TRANSFERABILITY OF SOUTH AFRICAN BOTTOM-OF-THE-PYRAMID FINANCIAL BUSINESS MODEL INNOVATIONS TO THE GERMAN BANKING SECTOR

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Abstract

This paper explores how innovative financial business models from South Africa's Bottom-of -the Pyramid (BOP) market can influence and inform strategic thinking and innovation within Germany's mature banking sector.

The research, is guided by the following central question: How can the innovation strategies and business model mechanisms developed under resource constraints in South Africa's Bottom-of-the-Pyramid (BoP) financial sector offer transferable insights for enhancing inclusive financial innovation in Germany's established banking environment?

To address the research question, the research adopts a qualitative multiple-case study methodology analysing two relevant cases in the South African banking sector, Capitec Bank and Yoco, to determine applicable innovation strategies that might be applicable for the German Banking Sector. These mechanisms are subsequently assessed for transferability to the German context using the CAGE Distance Framework.

The findings shows that innovation born from necessity in South Africa´s BoP market can generate applicable strategic principles such as radical simplification, cost-efficient hybrid distribution, and ecosystem-based service models – that hold significant relevance for German financial incumbents, FinTechs and new entrants. The objective is not to suggest that German institutions should mimic South African models, but rather that they should adopt the underlying frugal innovation mindset to solve german challenges in a new way.

Keywords: bottom-of-the-pyramid, financial inclusion, frugal innovation, reverse innovation, banking transformation

1.Introduction

The global economy is at a critical juncture, defined by a new pace of change. Forces of digital transformation, geopolitical shifts, and the need for future sustainability are reshaping industries and is creating a new universal challenge: How to foster inclusive growth that ensures that the benefits are shared equitably? This thinking has long been at the core of emerging markets, yet it is no longer confined to them and even the most advanced economies are being forced to re-evaluate their current business models and policies in order to fit this new reality.

While Germany´s financial sector is facing new challenges, South Africa´s necessity-driven market has shaped these very frugal solutions to success.

The German financial system, anchored by its three-pillar structure, regulatory stability and prudent risk culture, faces growing critisism for slow digital adoption, high operating costs and limited agility. (Schufa, 2023). These same attributes that ensured resilience in the past now risk contributing to innovation inertia. While Germany prides itsself in near-universal financial inclusion when it comes to bank ownership, evidence is shedding light on “hidden exclusion”: migrants facing complex onboarding, gig economy workers with irregular incomes, aging rural populations left behind, and other underserved groups find that the traditional system is often inaccessible, unaffordable or ill-suited to their needs.(IMF,2023)

In stark contrast, the South African financial landscape has been shaped by its history of structural scarcity and systemic inequality. Defined by its dual economy – a sophisticated formal sector alongside a vast informal one – and some of the highest inequality rates in the world, the country has long been struggling with the systemic exclusion of the Bottom of the Pyramid (BoP). This environment of extreme scarcity demanded innovation and inspired the development of fundamentally new, efficient, and deeply customer centric business-models

2.Theoretical Framing

2.1 Bottom-of-the-Pyramid (BOP) Theory

First introduced in article by Prahalad and Hart (2002), The Concept of The Bottom (or Base) of the Pyramid (BoP) refers to largest socio-economic group and market in the world –the poorest segments of global society. The world population, when mapped by Income per Capita, naturally depicts a pyramid structure as shown in fig 1 below.

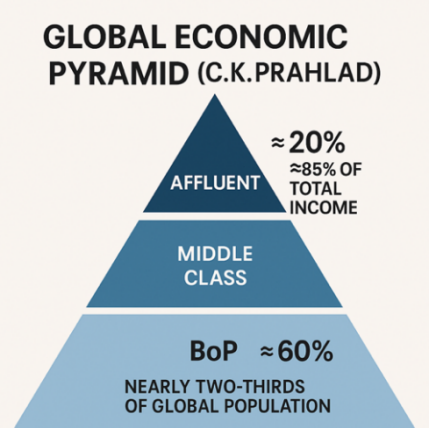

Fig.1: The Global Economic Pyramid (Authors own construction, based on C.K Prahalad 2004)

The BoP market approach has evolved over the years as follows:

BoP 1.0: Selling to the poor with low-margin, high -volume products

BoP 2.0: The second phase introduced a significant shift from merely selling to the poor to co-creating value with them (London and Hart, 2011).

BoP 3.0: The most recent and still evolving development, also dubbed as “Sharing fortune with the BoP” by Borchardt et al. (2019), expands the focus to include sustainable development through cross-sector partnerships. (Dembek et al. 2019).

2.2 Innovation under Resource Constraints

Disruptive Innovation: At its core, Christensen´s theory of disruptive innovation describes a process whereby a product, service or business model – often enabled by a technology – enters at the lower end of an existing market, initially serving overlooked or underserved customer segments with simpler, more affordable, or more accessible solutions (Christensen et al. 2015).While incumbent firms focus their resources on sustaining innovations for their most profitable mainstream customers, they often fail to recognize the threat from below (Christensen, 1997). This dynamic creates strategic opportunities for new entrants, who can establish themselves in niche or low-end markets that incumbents are not motivated to defend. As the disruptive innovation improves over time, it begins to move upmarket, eventually attracting mainstream customers and displacing the established market leaders (Christensen, 2020).

Frugal Innovation: Frugal innovation has emerged as a critical paradigm, especially in emerging markets and the BoP context. (Pisoni et al. 2018).

At its core, Frugal innovations prioritise the creation of cost-effective, simple products under resource scarcity, emphasizing contextualisation. Products developed through this approach usually follow a “no-frills” structure, stripping away superfluous features to appeal to consumers with lower disposable incomes (Agarwal et al., 2017). This concept includes a range of related strategies including BoP innovations as well as cost innovations . While effective, some of these approaches, such as those relying solely on lower cost factors, can easily be imitated, while others may not be scalable enough. (Alvarez et. al,2017). In the BoP context, Frugal innovation and disruptive innovation support each other, both offering a practical strategy to compete in BoP environments.

Reverse Innovation: While disruptive and frugal innovation theories challenge how and for whom innovation occurs, the theory of reverse innovation challenges the assumption of where it originates and in what direction innovation flows. Originating from the work of Govindarajan and Trimble (2012), reverse innovation refers to the process whereby an innovation is first developed for and adopted in a lower-income or emerging market before it moves upwards towards higher-income countries. Fitting to its name, this concept directly inverts the traditional twentieth-century model of innovation, including that “West is best” (Harris et al., 2020). The presumption was that products and technologies were developed in the industrually strong countries, also known as the Global North, and subsequently transferred or adapted for the Global South.

The breakthrough came when Immelt, Govindarajan and Trimble (2009) observed the failure of the conventional “glocalization” strategy within NMCs like general Electric. Their analysis revealed that these markets did not only have different preferences, but fundamentally different realities which requires a “clean slate” approach to designing solutions specifically for these unique operational environments. These constraints were now seen as opportunities (Radjou & Prabhu, 2014) and lower-income countries as a laboratory for innnovation (Ledingham et al. 2023)

Business Model Innovation (BMI): Business model innovation demonstrates how organisations create, deliver, and capture value in a profitable way (Osterwalder & Pigneur, 2010). This perspective is particularly suitable for financial services, where innovation often involves reconfiguring processes, relationships, and cost structures rather than introducing entirely new technologies.

2.3 Analytical Tools

Business Model Canvas (BMC) The Business Model Canvas (BMC), developed by Osterwalder and Pigneur (2010), is a widely aknowledged strategic management tool used to map out the foundational elements of any organisation into a comprehensive user-friendly framework.

The BMC consist of nine interrelated building blocks: Customer Segments, Value Proposition, Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partnerships and Cost Structure.

Each Building block aids in developing a new, or defining an existing business model, offering organisations a shared language and strategic tool for describing, visualising, assesing and changing business models.

By populating the BMC for each case study, this research will create a clear and structured blueprint of their respective value creation logics, which serves as the foundation for the subsequent transferability analysis. While the Capitec case study receives an in-depth analysis due to its comprehensive scope and relevance, the analysis of Yoco is intentionally more condensed. This shorter format focuses exclusively on to the unique components of Yoco´s model to avoid redundancy and maintain emphasis on Yoco´s distint contribution to inclusive innovation of the SME sector.

The CAGE Distance Framework:To assess the contextual transferability of business model elements between South Africa and Germany, this study employs the CAGE distance framework (Ghemawat, 2001). While originally developed to evaluate cross-country expansion potential, subsequent research (e.g.,Beugelsdijk et al., 2017) highlights its broader relevance for analysing the transfer or adaptation of business practices and strategies across different institutional and cultural contexts. It provides a structured way to move beyond broad generalisations and make critical cross-country differences visible.

The CAGE framework identifies four critical dimensions of distance:

Cultural Distance: This dimension assesses differences in social norms, language, religion, and values.

Administrative and Regulatory Distance: This refers to differences in governmental policies, legal frameworks, and political systems.

Geographical distance: While traditionally focused on physical distance, this aspect has evolved to include differences in technological and physical infrastructure.

Economic distance: Economic distance encompasses the significant differences in wealth and income between the countries.

3.Research Design and Methodology

3.1 Research Approach

The research for this paper is guided by the following research question:

How can the innovation strategies and business model mechanisms developed under resource constraints in South Africa's Bottom-of-the-Pyramid (BoP) financial sector offer transferable insights for enhancing inclusive financial innovation in Germany's established banking environment?

To answer this overarching question, the study will investigate the following sub-questions:

What are the core mechanisms that enable South African financial innovators like Capitec and Yoco to successfully serve the BoP market?

What are the primary barriers and enablers for transferring these BoP-inspired mechanisms into the German financial context?

What, if any, strategic recommendations can be derived for German financial incumbents and start-ups to leverage these insights for fostering more inclusive and resilient growth?

To adress these questions, this study adopts a qualitative multiple-case study methodology. This methodology is particularly well-suited to exploring complex, context-dependant phenomena such as business model innovation and cross-contextual transferability.

The primary units of analysis are two exemplary South African financial innovators: Capitec Bank, representing a disruption in consumer banking, and Yoco, representing innovation in the SME merchant services space. These cases were selected for their documented success in serving the BoP market and provide a holistic view of financial inclusion, covering both individual consumers and enterprises. The use of mutliple cases further strengthens analytical robustness by enabling cross-case comparison, supporting the identification of recurring patterns and the development of strategic insights rather than isolated case-sepcific observations.

3.2 Data Sources

The study draws on a combination of secondary and primary qualitative data. Secondary sources include academic literature, company annual and integrated reports, regulatory publications, industry analyses, and reputable media coverage. These sources provide longitudinal performance data and contextual insights.

Primary qualitative inputs complement the secondary data and enhance analytical depth. These include semi-structured expert interviews conducted during the research phase, most notably with Professor Kobus Jonker, a leading academic in BoP innovation, whose insights and unpublished research on Capitec Bank provided valuable strategic and contextual understanding. Secondly interviews with practitioners operating within South Africa’s fintech ecosystem offered industry-level perspectives.

In addition, consumer insight data, including survey-based inputs and aggregated market research, were used to contextualise market behaviour and adoption patterns. All primary data are used analytically rather than descriptively, ensuring alignment with the qualitative case-study approach.

3.3 Analytical Procedure

The analysis proceeds in three stages. First, each case is deconstructed using the Business Model Canvas to identify its core value creation and delivery mechanisms.

While both cases use the same conceptual framework, they do differ in depth. The Capitec case is examined in larger detail due to its scope and relevance to consumer banking, while the Yoco case is more focused, emphasising its specific contribution to SME financial inclusion.

Second, a cross-case synthesis is employed to identify shared principles and distinctive features across the two cases. Third, the CAGE distance framework is applied to assess the transferability of these mechanisms to the German context, explicitly considering cultural, administrative, geographic, and economic differences.

This structured analytical approach allows for an assessment of both the internal coherence of the South African models and their external relevance for Germany's financial sector.

3.4 South African Case Study Analyses

3.4.1 South Africa's BoP Financial Landscape

Socio -Economic Context: South Africa exhibits extreme inequality (Gini coefficient -63 %), with 70 % of adults earning less than R10 000 (2000 Euro) per month. (Brandmapp by WhyFive,2025) The economy is further dual with a sophisticated formal sector and a large informal sector, with many financially excluded. According to the Department of Trade, Industry and Competition (DTIC,2024) small Medium and Micro Enterprises (SMMEs) in South Africa are pertinent economic players and contribute about 40 % of GDP and 59% of employment many informal

Banking Sector Pre-Disruption: The banking sector was until the introduction of Capitec Bank in 2001 dominated by an oligopoly of four large banks representing 80 % of the market focusing primarily on the middle- and higher-income segments considering the BoP market as a non-market segment. (SARB,2010). Formal financial inclusion of the BoP market or unbanked surged from 2009 onwards driven by regulatory changes and the new intrants like Capitec Bank.

The South African context described above combines three critical conditions for BoP financial innovation. First, widespread socio-economic need created strong demand for affordable and accessible financial services. Second, structural exclusion within both household finance and the SME sector created clear market gaps overlooked by current competitors. Third, a regulatory environment oriented toward inclusion and innovation provided space for new business models to emerge.

These conditions did not merely require incremental adaptation but rather fundamental business model innovation. Institutions such as Capitec Bank and Yoco did not succeed by offering simplified versions of traditional banking products. Instead, they re-engineered customer value propositions, cost structures, distribution channels, and relationships to align with the real needs and expectations of BoP consumers and entrepreneurs.

The following sections build on this contextual analysis by examining how these conditions translated into specific, scalable business model mechanisms through detailed case studies of Capitec Bank and Yoco

3.4.2 Case Study 1: Capitec Bank - Disruptive Consumer Banking at the Bottom of the Pyramid

Capitec Bank represents one of the most prominent examples of successful Bottom-of-the-Pyramid (BoP) financial innovation in the world. Its rise from a niche market entrant to South Africa's largest retail bank by customer numbers illustrates how a fundamentally reconfigured business model can disrupt an entrenched oligopoly while achieving both commercial success and social impact. (Jonker, 2025).

Capitec Bank was founded in 2001 against the backdrop of a highly concentrated South African banking sector dominated by four large banks who focused predominantly on middle- and high-income customers, offering complex product portfolios supported by expensive branch networks and fee structures. (Coetzee, 2003).

Capitec's founders entered the market with an alternative strategic logic. Drawing on experience outside traditional banking, they rejected income-based customer segmentation and instead focused on the target market's most important needs such as simplicity, affordability, and transparency. Rather than adapting existing banking products, Capitec designed its offering from first principles, deliberately targeting individuals who were underserved or excluded by conventional banks the so-called "unbanked". (Coetzee, 2003).

This strategy aligns closely with the logic of disruptive innovation (Christensen, 1997; Christensen et al., 2015). Capitec initially targeted a neglected market segment with a good and simpler value proposition focused on real customer needs. By competing against non-consumption and dissatisfaction the bank established a foothold that incumbents had little incentive to defend. Over time, Capitec expanded its appeal across other income groups without abandoning its core strategic principles and value contributions and therefore reverse innovation.

Capitec's growth trajectory demonstrates the commercial viability of its BoP-oriented strategy. Since its inception, the bank has exhibited sustained growth in customer numbers, earnings, and profitability. Capitec experienced rapid growth to over 24 million customers, more than half of South Africa's adult population after initially targeting primarily the 10 million "unbanked "customers. This performance challenges the assumption that serving low-income customers necessarily entails lower margins or higher risk. (Capitec Bank, 2025a)

Beyond financial indicators, Capitec's market impact is evident in its contribution to formal financial inclusion (Demirgüç-Kunt et al., 2015; World Bank, 2024). The bank played a central role in onboarding first-time users to formal banking services. Its nationwide presence, combining physical access points with digital channels, helped normalise everyday banking for populations historically marginalised by traditional institutions. (Capitec Bank,2025b)

To understand how Capitec achieved this dual success, its business model was deconstructed across the nine components of the Business Model Canvas as follows:

Customer Segments -while Capitec initially focused on low- and middle-income consumers, its offerings are now designed to appeal across all income levels. Traditionally, low-income accounts were often designed as "downgraded" versions of elite offerings, with lower social importance. Instead, Capitec fundamentally

challenged this paradigm by disregarding the traditional tiered structure. They offered each customer, irrespective of income-level the exact same high-quality branch experience and a universal golden bank card. This “status-neutral” positioning reduces stigma associated with BoP products and enables upward mobility within the same banking relationship. (McNulty, n.d.)

Capitec’s value propositions centres on simplicity, affordability, and trust. Customers are offered a single, (Global One) account with affordable and fixed transparent fees and minimal complexity. This contrasts sharply with the multi-tiered, comprehensive product structures of the traditional competing banks. (Jonker, 2025).

Customer Channels - Capitec employs a hybrid channel strategy combining lean physical branches, retail partnerships with food retailers and a best -in class digital app for self-service. The branch network strategically focused on high-traffic and underserved locations. This physical presence lowers psychological and logistical barriers for customers unfamiliar with formal banking. (Capitec Bank, 2025a)

Customer relationships are built on standardisation and consistency rather than personalised advisory services. Frontline staff are trained to deliver uniform service quality, reducing complexity. This approach supports scale while maintaining a perception of fairness and reliability. (Coetzee, 2003).

Trust is reinforced through predictable and friendly interactions and clear communication. Rather than cross-selling complex products, Capitec focuses on deepening engagement with its core offering, strengthening long-term relationships through everyday relevance. (Capitec Bank ,2025a)

Capitec generates revenue primarily through interest income from lending products and to a lesser extent transaction fees. Importantly, fees are structured to align with customer usage patterns, avoiding unnecessary punitive charges to low-income users. High transaction volumes compensate for low per-unit margins, consistent with the BoP business logic.

Key resources include a standardised IT infrastructure, a trained frontline workforce, and a strong brand associated with fairness and simplicity. Unlike competitors, Capitec’s technology platform was designed to support its streamlined product architecture from inception. (Capitec Bank ,2025)

Core activities focus on efficient transaction processing, risk management, and continuous process optimisation. Automation and standardisation reduce costs while supporting reliability and scalability.

Capitec’s cost structure is characterised by low fixed costs. Paperless and cashless branches , a centralised back-office: biometric identification of customers are pertinent examples that contribute to substantially lower cost. This cost discipline underpins the bank’s ability to offer affordable services while maintaining profitability. (Jonker, 2025).

The analysis reveals that Capitec’s success is not attributable to a single innovation but to a configuration of mutually reinforcing factors. Simplicity reduces operational complexity and customer confusion. Cost discipline enables affordability without sacrificing quality. Hybrid distribution builds trust and accessibility, while transparency fosters long-term engagement.

These mechanisms reflect core BoP principles but are not inherently limited to low-income contexts. Their relevance lies in addressing fundamental inefficiencies and misalignments that can emerge in mature financial systems, setting the stage for examining their potential transferability to the German context.

3.4.3 Case Study 2: Yoco - Enabling SME inclusion through Digital Financial Infrastructure

Founded in 2013, Yoco addresses financial exclusion of small and micro-enterprises by simplifying access to digital payments (Enwereij et al., 2024). While Capitec illustrates disruptive innovation (Christensen, 1997; Christensen et al., 2015) in consumer banking, Yoco represents Bottom-of-the-Pyramid (BoP) innovation within the small and micro-enterprise segment in South Africa.

Yoco emerged in response to the limited availability of affordable, accessible card payment solutions for small and informal merchants in South Africa. Prior to its entry, digital payment acceptance was largely restricted to larger, formal businesses due to high upfront costs, complex contracts, and stringent compliance requirements imposed by incumbent providers and banks.

Yoco's business model is built around simplicity, modularity, and ecosystem integration. Its core offering consists of low-cost, portable card readers paired with a user-friendly digital platform. Merchants can onboard quickly, avoid long-term contracts, and pay transparent transaction-based fees rather than fixed monthly charges. Yoco´s steep growth is matched by its transaction volumes, growing from over Euro1 billion in card payments by 2021 to Euro 2.5 billion annually by 2024. (Kene-Okafor, 2021; Canvas Business Model, 2025)

Rather than approaching SMEs through traditional merchant-acquiring models, Yoco adopted a fundamentally different strategy. It reframed digital payments not as a premium service but as basic business infrastructure. This repositioning aligned closely with the realities of micro-entrepreneurs, many of whom operated cash-based businesses with limited access to banking products, credit, or financial data.

Yoco's strategic focus was explicitly inclusive: enabling participation in the digital economy without requiring full formalisation at the point of entry. This logic reflects BoP principles of affordability, accessibility, and acceptability, as well as a recognition that inclusion is often a gradual, processual outcome rather than an immediate state. (Enwereji et al, 2024).

The value proposition extends beyond payment acceptance. By aggregating transaction data, Yoco provides merchants with basic analytics, sales insights, and access to additional services such as working capital solutions. Importantly, these services are layered progressively, allowing merchants to deepen engagement as trust and usage increase.

Distribution relies heavily on digital channels complemented by targeted physical presence in high-density commercial areas. Customer relationships are maintained through standardised support, digital onboarding, and peer-based learning rather than intensive relationship management. This approach enables scale while keeping operating costs low.

Yoco shares several foundational mechanisms with Capitec. Both emphasise radical simplicity, transparent pricing, and trust-building among historically excluded

users. Both rely on high-volume, low-margin economics supported by lean cost structures and standardised processes. (Yoco, 2025a).

However, Yoco's distinctive contribution lies in its ecosystem-oriented logic. Whereas Capitec focuses on internal coherence and control, Yoco positions itself as an enabling platform within a broader entrepreneurial ecosystem. Its model leverages partnerships, data, and modular service expansion to gradually integrate SMEs into the formal financial system without imposing immediate compliance burdens that could deter adoption

Yoco's impact on financial inclusion (Demirgüç-Kunt et al., 2015; World Bank, 2024) operates through indirect but powerful mechanisms that address a critical bottleneck in SME development: the absence of affordable financial infrastructure tailored to SME development. By reducing reliance on cash, it increases transaction traceability, supports business resilience, and creates digital footprints that can facilitate access to credit and other financial services.

A pivotal mechanism in Yoco's model is the creation of a "Data-Value Loop," which effectively utilises transaction history as a proxy for traditional financial formality. (Startup Mag, 2025) In BoP contexts, many micro-merchants remain "invisible" to formal tax and credit bureaus due to their reliance on cash, which precludes them from obtaining traditional financing. By digitising the point of sale, Yoco transforms these cash flows into a verifiable, longitudinal data stream. This "visibility" allows the platform to assess creditworthiness based on real-time turnover rather than static collateral or historical payslips—a concept central to reverse innovation

Although developed in a BoP context, Yoco's mechanisms address challenges that are increasingly visible in advanced economies. Micro-entrepreneurs, freelancers, and small service providers in Germany face growing administrative complexity, rising costs, and barriers to digital integration. Yoco's model demonstrates how payment infrastructure can function as an entry point to broader inclusion, offering lessons that extend beyond emerging markets.

3.4.4 Comparative Analyses

Despite operating in different segments of the financial ecosystem, Capitec and Yoco share a set of foundational mechanisms that underpin their success.

Radical simplicity and transparency emerge as central principles. Both organisations deliberately reduced complexity in product design, pricing, and user interaction. In Capitec's case, this took the form of a single, transparent transactional account with one card; for Yoco, it manifested in contract-free onboarding and transaction-based pricing. In both cases, simplicity reduced cognitive and behavioural barriers to entry, a mechanism that is decisive not only for BoP consumers but also developed markets such as Germany, where increasing complexity and overabundance of choice leads to user disengagement and decision fatigue.

Cost discipline and lean operations represent a second shared mechanism. Both firms re-engineered cost structures to achieve profitability at low margins through high volumes.

Trust-building through consistency and accessibility also features prominently. Capitec invested in physical presence to normalise banking and reduce psychological barriers, while Yoco emphasised ease of entry and predictable

interactions. In both cases, trust was not assumed but actively constructed through repeated, reliable customer experiences.

Finally, both models demonstrate a gradual inclusion logic. Rather than demanding full formalisation upfront, they allow customers to deepen their engagement over time. This processual approach aligns with BoP realities and reduces exclusionary friction.

3.5 Transferability Assessment

3.5.1 German Financial context and Challenges

Germany's financial sector faces challenges that differ in origin but increasingly resemble those addressed by BoP innovators. High operating costs, fragmented infrastructure, slow digital adoption, and declining customer satisfaction indicate structural inefficiencies. Moreover, while formal access is widespread, segments such as migrants, micro-entrepreneurs, gig workers, and rural populations encounter barriers related to complexity, usability, and affordability. (Schufa, 2023).

At the core of the financial system lies a highly stable yet fragmented three-pillar banking structure, consisting of private banks, public savings banks, and cooperative institutions. (IMF, 2004). Germany still maintains the largest number of banks in Europe despite consolidation, contributing to intense competition, duplication of infrastructure, and high operational costs. As a result, the sector suffers from chronically low profitability, with high cost-to-income ratios and projections suggesting returns on equity could fall to zero without structural reform.

The regulatory framework in Germany is complex and prescriptive, governed by Ba Fin ((Federal Financial Supervisory Authority of Germany) (BaFin, n.d.a) and also other EU directives. This system imposes significant compliance burdens, fostering a "compliance-first" culture that diverts resources away from innovation and customer-centric development. The rigidity of rules-based regulation, alongside strict data protection requirements, limits experimentation with new business models and slows the adoption of digital and data-driven solutions.

Germany also lags behind global peers in digital banking adoption, with strong cultural preferences for cash and risk aversion slowing technological uptake. (Statista, 2025). Combined with demographic shifts such as an aging population and rising inequality, these dynamics create a dual challenge: a financial system that is both economically inefficient and increasingly misaligned with the evolving needs of certain sections of the society. These symptoms of the German market have not gone unnoticed. A 62% surge in customer complaints to BaFin between 2022 and 2023 signals growing consumer dissatisfaction (BaFin,2024a). A further study reveals that 71% would like their bank to provide more support in though financial times (CRIF, 2022).

3.5.2 Transferability assessment using the CAGE Framework

To assess whether these mechanisms can be adapted to Germany's context, the analysis applies the CAGE distance framework, examining cultural, administrative, geographic, and economic distance.

Cultural distance presents both constraints and opportunities. German consumers exhibit high risk aversion and strong preferences for security and data privacy.

While this may slow adoption of radically simplified or fully digital offerings, it also creates demand for transparent, predictable services. The trust-building mechanisms employed by Capitec and Yoco particularly clarity and consistency are culturally compatible, even if delivery channels require adaptation.

Administrative and regulatory distance constitutes the most significant barrier. Germany's financial sector operates within a dense, rule-based regulatory environment shaped by national and European frameworks. Unlike South Africa's outcome-oriented approach, compliance requirements in Germany can limit experimentation, particularly in onboarding and customer verification. Nevertheless, emerging regulatory initiatives and proportionality principles suggest scope for adapting processual inclusion models, especially for low-risk customer segments and SME services.

Geographic distance is comparatively less relevant due to Germany's advanced infrastructure. However, the retreat of physical bank branches in rural areas creates access gaps similar in effect, if not in cause, to those found in BoP contexts. Capitec's hybrid physical digital model offers insights into maintaining accessibility while transitioning toward digital efficiency.

Economic distance remains substantial in terms of income levels and purchasing power. Direct replication of low-margin models is neither necessary nor feasible. However, the strategic logic of cost discipline and efficiency holds relevance in a low-growth, margin-constrained banking environment.

The analysis suggests that transferability should be understood in tiers rather than as a binary outcome. Some mechanisms such as radical simplification, transparent pricing, and customer-centric design are highly transferable with minimal adaptation. Others such as hybrid distribution or gradual formalisation require institutional and regulatory alignment. Mechanisms deeply embedded in South Africa's transformation framework exhibit lower transferability but still offer conceptual insights.

Importantly, the findings do not support wholesale transplantation of BoP models into Germany. Instead, they point toward selective adaptation and mutual learning. South African BoP innovations highlight inefficiencies and blind spots within mature systems, offering alternative strategic logics rather than prescriptive solutions. In this sense, reverse innovation (Govindarajan & Trimble, 2012; Zeschky et al., 2014) should focus on transfer of principles rather than transfer of products.

4.Findings and Strategic Recommendations

This study set out to examine whether innovation strategies and business model (Osterwalder & Pigneur, 2010) mechanisms developed under resource constraints in South Africa's Bottom-of-the-Pyramid (BoP) financial sector offer transferable strategic insights for Germany's established banking environment. The findings suggest that, while contextual differences remain substantial, several underlying mechanisms possess strategic relevance for mature and highly regulated financial systems such as the German Banking system.

The findings further suggest that inclusive innovation does not require sacrificing financial performance. On the contrary, BoP-inspired models demonstrate how efficiency and inclusion can be mutually reinforcing. By leveraging the "Data-Value Loop," innovators can transform previously "invisible" segments into viable customers. For incumbents, this implies that addressing underserved or dissatisfied

segments such as migrants, micro-entrepreneurs, and individuals with non-standard income patterns can represent a strategic growth opportunity rather than a compliance obligation.

The strategic recommendations based on the research outcomes for the German financial sector is summarised in the table 1 below:

Table 1: Strategic Recommendations (Authors summary based on comparative analyses)

German Financial Incumbents	German Fintechs and new entrants	Regulatory Navigation
1. Re-engineering the channel architecture towards a lean hybrid model with high-impact physical touchpoints can reset the operating cost base for improved profitability. 2. A radically simplified, transparent product can capture skeptical, disengaged or underserved segments 3. Adopting transparent, value-based pricing can accelerate mass customer acquisition and improve institutional profitability through economies of scale. 4. Invest in customer empowerment and trust	1.Target underserved SME'S with business - enabling platforms 2. Adopt transparent, value-based pricing models to build trust and lower barriers to adoption 3.Postion as essential B2B technology partners providing service solutions 4. Leverage data as capital within regulatory boundaries to enhance credit access and personalised services	1.Treat compliance as a strategic asset and build proactive engagement with BaFin ((Federal Financial Supervisory Authority of Germany) 2. Align innovation with regulatory tailwinds such as ESG and sustainable finance frameworks, to unlock institutional support 3. Balance innovation with strict consumer protection and data privacy requirements

5. Contribution of the Research

This study makes both a theoretical and practical contribution to the academic literature.

Firstly it bridges the gap between BoP strategy and mature market innovation studies, which are often treated as separate domains. It extends the theory of reverse innovation by demonstrating that its application is not limited to product transfer but encompasses the adaptation of underlying principles and strategic mindsets. By applying the CAGE framework to BoP model transferability, it also offers structured methodology for assessing the viability of cross-contextual innovation from emrging to developed markets.

For practitioners in the German financial sector, this thesis provides a counter-intuitive yet actionable strategic playbook. It challenges the popular belief that high-value innovation comes from established hubs like Silicon Valley and instead invites an unprejudiced thinking, enabling learning valuable lessons from emerging markets.

6.Limitations and future research

Several limitations must be acknowledged. The study relies primarily on qualitative case analysis, which limits generalisability. While the selected cases are exemplary, they cannot represent the full diversity of BoP or German financial innovation. In addition, the analysis focuses on strategic and organisational mechanisms rather than detailed regulatory implementation pathways.

Future research could address these limitations by incorporating comparative empirical studies across multiple advanced economies, longitudinal analyses of adaptation processes, or quantitative assessments of customer outcomes resulting from BoP-inspired innovations. Further investigation into regulatory experimentation within the European Union would also be valuable.

7.Conclusion

At a theoretical level, this research contributes to the evolving literature on reverse innovation and BoP transferability, showing that lessons from emerging economies are not context-bound but principle driven. It challenges the old-fashioned distinction between “developed” and “developing” markets, suggesting instead that innovation thrives where constraint and creativity intersect. South Africa´s fintech ecosystem demonstrates that the absence of resource can sharpen strategic focus, while Germany´s institutional abundance can sometimes dilute it, contributing to enhance complexity and reduced agility. True progress lies in bridging these worlds – combining the discipline of structure and the improvisation of scarcity

8.Acknowledgement

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