

The role of innovation in the development of BoP Business Models - A literature review

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1. INTRODUCTION

Society is going through a shift towards an increasing consciousness regarding social and environmental problems, which motivated a growing concern with the impacts caused by companies through their economic activities. Businesses targeting the BoP population, a 4 billion mass of poor global consumers (Goyal, Agrawal, et al., 2020), emerged as an option to combine economic opportunities while also addressing social concerns. Rather than the aid and charity approaches, the discussion around BoP emphasizes the role of innovation and entrepreneurship. The very concept of BoP is embedded with the claim that business can help eradicate poverty by turning these people into customers and business partners, bringing prosperity to the poor while, at the same time, finding new revenue sources (Halme et al., 2012; Rivera-Santos & Rufin, 2010).

Nonetheless, despite the potential for generating solutions for untapped market segments and promoting poverty alleviation, enterprises operating at the BoP struggle to achieve the dual goals of sustained profitable growth and sustainable poverty alleviation (van der Merwe et al., 2020), and BoP businesses fail to achieve their objectives. Contexts marked by institutional voids, poor infrastructure, weak formal markets, and inadequacies in the supply or demand are amongst the main challenges imposed by the context (Jaén et al., 2020; Seuring et al., 2019)

It is often argued that success at BOP markets requires innovative and inclusive business models (Danse et al., 2020). The latest trend of social enterprises involves designing and implementing innovative business models to develop value offerings and delivery networks at the BoP (Goyal, Agrawal, et al., 2020). However, research findings have been quite descriptive and generic (Danse et al., 2020).

2. OBJECTIVES AND RESEARCH QUESTIONS

This article aims to analyze the literature on business model innovation in BoP markets to understand the approaches applied by enterprises that tackled context-related challenges and to obtain a better understanding of the reasons that explain their success or failure. The examination will focus on answering the following research questions:

RQ1. How is innovation contributing to the development of appropriate business models for BoP markets?

RQ2. What are the research gaps on the theme?

3. THEORETICAL BACKGROUND

3.1 Bottom/Base of the Pyramid (BoP)

The concept 'Bottom/Base of the Pyramid' (BoP) refers to the bottom-tier of the world income pyramid, a cross-national class of population living in a situation of extreme or moderate poverty (Gold et al., 2013; Hahn, 2009; Sharma & Jaiswal, 2018), residing primarily in urban slums, semi-urban and rural areas, living and transacting in an informal economy, and lacking access to mechanisms for the fulfillment of basic human needs (Goyal, Kapoor, et al., 2020; Viswanathan & Sridharan, 2012).

BoP is often associated with different strategies to alleviate global poverty (Kolk et al., 2014a; C. Prahalad & Hart, 1999). The most common one advocates the application of a market logic, with the engagement of the private sector to transform the poor into consumers of products and services to which they are currently underserved, exploring the potential of profitable segments in this largely untapped market, while simultaneously contributing to the development of local economies and the resolution of significant societal problems in these

regions (Hahn, 2009; Olsen & Boxenbaum, 2009; Seuring et al., 2019; Viswanathan & Sridharan, 2012).

The interest in designing business ventures to serve the BoP is based on a mutual value creation perspective that advocates the possibility of generating profitability and providing social value to the communities served, alleviating poverty. Approaches may vary, with some initiatives focusing more on the development and selling of products, while others are more concerned with the development of business partnerships, regarding BoP population not only as consumers, but primarily as integrative parts of all segments of the value creation process (Hahn, 2009; Karnani, 2007; London et al., 2010).

The first generation of research on the BOP was primarily focused on the concept evolution and on whether companies should enter the market; the second generation emphasized developing market strategies, building value-based partnerships, innovation, marketing, and market entry strategies, and consumer behavior; in the recent past, research has been directed towards creating service ecosystems, business models, branding strategy and product adoption (Mathur et al., 2020). This last wave of research, BoP 3.0, also attempts to address failures and shortcomings from the previous waves by stressing the need to perceive poverty as a multifaceted and complex problem rather than simply an economic issue (Dembek & York, 2020). The third generation also expanded the previous set of capabilities identified by researchers to include open innovation, cross-sector partnership, innovation ecosystems, systemic triple bottom line impact, and replicable and scalable business models (Nobre & Morais-da-Silva, 2021).

3.2 Innovation and BoP Markets

Since innovation contributes to successful and growing enterprises, it can also be considered as a natural component of businesses that target BoP markets, as a means of successfully exploiting new ideas concerning products or services in this context, which is inherently more complex (van der Merwe et al., 2020).

Innovation can receive many epithets, depending on the objectives and the means applied to achieve them. Social innovation, for example, has the goal to address pressing problems of society through transformative activities (Goyal, Agrawal, et al., 2020). Inclusive innovation aims to improve access to products, services, or economic benefit to individuals at the BoP and marginalized communities (van der Merwe et al., 2020). And frugal innovation simplifies products and processes, redesigning them to become more efficient and cost-effective (David-West et al., 2019). This logic can be extended to innovate in all supply chain stages (Knizkov & Arlinghaus, 2021). It has also been argued that innovation at the BoP is often incremental, focusing on diffusion, local needs, demand, and customer suitability (van der Merwe et al., 2020).

Although names may vary, the innovation objectives in this context are always around improving life conditions and must start with the commitment to awareness, access, affordability, and availability (C. K. Prahalad, 2012). To achieve such a goal, BoP initiatives require novel cost schemes for increasing affordability and breaking the poverty penalty, which requires innovation in individual business activities and at the business model level (Joncourt et al., 2019).

Literature on innovation for emerging markets, where BoP can be considered to fit in, raises concerns around the adaptation of the product design, entire value chain, and various elements of the business (Mathur et al., 2020). Value offerings must exhibit compatibility, complexity, observability, relative advantage, and trialability to promote diffusion and adoption. At the same time, the outcomes of the innovation process must focus on large price-performance improvements and the development of simpler, less expensive, more convenient value offerings (van der Merwe et al., 2020).

For global firms, breakthrough innovations achieved in BoP markets and the lessons learned during their development may become competitive advantages if leveraged in developed markets (C. K. Prahalad, 2012). When these new capabilities' move up the pyramid', they can be used to challenge existing capabilities, which means that the base of the pyramid may offer a unique opportunity to incubate disruptive technologies and to nurture abilities and strategies that provide the means to catalyze internal creative destruction (London & Hart, 2004).

3.3 Business Models (BMs) Innovation in BoP Markets

Business model (BM) is a widely used concept, although mostly undefined. Interest in it has risen recently, with scholars and practitioners arguing that the ability to innovate in BMs can explain a firm's current and future competitiveness (Sanchez & Ricart, 2010). A business model can be described as a visual tool to analyze the way organizations implement their strategy to create and capture value (Dumalane et al., 2020). It also refers to the value that a product or service brings to the customer, how the product/service is delivered, and how the profit is captured (Halme et al., 2012).

While conventional BMs presuppose a well-functioning environment for business development and deployment, BMs developed for BoP markets will encounter very different circumstances (C. K. Prahalad, 2012), characterized by institutional voids, lack of formal market institutions, high transactional costs, high agency costs, low intellectual property protection, high information asymmetries, and risks of opportunism – conditions which will influence their configuration in these contexts (Danse et al., 2020; Lashitew et al., 2021).

BoP businesses in such economies have limited market information, which exposes them to significant uncertainties that make it difficult to anticipate challenges and formulate strategies. Therefore, they require capabilities to create contextualized and non-transferable solutions, increase costs, and limit the scaling of the business. Managing BoP businesses then becomes a process of discovery, involving learning-by-doing and iterative adaptation and reformulation of various business components (Lashitew et al., 2021).

Some scholars claim that the approach used so far for understanding and designing BMs – through the conventional lens that considers BM not more than a combination of mechanisms to deliver value, receive payment and convert those payments to profit, through a relationship between only two stakeholders (customer and enterprise), where the value exchanged is mostly financial – may explain our difficulty to create thriving BoP enterprises because it is ill-equipped to deal with the complexities of poverty and the obstacles encountered in BoP markets (Dembek & York, 2020). Therefore, works in this field stress the need to develop new strategies and capabilities and reshape BMs and business practices to succeed in such dynamic and uncertain environments (Sanchez & Ricart, 2010).

BoP BMs will be affected by their challenging context and by their purpose to achieve both financial and social results. Since the value proposition is expanded to provide benefit both for the individual customer and the community of low-income people (Halme et al., 2012), these companies will strive to go beyond the objective of simply providing affordable products and services. They aim to create products and solutions that are embedded in social values, adopt revenue models that represent a fair distribution of costs and benefits, and foster the promotion of equitable relationships amongst the actors involved, making the value chain more inclusive and just, sometimes even including components to address more systemic socio-economic problems (Halme et al., 2012; Matos & Silvestre, 2013).

The literature on BMs highlights the transformational value of these innovations, especially more in the emerging markets (Mathur et al., 2020), and strategic management has begun to consider BM innovation as a determinant factor in the firm's performance in low-income markets (Iheanachor et al., 2021; Sanchez & Ricart, 2010). Solutions include the engagement of 'fringe stakeholders' to embed the BM in the local context, internalization of

market failures (e.g., building water facilities, training of suppliers, and provision of financial services), and deliberately improving the business ecosystem – although all these options come embedded with costs to the enterprise (Danse et al., 2020).

With so many components to deliberate when configuring BoP BMs, this has been considered a useful unit of analysis to understand better the characteristics of firms that aim to address social problems in BoP markets. Recent research highlights the importance of studying the social value creation of new business models, encompassing inclusive BMs, BoP BMs, social enterprise BMs, social BMs, sustainability BMs, shared value, and transformative BMs (Mathur et al., 2020).

Nonetheless, although BM innovations are considered an imperative element for entering into low-income markets, we are still missing an explanation of the nature of BMs in this context and the underlying factors that explain the type of innovation required to support their success (Sanchez & Ricart, 2010).

4. RESEARCH METHODOLOGY

4.1 Sampling Process

The sampling process was conducted using the Web of Science (WoS) and Scopus databases due to the search mechanism capable of reaching all indexed journals with an impact factor in the Journal Citation Report (JCR) (Carvalho et al., 2013) and also because it is the most extensive database of peer-reviewed literature (Galvão et al., 2020).

The databases' research was conducted with the keywords "innovation*" and "business model*" and "base of the pyramid" or "bottom of the pyramid" or "base of pyramid" or "bottom of pyramid" in the title, abstract or keywords. The search was then refined, selecting "articles", "reviews", and "early accesses" only. The timeframe included publications from each journal's zero-year until April 2021. The search returned 71 papers from WoS, and 46 from Scopus. The merge of the results left the sample with 88 single papers, since 29 were listed in both databases.

Studies that met the following criteria were included: (i) aligned with the research goals; (ii) written in English; and (iii) available. The exclusion protocol included reading titles and abstracts to determine if the paper was aligned with the research goals, the reading of the whole paper for confirmation, and the creation of an explanation for exclusion. As a result of the refinement process, 13 papers were excluded, leaving the sample with 75 articles. Figure 1 represents the complete sampling process.

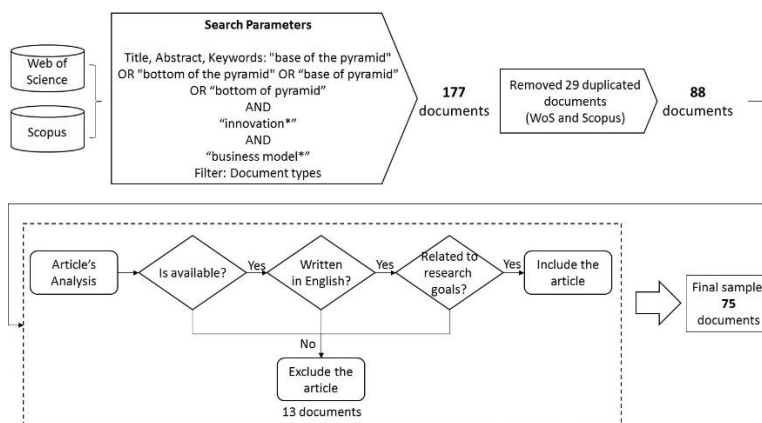


Figure 1. Systematic literature review workflow

A snowballing process was executed to understand the existing research streams and the correlated subjects. Additional 38 articles were found in the snowballing and included in the theoretical background, but not in the systematic literature review to avoid a conflict with this research's goals.

4.2 Data analysis

Keywords co-occurrence and reference co-citation analyses were performed using the software VOS Viewer. The resulting graphics were analyzed according to the thematic codes created through a manual screening and registered in NVivo11 software. The co-occurrence analysis shows the network of keywords that have been used together - by authors or editors - indicating how frequently the concepts displayed were associated by the researchers. The co-citation analysis shows the network of papers that have been referenced together and may contribute to the understanding of the intellectual map of an area.

A manual screening on the selected sample of papers was also executed, attributing codes using software NVivo11. The coding process applied was abductive coding, following the coding cycles described by Skjott Linneberg & Korsgaard (2019). This process combines inductive and deductive techniques and includes cycling back and forth between data and theory. Therefore, the first list of codes emerged from the literature screening (inductive coding) and was gradually refined as patterns emerged or new theories and papers were analyzed.

Furthermore, the deductive coding process - that starts with a list of codes created in a coding frame - was applied for the methodological approach, research method, and sources of evidence.

5. RESULTS

There is an increasing interest in publishing articles relating to business model innovation for BoP in recent years. The last three years (2019, 2020, and 2021¹) accounting for 39% of the publications on the theme. The main journals publishing about BM innovation in BoP contexts are Journal of Cleaner Production (14%), Business and Society (6%), and Emerald Emerging Markets Case Studies (6%).

The key-occurrence analysis indicates five clusters when applied the criteria of at least three co-occurrences. The red cluster is focused on strategies for deploying BoP business models in developing countries. The purple cluster includes the literature reviews and discusses strategies for delivering social value to BoP communities. The blue cluster includes specific business models, like partnerships or BMs tailored to provide energy. The yellow cluster is concerned with strategies for poverty alleviation that include capacity building. And the green cluster discusses innovation themes, either directly related to BoP or also including BMs. Figure 2 contains the cluster representation.

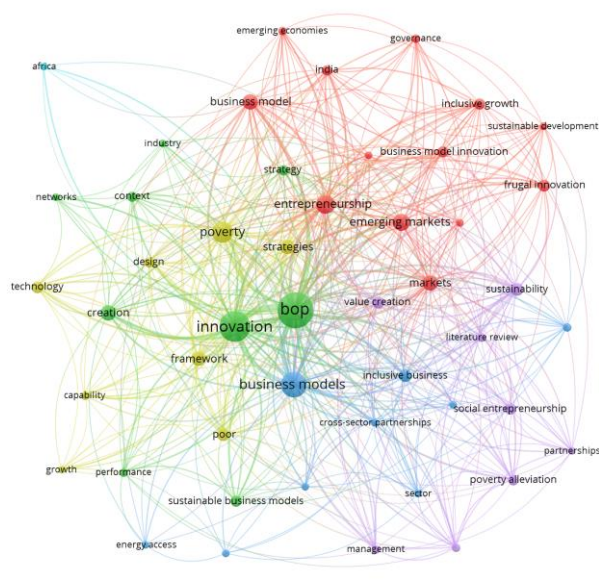


Figure 2. The key-occurrence analysis created using VOS Viewer shows the presence of five thematic clusters

The co-citation analysis indicates three clusters when applied the criteria of at least nine references in the sample. The red cluster is composed of works that express ethical concerns related to how BoP businesses are conducted and claim capability transfer and retention (Ansari et al., 2012) and empowerment for this population (Arnold & Valentin, 2013). It also includes authors who are positioning themselves against BoP, alleging that this discourse serves ideological functions and are shaped by power relations (Arora & Romijn, 2012), that discuss possible theoretical and conceptual failures in BOP arguments (Chatterjee, 2014; Karnani, 2007) or simply point the practical difficulties embedded in implementing the idea (Dembek et al., 2020; Hall et al., 2012; Halme et al., 2012; Perez-Aleman & Sandilands, 2008). Other authors in this cluster are analyzing practical perspectives and challenges of the BoP idea implementation (Arnould & Mohr, 2005; London et al., 2010; Matos & Silvestre, 2013; Nakata & Weidner, 2012; Olsen & Boxenbaum, 2009; Reficco & Márquez, 2012), or exploring how the concept evolved thought time (Kolk et al., 2014b).

The green cluster is dominated by practical discussions around implementing BoP business models and the challenges encountered. The cluster includes BM authors like Osterwalder & Yves (2010) and Porter and articles from practical-oriented journals like Harvard Business Review and MIT Sloan Management Review. Prahalad, one of the first authors to discuss BoP, is also included in this cluster.

Finally, the blue cluster, with only four articles, include two works focused on institutional voids in India (Mair et al., 2012; Mair & Marti, 2009), a Prahalad article published in a practice-oriented journal (Coimbatore K Prahalad, 2008), and a case study in India (Sridharan & Viswanathan, 2008). Figure 3 contains the cluster representation.

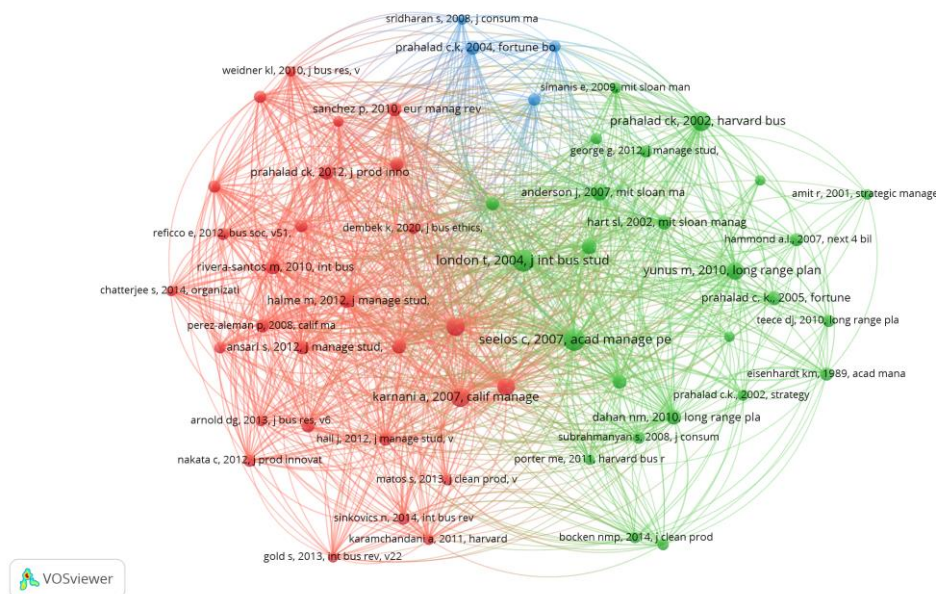


Figure 3. The co-citation analysis created using VOS Viewer shows the presence of three clusters

5.1 Content analysis

The papers in the sample used mostly qualitative approaches to explain how business models are being deployed in BoP markets, with case studies as the preferred method and interviews as the main source of evidence. This finding is consistent with other works recently published that indicate that most of the existing studies on business models in the BoP domain rely on sector-specific unique cases to suggest strategies to succeed in the BoP market (Mathur et al., 2020). Literature reviews were also common in the sample, reflecting the difficulty of summarizing the understandings obtained so far, with so many different levels of analysis being

applied by scholars to address the research challenge. Table 1 provides the complete results of the deductive coding process.

Approach	# of papers
Qualitative	69
Mixed	3
Quantitative	3
Research Method	# of papers
Case Study	54
Literature Review	12
Theoretical-conceptual	3
Survey	3
Mixed	2
Public data	1
Sources of evidence	# of papers
Interviews	39
public data	16
questionnaire	4
bibliography	1
Mixed	1

Table 1. Deductive coding results

The abductive codes identified that some authors choose to use a specific theoretical approach for innovation. However, they mention innovation as a phenomenon more than a concept, without further theoretical elaboration. But when they do choose a theoretical approach, frugal innovation is the most common one. Table 2 summarizes the number of articles by theoretical approach.

Theoretical approach for innovation	# of papers
Undefined	49
Business Model Innovation	12
Frugal Innovation	7
Disruptive innovation	2
Inclusive Innovation	2
Social Innovation	2
Bricolage innovation	1
Technological Innovation	1
Sustainable innovation	1
Reverse Innovation	1
Open Innovation	1
Radical Innovation	1
Institutional Innovation	1

Table 2. Abductive coding results for the theoretical approach for innovation

The papers analyzed chose mainly international approaches – either by studying global companies or mixing cases from several countries. But when specific countries or regions are specified, Asia is the most representative one in the sample, with India leading the number of cases by far. Africa is also well represented, while Latin America remains an unexplored territory. Table 3 shows the number of businesses analyzed in each geographic region.

Geographic Region	Country	# of papers
Total Africa		14
	Continental	7
	South Africa	2
	Kenya	2
	Uganda	1
	Ghana	1
	Nigeria	1
Total Asia		23

	India	14
	China	4
	Phillipines	1
	Pakistan	1
	Vietnam	1
	Filipinas	1
	Continental	1
Total Latin America		8
	Brazil	4
	Mexico	2
	Argentina	1
	Haiti	1
International		18

Table 3. Abductive coding results for the geographic region of business

Some additional codes emerged from the coding process. The first one refers to differences in the business phase(s) being analyzed by scholars and the business component(s) from that phase that received the focus. The business phase and business component were coded as levels of analysis (L), as shown in Table 4. Some authors simultaneously analyzed several business phases and business components since they closely intertwined and influenced one another. Nonetheless, organizing them as separated codes might provide better ground for future comparisons among results obtained by researchers.

	L1. Business phase	Identify the opportunity	Develop the solution	Validate the opportunity and the solution	Plan the business	Configure the business	Run the business
Analysis level (L)	L2. Business component	Research BoP problems	Research and development (R&D)	Validate the problem	Plan for the uncertainties	Define value proposition	Research and development
		Get to know the target community	Generate innovative solutions	Evaluate the solution adherence to problem	Plan for context-related constraints	Define customers	Market development
			Understand context-related constraints	Capacity building	Define business partners	Raw material definition	
			Understand context-related opportunities	Governmental influence	Define resources	Procurement	
					Define activities	Production	
					Define communication channels	Selling	
					Define distribution channels	Distribution	
					Define distribution modal	Reverse Logistics	
					Define cost structure	Supply chain	
					Define revenue stream		

Table 4. Abductive coding results for the level of analysis

Another code that emerged is related to the perspective (P) adopted by authors when analyzing the phenomenon observed. Some chose to highlight the results from a perspective of who was responsible for the business or the business leadership. Differences in purpose, resources, and approach were observed depending on the leader. For example, BoP business led by MNCs discussed internal barriers, resources available for product research and development, and the challenges faced to adapt their current business models to BoP market conditions. BoP businesses led by external entrepreneurs tended to discuss the difficulties in balancing profit and social value. Both discussed the challenges related to understanding their clients' reality and developing tailored solutions differently from local entrepreneurs.

The perspective adopted could also vary depending on the business aspect prioritized – process, technology, KPIs, or a combination. Finally, some papers chose to include discussions around the trade-offs between economic, social, and environmental values and then analyze how business leaders dealt with them, the decision mechanisms employed, and which one was prioritized in the end.

Analytical P Perspective (P)	P1. Business Leadership	Multinational Enterprise (MNE)
		Large local company
		Small local company
		External Entrepreneurs
		Local Entrepreneurs
		Government
		NGOs
	P2. Business aspect	Process
		Organizational capabilities
		Technology
		KPIs
	P3. Prioritized value	Economic value
		Social value
Environmental value		

Table 5. Abductive coding results for the analytical perspective

The theoretical approach consolidates the findings presented in Table 2 and indicates the different theoretical lens applied in the research. Researches in the sample used combinations of (L), (P), and (T) to analyze data and to present results, therefore creating difficulties to the task of comparing their results and summarizing the findings in this field.

Theoretical Approach (T)	Social innovation
	Frugal innovation
	Business Model Innovation
	Disruptive innovation
	Bricolage innovation
	Technological innovation
	Institutional innovation
	Sustainable innovation
	Reverse innovation
	Open innovation
	Inclusive Innovation
Radical Innovation	

Table 6. Abductive coding results for the theoretical approach

6. DISCUSSION

Innovation can play many roles in developing business models to address BoP markets. Recent literature reviews make attempts to capture how scholars have been organizing this contribution. Several templates and perspectives have been proposed for different layers of analysis. However, it remains a challenge to connect all this knowledge to provide consistent

guidelines on how innovation should be conducted by entrepreneurs and companies trying to create economically viable businesses in the BoP context. Although looking into small pieces of this puzzle does provide important insights, scholars still struggle with the big picture. In this review, we attempt to contribute to this body of knowledge by proposing that innovation can play important roles in several aspects of a business. That role will be analyzed by academics using different approaches or analysis levels that create difficulties in understanding where each work fits in the overall context.

We proposed that the analysis made by authors have two main levels (L) that will define where they are looking when analyzing a BoP business: (L1) the business phase; (L2) the business component inside that phase that will be their object of study. Their choice will inform their analysis of business phases and components on different perspectives (P): (P1) business leadership; (P2) the business aspect; and (P3) the prioritized value to be delivered by that business. Both analytical Level (L) and perspective (P) will be influenced by the theoretical lens employed (T) if any. Tables 4, 5, and 6, presented in the results section, consolidates this proposal.

The business phase (L1) guides the researches through one or more business components (L2). Some of them will look into a phase as a whole, while others will choose just one aspect. The business leadership (P1) will influence discussions around the resources available for (L2) Capacity Building. It will also change the (L2) context-related constraints and opportunities. Concerns about intellectual property issues encountered in BoP markets, for example, are mentioned in papers that address (P1) MNEs' perspectives when entering these markets. Therefore, it is important to consider that components exert influence on one another.

Research questions permeate several aspects of this layout. For example, discussions about the role of the BoP in a business (inventors, employees, suppliers, business partners, or consumers) are related to (L1) Configure the business and (L2) Define business partners. Still, the discussions also include (L2) Capacity building issues and even (P3) Prioritization of social value. Another example can be given to discussions around cost reduction for economic viability. Cost reduction can happen through (P2) Technological components that address (L2) definition of distribution channels, reducing the cost of transactions. Still, they also can discuss (L2) raw material definition while also considering that (P3) environmental value must be delivered when such a choice is being made. When all these analysis components are applied to many works in so many different contexts, it becomes a challenge to evaluate where this field of study aims. The role of innovation also becomes harder to understand and assess.

Success factors

Presenting success factors is a common approach adopted by scholars to make sense of their findings and suggest practical next steps. The first and most common success factor is the understanding that poverty is a complex problem and that increased income is not sufficient to address it (Dembek & York, 2020). Different cognitive frames used to understand and respond to this complex challenge might lead to very different results (Grimm, 2020). Therefore the different cognitive understandings of the problem can be further studied to understand their relationship to BMs' success.

Another success factor is to embed the business model in the local community, designing it around the community's strengths and addressing its weaknesses through business model components that will vary depending on the business's contextual challenges (Dembek & York, 2020). The challenges encountered in these contexts also lead scholars to emphasize the need for carefully designed pilots, starting with small-scale experimental ventures (Lashitew et al., 2021).

Scholars noticed that, as the business interacts with the community, changes happen. Therefore, the business model cannot be static and must evolve as the community evolves to

maintain relevance and efficiency. It also must allow for monitoring changes and taking appropriate actions when necessary (Dembek & York, 2020; Grimm, 2020).

The ability to scale up the operation, taking advantage of the decrease in operational costs brought by economies of scale, is mentioned as an important means of growth in an environment that is very price-sensitive and where differentiation strategies based on quality tend to fail. Therefore, high operational costs will lead the business to economic failures in this context (Knizkov & Arlinghaus, 2021; Lashitew et al., 2021), and low-cost solutions and adequate financing schemes will exert a positive influence on the success of BoP BMs (Fritz et al., 2020).

The following managerial and organizational capabilities have also been included in the hall of success factors: (i) organizational ambidexterity; (ii) leveraging technology; (iii) partnerships and co-creation; (iv) developing social capital; (v) ecosystem building; (vi) internal and external contingencies (Lashitew et al., 2021); (vii) responsible and strong leadership (Jaén et al., 2020); (viii) communication, partner development and technological integration with suppliers; (ix) a well-structured, rich and inclusive supply chain network; (x) active relationships with traditional and non-traditional stakeholders (Khalid et al., 2020); (xi) collaboration with local partners and the utilization of existing value chains (Fritz et al., 2020).

Other strategies mentioned as successful by authors are: (i) vocational and on the job training; (ii) de-skilling and providing maintenance services; (iii) prioritize decentralized as opposed to large-scale centralized operations; (iv) collaboration with CSOs and local intermediaries (Fritz et al., 2020); (v) include a diverse number of local stakeholder groups for learning and defining innovative solutions in BOP settings; (vi) adopt a mix of bottom-up and top-down approaches to address key collaboration and coordination challenges, where both learning and capability building are part of the stakeholder relations process; (vii) enhance the role played by the government at all levels (local, provincial and national), including a more efficient approach in terms of monitoring mechanisms, tax exemptions, and other incentives; (viii) find effective mechanisms to convince stakeholders to shift from single to multiple objectives (Matos & Silvestre, 2013).

Although very few parallels have been traced with innovation literature, an emphasis must be made to the role of leadership, which is similar to the crucial role of innovators as drivers of the process (Halme et al., 2012).

Research opportunities

Aiming to provide meaningful and updated research avenues, this review organized the research questions suggested by authors that published articles on BoP BMs in the last three years (2019, 2020, and 2021). These questions are summarized in Table 7.

Research themes	Related Authors
Business Model (BMs)	
Apply multi-stakeholder lens to sustainable business models (SBMs), and explore the use of SBMs in the BoP context	(Dembek & York, 2020)
Investigate strategies used by social enterprises that lead to sustainable transformation at the BoP, specifically applying the model developed by the authors	(Goyal, Agrawal, et al., 2020)
Investigate how leadership operates and contributes to the successful implementation of commercial business ventures at the BOP	(Jaén et al., 2020)
Explore business-to-business (B2B) situations in BoP contexts	(Khalid et al., 2020)
Place attention on services, which have long-term, less tangible, and no direct financial benefits, challenging value proposition and value capture as elements of the BoP BM	(Joncourt et al., 2019)
Look into the less successful initiatives and failures to build a stronger theoretical argument on how to succeed in BoP markets	(Goyal, Kapoor, et al., 2020; Joncourt et al., 2019)
Take the focus out of formal organizations, and draw attention to informal businesses and networks and on understanding their role within the BoP	(Joncourt et al., 2019)

Focus on the learning process to uncover and develop the most suitable BM and the ongoing assessment that precedes large-scale replication of it. How can organizations build replication capabilities in BoP markets? How does causal ambiguity influence the learning processes leading to the replication capability?	(Joncourt et al., 2019)
Process design	
Investigate the functioning of supply chains in BoP markets, especially the upstream part of it	(Khalid et al., 2020)
Understanding dynamics of buyer-supplier interactions in BoP supply chains	(Khalid et al., 2020)
How companies can design their processes to address resource constraints in BoP contexts successfully; how resource constraints influence processes in the different stages of a company's supply chain	(Knizkov & Arlinghaus, 2021)
To what extent does the strategic supply-chain design of firms at the bottom of the pyramid evolve, and how does this impact their operational performance	(Knizkov & Arlinghaus, 2021)
Trade-off management	
Issue of time and paradoxical tensions to understand struggles with balancing different temporal orientations and maintaining long term time frame	(Dembek & York, 2020)
Responses to trade-off tensions in BoP contexts (profitability vs. poverty reduction), employing a methodological approach that takes a process perspective	(Grimm, 2020)
Cognitive perspectives and BOP, applying concrete cognitive frames	(Grimm, 2020)
Investigate tensions (from action and organizational to BoP ecosystem levels) that arise when implementing long-term alongside short-term capabilities	(Nobre & Morais-da-Silva, 2021)
Value creation and capture	
Value capture by community members, especially beyond purely economic meaning	(Dembek & York, 2020)
Building capabilities to overcome the constraints and contingencies of social value creation for and with BoP communities	(Lashitew et al., 2021)
How should necessary (local) investments into the scaling process be integrated into financial viability? How does economic viability depend on covering different income levels? How does value capture across different income levels influences the business model evolution? How do marketing strategies for expanding the business scope create rebound effects with the financial viability?	(Joncourt et al., 2019)
Investigate the value capture aspect of the funding schemes and the consistency of the business model elements during the business model evolution. How can organizations be innovative in capturing value through external funding? How can organizations innovate value creation to let the poor become co-producers and co-inventors? How can organizations innovate value propositions for more complex poverty needs?	(Joncourt et al., 2019)
Integration of environmental concerns	
Determine what is the environmental impact of frugal products when taking a system perspective and how to minimize environmental waste across supply chains at the BoP	(Knizkov & Arlinghaus, 2021)
Capability building	
Use learning theories, especially transformative learning processes, to explain how organizations can understand poverty as a multifaceted and heterogeneous constraint. How do cognitive structures influence an individual's perception of resource constraints in BoP markets? How can transformative learning processes break apart from these cognitive structures? How can combinative capabilities facilitate transformative learning processes?	(Joncourt et al., 2019)
How do higher- and lower-order capabilities' development teams differ in their understanding (and cognitive frames) about the tensions of creating	(Nobre & Morais-da-Silva, 2021)

long- and short-term sustainability values in BoP organizations and BoP ecosystems	
Other themes	
Understand consumer behavior at a country-specific level in BoP markets	(Lappeman et al., 2019)

Table 7. Research questions and themes suggested by authors publishing in the last three years

7. CONCLUSION

Innovation plays a relevant role in the development of all sorts of solutions. The mechanisms associated with how innovation happens are not discussed in the literature related to BoP Business Models. Authors' concerns are more connected to practical issues: where is innovation taking place, and what is being done by entrepreneurs and companies to address the challenges encountered. Articles are mainly qualitative, using case studies to provide examples of successes and failures that might guide the community toward success. Many recent articles are formatted as literature reviews to make sense of all the knowledge produced. Therefore, we can say that this knowledge field is yet under development.

Contributions for the practice include the landscape of the success factors for designing and implementing effective BMs in BoP markets. Contributions for the theory consists of a consolidation of the main research avenues appointed by recent papers, as well as the proposition of a framework to analyze the knowledge produced on BoP BMs so far, providing better ground for future comparisons among results obtained by researchers and therefore to better assess the evolution of the field.

A limitation of this research is the research string, which limits the amplitude of theoretical perspectives analyzed. Another limitation is the subjectivity of the process of coding and analyzing the data. Future research could further develop the proposed framework for delivering a comprehensive landscape of the developments related to BoP BM innovation.

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ⁱ The year 2021 is considered only until April.