeit with some delay, without the imposition of specific tasks or requirements. Generally, the interviews were conducted with the directors, given their pivotal roles but in certain cases, such as in Switzerland, we also engaged with curators, head of finance and marketing, as their contributions were deemed equally significant. With the Spanish institution and the major Italian archaeological parks, on the other hand, we only talked to the communication and press officers. The varying experiences and approaches encountered in these countries underscore the diversity of administrative and procedural norms within GLAM institutions and underscore the importance of adaptability and relationship building in navigating these complexities, as a first finding of this study.

3.3 Data analysis

The telephone interviews were recorded using a smartphone, and subsequently, the audio files were transcribed automatically using Nvivo software (version 14). These transcriptions were then meticulously reviewed and checked manually for accuracy. Supported by Nvivo software, the data underwent several stages of analysis. Initially, data segments of interest were labeled through coding, assigning relevant tags to these text segments. These coded

ID	Type of GLAM	Management	Country	Role of respondents
R1	Archaeological museum	Public-regional	Italy	Director
R2	Archaeological park	Public-national	Italy	Press officer
R3	Art Gallery	Public-regional	Italy	Director, curator
R4	Ethnography museum	Public-federal	Switzerland	Director, curator, marketing, finance
R5	Ethnography museum	Public-cantonal	Switzerland	Director, curator
R6	Science museum	Public-federal	Germany	Director
R7	Archaeological museum	Public-national	Spain	Communication officer
R8	Archaeological park	Public-national	Italy	Press officer

Source(s): Author's own work

Table 1. Participants

segments were then grouped into categories. Following this, a thematic analysis of the data was initiated. The data was visualized on a dashboard, and an interpretive process ensued to determine whether they aligned with the factors initially identified in the literature and the proposed framework (Dhakal, 2022). This methodical approach to data collection, transcription, coding, categorization, and thematic analysis using Nvivo software ensured a rigorous and systematic examination of the interview data, allowing for a comprehensive exploration of the research objectives and alignment with established theoretical and conceptual frameworks (Jackson *et al.*, 2019).

4. Findings

4.1 Emerging key drivers

The outcomes align with the initial approach, presenting a plausible theoretical framework for the integration of Business Model Innovation (BMI) and Industry 5.0 within the cultural sector. The extracted verbal codes have been categorized as follows:

(1) Stakeholder, customer, and organizational - engagement (as human-centric)

(2) Collaborative environment, knowledge management, innovation management (as resilient)

(3) Environmental, social, and economic - sustainability (as sustainable)

Facilitators identified include: technology, resources, leadership, which will be addressed along with the emerging key factors in the discussion section.

4.1.1 Stakeholder engagement. The analysis shows that the *government* factor is not a facilitator as envisaged in the initial model but is subordinate to the *stakeholder engagement* factor since the institutions are managed by the public through special departments or ministries. Strong cooperation with local, national and supranational institutions, as well as the local community such as companies, associations, foundations, non-profit organizations, schools, research institutes and universities emerged. This collaborative effort aims at the co-creation of temporary exhibitions, the improvement of permanent ones and the organization of initiatives both within the institutions and across the territory (R8).

"*We believe that the activities we undertake contribute to the development of society, promoting knowledge, creativity, and dialogue across different cultures and disciplines*" - emphasized R6. Typically, all institutions actively engage the local community and its stakeholder in their initiatives through educational and training programs for schools and local groups (R8), collaborations with artists, designers and local organizations to create exhibitions and events, and the promotion of cultural heritage and local traditions (R1). In larger museums, such as the archaeological park mentioned by R2, the organization of outdoor concerts that attract numerous attendees is also highly appreciated. Furthermore, all respondents indicated that technological solutions were developed by external companies and then delivered to them. R6 also mentioned that the audio-guide application is entirely managed by a company that holds the majority of Swiss federal and cantonal museum institutions. The management of social media channels is outsourced to external companies, often supported by in-house departments, such as the press and public relations teams. In Swiss institutions, on the other hand, there is a dedicated marketing department that handles social media channels in-house, although they tend to have lower visitor engagement. Bookshops or souvenir shops are also run in cooperation with local or national companies and can be used as a first point of contact with the local area, promoting local products both physically and virtually (R5).

4.1.2 Customer engagement. Respondents perceive innovation within GLAM institutions mainly as "*technological implementation aimed at improving the visitor experience*" - as

indicated by R6. Indeed, when asked directly about innovations implemented in their institutions, they cited interactive technologies such as touch-screen totems and smartphone applications to improve the visitor experience, the use of website and social media channels, the creation of multimedia content such as podcasts, comics and social media mini-series, and the implementation of online ticket booking systems. In addition, it is common practice to prepare advertising material through the road and in cinemas (R4) and newsletters to visitors. Annual subscriptions and specific programmes are also ways to engage loyal visitors. All this has to do with increased visitor involvement. Only one institution has already implemented a pandemic-driven virtual tour. In others, projects are currently being developed in collaboration with external companies or have expressed misgivings. This is because, in their desire to preserve the beauty of the cultural heritage and to contribute to the well-being of society and the local community, they prefer to attract and host tourists and visitors on site in order to offer an authentic experience and foster a connection with the local area. Tangible results that have been unanimously regarded as positive include an increase in visitors, including loyal ones, and improved social media coverage. All institutions have leveraged their relationship with visitors and their engagement. Moreover, collecting feedback from visitors, both offline and online, has also proven to be a successful practice, as highlighted by R4 and R7, in an effort to continuously enhance the value proposition. From this perspective, all respondents emphasized the importance of gathering data on visitors and industry trends, including those from overseas, as mentioned by R2. They collect data through entrance tickets, surveys, and web analytics. These data are used across the board to inform business decisions, marketing strategies and innovation efforts, helping to identify areas for improvement and opportunities for growth, all of which feed into knowledge management, which is critical both for management and here to attract, engage and retain visitors. Finally, the challenge shared by many is to find new ways to involve the young and the new generations more closely, not only with communication channels but also with the exhibitions themselves.

4.1.3 Organizational engagement. To effectively manage change within organizations, several key strategies have emerged from the interviews: open and transparent communication with staff, training and support for employees, involving employees in the decision-making process, and regular monitoring and evaluation of implemented innovations to ensure success and make necessary adjustments. This highlights a crucial point that for change to occur, an organizational culture based on strong leadership and employee empowerment is essential. The most commonly adopted organizational model is a combination of functional and divisional structures, with various competency areas working together to achieve the museum's objectives. "*Over time, we have adopted a more flexible and collaborative approach to meet the needs of an ever-evolving sector*," as mentioned by R6. When asked to describe their directors, respondents reported their leadership, their being visionary, passionate and empathetic. R7 states: "*Our director is a visionary leader, deeply committed to the museum's mission and values. He is open-minded, forward-thinking and strongly supports innovation and continuous improvement*". This made it clear that it takes a determined and respectable leader, a recognized mover and shaker, to engage the organization, customers and stakeholders in general.

4.1.4 Collaborative environment. The collaborative environment is the result of engaging with partners, other organizations, and the local community, contributing to enhanced resilience in several ways. Collaboration in the sector has been found to facilitate access to novel ideas, resources, and expertise, enabling institutions to adapt and innovate in response to challenges, as highlighted by all the participants. For instance, each exhibition could change the partner and they could be different for each department or collection at the same time as R4 tells us. An other example of this is the collaboration between multiple museums, journalists and cultural organizations, which has created a distinctive model demonstrating

the flexibility and openness required for resilience in the face of the COVID-19 pandemic, as R7 mentioned. Moreover, collaboration serves to fortify community ties and support, crucial elements for resilience. Museums operate as public services and bear responsibility to their communities. Active engagement with these communities, particularly with minority groups, not only improves post-crisis care but also integrates museums as integral components of community resilience. Lastly, collaboration fosters cross-sectoral engagement, a pivotal factor in building healthy communities and enhancing post-crisis care. For instance, the incorporation of arts and culture into community planning and development, coupled with collaboration with arts organizations and artists in the design and implementation of interventions, contributes significantly to community resilience. It turned out that another facilitator already present in the literature are *resources* and skills.

4.1.5 Knowledge management. Innovation in the GLAM sector, in addition to a strong focus on prioritizing visitors, aims to improve the preservation and enjoyment of cultural heritage. Respondents also emphasized that innovation serves to promote the preservation and dissemination of knowledge. Furthermore, R5 spoke of new ideas and methods and the goal of improving operational efficiency. As previously highlighted, the acquisition and analysis of data, coupled with Knowledge Management (KM), play a pivotal role throughout stakeholder, customer, and organizational engagement processes in general. In the context of GLAM institutions, Knowledge Management is a systematic process encompassing the capture, distribution, and efficient utilization of the knowledge generated and stored by these institutions. As articulated by R1, this knowledge extends to diverse facets, including information about collections, research findings, visitor data, operational processes, and more. The significance of Knowledge Management in GLAM institutions is underscored by its instrumental role in bolstering their capacity to fulfill their mission of providing access to knowledge, preserving cultural heritage, and serving the public interest. As observed, macro-level knowledge management is achieved within a collaborative environment to access new resources and insights that may otherwise be challenging to attain. In GLAM institutions, Knowledge Management involves a harmonious blend of internal knowledge capture and utilization, complemented by external knowledge sharing and collaboration, often facilitated by digital technologies. This complex process demands specific skills and expertise while encountering challenges in terms of fostering effective collaboration and engagement. Nevertheless, when executed adeptly, Knowledge Management stands as a powerful tool, significantly augmenting the ability of GLAM institutions to fulfill their mission and cater to the needs of their communities.

4.1.6 Innovation management culture. The interviews brought to light several noteworthy challenges within the realm of innovation that warrant careful consideration. Primarily, a significant hurdle lies in the resistance to change, emanating from both staff and visitors who are entrenched in conventional methodologies. This resistance poses a substantial impediment to innovation, as underscored by the realization that innovation in GLAM institutions transcends mere technological advancements. As articulated by R7, it involves a profound shift in our perception of technology and ourselves. R4 further emphasizes the need to redefine "innovation" and seamlessly integrate interactive media into museum spaces without diverting attention from existing collections. Additionally, financial constraints and limited resources allocated for investments in new technologies and infrastructure present a formidable challenge to the implementation of innovative solutions. The quest for external partners and collaborators, crucial for fostering innovation through cooperation, adds another layer of complexity. There is also the persistent challenge of monitoring private companies offering immersive or virtual tours, often in direct competition with GLAM institutions. Looking ahead, respondents voiced concerns about future challenges. The perpetual balancing act between tradition and innovation (R1) remains a central concern, as institutions endeavor to uphold their cultural heritage while embracing new technologies.

The imperative to keep pace with the rapid evolution of technology (R2) is crucial to ensuring that institutions remain relevant and captivating for visitors. Continuously adapting to the evolving expectations and needs of visitors, while ensuring accessibility and inclusiveness for all (R3), presents an ongoing challenge. Finding a 'flexible' innovation that can meet the needs of different departments can also be a challenge (R7). Institutions must navigate ways to cater to diverse audiences while staying true to their missions. The prevailing lack of confidence in an uncertain future, heightened perceived risks, fear of change, a reluctance to take risks, and the crucial role of strong leadership and competencies are integral aspects of the innovation management culture.

4.1.7 Sustainability (environmental, social, and economic). There is a growing emphasis on sustainability within GLAM institutions, encompassing not only environmental aspects but also social and economic dimensions, as highlighted by R4. Achieving sustainability across these dimensions is a complex and long-term effort. Consequently, there is an urgent imperative for GLAM institutions to establish resilient business models that prioritize knowledge management and data collection, recognizing their increasing centrality in all organizational processes. Exploring sustainable funding models for the future is also crucial to prevent the potential disappearance or merger of smaller institutions with larger ones, as noted by R5 or project abandonment due to lack of resources (R7). It is essential to acknowledge the potential risks associated with private management, such as the transformation of cultural heritage institutions into commercial entities. R1 underscored that economic sustainability is not solely tied to visitor numbers but also hinges on the ability to attract public and private resources and develop innovative, sustainable projects. Public museums often rely on public funding and governmental, community, and international measures, with these funding sources often earmarked for specific activities, contributing to the potential time-consuming nature of implementing new technologies. Furthermore, museums strive to diversify their revenue streams and frequently outsource various support services, as observed earlier. R2 highlighted, "*Entering partnerships certainly does not burden general expenses, providing more economic resources and expertise*". Over time, crowdfunding campaigns have also been organized, particularly for smaller institutions. This practice is notably common in more innovative and less bureaucratic regions, exemplified by Switzerland, as evident from the insights gathered during the interviews. Based on the insights provided by interviewees, the most widely adopted sustainability practices within the GLAM sector include waste separation and recycling, the implementation of low-energy lighting systems, the adoption of nanotechnological coatings, and the promotion of educational programs aimed at raising visitors' awareness of environmental sustainability. In the social context, complementing the previous discussion, some museums organized fundraising campaigns for humanitarian aid and promoted volunteering to support various projects and initiatives with accessibility as a keyword. In fact, R3 emphasized: "*These activities have a significant impact on our ability to undertake ambitious projects, improve accessibility, and engage the local community*". They are also launching initiatives to make museums and archaeological parks accessible to all, "*because we believe that accessibility is important*" (R1).

5. Discussions

To achieve the research objective, we can assert that a relationship has been identified between BMI and Industry 5.0. Through comprehensive work and interviews conducted in sectors where the social impact is particularly pronounced, such as GLAM institutions, we have delved into the essential drivers for implementing new 5.0 business models. This exploration encompasses the dimensions of human-centricity, resilience, and sustainability as extensively discussed in the literature review. In the pursuit of implementing Business

Model Innovation 5.0 in the GLAM sector, several key drivers have surfaced, illuminating the evolving landscape of these cultural institutions. The identified categories of stakeholder, customer, and organizational involvement underscore the human-centric nature of the industry's evolution, emphasizing collaboration in dynamic and flexible environments. Simultaneously, knowledge management and innovation highlight organizational resilience, all underpinned by long-term sustainability goals from economic, social, and environmental perspectives.

Stakeholder engagement, as revealed through collaborative efforts with local, national, and supranational entities, reinforces the interconnectedness of cultural institutions with their communities and broader societal fabric (Huang and Ichikohji, 2023). This aligns with existing literature emphasizing the importance of partnerships in fostering innovation (Lazzeretti and Sartori, 2016; Riege and Lindsay, 2006; Polese *et al.*, 2018; Monda *et al.*, 2023; Sanderink and Nasiritousi, 2020). The most important challenge will be to open up to participatory governance that combines listening with the expressed planning capacity of the local community, so as to speed up the integration process by transforming community members and visitors from passive to active subjects, to real curators in order to build a heritage community. *Customer engagement* is perceived as a driver primarily focused on technological implementation to enhance the visitor experience, with a strong emphasis on feedback on value co-creation, feedback gathering, and data-driven decision-making (Prandelli *et al.*, 2016; Chathoth *et al.*, 2016; Ciasullo *et al.*, 2018; Barile *et al.*, 2017; Troisi *et al.*, 2019, 2023; Rather, 2020; Massari *et al.*, 2022). The significance of tangible results, such as increased visitor numbers and improved social media coverage, highlights the effectiveness of engagement strategies. However, the cautious approach toward immersive or virtual tour technologies indicates a careful balance between innovation and the preservation of authentic, on-site experiences. A challenge for all GLAM institutions is to succeed in getting established audience segments to accept the new technologies on the one hand (Pantano and Corvello, 2014), and to start involving the younger generation on the other. *Organizational engagement* emerges as a critical driver, necessitating open communication, employee training, and a flexible, collaborative organizational culture (Cheah and Ho, 2019; Afsar *et al.*, 2020; Albrecht *et al.*, 2018; Jonas *et al.*, 2018).

The *collaborative-driven environment* contributes to organizational resilience, enabling adaptability in the face of challenges and is described as a mechanism for access to resources and expertise, exemplified by the industry's adaptability during the COVID-19 pandemic (Senyo *et al.*, 2019; Sanderink and Nasiritousi, 2020) and concerns both the macro and meso spheres. *Knowledge management* stands out as a key driver, encompassing the capture, distribution, and efficient utilization of diverse knowledge within GLAM institutions (Von Delft *et al.*, 2019; Li *et al.*, 2022). This aligns with literature emphasizing the role of knowledge in facilitating innovation and organizational resilience (Visvizi *et al.*, 2022; Ciasullo *et al.*, 2022; Troisi *et al.*, 2023; Bartuseviciene *et al.*, 2022; Koskinen, 2005; Antara and Shuvro, 2020; Cerquetti and Cutrini, 2023). The collaborative nature of knowledge management, both internally and externally, highlights the need for skills and expertise in navigating complex collaborative processes. *Innovation management culture* is a multifaceted driver, encompassing challenges such as resistance to change, financial constraints, and the delicate balance between tradition and innovation, characterized by an internal focus and an external aperture (Hock-Doepgen *et al.*, 2021; Pohlmann *et al.*, 2005).

*Sustainabilit*y, encompassing environmental, social and economic dimensions, emerges as a significant factor. GLAM institutions more than any other can be an example of resilience but also of longevity as long as they preserve the artistic-cultural-literary heritage of an area made by the history of peoples (Silverman, 2009). This is why GLAMs first and foremost must actively adopt sustainable practices, recognizing the long-term efforts required for survival (Stylianou-Lambert *et al.*, 2014; Loach *et al.*, 2017; Rantala *et al.*, 2018; Reficco *et al.*,

2021; Madhavan *et al.*, 2022; Franceschelli *et al.*, 2018). The focus on resilient business models, sustainable funding and potential risks associated with private management reflects an awareness of the broader social impact of these institutions. Sustainability emerges as a transversal factor in all three spheres micro, meso and macro in line with the literature of Humane Entrepreneurship (Parente *et al.*, 2018).

The facilitators identified within the context of the study encompass three key elements: Technology, Resources, and Leadership. These components play pivotal roles in driving innovation and successful integration of Business Model Innovation (BMI) and Industry 5.0 within the cultural sector.

Technology as a facilitator of BMI is already widely known in the literature and in this context includes the use of new solutions to improve various aspects, including visitor experiences, heritage management and optimization of internal business processes (Pateli and Giaglis, 2005; Coblence and Sabatier, 2014). Results reveal that GLAM institutions actively exploit technology through interactive displays, smartphone applications, online ticket booking systems and other innovative Phygital experiences (Baldi, 2022). The implementation of these technologies is made possible through collaboration with other companies and organizations, which once again demonstrates the complexity and networked form of these organizations.

Resources include a spectrum of expertise, financial assets and data. GLAM institutions recognize the importance of possessing diverse resources to successfully navigate the complexities of the cultural sector (Sund *et al.*, 2021; Bitetti and Gibbert, 2022). Financial resources are recognized as essential for investment in new technologies and infrastructure, highlighting the challenge posed by budgetary constraints. Expertise, both internal and external, is crucial to foster innovation through collaborative efforts. Furthermore, strategic data management also proven invaluable in this context for informed decision-making, marketing strategies and overall knowledge management.

Leadership emerges as a critical facilitator, playing a central role in orchestrating the effective use of technology and resources, as well as the implementation of new BM. The study emphasizes the importance of visionary and determined leaders who foster inclusive and challenging work environments. These leaders are instrumental in instigating cultural change within organizations, overcoming resistance to change and promoting innovation. Respondents emphasize the importance of leaders who are open-minded, forward-thinking and deeply committed to the mission and values of GLAM institutions. Strong leadership is identified as a key factor in navigating the delicate balance between tradition and innovation, ensuring relevance in the face of technological evolution, and adapting to evolving visitor expectations (Lin and McDonough, 2011). All the emerging factors and facilitators are represented in an outline of the proposed new framework of the possible integration of Business Model Innovation and Industry 5.0 (Figure 2).

6. Conclusions

This study embarked on a journey, drawing inspiration from the European Commission's concept of Industry 5.0, and synthesizing insights from the extensive literature on BMI. Our primary aim was to discern the key drivers underpinning a BMI 5.0 framework. In pursuit of this goal, we chose the context of GLAM institutions, recognizing their increasing social significance and the dearth of comprehensive studies that incorporated them into the BMI discourse. Through rigorous analysis, we identified the pivotal drivers for BMI 5.0: Stakeholder, Customers and Organizational Engagement (for human-centricity), Collaborative environment, Knowledge and Innovation Management (for resilience), and Economic, Social and Environmental Sustainability. These drivers represent the essential components for shaping innovative and sustainable business models capable of navigating

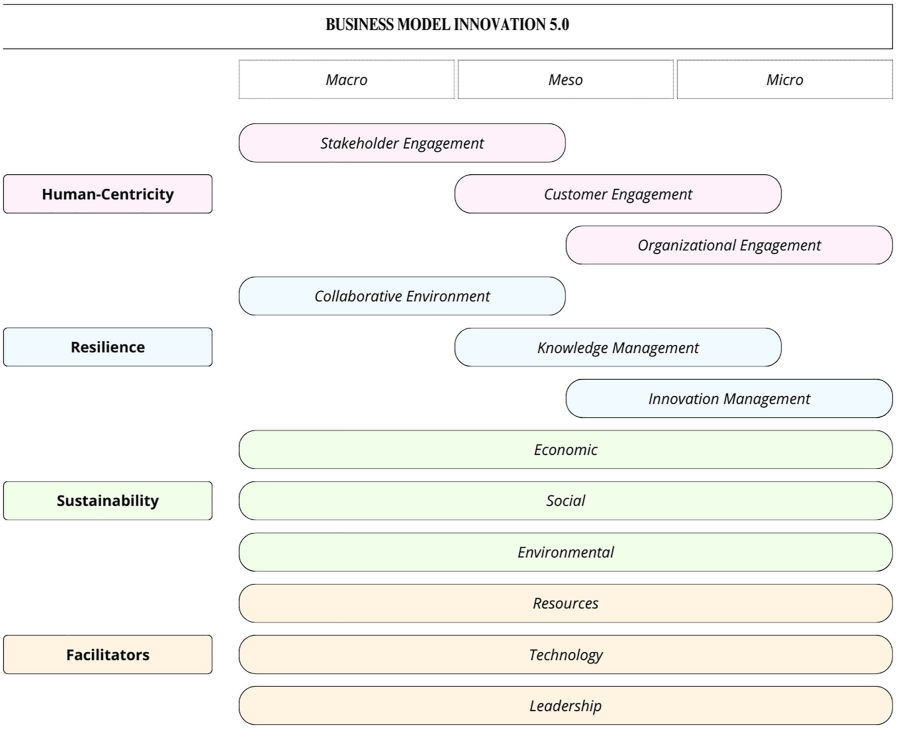

Figure 2.
Emerging key drivers and facilitators of BMI 5.0

Source(s): Author's own work

the complex landscape of the contemporary era. Furthermore, we have also underscored the facilitators that underpin BMI 5.0: Technology, Resources, and Leadership. These tools provide the necessary infrastructure and guidance to implement and sustain innovative business models effectively. This research offers a foundational understanding of how these drivers and tools intertwine within the GLAM sector and serves as a steppingstone for further exploration into the dynamic realm of BMI 5.0 across diverse industries. It highlights the imperative of synergizing these elements to drive innovation, foster sustainability, and ensure the resilience of organizations in an ever-evolving landscape.

6.1 Limitations and implications

The limitations of this study must be recognized as a crucial aspect to consider. Firstly, it is important to note that our research focused exclusively on publicly managed GLAM institutions in four specific developed countries. This narrow scope may limit the applicability of our findings to a broader context. Furthermore, the small number of participants in the study could influence the representativeness of the results. Therefore, while our findings offer valuable insights within this specific context, caution is needed when applying these conclusions to other sectors or contexts. Future research can broaden its horizons to include a wider range of contexts providing a more comprehensive understanding of how the drivers of BMI 5.0 operate in different environments. This would improve our understanding of the dynamics in the changing landscape of business model innovation. However, this study has both managerial and theoretical implications.

From a theoretical perspective, this research extends the concept of Business Model Innovation by considering the challenges and opportunities presented by Industry 5.0. This expansion enriches the existing BMI theory, offering a more contemporary perspective that aligns with the evolving business landscape. Moreover, the interdisciplinary nature of this research, drawing from management, entrepreneurship, business organization studies, social and museum sciences, lays the foundation for further studies incorporating different perspectives to achieve a more comprehensive understanding of business innovation. Finally, the emphasis on the GLAM sector-specific context underlines the importance of considering the unique characteristics of a sector when analyzing the dynamics of BMIs.

From a management point of view, organizations can gain valuable insights into the new BMI 5.0 framework. This understanding can be useful for the development of targeted strategies that prioritize the emerging drivers of the implementation of new business models that emphasize the human component, involving stakeholders, visitors and the organization. Then, organizations can leverage the knowledge to optimize their resource allocation strategies, creating an environment conducive to innovation. Another strategy to be pursued is to make accessible to everyone in every way. In addition, GLAM institutions can explore deeper collaboration with government agencies, academic institutions, non-profit organizations and private enterprises to jointly develop innovative solutions and promote social impact through shared projects. The challenge of engaging the younger generation can be addressed by establishing dynamic, flexible, temporary and specific partnerships on individual aspects of collections or exhibitions, permanent or temporary, with artists, scientists and designers to enhance the visitor experience even without the direct use of technology.

References

Afsar, B., Al-Ghazali, B.M., Cheema, S. and Javed, F. (2020), "Cultural intelligence and innovative work behavior: the role of work engagement and interpersonal trust", *European Journal of Innovation Management*, Vol. 24 No. 4, pp. 1082-1109, doi: 10.1108/ejim-01-2020-0008.

Aheleroff, S., Huang, H., Xu, X. and Zhong, R.Y. (2022), "Toward sustainability and resilience with Industry 4.0 and Industry 5.0", *Frontiers in Manufacturing Technology*, Vol. 2, 951643, doi: 10.3389/fmtec.2022.951643.

Albrecht, S., Breidahl, E. and Marty, A. (2018), "Organizational resources, organizational engagement climate, and employee engagement", *Career Development International*, Vol. 23 No. 1, pp. 67-85, doi: 10.1108/cdi-04-2017-0064.

Antara, N. and Shuvro, S.E.N. (2020), "The impact of COVID-19 on museum and the way forward to be resilience", *Uluslararası Müze Eğitimi Dergisi*, Vol. 2 No. 1, pp. 54-61.

Aslam, F., Aimin, W., Li, M. and Ur Rehman, K. (2020), "Innovation in the era of IoT and industry 5.0: absolute innovation management (AIM) framework", *Information*, Vol. 11 No. 2, p. 124, doi: 10.3390/info11020124.

Baldi, G. (2022), "Integrating a Digital Platform Within Museum Ecosystem: A New 'Phygital'Experience Driving Sustainable Recovery", *The International Research & Innovation Forum*, Springer International Publishing, Cham, pp. 665-674.

Barile, S., Ciasullo, M.V., Troisi, O. and Sarno, D. (2017), "The role of technology and institutions in tourism service ecosystems: findings from a case study", *The TQM Journal*, Vol. 29 No. 6, pp. 811-833, doi: 10.1108/tqm-06-2017-0068.

Bartuseviciene, I., Butkus, M. and Schiuma, G. (2022), "Modelling organizational resilience structure: insights to assess resilience integrating bounce-back and bounce-forward", *European Journal of Innovation Management*, Vol. 27 No. 1, pp. 153-169, doi: 10.1108/ejim-04-2022-0180.

Bertacchini, E. and Morando, F. (2013), "The future of museums in the digital age: new models for access to and use of digital collections", *International Journal of Arts Management*, Vol. 15 No. 2, pp. 60-72.

Bitetti, L. and Gibbert, M. (2022), "The ROAD to continuous business model innovation: a longitudinal study unveiling patterns of cognitive sensing dynamic capabilities", *Creativity and Innovation Management*, Vol. 31 No. 1, pp. 123-140, doi: 10.1111/caim.12477.

Black, G. (Ed.) (2020), *Museums and the Challenge of Change: Old Institutions in a New World*, Routledge.

Bonini Baraldi, S. and Ferri, P. (2019), "From communism to market: business models and governance in heritage conservation in Poland", *Journal of Management and Governance*, Vol. 23 No. 3, pp. 787-812, doi: 10.1007/s10997-018-09448-8.

Boons, F., Montalvo, C., Quist, J. and Wagner, M. (2013), "Sustainable innovation, business models and economic performance: an overview", *Journal of Cleaner Production*, Vol. 45, pp. 1-8, doi: 10.1016/j.jclepro.2012.08.013.

Borin, E. (2017), *Public-Private Partnership in the Cultural Sector: A Comparative Analysis of European Models*, PIE-peter Lang, Bruxelles.

Breque, M., De Nul, L. and Petridis, A., EU Commission, Directorate-General for Research and Innovation (2021), "Industry 5.0: towards more sustainable, resilient and human-centric industry", *Publications Office of the European Union*, available at: https://data.europa.eu/doi/10.2777/308407

Burton, C. and Scott, C. (2007), "Museums: challenges for the 21st century", in *Museum Management and Marketing*, Routledge, pp. 49-66.

Camarero, C., Garrido, M.J. and Vicente, E. (2011), "How cultural organizations' size and funding influence innovation and performance: the case of museums", *Journal of Cultural Economics*, Vol. 35 No. 4, pp. 247-266, doi: 10.1007/s10824-011-9144-4.

Cerquetti, M. and Cutrini, E. (2023), "Structure, people, and relationships: a multidimensional method to assess museum resilience", *Nonprofit and Voluntary Sector Quarterly*, Vol. 52 No. 1, pp. 130-152, doi: 10.1177/08997640211068409.

Chathoth, P.K., Ungson, G.R., Harrington, R.J. and Chan, E.S. (2016), "Co-creation and higher order customer engagement in hospitality and tourism services: a critical review", *International Journal of Contemporary Hospitality Management*, Vol. 28 No. 2, pp. 222-245, doi: 10.1108/ijchm-10-2014-0526.

Cheah, S. and Ho, Y.P. (2019), "Coworking and sustainable business model innovation in young firms", *Sustainability*, Vol. 11 No. 10, p. 2959, doi: 10.3390/su11102959.

Chesbrough, H. (2007), "Business model innovation: it's not just about technology anymore", *Strategy and Leadership*, Vol. 35 No. 6, pp. 12-17, doi: 10.1108/10878570710833714.

Chesbrough, H. (2010), "Business model innovation: opportunities and barriers", *Long Range Planning*, Vol. 43 Nos 2-3, pp. 354-363, doi: 10.1016/j.lrp.2009.07.010.

Chesbrough, H. and Rosenbloom, R.S. (2002), "The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies", *Industrial and Corporate Change*, Vol. 11 No. 3, pp. 529-555, doi: 10.1093/icc/11.3.529.

Chesbrough, H., Lettl, C. and Ritter, T. (2018), "Value creation and value capture in open innovation", *Journal of Product Innovation Management*, Vol. 35 No. 6, pp. 930-938, doi: 10.1111/jpim.12471.

Ciasullo, M.V., Troisi, O. and Cosimato, S. (2018), "How digital platforms can trigger cultural value co-creation?—a proposed model", *Journal of Service Science and Management*, Vol. 11 No. 2, pp. 161-181, doi: 10.4236/jssm.2018.112013.

Ciasullo, M.V., Montera, R. and Ferrara, M. (2022), "Digital readiness and resilience of digitally servitized firms: a business model innovation perspective", in *The International Research & Innovation Forum*, Springer International Publishing, Cham, pp. 509-517.

Coblence, E. and Sabatier, V. (2014), "Articulating growth and cultural innovation in art museums: the Louvre's business model revision", *International Studies of Management and Organization*, Vol. 44 No. 4, pp. 9-25, doi: 10.2753/imo0020-8825440401.

Colovic, A. (2022), "Leadership and business model innovation in late internationalizing SMEs", *Long Range Planning*, Vol. 55 No. 1, 102083, doi: 10.1016/j.lrp.2021.102083.

Corvello, V., De Carolis, M., Verteramo, S. and Steiber, A. (2022a), "The digital transformation of entrepreneurial work", *International Journal of Entrepreneurial Behavior and Research*, Vol. 28 No. 5, pp. 1167-1183, doi: 10.1108/ijebr-01-2021-0067.

Corvello, V., Verteramo, S., Nocella, I. and Ammirato, S. (2022b), "Thrive during a crisis: the role of digital technologies in fostering antifragility in small and medium-sized enterprises", *Journal of Ambient Intelligence and Humanized Computing*, Vol. 14 No. 11, pp. 1-13, doi: 10.1007/s12652-022-03816-x.

Cunningham, S. (2002), "From cultural to creative industries: theory, industry and policy implications", *Media International Australia*, Vol. 102 No. 1, pp. 54-65, doi: 10.1177/1329878x0210200107.

Dahles, H. and Susilowati, T.P. (2015), "Business resilience in times of growth and crisis", *Annals of Tourism Research*, Vol. 51, pp. 34-50, doi: 10.1016/j.annals.2015.01.002.

Davis, W. and Howard, K. (2013), "Cultural policy and Australia's national cultural heritage: issues and challenges in the GLAM landscape", *The Australian Library Journal*, Vol. 62 No. 1, pp. 15-26, doi: 10.1080/00049670.2013.774684.

Dhakal, K. (2022), "NVivo", *Journal of the Medical Library Association: JMLA*, Vol. 110 No. 2, pp. 270-272, doi: 10.5195/jmla.2022.1271.

Dodds, S. (1997), "Towards a 'science of sustainability': improving the way ecological economics understands human well-being", *Ecological Economics*, Vol. 23 No. 2, pp. 95-111, doi: 10.1016/s0921-8009(97)00047-5.

Egfjord, K.F.H. and Sund, K.J. (2020), "Do you see what I see? How differing perceptions of the environment can hinder radical business model innovation", *Technological Forecasting and Social Change*, Vol. 150, 119787, doi: 10.1016/j.techfore.2019.119787.

Eid, H. (2019), *Museum Innovation and Social Entrepreneurship: A New Model for a Challenging Era*, Routledge, Abingdon.

Foss, N.J. and Saebi, T. (2017), "Fifteen years of research on business model innovation: how far have we come, and where should we go?", *Journal of Management*, Vol. 43 No. 1, pp. 200-227, doi: 10.1177/0149206316675927.

Franceschelli, M.V., Santoro, G. and Candelo, E. (2018), "Business model innovation for sustainability: a food start-up case study", *British Food Journal*, Vol. 120 No. 10, pp. 2483-2494, doi: 10.1108/bfj-01-2018-0049.

Fukuyama, M. (2018), "Society 5.0: aiming for a new human-centered society", *Japan Spotlight*, Vol. 27 No. 5, pp. 47-50.

Guo, H., Zhao, J. and Tang, J. (2013), "The role of top managers' human and social capital in business model innovation", *Chinese Management Studies*, Vol. 7 No. 3, pp. 447-469, doi: 10.1108/cms-03-2013-0050.

Guo, L., Cao, Y., Qu, Y. and Tseng, M.L. (2022), "Developing sustainable business model innovation through stakeholder management and dynamic capability: a longitudinal case study", *Journal of Cleaner Production*, Vol. 372, 133626, doi: 10.1016/j.jclepro.2022.133626.

Healy, C. and Witcomb, A. (Eds) (2006), *South Pacific Museums: Experiments in Culture*, Monash University ePress.

Hobbs, J.R., Stickel, M.E., Appelt, D.E. and Martin, P. (1993), "Interpretation as abduction", *Artificial Intelligence*, Vol. 63 Nos 1-2, pp. 69-142, doi: 10.1016/0004-3702(93)90015-4.

Hock-Doepgen, M., Clauss, T., Kraus, S. and Cheng, C.F. (2021), "Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs", *Journal of Business Research*, Vol. 130, pp. 683-697, doi: 10.1016/j.jbusres.2019.12.001.

Hollebeek, L.D., Urbonavicius, S., Sigurdsson, V., Clark, M.K., Parts, O. and Rather, R.A. (2022), "Stakeholder engagement and business model innovation value", *The Service Industries Journal*, Vol. 42 Nos 1-2, pp. 42-58, doi: 10.1080/02642069.2022.2026334.

Huang, W. and Ichikohji, T. (2023), "A review and analysis of the business model innovation literature", *Heliyon*, Vol. 9 No. 7, e17895, doi: 10.1016/j.heliyon.2023.e17895.

Huijben, J.C.C.M., Verbong, G.P.J. and Podoynitsyna, K.S. (2016), "Mainstreaming solar: stretching the regulatory regime through business model innovation", *Environmental Innovation and Societal Transitions*, Vol. 20, pp. 1-15, doi: 10.1016/j.eist.2015.12.002.

Ivanov, D. (2023), "The Industry 5.0 framework: viability-based integration of the resilience, sustainability, and human-centricity perspectives", *International Journal of Production Research*, Vol. 61 No. 5, pp. 1683-1695, doi: 10.1080/00207543.2022.2118892.

Jackson, K., Bazeley, P. and Bazeley, P. (2019), *Qualitative Data Analysis with NVivo*, Sage, London.

Johnson, M.W., Christensen, C.M. and Kagermann, H. (2008), "Reinventing your business model", *Harvard Business Review*, Vol. 86 No. 12, pp. 50-59.

Jonas, J.M., Boha, J., Sörhammar, D. and Moeslein, K.M. (2018), "Stakeholder engagement in intra- and inter-organizational innovation: exploring antecedents of engagement in service ecosystems", *Journal of Service Management*, Vol. 29 No. 3, pp. 399-421, doi: 10.1108/josm-09-2016-0239.

Kilduff, M., Mehra, A. and Dunn, M.B. (2011), "From blue sky research to problem solving: a philosophy of science theory of new knowledge production", *Academy of Management Review*, Vol. 36 No. 2, pp. 297-317, doi: 10.5465/amr.2011.59330922.

Koskinen, K.U. (2005), "Metaphoric boundary objects as co-ordinating mechanisms in the knowledge sharing of innovation processes", *European Journal of Innovation Management*, Vol. 8 No. 3, pp. 323-335, doi: 10.1108/14601060510610180.

Langley, S. (2018), "Digital preservation should Be more holistic", in *A Digital Stewardship Approach*, American Library Association.

Lazzeretti, L. and Sartori, A. (2016), "Digitisation of cultural heritage and business model innovation: the case of the Uffizi gallery in Florence", in *Il Capitale Culturale. Studies on the Value of Cultural Heritage*, No. 14, pp. 945-970.

Legard, R., Keegan, J. and Ward, K. (2003), "In-depth interviews", in *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, Vol. 6 No. 1, pp. 138-169.

Leih, S., Linden, G. and Teece, D.J. (2015), "Business model innovation and organizational design: a Dynamic Capabilities Perspective", in Foss, N.J. and Saebi, T. (Eds), *Business Model Innovation: the Organizational Dimension*, Oxford Academic.

Leng, J., Sha, W., Wang, B., Zheng, P., Zhuang, C., Liu, Q. and Wang, L. (2022), "Industry 5.0: prospect and retrospect", *Journal of Manufacturing Systems*, Vol. 65, pp. 279-295, doi: 10.1016/j.jmsy.2022.09.017.

Li, G., Xue, J., Li, N. and Ivanov, D. (2022), "Blockchain-supported business model design, supply chain resilience, and firm performance", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 163, 102773, doi: 10.1016/j.tre.2022.102773.

Lin, H.E. and McDonough, E.F., III (2011), "Investigating the role of leadership and organizational culture in fostering innovation ambidexterity", *IEEE Transactions on Engineering Management*, Vol. 58 No. 3, pp. 497-509, doi: 10.1109/tem.2010.2092781.

Linnenluecke, M.K. (2017), "Resilience in business and management research: a review of influential publications and a research agenda", *International Journal of Management Reviews*, Vol. 19 No. 1, pp. 4-30, doi: 10.1111/ijmr.12076.

Loach, K., Rowley, J. and Griffiths, J. (2017), "Cultural sustainability as a strategy for the survival of museums and libraries", *International Journal of Cultural Policy*, Vol. 23 No. 2, pp. 186-198, doi: 10.1080/10286632.2016.1184657.

Logan, W. (2016), "Cultural diversity, cultural heritage and human rights: towards heritage management as human rights-based cultural practice", in *World Heritage Management and Human Rights*, Routledge, pp. 19-32.

Lyubareva, I., Benghozi, P.J. and Fidele, T. (2014), "Online business models in creative industries: diversity and structure", *International Studies of Management and Organization*, Vol. 44 No. 4, pp. 43-62, doi: 10.2753/imo0020-8825440403.

Maddikunta, P.K.R., Pham, Q.V., Prabadevi, B., Deepa, N., Dev, K., Gadekallu, T.R., Ruby, R. and Liyanage, M. (2022), "Industry 5.0: a survey on enabling technologies and potential applications", *Journal of Industrial Information Integration*, Vol. 26, 100257, doi: 10.1016/j.jii.2021.100257.

Madhavan, M., Sharafuddin, M.A. and Chaichana, T. (2022), "Impact of business model innovation on sustainable performance of processed marine food product SMEs in Thailand—a PLS-SEM approach", *Sustainability*, Vol. 14 No. 15, p. 9673, doi: 10.3390/su14159673.

Monda, A., Feola, R., Parente, R., Vesci, M. and Botti, A. (2023), "Rural development and digital technologies: a collaborative framework for policy-making", *Transforming Government: People, Process and Policy*, Vol. 17 No. 3, pp. 328-343, doi: 10.1108/tg-12-2022-0162.

Massari, F.S., Del Vecchio, P. and Degl'Innocenti, E. (2022 In press), "Past for Future–museums as a digitalized 'interaction platform' for value co-creation in tourism destinations", *European Journal of Innovation Management*, doi: 10.1108/ejim-09-2022-0521.

Morris, A. (2015), *A Practical Introduction to In-depth Interviewing*, Sage, London.

Nambisan, S., Wright, M. and Feldman, M. (2019), "The digital transformation of innovation and entrepreneurship: progress, challenges and key themes", *Research Policy*, Vol. 48 No. 8, 103773, doi: 10.1016/j.respol.2019.03.018.

Özdemir, V. and Hekim, N. (2018), "Birth of industry 5.0: making sense of big data with artificial intelligence, 'the internet of things' and next-generation technology policy", *Omics: A Journal of Integrative Biology*, Vol. 22 No. 1, pp. 65-76, doi: 10.1089/omi.2017.0194.

Pantano, E. and Corvello, V. (2014), "Tourists' acceptance of advanced technology-based innovations for promoting arts and culture", *International Journal of Technology Management*, Vol. 64 No. 1, pp. 3-16, doi: 10.1504/ijtm.2014.059232.

Parente, R., ElTarabishy, A., Vesci, M. and Botti, A. (2018), "The epistemology of humane entrepreneurship: theory and proposal for future research agenda", *Journal of Small Business Management*, Vol. 56, pp. 30-52, doi: 10.1111/jsbm.12432.

Pateli, A.G. and Giaglis, G.M. (2005), "Technology innovation-induced business model change: a contingency approach", *Journal of Organizational Change Management*, Vol. 18 No. 2, pp. 167-183, doi: 10.1108/09534810510589589.

Pedersen, E.R.G., Gwozdz, W. and Hvass, K.K. (2018), "Exploring the relationship between business model innovation, corporate sustainability, and organisational values within the fashion industry", *Journal of Business Ethics*, Vol. 149 No. 2, pp. 267-284, doi: 10.1007/s10551-016-3044-7.

Pironti, M., Cautela, C. and Christodoulou, J. (2015), "Business models innovation through new customer roles: a design-driven case study", *Symphonya. Emerging Issues in Management*, No. 2, pp. 25-41, doi: 10.4468/2015.2.03pironti.cautela.christodoulou.

Pohlmann, M. (2005), "The evolution of innovation: cultural backgrounds and the use of innovation models", *Technology Analysis and Strategic Management*, Vol. 17 No. 1, pp. 9-19, doi: 10.1080/09537320500044396.

Polese, F., Botti, A., Grimaldi, M., Monda, A. and Vesci, M. (2018), "Social innovation in smart tourism ecosystems: how technology and institutions shape sustainable value co-creation", *Sustainability*, Vol. 10 No. 1, p. 140, doi: 10.3390/su10010140.

Prandelli, E., Pasquini, M. and Verona, G. (2016), "In user's shoes: an experimental design on the role of perspective taking in discovering entrepreneurial opportunities", *Journal of Business Venturing*, Vol. 31 No. 3, pp. 287-301, doi: 10.1016/j.jbusvent.2016.02.001.

Rantala, T., Ukko, J., Saunila, M. and Havukainen, J. (2018), "The effect of sustainability in the adoption of technological, service, and business model innovations", *Journal of Cleaner Production*, Vol. 172, pp. 46-55, doi: 10.1016/j.jclepro.2017.10.009.

Rather, R.A. (2020), "Customer experience and engagement in tourism destinations: the experiential marketing perspective", *Journal of Travel and Tourism Marketing*, Vol. 37 No. 1, pp. 15-32, doi: 10.1080/10548408.2019.1686101.

Raved, N. and Yahel, H. (2022), "Changing times-A time for change: museums in the COVID-19 era", *Museum Worlds*, Vol. 10 No. 1, pp. 145-158, doi: 10.3167/armw.2022.100111.

Reficco, E., Layrisse, F. and Barrios, A. (2021), "From donation-based NPO to social enterprise: a journey of transformation through business-model innovation", *Journal of Business Research*, Vol. 125, pp. 720-732, doi: 10.1016/j.jbusres.2020.01.031.

Richter, M. (2012), "Utilities' business models for renewable energy: a review", *Renewable and Sustainable Energy Reviews*, Vol. 16 No. 5, pp. 2483-2493, doi: 10.1016/j.rser.2012.01.072.

Riege, A. and Lindsay, N. (2006), "Knowledge management in the public sector: stakeholder partnerships in the public policy development", *Journal of Knowledge Management*, Vol. 10 No. 3, pp. 24-39, doi: 10.1108/13673270610670830.

Roco, M.C. and Bainbridge, W.S. (2013), "The new world of discovery, invention, and innovation: convergence of knowledge, technology, and society", *Journal of Nanoparticle Research*, Vol. 15 No. 9, pp. 1-17, doi: 10.1007/s11051-013-1946-1.

Ruggiero, S., Kangas, H.L., Annala, S. and Lazarevic, D. (2021), "Business model innovation in demand response firms: beyond the niche-regime dichotomy", *Environmental Innovation and Societal Transitions*, Vol. 39, pp. 1-17, doi: 10.1016/j.eist.2021.02.002.

Sanderink, L. and Nasiritousi, N. (2020), "How institutional interactions can strengthen effectiveness: the case of multi-stakeholder partnerships for renewable energy", *Energy Policy*, Vol. 141, 111447, doi: 10.1016/j.enpol.2020.111447.

Scott, C.A. (2009), "Exploring the evidence base for museum value", *Museum Management and Curatorship*, Vol. 24 No. 3, pp. 195-212, doi: 10.1080/09647770903072823.

Senyo, P.K., Liu, K. and Effah, J. (2019), "Digital business ecosystem: literature review and a framework for future research", *International Journal of Information Management*, Vol. 47, pp. 52-64, doi: 10.1016/j.ijinfomgt.2019.01.002.

Serpa, S. and Ferreira, C.M. (2019), "Society 5.0 and sustainability digital innovations: a social process", *Journal of Organizational Culture, Communications and Conflict*, No. 2, pp. 1-14.

Sheffi, Y. and Rice, J. (2005), "A supply chain view of the resilient enterprise", *MIT Sloan Management Review*, Vol. 47, pp. 41-48.

Short, J.C., Moss, T.W. and Lumpkin, G.T. (2009), "Research in social entrepreneurship: past contributions and future opportunities", *Strategic Entrepreneurship Journal*, Vol. 3 No. 2, pp. 161-194, doi: 10.1002/sej.69.

Siebold, N. (2021), "Reference points for business model innovation in social purpose organizations: a stakeholder perspective", *Journal of Business Research*, Vol. 125, pp. 710-719, doi: 10.1016/j.jbusres.2020.01.032.

Silverman, L.H. (2009), *The Social Work of Museums*, Routledge, Abingdon.

Stuart, L.A. (2021), "The role of libraries, archives and museums in the cultural economy", in *Economic Considerations for Libraries*, Archives and Museums, 197.

Stylianou-Lambert, T., Boukas, N. and Christodoulou-Yerali, M. (2014), "Museums and cultural sustainability: stakeholders, forces, and cultural policies", *International Journal of Cultural Policy*, Vol. 20 No. 5, pp. 566-587, doi: 10.1080/10286632.2013.874420.

Sund, K.J., Bogers, M.L. and Sahramaa, M. (2021), "Managing business model exploration in incumbent firms: a case study of innovation labs in European banks", *Journal of Business Research*, Vol. 128, pp. 11-19, doi: 10.1016/j.jbusres.2021.01.059.

Teece, D.J. (2007), "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, Vol. 28 No. 13, pp. 1319-1350, doi: 10.1002/smj.640.

Teece, D.J. (2010), "Business models, business strategy and innovation", *Long Range Planning*, Vol. 43 Nos 2-3, pp. 172-194, doi: 10.1016/j.lrp.2009.07.003.

Teece, D.J. (2018), "Business models and dynamic capabilities", *Long Range Planning*, Vol. 51 No. 1, pp. 40-49, doi: 10.1016/j.lrp.2017.06.007.

Tranta, A., Alexandri, E. and Kyprianos, K. (2021), "Young people and museums in the time of covid-19", *Museum Management and Curatorship*, Vol. 36 No. 6, pp. 632-648, doi: 10.1080/09647775.2021.1969679.

Troise, C., Ben-Hafaïedh, C., Tani, M. and Yablonsky, S.A. (2022), "Guest editorial: new technologies and entrepreneurship: exploring entrepreneurial behavior in the digital transformation era", *International Journal of Entrepreneurial Behavior and Research*, Vol. 28 No. 5, pp. 1129-1137, doi: 10.1108/ijebr-08-2022-999.

Troisi, O., Santovito, S., Carrubbo, L. and Sarno, D. (2019), "Evaluating festival attributes adopting SD logic: the mediating role of visitor experience and visitor satisfaction", *Marketing Theory*, Vol. 19 No. 1, pp. 85-102, doi: 10.1177/1470593118772207.

Troisi, O., Visvizi, A. and Grimaldi, M. (2023), "Digitalizing business models in hospitality ecosystems: toward data-driven innovation", *European Journal of Innovation Management*, Vol. 26 No. 7, pp. 242-277, doi: 10.1108/EJIM-09-2022-0540.

Tykkyläinen, S. and Ritala, P. (2021), "Business model innovation in social enterprises: an activity system perspective", *Journal of Business Research*, Vol. 125, pp. 684-697, doi: 10.1016/j.jbusres.2020.01.045.

Visvizi, A., Troisi, O., Grimaldi, M. and Loia, F. (2022), "Think human, act digital: activating data-driven orientation in innovative start-ups", *European Journal of Innovation Management*, Vol. 25 No. 6, pp. 452-478, doi: 10.1108/EJIM-04-2021-0206.

Von Delft, S., Kortmann, S., Gelhard, C. and Pisani, N. (2019), "Leveraging global sources of knowledge for business model innovation", *Long Range Planning*, Vol. 52 No. 5, 101848, doi: 10.1016/j.lrp.2018.08.003.

Vuori, T.O. and Huy, Q.N. (2016), "Distributed attention and shared emotions in the innovation process: how Nokia lost the smartphone battle", *Administrative Science Quarterly*, Vol. 61 No. 1, pp. 9-51, doi: 10.1177/0001839215606951.

Wadho, W. and Chaudhry, A. (2018), "Innovation and firm performance in developing countries: the case of Pakistani textile and apparel manufacturers", *Research Policy*, Vol. 47 No. 7, pp. 1283-1294, doi: 10.1016/j.respol.2018.04.007.

Zhu, X. (2017), "Inter-regional diffusion of policy innovation in China: a comparative case study", *Asian Journal of Political Science*, Vol. 25 No. 3, pp. 266-286, doi: 10.1080/02185377.2017.1339619.

Zott, C. and Amit, R. (2010), "Business model design: an activity system perspective", *Long Range Planning*, Vol. 43 Nos 2-3, pp. 216-226, doi: 10.1016/j.lrp.2009.07.004.

Corresponding author
Giovanni Baldi can be contacted at: gbaldi@unisa.it