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The role of multinational enterprises and formal institutions in BOP markets

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ABSTRACT

There has been much debate on the role of multinational enterprises (MNEs) in 'Bottom of the Pyramid' (BOP) markets. MNEs are advised to overcome institutional voids by making maximum usage of informal institutions. In practice, the empirical support for MNEs' success and their contributions to the sustainable development of BOP markets has been limited. In this article, we focus on a realistic path –including the role of MNEs in this journey– to overcome the 'poverty premium.' The poverty premium refers to goods being available to BOP customers only at a very high cost, especially when using credit, and we attempt to address the root causes of this barrier. We present an actionable, transaction cost economics (TCE) based approach for MNEs and other market actors to strengthen and leverage contract-enforcing institutions in the long-term, using illustrative examples of the digital and financial inclusion journey observable in India. Our study confirms the continued need in BOP markets to build on conventional economics and management thinking, for the poorest people to be lifted out of poverty. Here, efficient formal institutions do matter.

1. Introduction

It has been over twenty-five years since C. K. Prahalad and his colleagues popularized the term Bottom of the Pyramid (also known as Base of the Pyramid, BOP),[1] referring to the billions of people with low income in developing countries. These individuals have ultimately been underserved as potential customers and underutilized as potential contributors to value creation in the global economy (cf. Prahalad and Lieberthal, 1998). Prahalad's main thesis was that MNEs should adopt an innovative mindset and develop both new business models and products to tap into this potentially enormous market in ways that would create profits for the MNE while raising the living standard of people at the BOP, i.e., contributing to sustainable development. During the past two decades, MNEs have achieved mixed results in BOP markets, with genuine success stories being infrequent rather than the norm (Dembek et al., 2020; Karamchandani et al., 2011; Simanis, 2012).

As one example of the prevailing challenges, the Japanese MNE Honda launched a dedicated 'bare bones,' and inexpensive

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[1] Many authors have subsequently relabeled the 'Bottom of the Pyramid' concept as 'Base of the Pyramid', because of supposed 'negative connotations' associated with the former label, but some authors use the terms interchangeably (e.g., Dembek et al., 2020).

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motorcycle for low-income customers in India's rural economy, but one barrier to large-scale market penetration appeared to be the limited availability of credit at low lending rates (Kant, 2023). The absence of cheap credit for potential BOP customers has been one of the main reasons for the mixed performance results of many products launched by MNEs (Prahalad and Hart, 2002). BOP customers may not be able to obtain credit from a bank or other financing institution due to the absence of a credit score[2] or formal documents such as paystubs or tax-returns, and their only option may be to obtain a loan at a very high interest rate from a 'moneylender' (thereby reflecting in part what Prahalad refers to as the *poverty premium*).

The lack of access to credit has been recognized for decades, but BOP researchers and MNE managers have so far focused mainly on the need to foster *informal institutions*, including 'relationships' with local actors (Heuer et al., 2020; Prahalad and Hart, 2002). In contrast, we think that a main focus on informal institutions to increase the participation of MNEs in BOP markets, thereby contributing to sustainability in terms of higher participation of BOP customers in the economy, and to social justice, is largely a non-starter. Informal institutions, defined here as relationship-based agreements that build on social norms, prior ties and experiences more generally (Rivera-Santos et al., 2012; Zhou and Poppo, 2010), do not address the root causes of the poverty premium, which continues to hinder economic prosperity for BOP citizens. In this paper, we make three contributions. *First*, we suggest that it is important to pay adequate attention to the poverty premium and we argue that MNEs should take an active role in working with partners (including the government) to build *formal institutions*. These institutions should improve the likelihood that contractual promises will be honored, such as loan repayment by those who do not have the conventional, documented stable sources of income or wealth. We demonstrate through several cases in India, at present the largest BOP market in the world, that an emphasis on building formal institutions is well underway (cf. United Nations Development Programme and Oxford Poverty and Human Development Initiative, 2023[3]). We identify opportunities for MNEs to realign their strategy with this reality, thereby increasing chances of success in BOP markets, in terms of growth and profits.

Second, we suggest shifting the intellectual focus from a commonly adopted notion of 'trust' used by Prahalad and others, to the concept of reliability and more specifically bounded reliability (BRel). When building upon the BRel concept, we do not any longer need to invoke the emotion-laden and ultimately unproductive notion of 'absence of trust.' Referring to absence of trust often places an unfortunate and unfair burden on the shoulders of MNEs, which are then viewed as largely (or even exclusively) responsible for 'not making it happen' in BOP markets. In reality, a credible expectation of contracting partners to make good on their commitments is always associated with some form of safeguards (Kano and Verbeke, 2015). Such safeguards can be formal or relational (with the latter being informal in nature), and they can be instituted at the macro-, meso-, or micro-levels. Extant BOP related studies, however, typically refer to 'trust' without much –if any– further elaboration, except that it may be lacking and that more of it is needed. In Prahalad's words (2010, p. 45): "Both sides –the large firms and the BOP consumers– have traditionally not trusted each other. The mistrust runs deep. However, private-sector firms approaching the BOP market must focus on building trust between themselves and the consumers." In contrast, we argue using a transaction cost economics (TCE) perspective, that building safeguards to economize on BRel is highly relevant in BOP markets due to the likelihood of people reneging on commitments made in good-faith (for instance, the possibility of a delay in a BOP entrepreneur receiving payment from customer-farmers due to crop-failure) and also more actionable than the nebulous notion of building trust.

Third, we show the emerging use of technology in building (mostly formal) safeguards to economize on BRel in BOP markets through illustrative examples from India. This country has successfully enrolled an estimated 94 % of its citizens for so-called Aadhaar cards,[4] which provide a unique number for each person linked to biometric identification and can be verified instantly via a QR-code or the Internet (Rai, 2023). More recently, there has been widespread adoption of a 'Unified Payments Interface' (UPI), which enables the use of banking/payment apps to transfer money from a buyer to a seller. This usage allows even very small purchases in grocery stores run by BOP entrepreneurs (e.g., a small pack of Maggi instant noodles from Swiss MNE Nestle retails for 5 Indian Rupees (INR) or 0.06 US dollars, as does a small pack of Lays chips from US MNE PepsiCo). However, India has only recently begun taking the next steps beyond Aadhaar and UPI to make credit available through formal institutions and also to make the use of technology more widespread. For example, only 5–6 % of Indians above the age of 15 have credit cards (PWC, 2021). Below, we discuss how MNEs can economize on BRel by actively making use of emerging technology to increase the availability of credit from formal institutions to BOP customers.

2. BOP prescriptions for firms: a critical analysis

Prahalad (2010) argued that the dominant logic adopted by most large firms such as MNEs, precludes interest or success in BOP markets. He articulated the perspective that MNEs typically assume that the poor cannot afford the firm's products or do not have any use for the core products sold in advanced economies or to wealthy customers. Reaching BOP customers can be difficult and costly for MNEs due to market inefficiencies, a lack of intermediaries, and difficulties assessing credit worthiness. Prahalad (2010) therefore

[2] In India, 63.1 % of the active population had credit scores as of 2019 (World Bank, 2019). It is likely that this number is lower for those active at the BOP due to the absence of documents to start building a credit history.

[3] This publication assesses the number of people living in 'multidimensional poverty' (MDP), which is based on ten indicators of health, education, and living standards. India has the largest number of people living in MDP, followed by Pakistan, Ethiopia, Nigeria, Democratic Republic of the Congo, and China.

[4] Translates to base/foundation/support.

advocated two strategies. *First*, creating a network or ecosystem of informal institutions that can substitute for weak formal institutions (an example from his book is the firm ITC[5] partnering with farmers and providing them with PCs to enable them to *bypass* intermediaries while selling produce), and *second*, creating "transaction governance capacity" through formal institutions (e.g., in the realm of real estate transactions, a state government in India digitized records and processes thus making it easier for citizens to register land purchases, *without* intermediaries) (Prahalad, 2010, p. 107).

As noted earlier, relationships represent an essential component of informal institutions. Prahalad (2010) provided the example of an MNE creating a network of associates in rural BOP communities, who in turn built relationships with consumers, and how this network of relationships helped people learn the importance of adhering to commitments.[6] In the broader economics literature, North (1990, p. 36), differentiated between formal and informal institutional constraints, and argued that: "in all societies…people impose constraints upon themselves to give a structure to their *relations* with others" (emphasis added) thus suggesting that relationships of some kind are a component of all institutions. Verbeke and Kano (2013, p. 417), however, made a clear distinction between formal contracting and relational contracting, with the latter "referring to informal aspects of contracting as measured by the collaborative attitude of parties, sharing of goals, reliance on unwritten promises" based on "socially derived norms and *social ties* between the contracting parties" (emphasis added).

In the realm of assessing creditworthiness, which can be performed either informally or formally, Prahalad and Hart (2002, p. 4) noted that "commercial credit is central to building a market economy." However, Prahalad's book (2010, p. 141) included letters from senior leaders who shared their "reactions to the [BOP] concept," as outlined in the earlier edition of the book, and their own experience in BOP markets[7] and only two of the ten letters mentioned the importance of being able to provide credit to BOP customers. One of those letters was from a board-member of ING, a Dutch multinational *financial institution* with a banking subsidiary in India, the activities of which largely depend on formalized credit provision (Prahalad, 2010). The limited attention in the other letters devoted to the role of credit, especially in formal transactions, indicates that the authors were not particularly attuned to the potential role of formal institutions in BOP markets and to the contribution of MNEs in this sphere.

Over the past decade, the focus on informal network relationships in BOP markets has become somewhat less dominant, but it is still highly prevalent (Dembek et al., 2020). Here, past research suggests that several actors have important roles to play in ensuring a socially acceptable distribution of goods (Bardy et al., 2012; Mol et al., 2017; Vachani and Smith, 2008; VanSandt and Sud, 2012). Categories of actors identified as important in these informal networks include MNEs (Hart and London, 2005), but also smaller local firms (Decker and Obeng Dankwah, 2023; Wheeler et al., 2005), local communities (Peredo and Chrisman, 2006) as well as non-governmental organizations (NGOs) (Vachani and Smith, 2008; VanSandt and Sud, 2012). Empirical studies suggest that often, actors other than MNEs assume leading roles in BOP initiatives (Kolk et al., 2014). MNEs are then encouraged to think creatively about how partnerships with such stakeholders that are conventionally considered peripheral can enhance learning and growth in BOP markets. Broad informal networks can supposedly help MNEs overcome the lack of formal safeguards to ascertain reliability between large firms and BOP customers (Prahalad, 2010) and be instrumental to identifying and implementing innovative solutions (Hart and Sharma, 2004).

But a review of the BOP literature pointed out that half of the articles studied did not measure the financial benefits of BOP initiatives to the firm. Similarly, about half of the studies did not measure any "social impact on local populations" (Kolk et al., 2014, p. 358). Karnani (2007) assessed the cases highlighted in Prahalad's (2010) book and pointed out that many of the products mentioned were expensive and would therefore not have been a good match for a BOP consumer with limited financial resources. He also argued that the MNEs involved had not been able to develop profitable activities in BOP markets. Finally, Dentchev et al. (2022) pointed to the complexity of serving BOP markets in areas such as health and food services provision, which typically require cooperation among governments, NGOs and other societal stakeholders, and which have remained largely under-researched.

So, the question arises whether largely informal networks can systematically alleviate the problem of significant poverty premiums facing BOP consumers and entrepreneurs, with the various parties involved benefiting from such poverty premium reduction (Decker and Obeng Dankwah, 2023; Prahalad, 2010; Prahalad and Hammond, 2002; Prahalad and Lieberthal, 1998). The poverty premium refers to the relatively higher costs that individuals in BOP markets pay for basic products and services, including the cost of credit, as compared to what consumers and entrepreneurs in well-functioning markets pay for the same products and services. The 'cost differential' is not limited to observing higher product prices per se, as these may change over time and become less relevant in some BOP markets (Kay and Lewenstein, 2013). The premium also implies lower quality at similar price levels and more difficult access to the products involved (Hammond et al., 2007; Mendoza, 2011). The poverty premium is believed to perpetuate as long as the poor lack access to financial services (Agnihotri, 2013).

It remains unclear, at least in our view, whether the poverty premium can be reduced or eliminated through corporate action at the micro-level, though this was one of the main themes in Prahalad's book (Hahn, 2009; VanSandt and Sud, 2012). The empirical evidence of the impact on sustainability in terms of economic, social or environmental improvements resulting from MNE-led BOP

[5] ITC, formerly Indian Tobacco Company, is 29.4 % owned by MNE British American Tobacco (BAT). The management of ITC does not appear to be directed closely by BAT (Mukherjee, 2020).

[6] We subsequently discuss how the MNE in this example (Hindustan Unilever) has more recently encouraged participation in formal institutions rather than relying on relationships or other informal institutions.

[7] Acumen Fund: CEO; Bharti Airtel: CEO & JMD; GlaxoSmithKline: President, Consumer Healthcare Intl.; ING: Member of the Executive Board; Maastricht School of Management: Director, Dean & Professor; Microsoft: Chief Technology & Strategy Officer; Royal DSM: Chairman of the Managing Board; Royal Philips Electronics: President & CEO; Thomson Reuters: CEO; Unilever: Retired CEO.

initiatives is scarce (Heuer et al., 2020; Kolk et al., 2014). In fact, van der Straaten et al. (2023) even suggest that the globalization process where MNEs play a significant role, can *increase* within-country inequality.[8]

The lack of attention to the root causes of poverty premiums is surprising given that insufficient access to affordable credit for potential purchasers has been identified by several MNEs as a key barrier to success in BOP markets. GE Healthcare, an American multinational, found that success in rural India was contingent on the presence of more flexible payment and delivery options rather than on the ability to compete on technology (Singh, 2011). Similarly, Schneider Electric, a French energy provider, identified the high cost of credit as the key challenge for engaging local entrepreneurs to buy their lighting systems, so that they could subsequently rent these out to local customers (Singh and Bode, 2012).

Micro-financing has sometimes been proposed as the key to eliminating the poverty premium: it has opened opportunities for poorer populations to gain access to financial services (Serrano-Cinca and Gutiérrez-Nieto, 2014). However, micro-financing alone is not considered sufficient to alleviate poverty, particularly because scale is difficult to achieve (Sánchez and Ricart, 2010; Abdallah Ali et al., 2022; Banerjee et al., 2015). Micro-financing has grown over the past decades, but its level of penetration remains low and the access to micro-credit as well as the scope varies. For example, in India the term micro-financing is defined as collateral-free loans less than INR 300,000 (USD 3,600) and 55 % of these loans are provided by banks (Makwana, 2022). In an introduction to a special issue that included six studies with "rigorous methods for identifying causal effects," set in BOP markets in different countries including India, Banerjee et al. (2015, p. 2), state that none of the studies found a statistically significant impact of micro-financing on household income. In addition, the four studies in this issue that measured household consumption found no evidence of an increase in this metric.

The interest rates and payment structures of micro-financing can also create barriers for the poorest populations in BOP markets to participate since these groups are characterized by highly irregular economic activities (Gebauer et al., 2017; Rangan et al., 2011). Some micro-financing institutions have low credit limits, which makes this source of credit difficult to use when larger upfront investments or multiple investments are needed. Importantly, to achieve inclusive growth and wealth distribution, the poor must not only be turned into producers, but also be correctly 'assessed' as potential consumers (Jaiswal, 2008).

In this article, we focus on the role of MNEs in this issue of 'correct assessment' and access to credit. We apply TCE thinking to contribute to a more nuanced discussion of the lack of perceived reliability and to explain the widespread occurrence of a poverty premium. TCE does not simply represent a mainstream governance framework, but also –perhaps more importantly– a pragmatic approach to BOP market creation. As we elaborate below, documented reliability – or at least a credible assessment thereof – in contractual relationships is a critical condition for addressing the underlying challenges of 'doing well by doing good' in BOP markets.

3. Reliability in BOP market transactions

3.1. A transaction cost economics (TCE) perspective

TCE is based on the proposition that the potential gains from trade between parties to a transaction (or class of transactions) can usually not be realized in their entirety due to transaction costs associated with designing and enforcing agreements (Williamson, 1985). Williamson (1985) has argued that the behavioral drivers of bounded rationality (BRat) and opportunism help explain prevailing micro-organizational arrangements in business environments where efficiency considerations stimulate self-correction in the medium and long term (as witnessed in various systems of macro-level, capitalist governance). He has defined BRat as the limited foresight of individuals (related to the absence of both perfect information and perfect human information processing capabilities), and opportunism as the tendency to renege on promises (reflecting intentional deceit). While traditional economics focused entirely on the *ex ante* set up of agreements and assumed the absence of friction during the course of executing contractual arrangements, TCE focuses on contracting in its entirety, including *ex post* contract implementation. In the presence of uncertainty and change, transacting parties need to plan, monitor and continuously adjust their activities and behavior (Williamson, 1975, 1985, 1996).

Rivera-Santos et al. (2012) argued that from a TCE perspective, the structure of partnerships in BOP markets should be based on informal contracts, in-kind contributions and gifts since institutional voids and missing market actors make the enforcement of formal contracts difficult. They based their argument on the perceived high risk of opportunism in BOP markets in cases of high asset specificity, uncertainty and frequency of interactions. In their case-study of BOP market ventures, Basu and Swatantra (2013) similarly suggested that MNEs should approach BOP markets more innovatively than through usage of traditional formal contracts to reduce opportunistic behaviors anticipated in these markets with institutional voids, and they should foster partnerships.

However, the difficulties in enforcing contracts and not making good on promises may have other root causes than opportunism as intentional deceit (Verbeke and Greidanus, 2009). In addition to opportunism, promises may remain unfulfilled due to actions devoid of the intent to deceive but which nevertheless trigger the same outcome of not fulfilling a promise. Verbeke and Greidanus (2009) and Kano and Verbeke (2015) introduced the BRel concept to capture and explain such reasons for failed commitments. The BRel concept is based mainly on benevolent preference reversal: human beings' efforts towards fulfilling open-ended promises may be imperfect and there may be some level of 'scarcity of effort,' even in the absence of technical incompetence or goal ambiguity. Elements such as

[8] van der Straaten et al. (2023) also point out that MNEs contribute to value creation in ways such as raising working conditions and sustainability of global value chains, with domestic firms also benefiting. There is no doubt that value creation precedes value distribution, but we think that an overemphasis on the former over the latter is not a productive discussion, especially due to TCE's focus on value distribution through optimal governance.

reprioritization and scaling back on over-commitment (often observed when buyers suddenly and unexpectedly face a reduced income, and then default on financial commitments) appear to be the main expressions of such benevolent preference reversal.[9]

3.2. Bounded reliability in BOP markets

Many BOP consumers and entrepreneurs are faced with difficult economic circumstances at the personal level. Some are left on the outside of the formal economy and others rely on daily wages to satisfy their basic needs (Basu et al., 2021; Hammond et al., 2007). BOP consumers and entrepreneurs often also lack access to basic financial services (Agnihotri, 2013; Hammond et al., 2007). Unless BOP customers have access to credit, there cannot be a meaningful market for products similar to those sold in advanced economies and to more wealthy customers. As the French MNE, Schneider Electric experienced in rural India, BOP customers typically cannot make up-front payments without the use of credit (Singh and Bode, 2012). Selco, a multinational from Pakistan offering solar energy solutions, estimated that over 90 % of its BOP customers bought its products on credit (Mukherji and Jose, 2010).

The BOP includes not only consumers in the business-to-consumer market, but also millions of small business owners, including farmers, auto-rickshaw (three-wheeled taxi) owner/operators, two-wheeler mechanics, and various manufacturing enterprises ranging from handicrafts to metal-machining workshops. Karnani (2011) explains that some of these people are entrepreneurs by necessity and would readily accept employment for the benefit of a steady paycheck, if they had a choice. There are over eight million businesses in India registered with the government whose annual revenue is less than INR 2 million (USD 24,000) (Sidhartha, 2020). It is likely that there are substantially more unregistered small businesses since the cut-off to pay goods and service tax (GST) in India is INR 4 million (USD 48,000) and smaller businesses may not register. Similarly, India has 70 million farms smaller than 0.5 ha (1.25 acres), comprising 48 % of all farms in the country, which indicates that a significant portion of farming in India is still subsistence oriented (Ministry of Agriculture & Farmers Welfare, 2020[10]). Irrespective of whether we use Prahalad's earnings cut-off of USD 2/day or a more recent and substantially higher figure, it is likely that many of these small business owners and farmers are part of the BOP.[11]

Those who have access to credit suffer from high borrowing costs as lending firms anticipate the possibility of non-payment (default risk). Companies often view all BOP customers through the same lens (an expression of BRat) and assume that the credit risks associated with them are similar, meaning very high. While it may be true that wages and consumption patterns of most BOP individuals –as a population– are similar, it would be a mistake to assume that they would all have the same proclivity and propensity to fail to make good on fulfilling contractual promises. Bruton et al. (2011) make a similar point in the context of micro-lending and demonstrate that specific borrowers' characteristics dramatically influence the likelihood of success. However, even a widely recognized micro-financing institution such as Grameen Bank, which has partnered with MNEs over several years, still uses routinized approaches to assess customers and to determine 'standard' interest rates (AFCA, 2020; Kakani and Thakur, 2009).

Prahalad (2010) suggested that expectations of unreliability and the presence of a poverty premium inhibit the growth of BOP markets, but he did not acknowledge explicitly any linkage between these expectations of BRel and the poverty premium. In reality, the high cost of credit can precisely be explained by expectations of BRel: there need not be any expectation of malevolence in the sense of intentional deceit, or the threat thereof, by any party involved in transactions requiring credit. Borrowers are associated with high levels of risk including over-indebtedness, and this risk is driven by factors ranging from unforeseen personal circumstances to volatile market dynamics (Guérin et al., 2018). BRel explains why even the most entrepreneurial firms, including foreign MNEs, are often not able or willing to serve BOP customers on a large scale. The basic structure of the market remains very similar to the market catering to the economic middle class and upper middle class. However, the default risk, due to BRel, in terms of likelihood of non-payment for product purchases is considered very high for BOP customers. See Fig. 1 for an illustration of these BOP market characteristics.

The credible expectation that any promise made by the BOP customer may not actually be honored at a later stage, is fully in line with many MNE top management teams' deeply ingrained dominant logic: the BOP market is a market to be avoided. Unlike the selling of products to the middle class, sales to BOP customers, whether ordinary consumers or entrepreneurs, are not viewed as simple arm's length transactions: the seller's view is that these sales cannot be isolated from the BOP customers' overall income and general expenditure patterns. These income and expenditure patterns will determine the likelihood of non-payment, i.e., contract breach. In other words, assuming that BOP customers are unable to prove their creditworthiness, high borrowing costs will persist (Prahalad,

[9] Reprioritization has two sources. *First*, an economic actor may make an *ex ante* commitment to a course of action considering a high probability of payoff. However, in completing the commitment, other opportunities may arise with a higher probable payoff, at least from the viewpoint of the economic actor reneging on the original commitment. *Second*, the cognitive bias known as the time discounting bias makes individuals place a lower value on future events than on more proximate ones. Time discounting bias encompasses any reason for paying less attention about a future consequence, and the related preference for immediate utility over delayed utility. From the bounded reliability perspective, such discounting of future events can push an economic actor to postpone the fulfillment of a commitment to the point that such a commitment can no longer be fulfilled. Benevolent preference reversal in the form of overcommitment refers to instances of *ex ante* selection of too many commitments that have to be scaled back ex post. Overcommitment as a boundary on reliability may stem from the behavioral phenomena of impulsivity and overconfidence, i.e., an unrealistic belief in one's own abilities, predictions or chances of success.

[10] Table 4.2.

[11] If we assume a net income of 10 % and a family size of four, the USD 24,000 (8 million registered businesses with sales less than USD 24,000) translates to USD 1.64 per person per day, which is above the "official" poverty line in India (which was below USD 0.5 when India stopped reporting poverty rates in 2010) (Panagariya and Mukim, 2014). Of course, the spouse and even children who are minors may work outside the business, and the net income may be >10 % of sales, but this tentative calculation demonstrates that millions of small business owners in India are likely BOP customers.

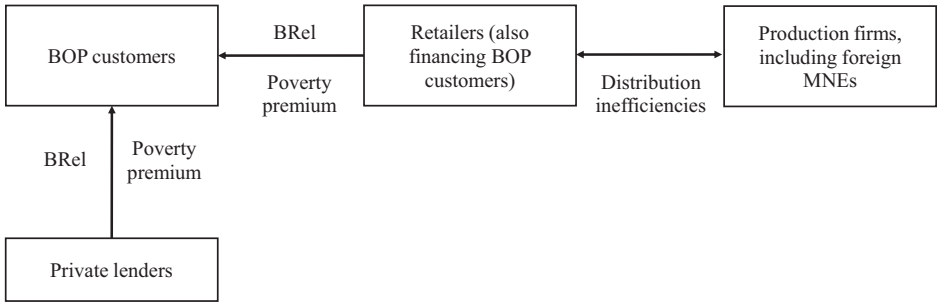

Fig. 1. The current BOP market scenario

2010).

Conventional TCE addresses largely the same issue in the generic context of contracts between suppliers and manufacturers. TCE suggests that contractual relationships associated with higher asset specificity and uncertainty, and of a recurrent nature, typically require more extensive and sophisticated safeguards and governance instruments in general, to ensure successful contracting in its entirety, i.e., considering *ex post* contract execution. However, a significant point is also that information on 'past experience' and 'reputation' can affect contract structure, irrespective of intrinsic transaction characteristics (Williamson, 1996).

Once the above BRel problem is acknowledged, it can actually be addressed using a TCE framework. If the relationship between the BOP customer and the vendor (especially the MNE) is viewed as a contract, which should be designed in such a way as to benefit both parties, then a new world of actionable and sustainable BOP market creation opens up.

3.3. TCE prescription

Contrary to arguments favoring micro-level, relational governance (for an overview see Kolk et al., 2014), TCE would not consider eliminating BRel problems through informal institutions, as the key to solving the BOP market creation problem. In fact, a TCE perspective suggests that it is important to establish an appropriate governance environment with safeguards to effectively protect all parties against failure of contract execution. Given prior research suggesting that success in BOP markets is contingent on multiple actors collaborating with each other (VanSandt and Sud, 2012), the emphasis must be on creating a governance environment that enables transparent transactions based on all available objective information and that ensures the alignment of interests of all parties involved as well as the safeguarding of each party's interests. The role we propose for MNEs is to advocate for formal governance solutions that will clearly benefit all parties concerned. The specificity of MNE involvement is that foreign firms typically have a variety of location choices, and can easily forego a BOP market, even a large one, that is fraught with poverty premium challenges, thereby making market co-creation a non-starter.

To reduce poverty premiums related to the cost of credit, it is critical for all parties involved to be able to measure accurately these customers' creditworthiness (or more specifically the extent to which BRel may constitute a problem). Access to correct creditworthiness information should enable firms such as entrepreneurial MNEs to segment the BOP customer base and to extend credit at reasonable rates, thereby reducing the poverty premium for BOP customers with high expected reliability, according to informed assessments. Micro-financing institutions such as Grameen Bank have traditionally primarily assessed individuals' willingness and abilities to adhere to group norms, to the extent that lending was conducted via local groups that were communally responsible for loan repayments. However, these institutions have been criticized for charging high interest rates, reflecting the cost of administrating many smaller loans and perhaps more importantly managing a significant portion of 'bad debt' (Kakani and Thakur, 2009).

In the following section, we utilize cases from India to describe how technological innovation has enabled MNEs to assume a more active role in developing formal institutions to address the poverty premium, thus contributing to the achievement of social justice.

4. The technology and financial inclusion journey in India

4.1. India's initiatives

As mentioned previously, more transparency, and effective tools to assess creditworthiness are critical to mitigate BRat and BRel concerns, thereby reducing the poverty premium. The coverage of credit cards and credit scores is still very low in India as compared to developed countries, suggesting limited access to credit for BOP consumers and entrepreneurs. However, there have been a number of important steps leveraging technology and data that have the potential to change this situation. Table 1 provides a brief summary of the achievements to date.

Some of the initiatives such as the Kisan credit card scheme for farmers are intended to "provide easy access to concessional institutional credit" (Ministry of Agriculture & Farmers Welfare, 2022). Other projects are broader initiatives with significant

Table 1
A brief history of financial inclusion initiatives in India.

Year of inception	Initiative	Objective	Role in India Stack	Current status
1994	Mobile phone service liberalization	Widespread mobile phone connectivity at low cost		700 million internet users
1998	New RBI norms for NBFC	Reduce risk of NBFC failure or malpractice		New norms in 2021 increased regulation
1998	Kisan credit card	Short-term loans for farmers (includes personal accident/ disability insurance)		73 million cards operative[a]
2010	Launch of Aadhaar	Verifiable ID for each individual linked to biometrics (enables customer verification for bank accounts, mobile-phone SIMs etc.)	Identity verification	1.3 billion Aadhaar IDs issued[b]
2014	Launch of RuPay	Credit card settlement (alternative to Visa/Mastercard)		1100 banks issue RuPay cards[c]
2014	Launch of Jan Dhan accounts	Bring people into formal banking. Transfer social benefits through bank accounts.		490 million accounts, 850 k "branchless banking" providers.[d]
2016	Launch of UPI	Peer-to-peer money transfer interface irrespective of bank/ app	Real-time payments	74 billion transactions in 2022[e]
2017	Launch of BHIM	Money transfer app (alternative to Google Pay etc.)		217 million installations[f]
2021	OCEN	Utilize data (initially invoices issued) from account aggregators to approve loans within minutes	Open digital ecosystem	Additional use-cases under development
2023	DPDP	Law for usage and transfer of digital data	Data ownership and usage	Passed by India's parliament in August 2023.[g]

RBI: Reserve Bank of India (central/federal bank and regulatory body).
NBFC: Non-Bank Finance Companies.
UPI: Unified Payments Interface.
BHIM: Bharat (India) Interface for Money.
OCEN: Open Credit Enablement Network.
DPDP: Digital Personal Data Protection.
[a] Mishra (2022).
[b] Enforcement of Aadhaar has allegedly had downsides such as people being denied essential services (Huffpost.com, 2018).
[c] https://www.rupay.co.in/about-us.
[d] https://pmjdy.gov.in/.
[e] Das (2023).
[f] https://www.npci.org.in/what-we-do/bhim/product-statistics.
[g] Rajagopal (2023).

potential. For instance, India Stack has been called: "the moniker for a set of open APIs[12] and digital public goods that aim to unlock the economic primitives of identity, data, and payments at population scale" (indiastack.org). The key elements in this 'stack' are the Aadhaar-based authentication of an individual's *identity*, real-time mobile *payments* using **a** unified payments interface (UPI), and proper ownership and usage of *data*.

As can be seen in the last column of Table 1, India has made progress on a number of fronts related to financial digitization. However, the impact on people at the BOP is still an open question. For example, Chanda (2020) did not find a significant relationship between volume of credit issued through the Kisan Credit scheme and measures of agricultural productivity. On the other hand, Gupta and Kanungo (2022) found evidence that the digitalisation of banks in India has improved financial inclusion at the BOP, while micro-lending was not significant in their model. Data sharing with lenders with customer consent has been found to increase competition among lenders and promote financial inclusion (Parlour et al., 2022).

An initiative currently underway, called OCEN (Open Credit Enablement Network) is promising, and "the idea is to get credit to everybody" (Open, 2022). Nandan Nilekani, the co-founder of Infosys (Indian IT services MNE with USD 18 billion in annual sales), who led the mammoth Aadhaar initiative, stated while launching OCEN:

> "…for credit to move seamlessly to small businesses, lenders will need to have a common protocol. Just like what UPI did with payments. We are working on a common language for lenders and borrowers, called the OCEN protocol, which will have a dramatic impact to enable small businesses to get loans" (Nandi, 2020).

The initial applications ('use cases') for OCEN include providing credit (within minutes) to small local entrepreneurial firms and individuals based on GST invoices issued by them or invoices to Indian government entities.

4.2. BRel implications of India's initiatives

The implementation of formal, digital and financial initiatives in India is aligned with TCE prescriptions. *First*, the array of tools deployed (e.g., APIs such as Aadhaar-based identity verification and UPI enabled fund transfer irrespective of bank/payment app)

[12] API stands for Application Programming Interface, which is software that allows different apps to share data with each other.

provides a governance framework for transactions. Safeguards include various rules/guidelines put in place by the Reserve Bank of India and other regulatory bodies (e.g., rules regarding NBFCs, the requirement of an Aadhaar card to verify the identity of individuals for transactions such as opening a bank account and taking a loan).

Second, the collaboration among multiple actors is widespread. India Software Product Round-Table (iSPIRT) is a think-tank set up by leaders of various Indian IT companies, whereas OCEN is being developed by a non-profit entity that lists about a dozen major banks in India as its investors, along with two of the major stock-exchanges. UPI operates under the auspices of an entity called National Payments Corporation of India (initially owned by ten banks, but with ownership now extended to include other shareholders), whereas Aadhaar-based products are owned by a Government of India department. More importantly, about 400 banks and numerous apps[13] partner with UPI.

Third, based on the preliminary applications ('use cases'), OCEN appears to be headed in the direction of accurately measuring a customer or entrepreneur's creditworthiness (including BOP consumers and entrepreneurs) by reviewing information *specific* to this individual, such as invoices issued. As use cases are expanded beyond providing credit against invoices, this element of the digital infrastructure could also become useful for people at the BOP who do not have a long credit history. Rai (2023) describes a scenario wherein a BOP vegetable vendor could take a loan in the morning (from a bank or other formal institution), buy vegetables from a wholesale market, sell these in a residential neighborhood at a profit, and return the loan in the evening.

The impact of the various stakeholders in India's technological and financial inclusion journey and the impact on reducing BRel is shown in Fig. 2.

4.3. Role of MNEs in India's digitalization and financial inclusion journey

The above discussion illustrates multiple opportunities for MNEs to advocate for – and contribute to – developing formal institutions: The think-tank iSPIRT, which appears to have played an active role in driving initiatives that improve formal governance is led by current and former leaders of Indian technology companies, but its impact on policy could likely be improved further. For example, Amit Ranjan, who co-founded SlideShare and sold it to LinkedIn before joining iSPIRT as a core volunteer and the architect of DigiLocker[14] stated: "iSPIRT plays multiple roles. The policy part is there, but it does not make those policies. It only advises and helps the government with policymaking" (Anupam, 2023).

Surprisingly, *foreign* MNEs have not yet played a leading role in India's digital and financial inclusion journey. The reason may precisely be that iSPIRT was led by founders/leaders of Indian IT firms who wished to make tech-products (as opposed to software, business-process outsourcing etc.) more central to the IT landscape in India (Anupam, 2023). However, we do observe that foreign MNEs in the technology and financial space have leveraged technologies and legal frameworks as they emerged in India. For example, Google Pay is in second place in terms of usage among UPI apps in the rankings released by the government body each month. The leading payment app PhonePe was developed in India, but is now majority-owned by Walmart, Inc. Other foreign MNEs with apps actively using UPI (and hence connected to users that are Aadhaar registered) include Citibank, Standard Chartered bank (UK headquartered) and Amazon Pay. These examples illustrate that MNEs can also assume an active role in supporting and legitimizing the development of institutions that have at minimum a formal component.

In Table 2, we provide examples of foreign MNEs playing an active role in linking customers to formal and informal institutions in India, including BOP consumers and entrepreneurs.

The initiative by Hindustan Unilever Ltd. (HUL) is particularly interesting to illustrate our point about the role of MNEs. HUL launched a mobile-phone app named Shikhar (meaning 'pinnacle') to allow retailers to order items without waiting for a distributor representative to visit the shop, which may have been only once a week (Purkayastha et al., 2021). HUL incentivized the use of this app through small discounts (e.g., 2 %) for certain items and saw a large increase in utilization of the Shikhar app. Restrictions on travel of distributor personnel during the COVID-19 pandemic triggered further increases in the use of the app. HUL claims that 1.1 million retailers have downloaded the Shikhar app (as compared to 2.1 million that HUL serves through its 'direct network', i.e., visited by representatives) and about 60 % of those who downloaded it, use the app every month (Sangameshwaran, 2023). This app has enabled HUL to move from a distributor focused supply chain to a retailer-centric model (Sangameshwaran, 2023). Retailers can thereby view distributor inventory as well as area sales trends in the app, which reduces the bullwhip effect wherein intermediaries in the supply chain over-order based on incorrect estimates about demand (a manifestation of BRat) leading to costly and excessive inventory (Lee et al., 1997). In addition, data from the app provide insight to both the retailer and HUL. This includes information on items that are selling well in a particular region of the country or items that move in tandem, i.e., insight which a salesperson may not have been able to provide (Sangameshwaran, 2023), once again reducing BRat (remediating inadequate information).

On the issue of credit, a retailer of fast-moving consumer goods (FMCG) may take on more inventory than can be sold, possibly as a manifestation of the overcommitment facet of BRel. This can in turn hamper the retailer's ability to pay the distributor on time. A technology solution provided by an MNE, in this instance HUL's Shikhar app that shows sales trends of a particular item (precise data) can help reduce overcommitment as opposed to the conventional occurrence of a salesperson pushing the retailer to order a particular (possibly excessive) quantity.

[13] For April 2023, the UPI provider National Payments Corporation of India (npci.org.in) lists 68 apps with atransaction volume > 10,000. Those with a lower volume are classified as "Others."

[14] DigiLocker is a platform with mobile and web-apps run by the Government of India, linked to Aadhaar, that enables individuals to securely store documents.

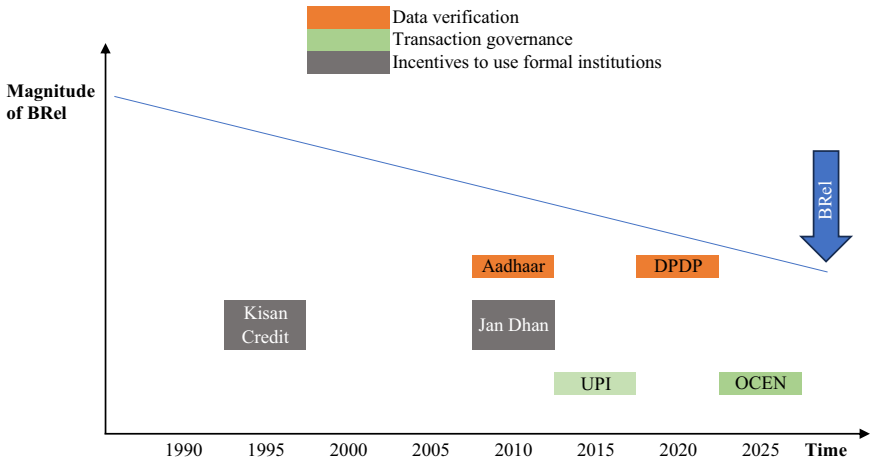

Fig. 2. The impact of technology and financial inclusion in reducing BRel.

Table 2
Examples of initiatives by foreign MNEs to link customers to formal/informal institutions in India.

MNE	Customer	MNE initiative	Comments
Castrol India (part of British MNE BP)	Vehicle repair shops, many of whom are local actors in BOP markets	"Castrol Fast Scan [app] helps retailers and mechanics to earn, track and redeem rewards, and receive them instantly in their bank account using IMPS,[a] leading to significant simplification and shortening of the incentive payment cycle from months to minutes…. through the digital solution it has acquainted mechanics and retailers to banking on the go, besides inculcating a savings mindset."[b]	Partnered with Standard Chartered bank and leveraged technology to make coupon redemption easier. An early attempt to link BOP entrepreneurs to formal banking systems.
Xiaomi (Chinese MNE)	Mobile phone users including large BOP customer base	"Xiaomi said it has partnered with a number of local startups[c]… to determine who should get credit and then finance it. Users are required to let the Mi Credit app access their texts and call logs to look for transactional information and some other details to assess whether they are creditworthy. This whole process takes just a few minutes and eligible users can walk out with some credit."	Use of informal institutions- alternatives to credit score/banks. Possible reduction in BRel. Data privacy concerns. Xiaomi has discontinued this app.[d]
John Deere India Finance (part of US MNE Deere)	Farmers, many of whom are at the BOP	"John Deere Financial knows and understands the cyclical nature of agriculture… by supporting a healthy cash flow, we promote healthy growth of your farming enterprise. We offer monthly or quarterly and semi-annual installments based on a farmer's cropping pattern and cash flow to best suit their need."[e]	Tailored lending (i.e., considering ability to pay) thereby potentially reducing BRel.
Hindustan Unilever (HUL, part of British MNE Unilever)	'Mom-and-pop'/'Kirana' retailers, many of whom are at the BOP.	Development and rollout of app that enables retailer to order without waiting for distributor sales rep. (with available data on product sales), take short term loans (link to State Bank app).	Potentially reduces excess ordering (BRat), reduces poverty premium through credit from formal institution.

[a] IMPS: Immediate Payment Service, run by National Payments Corp. of India.
[b] Autocar professional, 2019.
[c] Singh (2019). Some of these startups claim to use Artificial Intelligence to approve loans.
[d] Singh and Mehta (2022).
[e] https://www.deere.co.in/en/finance/financing/used-equipment-financing/.

A second manifestation of BRel is regression to earlier practices, such as borrowing from a moneylender, i.e., an informal institution that creates and thrives on a poverty premium, rather than from a bank. HUL has partnered with India's largest bank, State Bank of India, to provide an overdraft facility of up to INR 50,000 (approximately USD 750) to small retailers, thus enabling them to pay bills that are due to distributors, and hence avoid disruptions in supply of products (Purkayastha et al., 2021). The Shikhar app is linked to State Bank's yono app ('you only need one') on the retailer's smart phone (BusinessWorld, 2020). In terms of Fig. 1, the MNE HUL deals directly with the retailer, helping to reduce both distribution inefficiencies (to the extent it can provide better data, enabling the

retailer to order the right products and quantities) and the poverty premium (by providing a formal linkage with India's largest lender, through an overdraft facility). Unilever's erstwhile global CEO Alan Jope has publicly recognized the importance of this work[15] and we highlight it as an example of an MNE leveraging technology to reduce BRat and BRel. This institutional work includes partnering with a large bank and moving retailers in India (including many at the BOP) towards relying on credible formal institutions, thereby reducing the poverty premium.

5. Discussion and conclusions

CK Prahalad argued that MNEs should become more creative in their approaches to serve BOP markets and adopt new, micro-level business models and managerial practices (Prahalad, 2010; Prahalad and Hammond, 2002; Prahalad and Lieberthal, 1998). These should entail substantial relational contracting at the micro-level. However, Prahalad did not address in actionable terms the key challenges in the BOP market environment that he identified himself, namely the need to economize on BRel (though Prahalad implicitly referred to this challenge, using terms such as 'trust' and 'transaction governance capacity' rather than BRel), and the need to reduce the poverty premium faced by customers. Empirical studies following Prahalad's call for MNEs to pioneer new business approaches, suggest that few BOP initiatives are actually MNE-led, and there is little actionable and generalizable insight into how MNEs can 'do well by doing good' (Kolk et al., 2014).

MNEs have often been encouraged to focus on building informal relationships with multiple actors to mitigate opportunistic behavior and to compensate for the absence of well-functioning formal institutions (London and Hart, 2004; Rivera-Santos et al., 2012). A number of authors have pointed to the vital role that systemic, collaborative linkages in the relational sphere can play for securing long-term economic growth and wealth distribution (Peredo and Chrisman, 2006; VanSandt and Sud, 2012). While we agree that multiple actors need to be involved to reduce the poverty premium, we argue that a prime focus on informal relationships at the micro-level to overcome voids in formal institutions at the macro-level, will fail to address the root causes of the poverty premium. We propose instead that the conceptual lens provided by TCE enables the actors involved to address governance challenges related to BRel and the poverty premium, thereby contributing to sustainability, in the form of higher social equity.

More specifically, we have advocated for developing a better understanding of BOP market governance, with a focus on economizing on BRat and BRel. Here, TCE not only provides a useful conceptual framework for analyzing BOP market creation challenges, but it also suggests a macro-level governance approach to facilitate implementing BOP-related, innovative business models and managerial practices at the micro-level. MNEs cannot in most instances on their own introduce new, formal governance mechanisms at the macro-level. However, as our cases illustrate, they can advocate in favor of such governance mechanisms and take an active role when these are deployed at the micro-level. For instance, foreign MNEs have been conspicuous by their absence in driving technology and financial inclusion initiatives in India (e.g., India Stack), except for tech companies such as Google that have been successful in deploying their products and that have co-opted foreign banks which have come on board. Only few MNEs have acted on the insight that more formalized governance mechanisms can make them more successful in BOP markets. For example, by developing and deploying an app for retailers (including those at the BOP) in partnership with the largest bank in India, HUL has economized on BRat and BRel challenges, and ultimately taken an active role in contributing to reduce the poverty premium.

In this study, we have used cases from India to illustrate our point about the importance of formal institutions. But it does not follow that strong formal institutions will always support foreign MNEs in contributing to poverty alleviation or sustainable development. For instance, in China the main institutions-related concerns of many foreign MNEs can be found in the realm of intellectual property rights protection (IPR) rather than the poor functioning of the credit market. There is a perceived relative absence of a formal, independent IPR-protection apparatus (including case adjudication and enforcement) in contrast to what exists in highly developed economies. Formal institutions are viewed as providing selective IPR-enforcement and being biased against foreign firms (The Economist, 2023). In this instance, BRel and opportunism by host country actors do not simply disappear because of the presence of formal institutions but may on the contrary be amplified by these very institutions. Ultimately, a selective and biased enforcement of IPR rules will affect the poor at the BOP due to MNEs reducing their manufacturing footprint and therefore employment in China. As in the case of India, informal institutions (in this case guanxi), may be prevalent and far-reaching, but they will do little to stimulate outsider-MNE poverty reduction efforts (Su et al., 2023; Verbeke and Kano, 2013).

A range of recent studies has explored further the role of formal institutions in reducing poverty in BOP markets. For instance, Webb (2021) emphasized the importance of adopting a system-level view of institutions, whereby he focused on interfaces, trade-offs and externalities in the assessment of institutions and their influence on entrepreneurial activities and poverty. Coccia (2021) underscored the critical role of good formal governance for poverty alleviation and lower income inequality, based on a comprehensive analysis of the impact of formal governance indicators for 191 countries. Finally, Nabisaalu and Bylund (2021) confirmed our perspective on the importance of formal financial institutions for entrepreneurial action in the context of Uganda. Adopting a TCE perspective, they lamented especially the absence of efficient markets for credit, the prevalence of undocumented private property, and the weakness of informal institutions to provide access to capital, noting the "continued failure to develop strong formal institutions with streamlined systems that monitor and regulate financial activity to manage uncertainty in the market" (p. 994). They also observed that "banks are limited in valuing assets of the poor and cannot accept them as collateral due to the absence of nationally established standards for all forms of assets" (p. 998). The case of India we described is thus far from an isolated phenomenon.

[15] https://www.linkedin.com/posts/alanjope_the-unilever-app-helping-retailers-in-india-activity-7060244061244248064-KoHY/.

We advocate for more MNEs taking action to improve formal governance through technological infrastructure, and to build partnerships with formal institutions similar to the illustrative case of HUL. We also think MNEs should be more proactive in working with governments to bring people at the BOP into the fold of formal institutions. We do acknowledge the critical role of partnerships with multiple actors to successfully serve BOP customers (Hall et al., 2012; Kolk et al., 2014; Peredo and Chrisman, 2006; Rivera-Santos et al., 2012; VanSandt and Sud, 2012). However, the success of such micro-level partnerships depends largely on an effective governance environment supporting micro-level actors in managing BRat and BRel challenges. Our study thus points to a BOP-paradox, in that Prahalad proposed the initial BOP framework as a creative response to allegedly unhelpful, conventional economics and managerial thinking, insufficiently focused on addressing the root causes of poverty. In his mind, these root causes were related to macro-level institutional voids, requiring MNEs to rethink their micro-level strategies, thereby allowing these firms to 'do well while doing good.' However, the reality of BOP market creation is one that precisely requires supposedly 'conventional thinking', at least as far as effective governance is concerned, to make 'serving the world's poorest' –in the sense of more inclusive growth and wealth distribution– an actionable value proposition.

Our study has attempted to highlight actionable solutions for MNEs to succeed in BOP markets. However, more research is needed to further explore the roles that MNEs can play to contribute to the development of formal institutions in BOP markets. We have focused on India, the largest BOP market, to illustrate where market opportunities lie. More studies are needed to understand various complexities associated with other, idiosyncratic BOP markets. Our illustrative cases have focused on the development of APIs and digital public goods to support identification, data and payments. We expect that developments in other areas such as blockchain technology will increase market opportunities for MNEs, which also warrants further study. For example, Cummins India (a subsidiary of US MNE Cummins Inc. that manufactures diesel engines, gensets etc.) has recently implemented a blockchain-based solution in partnership with Citigroup, to sign-off on letters of credit on a 'digital trade network' called Contour (Srivats, 2023). Although this is currently targeted at larger customers than would be typical for the BOP, it could potentially be used for smaller transactions, once more banks and MNEs get on board. The impact of blockchains on managing transactions at the BOP is likely to extend beyond approving credit and will include opportunities to verify the origin of mined minerals or even ingredients in food products. Blockchains are being explored as a technology to verify sources and quantities of minerals extracted (Calvão and Archer, 2021). Such technology could have prevented, for instance, the 2018 ruling of the Supreme Court of India that all (iron-ore) mines in the state of Goa in India cease operations due to rampant illegal mining without approval of environmental regulators, thereby affecting the livelihood of thousands of BOP workers and small business owners.

In the grand theater of international business, the script of formal institutions is not merely an echo but the very voice of the performance. Informal institutions, while they improvise in the wings, are no less significant. They are the subtle cues, the unspoken dialogue that enriches the narrative. Yet, let us not forget, whether in highly developed economies or BOP markets, it is the formal institutions that set the stage, direct the actors, and command the spotlight. Their importance is not just equal to, but often surpasses, the whispers of the informal.

CRediT authorship contribution statement

Alain Verbeke: Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Sean Simoes:** Data curation, Investigation, Methodology, Writing – original draft, Writing – review & editing, Visualization. **Birgitte Grøgaard:** Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

Data availability

Data sources are indicated in the article

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