



# Inclusive business beyond borders:

The role of innovation  
intermediaries in market integration  
for the Base-of-the-Pyramid

Myrtille Danse

# Propositions

1. The success of Dutch trade in Base-of-the Pyramid markets depends more on trusted intermediaries than on Dutch firms. (this thesis)
2. Base-of-the Pyramid markets, shaped by deep cultural embeddedness, exposes the limitations of universal international business theories. (this thesis)
3. Food system transformation will be unlikely if the current model remains highly profitable for large agrifood corporations.
4. Despite the reproducibility crisis of research using quantitative methods, it continues to be seen as superior to qualitative research.
5. The misalignment between academic precision and practical urgency weakens the contribution of PhD research to the science for impact agenda.
6. Humanity treats climate change like a bad Wi-Fi signal: we notice it, complain about it, and hope it fixes itself.
7. A PhD is not a sprint, a marathon, or a relay, it's a hike you keep doing with the wrong shoes.

Propositions belonging to the thesis, entitled

Inclusive business beyond borders:

The role of innovation intermediaries in market integration for the Base-of-the-Pyramid

Myrtille G. Danse

Wageningen, 23 January 2026

# **Inclusive business beyond borders:**

The role of innovation intermediaries in market integration for the Base-of-the-Pyramid

Myrtille G. Danse

## **Thesis committee**

### **Promotor**

Prof. Dr *ir.* L.W.A. Klerkx  
Professor in Knowledge, Technology and Innovation  
Wageningen University & Research

### **Co Promotor**

Dr R. Lie  
Assistant Professor in Knowledge, Technology and Innovation  
Wageningen University & Research

### **Other members**

Prof. Dr R. Ruben, Wageningen University & Research  
Dr S.C.O. Wertheim-Heck, Wageningen University & Research  
Dr C. Kilelu, African Center for Technology Studies, Nairobi, Kenya  
Dr V.C. Materia, Wageningen University & Research

This research was conducted under the auspices of the Graduate School WASS.

# **Inclusive business beyond borders:**

The role of innovation intermediaries in market  
integration for the Base-of-the-Pyramid

## **Thesis**

submitted in fulfilment of the requirements for the degree of doctor  
at Wageningen University  
by the authority of the Rector Magnificus,  
Prof. Dr C. Kroeze,  
in the presence of the Thesis Committee appointed by the Academic Board  
to be defended in public  
on Friday 23 January 2026  
at 1 p.m. in the Omnia Auditorium.

Myrtille G. Danse

Inclusive business beyond borders: The role of innovation intermediaries in market integration for the Base-of-the-Pyramid, 256 pages.

PhD thesis, Wageningen University, Wageningen, the Netherlands (2026)

With references, with summary in English and Dutch.

DOI: 10.18174/681029

*"Mundus universus patria est."  
(De hele wereld is mijn vaderland.)*

— *Desiderius Erasmus*

*"For Julian and Olivier — for your love that held me, and your patience and support  
that carried me through."*

# Table of contents

<b>Table of contents</b>	<b>6</b>
<b>List of figures</b>	<b>10</b>
<b>List of tables</b>	<b>11</b>
<b>Abbreviation and Acronyms</b>	<b>12</b>
<b>Summary</b>	<b>14</b>
<b>Samenvatting</b>	<b>17</b>
<b>Chapter 1 Introduction</b>	
1.1. Introduction	23
1.2. Rethinking business for the Base-of-the-Pyramid: A journey from market inclusion to systemic change	23
1.3. Navigating institutional voids: the dynamics of inclusive business models and innovation in BOP markets	25
1.4. CSDPs and innovation intermediaries for social embeddedness	27
1.5. The support of Dutch Foreign Trade and Development Cooperation policies in advancing inclusive business for food security	28
1.6. Research aim, questions and relevance	30
1.7. Research design and methodology	34
1.7.1. Case studies	34
1.7.2. Data collection and methods	36
1.8. Outline of the dissertation	38
<b>Chapter 2 Rethinking international Base-of-the-Pyramid market selection: Four cases of European multinational companies introducing inclusive innovations in Kenya and Nigeria</b>	<b>41</b>
2.1. Introduction	43
2.2. IMS dimensions to introduce a private sector-driven inclusive innovation to BOP markets	45
2.2.1. International market selection	45
2.2.2. Market, institutions, and infrastructure dimensions	46
2.2.3. IMS screening based on secondary sources	49
2.3. Research approach	50
2.3.1. Case studies	50
2.3.2. Market screening based on publicly available databases	53
2.4. Findings—Kenya	54
2.4.1. Case studies	54

2.4.2. Market screening based on publicly available databases	62
2.5. Findings—Nigeria	64
2.5.1. Case studies	64
2.5.2. Market screening based on publicly available databases	72
2.6. Discussion	74
2.6.1. Comparative case performance on the three dimensions	74
2.6.2. The relevance of existing databases	77
2.7. Conclusion	78
<b>Chapter 3 Unravelling inclusive business models for achieving food and nutrition security in BOP markets</b>	<b>81</b>
3.1. Introduction	83
3.2. Research approach	86
3.2.1. IB model for food and nutrition security: a focus on foundational level	86
3.2.2. Research method	88
3.3. Results	91
3.3.1. inclusive business model initiator	91
3.3.2. Foundation level components of IB models for food and nutrition security	91
3.4. Discussion	98
3.4.1. Lead firms of IB models for food and nutrition security	98
3.4.2. Standardized low cost but high-quality products contribute to BOP food and nutrition security	99
3.4.3. Uniqueness of business model for food and nutrition security	100
3.4.4. Linkages aim more at achieving upgrading than economies of scale	101
3.4.5. Business ecosystem strengthening aims mostly on creating awareness	102
3.5. Conclusion	103
<b>Chapter 4 Roles and functions of innovation intermediaries facilitating cross-sector development partnerships for inclusive innovation at the Global North-South interface</b>	<b>107</b>
4.1. Introduction	109
4.2. Conceptual framework	112
4.2.1. Inclusive innovation	112
4.2.2. Intermediaries and cross-sector development partnerships	113
4.2.3. Roles and functions of intermediaries in a BOP context	116
4.3. Research approach	118
4.3.1. Selection of innovation intermediaries	118
4.3.2. Survey	120
4.3.3. Case studies	120

4.4. Findings	121
4.4.1. Survey findings	121
4.4.2. Intermediary roles and functions	123
4.5. Discussion	128
4.5.1. Intermediaries and cross-sector development partnerships	128
4.5.2. Roles and functions of intermediaries in a developing context	129
4.5.3. Implications for theory and practice	134
4.6. Conclusion	135
<b>Chapter 5 Creating social value in Base-of-the-Pyramid markets: the dynamic role of innovation intermediaries in cross-border cross-sector development partnerships</b>	<b>139</b>
5.1. Introduction	141
5.2. Conceptual framework	143
5.2.1. Cross-border development partnerships to manage institutional voids and embeddedness	144
5.2.2. Innovation intermediaries to reduce organizational risk and institutional distance	146
5.2.3. Social value creation and CSDPs	146
5.2.4. Innovation intermediaries' role to contribute to social value creation of cross-border CSDP	150
5.3. Research methodology	151
5.4. Research findings	154
5.4.1. Introduction	154
5.4.2. CSDP business model development and innovation intermediary role	155
5.4.2. Social value creation in the four CSDPs	168
5.5. Discussion	176
5.5.1. Innovation intermediaries facilitate, connect and translate policy into action	177
5.5.2. Innovation intermediaries contribute to coordination and alignment of performance	178
5.5.3. Innovation intermediaries contribute to local embeddedness and ecosystem development	180
5.6. Conclusion	181
<b>Chapter 6 Conclusions and reflections</b>	<b>185</b>
6.1. The interconnections of the research questions in this dissertation	187
6.2. Contributions to debates in the literature on inclusive business for BOP markets	190
6.2.1. International business research agenda on introducing inclusive innovations in BOP markets	190

6.2.2. Business model evolution for BOP markets: integrating adaptation, scaling, and the role of intermediaries	191
6.2.3. Innovation intermediation research agenda, by developing insights on the innovation intermediary role in supporting CSDPs introducing inclusive innovations in BOP markets	193
6.3. Research relevance for the Dutch Foreign Trade and Development Cooperation policies since 2010	195
6.3.1. Research relevance for the Dutch Foreign Trade and Development Cooperation Policy 2010–2020	195
6.3.2. Research relevance to the Dutch Trade and Development Aid Policy of 2025	196
6.4. Reflection on research methods	200
6.5. Recommendations for further research	204
<b>Endnotes</b>	<b>209</b>
<b>References</b>	<b>210</b>
<b>Appendices</b>	<b>225</b>
<b>About the Author</b>	<b>252</b>
<b>Acknowledgements</b>	<b>253</b>

## List of figures

Figure 1.1. Research questions of the dissertation	33
Figure 4.1. Engagement and type of contribution of innovation intermediaries in CSDP	132
Figure 5.1. Conceptual framework	146
Figure 5.2. Timeline of cross border CSDP partnership development phases (2012-2018)	154
Figure 5.3. IB model development for dairy cross border CSDP Nigeria	158
Figure 5.4. IB model development for seed potato cross-border CSDP Kenya	161
Figure 5.5. IB model development coffee cross-border CSDP Kenya	165
Figure 5.6. IB model development fertilizer platform cross-border CSDP Nigeria	168

## List of tables

Table 1.1. Description case studies	35
Table 1.2. Sub research questions and methods applied	37
Table 1.3. Outline of the dissertation	39
Table 2.1. Dimensions, sub-dimensions, indicators sources for IMS of BOP markets	51
Table 2.2. Overview of cases	52
Table 3.1. Foundation components for a strategic business model	88
Table 3.2. Business intervention strategy by type of lead organization	91
Table 3.3. Foundation level components per BIS on improved food and nutrition security	92
Table 4.1. Roles and functions of intermediaries	118
Table 4.2. Description of case studies	120
Table 6.1. Synthesizing key findings: the interconnections of research questions in this dissertation	189

## Abbreviation and Acronyms

AABS:	African Agri Business School
AIM:	Amsterdam Initiative for Improved Nutrition
BIS:	Business Intervention Strategy
BOP:	Base-of-the-Pyramid
BOP NC:	Base-of-the-Pyramid Innovation Center
CSDP:	Cross Sector Development Partnership
CEGESTI:	Centro de Gestión Tecnológica e Industrial (Centre for Technology and Industrial Information Management)
DDP:	Dairy Development Program
GNP	Gross National Product
iCRA:	International Centre for Research in Agriculture
IDH:	Initiatief Duurzame Handel (Sustainable Trade Initiative)
IFDC:	International Fertilizer Development Center
IMS:	International Market Selection
HIC:	High Income Country
LEI:	Landbouw Economisch Instituut (Agricultural Economic Research Institute)
LIC:	Low Income Country
MNE:	Multi National Enterprise
NWO:	Nederlandse Wetenschappelijke Organisatie (Dutch Scientific Council)
ODA:	Official Development Assistance

PPP:	Public Private Partnership
SDG:	Sustainable Development Goals
SME:	Small and Medium Sized Enterprises
SMS:	Sustainable Management Services
WAMCO:	Friesland Campina West Africa Milk Company
WCF:	World Cocoa Foundation
WUR:	Wageningen University and Research
WRR:	Wetenschappelijke Raad voor Regeringsbeleid (Dutch Scientific Council for Government Policies)

## Summary

This dissertation explores how inclusive business models designed to enhance food and nutrition security in Base-of-the-Pyramid (BOP) markets can be effectively developed and socially embedded to create mutual value. It addresses a central dilemma in international development: how businesses, while pursuing commercial objectives, can simultaneously generate meaningful social impact in contexts shaped by poverty, institutional voids, and fragmented supply chains. A central focus of the study is on the role of innovation intermediaries in cross-border cross-sector development partnerships (CSDPs), and the ways in which they facilitate collaboration, bridge institutional gaps, and foster long-term social value creation.

The research builds on and contributes to the evolution of the BOP paradigm. While early approaches (BOP 1.0) emphasized the purchasing power of the poor and product adaptation, they often neglected deeper developmental outcomes. Later approaches (BOP 2.0) highlighted co-creation and stakeholder collaboration but still struggled to reconcile the dual ambition of profitability and poverty alleviation. This study positions itself in the BOP 3.0 paradigm, which stresses systemic change, environmental sustainability, and local ownership. Within this framework, the dissertation investigates four interrelated research questions: how multinational enterprises select international markets for inclusive innovation, which business strategies the private sector employs to address food security, what roles and functions innovation intermediaries play in CSDPs, and how these intermediaries enable social value creation in BOP markets.

The research employs a mixed-methods design, combining surveys, literature review, and database analysis with in-depth empirical work. Four case studies of Dutch-funded cross-border partnerships in Kenya and Nigeria provide the core empirical material, including 55 semi-structured interviews with company managers, intermediary staff, local stakeholders, and public officials. Additionally, data were gathered from international databases and secondary sources to analyze international market selection processes, and a survey of 25 innovation intermediaries was conducted to refine theoretical insights. The methodological design ensured triangulation across data sources and incorporated participatory validation workshops in both Africa and the Netherlands.

The findings reveal several critical insights. First, the international market selection process in BOP contexts differs fundamentally from conventional approaches. Multinational enterprises often rely on intuition, prior familiarity, and existing networks, while formal screening tools based on macroeconomic indicators overlook informal institutions and social dynamics that strongly influence market entry. More refined tools integrating data on governance, infrastructure, and informal practices could strengthen decision-making.

Second, the analysis of inclusive business models demonstrates that success requires more than offering standardized low-cost products. Long-term viability rests on alliance building, strategies for upgrading value chains, and deliberate efforts to strengthen the broader business ecosystem. Particularly in food security contexts, embedding business models in local systems through training, coalition-building, and awareness-raising proved as important as product affordability.

Third, the dissertation develops a typology of innovation intermediary roles that sheds light on their dynamic contribution to cross-border CSDPs. Intermediaries function variously as conveners, mediators, co-creators, and learning catalysts. By brokering partnerships, translating between international and local perspectives, and mitigating institutional risks, they enable multinational enterprises and local actors to collaborate effectively. These roles, however, are not static. Intermediaries shift their emphasis in response to crises, donor demands, or local needs, which creates tensions but also safeguards the continuity of initiatives in highly volatile environments. Their capacity for “dual embeddedness”—being simultaneously attuned to global frameworks and local realities—emerges as a crucial success factor.

Finally, the case studies illustrate that innovation intermediaries play a decisive role in enabling social value creation. They help build trust among smallholder farmers, facilitate co-creation of innovations, and balance short-term donor expectations with the long-term process of ecosystem building. While public funding and Dutch foreign trade and development cooperation instruments created opportunities for private sector-led interventions, these mechanisms alone were insufficient to secure embeddedness. Intermediaries added the connective tissue that allowed business models to move beyond isolated interventions toward more resilient and inclusive systems that are better able to respond to shocks and in which low-income groups can participate and benefit on a structural basis.

The contributions of this research are threefold. Theoretically, it extends international business literature by integrating informal institutions and social embeddedness into international market selection for BOP markets. It advances business model research by showing how adaptation, resilience, and ecosystem strengthening are central to inclusive business success. And it enriches the literature on innovation intermediation by conceptualizing dual embeddedness as a defining characteristic of intermediaries operating across North–South boundaries. Practically, the study offers guidance for policymakers and donors. The Dutch Foreign Trade and Development Cooperation policies of 2010–2020 succeeded in mobilizing private sector engagement but often failed to generate durable social outcomes. This research highlights the importance of stronger

intermediary roles, more refined IMS tools, and governance mechanisms that safeguard social value creation over time.

Looking forward, the study recommends further research on intermediary ecosystems, their interaction with digital platforms, and comparative analysis across regions and sectors. Longitudinal approaches are particularly needed to understand better how intermediaries navigate shifting roles and how their interventions shape the long-term balance between commercial and social goals.

## Samenvatting

Dit proefschrift onderzoekt hoe inclusieve ondernemingsmodellen, gericht op het verbeteren van de voedsel- en voedingszekerheid in BOP-markten, kunnen worden ontwikkeld en verankerd in lokale contexten zodat zij duurzame en wederzijdse waarde genereren. Het behandelt een centraal dilemma in internationale ontwikkeling: hoe bedrijven, terwijl ze commerciële doelstellingen nastreven, tegelijkertijd een betekenisvolle maatschappelijke impact kunnen genereren in contexten die worden gevormd door armoede, institutionele leemtes en gefragmenteerde toeleveringsketens.

Een centrale focus van het onderzoek ligt op de rol van innovatie-intermediairs in internationale, sectoroverschrijdende ontwikkelingspartnerschappen (CSDP's), en de manieren waarop zij samenwerking faciliteren, institutionele kloven overbruggen en de creatie van maatschappelijke waarde op de lange termijn bevorderen.

Het onderzoek bouwt voort op en draagt bij aan de evolutie van het BOP-paradigma. Hoewel vroege benaderingen (BOP 1.0) de koopkracht van de armen en productaanpassing benadrukten, verwaarloosden ze vaak diepere ontwikkelingsresultaten. Latere benaderingen (BOP 2.0) legden de nadruk op co-creatie en samenwerking met verschillende belanghebbenden, maar hadden nog steeds moeite om de dubbele ambitie van winstgevendheid en armoedebestrijding te verzoenen. Dit onderzoek positioneert zich in het BOP 3.0-paradigma, dat de nadruk legt op systemische verandering, ecologische duurzaamheid en lokaal eigenaarschap.

Binnen dit kader richt het onderzoek zich op vier onderling samenhangende onderzoeksvragen: hoe multinationale ondernemingen internationale markten selecteren voor inclusieve innovatie, welke bedrijfsstrategieën de private sector hanteert om voedselzekerheid te waarborgen, welke rollen en functies innovatie-intermediairs spelen in CSDP's, en hoe deze intermediairs sociale waardecreatie in BOP-markten mogelijk maken.

Het onderzoek maakt gebruik van een mixed-methods-ontwerp, waarbij enquêtes, literatuuronderzoek en database-analyse worden gecombineerd met diepgaand empirisch werk. Vier casestudies van door de Nederlandse overheid gefinancierde internationale partnerschappen in Kenia en Nigeria leveren het belangrijkste empirische materiaal, bestaande uit 55 semi-gestructureerde interviews met bedrijfsmanagers, personeel van de betrokken innovatie-intermediairs, lokale belanghebbenden en overheidsfunctionarissen. Aanvullend werden gegevens verzameld uit internationale databases en secundaire bronnen om internationale marktselectieprocessen en inclusieve ondernemingsstrategieën te analyseren. Ook werd een enquête uitgevoerd onder 25 innovatie-intermediairs om theoretische inzichten te verfijnen. Het methodologische

ontwerp garandeerde triangulatie tussen databronnen en integreerde participatieve validatieworkshops in zowel Afrika als Nederland.

De bevindingen onthullen verschillende cruciale inzichten. Ten eerste verloopt internationale marktselectie in BOP-contexten wezenlijk anders dan in conventionele markten, omdat formele screeningsinstrumenten die doorgaans gebaseerd zijn op macro-economische indicatoren, onvoldoende zicht bieden op de informele instituties en sociale dynamieken die markttoetreding sterk beïnvloeden. Hierdoor baseren multinationale ondernemingen hun keuzes in de praktijk vaak op intuïtie, eerdere internationale ervaring en bestaande netwerken. Mijn onderzoek laat echter zien dat deze informele benadering in nieuwe en onbekende BOP-markten regelmatig tot onvolledige of misleidende inzichten leidt, en dat macro-economische indicatoren wél waardevol kunnen zijn wanneer zij anders worden geïnterpreteerd en gecombineerd met meer verfijnde instrumenten die gegevens over governance, infrastructuur en informele marktpotentieel integreren. Ten tweede toont de analyse van inclusieve bedrijfsmodellen aan dat succes meer vereist dan het aanbieden van gestandaardiseerde, goedkope producten. Levensvatbaarheid op de lange termijn berust op alliantievorming, strategieën voor het verbeteren van waardeketens en doelbewuste inspanningen om het bredere zakelijke "ecosysteem" te versterken. Met name in de context van voedselzekerheid bleek het verankeren van ondernemingsstrategieën in lokale systemen via training, coalitievorming en bewustwording, net zo belangrijk als het aanbieden van betaalbare producten.

Ten derde identificeert het proefschrift een typologie van de rollen van innovatie-intermediairs die duidelijk maakt hoe zij dynamisch bijdragen aan internationale CSDP's. Intermediairs functioneren op verschillende manieren: als procesbegeleider, bemiddelaar, partners in co-creatie en katalysatoren van leerprocessen. Door de ontwikkeling van partnerschappen te ondersteunen, een brug te slaan tussen internationale en lokale perspectieven en institutionele risico's te helpen beperken, stellen ze multinationale ondernemingen en lokale actoren in staat effectief samen te werken. Deze rollen zijn echter niet statisch. Innovatie-intermediairs verschuiven hun nadruk als reactie op crises, eisen van donoren of lokale behoeften. Dit kan spanningen veroorzaken, maar ook de continuïteit van initiatieven in zeer volatiele omgevingen helpen waarborgen. Hun vermogen tot "dubbele inbedding", door gelijktijdig afgestemd te zijn op mondiale kaders en lokale realiteiten, blijkt een cruciale succesfactor te zijn.

Ten slotte illustreren de casestudies dat innovatie-intermediairs een doorslaggevende rol spelen bij het mogelijk maken van maatschappelijke waardecreatie. Ze helpen vertrouwen op te bouwen onder kleine boeren, faciliteren het gezamenlijk creëren van innovaties en zorgen voor een evenwicht tussen de kortetermijnverwachtingen van donoren en het langetermijnproces van de lokale ontwikkeling van de institutionele omgeving.

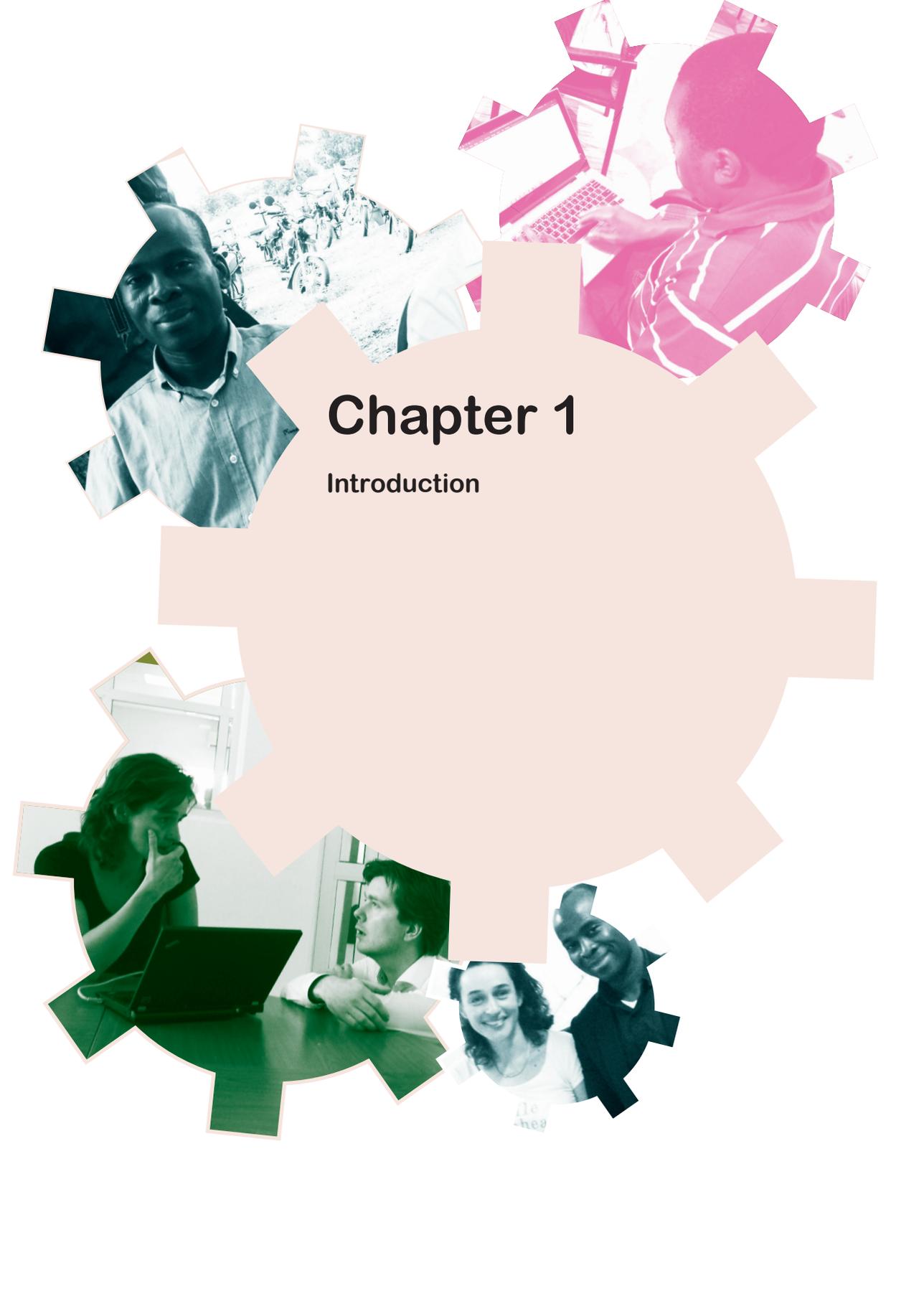
Hoewel overheidsfinanciering en Nederlandse instrumenten voor hulp en handel kansen creëerden voor door het bedrijfsleven geleide interventies, waren deze mechanismen op zichzelf onvoldoende om de inbedding te waarborgen. Innovatie- intermediairs voegden het bindweefsel toe, waardoor ondernemingsstrategieën door konden ontwikkelen van geïsoleerde interventies tot veerkrachtigere en lokaal ingebedde systemen die beter kunnen inspelen op schokken en waarin lage-inkomensgroepen structureel kunnen deelnemen en meeprofiteren.

De bijdragen van dit onderzoek zijn driedelig. Theoretisch gezien breidt het de internationale bedrijfskundeliteratuur uit door informele instituties en sociale inbedding te integreren in de internationale marktselectie voor BOP-markten. Het bevordert het onderzoek naar ondernemingsstrategieën door te laten zien hoe aanpassing, veerkracht en lokale institutionele versterking centraal staan in inclusief zakelijk succes in BOP markten. En het verrijkt de literatuur over innovatiebemiddeling door dubbele inbedding te conceptualiseren als een bepalend kenmerk van de rollen van innovatie-intermediairs die internationale grenzen van samenwerking helpen overbruggen.

Praktisch gezien biedt het onderzoek richtlijnen voor beleidsmakers en donoren. Het Nederlandse hulp- en handelsbeleid van 2010-2020 slaagde erin de betrokkenheid van het Nederlandse en lokale bedrijfsleven te mobiliseren, maar slaagde er vaak niet in om duurzame maatschappelijke impact te genereren. Dit onderzoek benadrukt het belang van sterkere innovatie-intermediaire rollen, verfijndere instrumenten voor internationale marktselectie en besturingsmechanismen die de creatie van maatschappelijke waarde in de loop der tijd waarborgen.

Met het oog op de toekomst beveelt de studie verder onderzoek aan naar de samenhang en samenwerking tussen intermediaire organisaties in zogenaamde intermediaire 'ecosystemen', hun interactie met digitale platforms en een vergelijkende analyse tussen regio's en sectoren. Longitudinale benaderingen zijn met name nodig om beter te begrijpen hoe intermediaire organisaties omgaan met veranderende rollen en hoe hun interventies de balans op lange termijn tussen commerciële en maatschappelijke doelen vormgeven.





# Chapter 1

## Introduction



## 1.1. Introduction

This introductory chapter establishes the foundation for the dissertation by addressing the core research question: ***How are inclusive business models aiming at improved food security designed and socially embedded to foster mutual value creation and effectively address the complex challenges of poverty and socio-economic development in Base-of-the-Pyramid (BOP) markets?*** The study explores how businesses navigate the complex challenges of poverty, institutional voids, and market constraints while striving to generate both commercial and social value. A key focus is the role of intermediary organizations in facilitating cross-border cross-sector development partnerships (CSDPs), bridging institutional gaps, and enhancing the social embeddedness of inclusive business models.

The chapter begins by examining the evolution of the BOP paradigm and the key theoretical and practical debates surrounding inclusive business models. It then introduces the research aim and questions, providing a structured framework for the study. The scientific and societal relevance of this research is discussed, drawing on my experience as both a scholar and a practitioner engaged in international development, private sector collaboration, and sustainable food systems. This dissertation represents a culmination of insights gained through 30 years of working at the intersection of business, social value creation and poverty alleviation, reflecting my transition from a reflexive practitioner to a practice-based researcher. The chapter concludes with an overview of the dissertation structure, summarizing the key themes and methodological approaches covered in each chapter.

## 1.2. Rethinking business for the Base-of-the-Pyramid: A journey from market inclusion to systemic change

The Greening of Industry Conference in Chapel Hill, North Carolina, USA in 1999 was a pivotal moment that forever reshaped my perspective on international business and development cooperation. Among the thought-provoking discussions, Professor C.K. Prahalad's keynote address stood out, igniting both intense debate and profound inspiration. He presented a working paper, *Strategies for the Bottom of the Pyramid: Creating Sustainable Development* (Prahalad & Hart, 1999), a visionary piece that challenged conventional thinking and opened new horizons for addressing poverty through innovative business strategies.

This groundbreaking work catalyzed an interdisciplinary research stream that has since bridged fields as diverse as development economics, cultural anthropology,

social innovation, systems thinking, and network theory (Dembek, Sivasubramaniam, & Chmielewski, 2020; Kolk, Rivera-Santos, & Rufin, 2014; Lashitew, Narayan, Rosca, & Bals, 2022; Voros Fregolente & Carvalho, 2023). It laid the intellectual foundation for exploring how businesses can create social value while thriving economically, particularly in low-income markets at the base of the pyramid.

For over two decades now, scholars and practitioners have studied the role of multinational and local businesses in alleviating poverty in low-income markets (Dembek & York, 2022; Gradl, Sobhani, Bootsman, & Gasnier, 2008; Lashitew, Bals, & van Tulder, 2020; Lashitew & van Tulder, 2020; Lashitew, van Tulder, & Muche, 2022; Mortazavi, Eslami, Hajikhani, & Väättänen, 2021; Pansera & Martinez, 2017; Pineda-Escobar & Merigo, 2020; Prahalad, 2004; Voros Fregolente & Carvalho, 2023). These efforts are grounded in the premise that businesses can simultaneously enhance their competitiveness while improving the social well-being of disadvantaged communities (Prahalad, 2004). By targeting the so-called 'Base-of-the-Pyramid' (BOP) markets, defined as large segments of society at the lower socio-economic levels, often reliant on informal livelihoods, businesses seek to reduce inequalities through innovative and empowering solutions (Hammond & Prahalad, 2004; London, 2008; Prahalad, 2004).

Since Prahalad's foundational work, research around the BOP paradigm has evolved, reflecting a deeper understanding of poverty's multifaceted nature and the need for inclusive, holistic approaches to socio-economic challenges (Dembek & York, 2022; Lashitew et al., 2020; Voros Fregolente & Carvalho, 2023). The initial publications, referred to as "BOP 1.0", focused on the market potential of the BOP segment, emphasizing the need for innovative products tailored to low-income consumers (Prahalad, 2004). However, it was criticized for overstating the purchasing power of the poor and neglecting their developmental needs (Arora & Romijn, 2011; Karnani, 2009, 2010). Strategies like selling single-serve sachets or using "village ladies" for distribution were scrutinized for commercializing poverty to benefit large corporations (Dembek et al., 2020). Critics argued for more sustained interventions that improve employment opportunities, productivity, and market access for the poor (Karnani, 2009). Based on this, the research focus shifted to social value creation through collaborative co-creation with local communities, aligning with sustainable business models and cross-sector partnerships (Dahan, Doh, Oetzel, & Yaziji, 2010; Nahi, 2016; Simanis & Hart, 2006). This approach emphasized engaging diverse stakeholders to integrate capabilities and resources, fostering entrepreneurial and innovation opportunities (Caldwell, Roehrich, & George, 2017; Freudenreich, Lüdeke-Freund, & Schaltegger, 2020; Seitanidi & Crane, 2013). Collaborations between multinational enterprises (MNEs) and local actors enhanced understanding of local markets and provided access to valuable local knowledge, contacts, and social legitimacy (Rivera-Santos, Rufin, & Kolk, 2012; Webb, Kistruck, Ireland, & Ketchen Jr, 2010). Partnering

with local civil society and governmental agencies also facilitated resource mobilization and social network development, essential for achieving systemic social impact (Nahi, 2016). Diverse stakeholder engagement was crucial for the success of this “BOP 2.0” strategy (Lashitew et al., 2020). However, BOP 1.0 and 2.0 endeavors often struggled to produce the dual results they aspired to: business profitability and poverty alleviation (Arora & Romijn, 2011; Chliova & Ringov, 2017; Karnani, 2009, 2010; Simanis, 2012). “BOP 3.0” advocates a comprehensive transformation of the socio-economic system around the BOP, addressing the entire value chain and emphasizing environmental sustainability (Hart, Sharma, & Halme, 2016; van der Merwe, Grobbelaar, Schutte, & von Leipzig, 2018). In BOP 3.0 research, the BOP market transitions from business partners to business owners, employees, consumers, and co-creators of inclusive innovations (Kuo, Shiang, Hanafi, & Chen, 2018; van der Merwe et al., 2018; Voros Fregolente & Carvalho, 2023). This new iteration is based on recognizing the complexity of poverty and the critical role of cross-sector partnerships and service ecosystems in overcoming it (Dembek et al., 2020; Vázquez-Pacho & Payaud, 2024).

### **1.3. Navigating institutional voids: the dynamics of inclusive business models and innovation in BOP markets**

Despite their potential, business strategies targeting the BOP market have faced significant challenges. Many initiatives fail to achieve their social impact goals (Dembek et al., 2020; Kolk et al., 2014; Voros Fregolente & Carvalho, 2023), and some inadvertently generate negative consequences, including increased social exclusion or environmental pollution (Dembek et al., 2020; Hall, Matos, Sheehan, & Silvestre, 2012). This duality underscores the complexity of developing effective business models for BOP markets. BOP 3.0 research has begun to illuminate the capabilities, strategies, and contextual factors that enable or hinder social value creation in developing economies (Lashitew & van Tulder, 2020; Lashitew, van Tulder, et al., 2022; Vázquez-Pacho & Payaud, 2024). Evidence suggests that the effectiveness of these models is highly contingent on how their internal mechanisms interact with external conditions (Dembek et al., 2020; Kolk et al., 2014). However, there remains a paucity of integrative analyses that synthesize existing evidence on the mechanisms of social embeddedness that contribute to the effectiveness of these business models. A deeper understanding of these processes requires greater conceptual clarity and a more detailed exploration of business model features, their operational dynamics, the broader socio-economic contexts in which they function (Hahn, Kolk, & Winn, 2010; Hart et al., 2016; Paul, 2019; Prahalad, 2012; Voros Fregolente & Carvalho, 2023) and innovation in these contexts (Hoffecker, 2021; Mortazavi et al., 2021; Mortazavi, Laine, Teplov, Vääänen & Gupta, 2019).

Conventional business model theories often assume a supportive environment characterized by developed infrastructure and clear institutional frameworks (Porter, 1980). This presumption does not hold in Low Income Countries (LICs), where businesses encounter unique challenges that significantly impact their business model configurations (Dembek & York, 2022; Goyal, Esposito, Kapoor, Jaiswal, & Sergi, 2014; Gradl & Jenkins, 2011; London & Anupindi, 2012; Prahalad, 2004; Vázquez-Pacho & Payaud, 2024). Existing business model frameworks often lack the necessary features to comprehend the external fit of firms operating in highly unpredictable and informal institutional contexts (Gebauer, Halldimann, & Saul, 2017; Hart & Sharma, 2004; Lashitew et al., 2020; Lashitew, van Tulder, et al., 2022). Voros Fregolente and Carvalho (2023) emphasize the need to consider multiple factors in designing business models for the BOP context, providing a comprehensive perspective on the complex nature of BOP markets. This holistic view encourages further research into the interconnections between the evolution of the BOP paradigm, business model components, and aspects of innovation, ecosystems, and sustainability.

Subsequent research by London and Hart (2004) and Christian Seelos (2014) expanded on this by highlighting the necessity for inclusive innovation and business models that diverge from traditional approaches. Inclusive innovation and inclusive business are closely interconnected concepts, especially within the context of BOP markets. Inclusive innovation refers to the creation of products, services, or processes that address the needs of low-income communities, focusing on accessibility and affordability (Heeks, Foster, & Nugroho, 2014). Inclusive business focuses on the potential of business activities for development opened up by the integration of the previously excluded poor in the global economy, also emphasizing the role of governments and other institutions in creating conducive conditions (Dembek et al., 2020; Veglio, 2011). In BOP markets, inclusive innovations often serve as the foundation for inclusive business strategies of foreign companies seeking to tailor their offerings to the specific constraints and opportunities present in these markets (Kolk, Kourula, Pisani, & Westermann-Behaylo, 2019; Mortazavi et al., 2021; Mortazavi et al., 2019). By linking innovation with inclusive business approaches, firms can drive market growth while simultaneously contributing to poverty alleviation and social inclusion (Dembek & York, 2022; Gebauer et al., 2017; Lashitew, van Tulder, et al., 2022). This synergy not only opens new market segments but also promotes long-term societal impact through scalable and sustainable solutions (Lashitew, van Tulder, et al., 2022). However, studies overlook the complexity of institutional voids in LICs, a gap only partially covered by recent research that incorporate the role of social networks and local partnerships (Lashitew et al., 2020; London & Anupindi, 2012; Uzzi, 2018), and the incorporation of variables related to alliance building and social value creation strategies (Dembek & York, 2022; Lashitew, van Tulder, et al., 2022; Ricart, 2010).

## 1.4. Cross-sector development partnerships and innovation intermediaries for social embeddedness

To navigate the uncertainties and inefficiencies resulting from institutional failures in BOP markets, companies need to cultivate social capital and establish trusted connections through social networks (Lashitew et al., 2020; Uzzi, 2018). These networks enhance resource access and information flow, fostering the development of “native capabilities” through the integration of local and global knowledge (Lashitew et al., 2020; London & Hart, 2004). Cross-sector development partnerships (CSDPs) are important social networks to address complex international development goals (Kolk, Van Tulder, & Kostwinder, 2008; Manning & Roessler, 2014; Rivera-Santos et al., 2012). These CSDPs are project-based collaborative arrangements between the private sector, government, and civil society organizations that aim to tackle issues such as food security, climate adaptation, health, and economic development (Andonova & Piselli, 2022; Caldwell et al., 2017; Manning & Roessler, 2014; Rivera-Santos et al., 2012; Schuster & Holtbrügge, 2014a; van Hille, de Bakker, Ferguson, & Groenewegen, 2020). CSDPs have proven effective in accessing BOP markets, offering crucial support in establishing credibility and legitimacy (Manning & Roessler, 2014; Voros Fregolente & Carvalho, 2023). In a cross-border context, CSDPs are particularly effective in creating a better understanding of local market and institutional conditions, and bridging the “liability of foreignness” for foreign MNEs by improving their legitimacy in the BOP market (Dahan et al., 2010; Lashitew & van Tulder, 2020).

Within this complexity, intermediaries, whether called innovation intermediaries, partnership brokers, or cross-cultural brokers, have emerged to manage and navigate these cross-border partnerships effectively (Kilelu, Klerkx, Leeuwis, & Hall, 2011; Stewart & Hyysalo, 2008; van Hille, de Bakker, Ferguson, & Groenewegen, 2019; van Lente, Hekker, Smits, & van Waveren, 2003; Yan, Lin, & Clarke, 2018). Some studies acknowledge the importance of international (i.e. cross-border and cross-cultural) intermediaries in international collaborative networks given the added complexities and ambiguities due to differences in culture and institutional environment (Kania & Kramer, 2011; Kivimaa, Boon, Hyysalo, & Klerkx, 2019; Stadler & Probst, 2012). This literature indicates that such intermediaries help resolving cultural and cognitive ambiguities, which relate to no clear-cut interpretation of the nature of an issue, the causality of an issue, or the intentions of actors related to the issue (Kumar & Patriotta, 2011). They make explicit and help reconcile taken-for-granted norms and values, different framings of issues and persons, different ways of reasoning and negotiating, different business cultures, different creative processes, and different ways of expressing emotions (Kanungo, 2006), and hence create spaces of intercultural learning. By their actions, international intermediaries contribute to sense making (the process by which individuals develop a framework within which to

understand certain events and situations) and sense giving (the process of attempting to influence the way others construct meaning and make sense), and hence enhance cultural sensitivity (Shapiro, Ozanne, & Saatcioglu, 2008).

Some scholars have recommended strengthening the role of these intermediaries to enhance linkage formation and performance in regions like Latin America, Africa, and Asia (Ekboir & Vera-Cruz, 2012; Intarakumnerd & Chaoroenporn, 2013; Kilelu et al., 2011; Klerkx, Álvarez, & Campusano, 2015; Klerkx, Hall, & Leeuwis, 2009; Szogs, Cummings, & Chaminade, 2011). Involving intermediaries in cross-border CSDPs can provide access to complementary resources, develop organizational capabilities, facilitate market entry, reduce organizational risk, and minimize institutional distance (Ma, Kaldenbach, & Katzy, 2014; Yan et al., 2018). Their role in facilitating and shaping cross-sector arrangements is vital for fostering longer-term network relations and developing a relational capacity for social innovation (Stadtler & Probst, 2012). While their importance in sustainable development contexts has been widely studied (Kivimaa et al., 2019), there is limited knowledge on their role in private sector-driven inclusive innovation processes and no research has been done on their contribution to social value creation in BOP markets. Given the complex nature of BOP markets, further research is encouraged to explore the relationships between the development of the BOP market, business model components, innovation, ecosystems, and sustainability (Danse, et.al., 2020; Gradl & Jenkins, 2011; Vázquez-Pacho & Payaud, 2024).

## **1.5. The support of Dutch Foreign Trade and Development Cooperation policies in advancing inclusive business for food security**

Food and nutrition security appears to be the area where the biggest advantages could be obtained for both the BOP market and inclusive business. Around 70% of the BOP (2.5 billion) depends on the food value chain for their incomes, either directly as small-scale farmers and farm labourers, or indirectly as small-scale entrepreneurs (Hammond, et.al., 2008; WFP & UNICEF, 2022). More than one billion people suffer from chronic hunger (FAO, UNICEF, WFP and WHO 2023; Godfray et al., 2010; Prosekov & Ivanova, 2018). Expanding inclusive business models in these areas could bring sizeable gains to both poor, food-insecure communities, economic development, and the private sector itself by (re)designing the product, process or the institutional arrangements of the value chain (Danse & Vellema, 2005; Vellema & Danse, 2007). These smallholder farmers, rural communities, and marginalized groups in BOP markets lack access to resources, knowledge, and markets to produce and consume sufficient and nutritious food.

Dutch development policy has long emphasized strengthening the private sector in developing countries, with its significance increasing over recent decades. Since the 1990s, development cooperation has adopted a broader approach to private sector development, reflecting a global shift from state-led production to private initiatives and market forces, as highlighted in key documents like the OECD-DAC's 1995 guidelines (IOB, 2014). The 2005 World Development Report (2005) reinforced the importance of fostering a favorable investment climate, linking private sector growth to poverty reduction. Studies such as "Voices of the Poor" (Narayan-Parker & Patel, 2000) revealed that jobs or entrepreneurial opportunities were seen as the best pathways out of poverty, with private enterprises accounting for 90% of global employment and serving as essential sources of tax revenue for public services.

The Dutch agenda for foreign trade and development cooperation has emphasized private sector involvement to address the growing complexity of development issues, such as food security. The focus was on leveraging economic development, promoting Dutch expertise to achieve sustainable poverty reduction, and prioritizing public-private partnerships (PPPs) (IOB, 2014). In 2010 the Dutch Scientific Council for Government Policies (WRR) recommended shifting from poverty reduction to economic growth and the promotion of Dutch interests (Van Lieshout, Went, & Kremer, 2010). The appointment of the first Minister of Foreign Trade and Development Cooperation in 2012 marked a policy shift, combining trade and development goals under the framework "A World to Gain," which prioritized poverty reduction, inclusive growth, and the promotion of Dutch firms (Bitzer, Van Balen, & de Steenhuijsen Piters, 2017; IOB, 2014). As a result, the Dutch Ministry of Foreign Affairs allocated approximately 250 million euros of official development assistance (ODA) to public-private partnership facilities, notably in food security, enhancing the involvement of Dutch internationally active companies in low-income markets in the Global South, with policies aimed at ensuring that the poorest groups benefit from economic growth (Bouma & Berkhout, 2015; IOB, 2014). The use of various policy instruments such as grants, loans, PPP support programs, technical assistance, training, and capacity building, was considered instrumental in engaging the private sector in development efforts (Bitzer et al., 2017; Bouma & Berkhout, 2015). Programs emphasizing PPPs for development received significant funding, including the 2SCALE program Phase 1 (2012–2016), supported by the Directorate for Inclusive Green Growth; the 4S@scale program (2013–2018) funded under the Dialogue and Dissent scheme by the Directorate for Social Development; and the multi-annual funding granted in 2014 to the Sustainable Trade Initiative (IDH) by the Directorate for Sustainable Economic Development. Case studies of each of these three programs form a central part of this PhD dissertation, as they provide empirical insights into the role of innovation intermediaries in supporting cross-border CSDPs aimed at inclusive innovation in BOP markets.

## 1.6. Research aim, questions and relevance

In this section I set out the general aim of the dissertation regarding the key knowledge gaps and research problems identified. This is followed by the research questions and the scientific relevance of this dissertation. The research is situated in the context of BOP 3.0 of the BOP paradigm, which emphasizes co-creation, cross-sector collaboration, and inclusive innovation driven by local capabilities and system-level transformation. This perspective informs both the theoretical framing and the empirical focus of the study.

Persistent poverty worldwide and the urgent transformations required within the food and agricultural sector to reach food security and end-of-poverty goals demands innovative and collaborative approaches to address its multifaceted consequences. The Sustainable Development Goals (SDGs) highlight the critical role of the business sector in poverty alleviation through inclusive business models designed for the BOP market (Ghosh & Rajan, 2019; FAO et.al., 2023; Ortuño & Dentchev, 2021). This involves transforming traditional business models to foster mutual value creation, benefiting both marginalized communities and the companies serving them (Dembek et al., 2020; Prahalad, 2012).

However, addressing poverty through business initiatives presents challenges, as companies must navigate the balance between commercial objectives and social goals (Geradts, Jansen, & Cornelissen, 2022; Hasegawa, 2022). While some firms have succeeded, the processes underlying the transformation of business models to reconcile these tensions remain poorly understood (Borchardt, et.al., 2020; Dembek & York, 2022; Sinkovics, Gunaratne et.al., 2021). This knowledge gap is especially evident among MNEs, despite their acknowledged role in achieving the SDGs (Andersen & Esbjerg, 2020; Sinkovics et al., 2021).

The dissertation's main research question is:

***How are inclusive business models aiming at improved food security designed and socially embedded to foster mutual value creation and effectively address the complex challenges of poverty and socio-economic development in Base-of-the-Pyramid (BOP) markets?***

This research contributes to the existing body of knowledge by addressing the gaps in current business model frameworks and highlighting the importance of multifaceted and inclusive approaches to tackle the complex challenges of poverty and socio-economic development in BOP markets. It underscores the significance of alliance building (Calton, Werhane, Hartman, & Bevan, 2013; London & Anupindi, 2012; van Hille et al., 2020), social embeddedness (Lashitew et al., 2020; Uzzi, 2018), and leveraging cross-border CSDPs

(Manning & Roessler, 2014) and intermediaries (Kivimaa et al., 2019; Klerkx et al., 2015; Ma et al., 2014) to enhance the effectiveness of business models in these contexts (Dembek & York, 2022; Lashitew, van Tulder, et al., 2022). This integrated approach is crucial for generating lasting social value creation and improving the livelihoods in BOP markets (Danse et al., 2020; Dentchev, et.al, 2022; Lashitew, Narayan, et al., 2022).

The research aims to address this gap in knowledge by studying how intermediaries that enhance cross-border CSDP between the MNEs and BOP market strengthening local food systems in East and West Africa. The focus of this dissertation is on food security because of the relevance of the food sector for the BOP market. Despite its importance, the sector has been understudied in relation to inclusive business model development. It also captures my transition from a reflexive practitioner into a practice-based researcher. Although this dissertation is brought forth in my capacity as a researcher, I have been drawing on perspectives obtained as a practice-based researcher for the Agricultural Economic Research Institute (LEI)/WUR, and as a reflexive practitioner while working for Centro de Gestión Tecnológica e Industrial/ Centre for Technology and Industrial Information Management (CEGESTI), Base-of-the-Pyramid Innovation Center (BOP Inc), HIVOS, The Netherlands Food Partnership (NFP), and Solidaridad Network. This approach, drawing scientific insights from a reflective practitioners' perspectives, provides an understanding that would otherwise not have been captured in literature. Integrating practical insights from practitioners with academic research is crucial for advancing BOP and business development research and theory development. Such collaboration ensures that theoretical frameworks are grounded in real-world applications, enhancing their relevance and impact. This research unravels factors important for facilitating cross-border CSDPs with the support of innovation intermediaries. The assumption is that the right facilitation of these partnerships reduces transaction costs in inclusive business networks by providing better access to local partners, fewer misunderstandings, better negotiations, more flexible networks' adaptive to emerging challenges, and a better interpretation of the local context.

The research was granted with financial support of the Dutch Scientific Council (NWO) through the Food & Business Global Challenges Program Fast Track Research from 2015 to 2018. The research consortium consisted of Wageningen University and Research (WUR), the International Fertilizer Development Center (IFDC) East and West Africa, iCRA, the African Agri Business School (AABS), and BOP Inc. This research was built on the 2SCALE program. Capacity development was an integral element of this program. The research aims to provide new, valuable insights into the role of intermediation on inclusive business and building scalable business strategies on food security in East and West Africa. The ambition was to integrate the findings of the research in the capacity development schedule of the 2SCALE program. The research findings have been integrated

into capacity building modules of iCRA. iCRA is an international center established by European members of CGIAR to support leadership and develop critical mass in facilitating knowledge-based rural and agricultural innovation. Parts of the research were converted into training modules and made available to those iCRA trainers to enable researchers, practitioners and policy makers to better prepare partners in these cross-border CSDPs and improve the social value creation of the inclusive innovations being introduced.

The research builds on the state of the art of BOP 3.0 research and seeks to contribute new insights into how innovation intermediaries operate within cross-border CSDPs, particularly in navigating institutional complexity and enabling inclusive innovation. These are dimensions that have thus far remained underexplored in the BOP 3.0 literature. The research begins by examining the role of international private sector engagement in addressing poverty in low-income markets, as discussed in sections 1.2 and 1.3, focusing on the complex and interconnected nature of business models in this context. Grounded in strategic business model theory, with an emphasis on the adaptability and local embeddedness of inclusive business models in BOP markets, the following research sub-questions have formed the core of this study (see also figure 1.1.):

**Research sub-question 1:** How do multinational enterprises (MNEs) navigate the international market selection (IMS) process when targeting Base-of-the-Pyramid (BOP) markets for inclusive innovations?

This question seeks to contribute to developing a more refined approach to IMS screening of BOP markets, drawing on 4 case studies that successfully identified and entered BOP markets in Nigeria and Kenya, as well as publicly available databases that address relevant dimensions. This question will be addressed in Chapter 2.

**Research sub-question 2:** Which inclusive business intervention (IB) strategies have been used by the private sector to contribute to food and nutrition security in Base-of-the-Pyramid (BOP) markets?

This question seeks to contribute to an improved understanding of the business model characteristics of private sector interventions aiming at food and nutrition security improvement in BOP markets, by scrutinizing 16 cases from Africa, Asia and Latin America, on the internal fitness of the strategic business model. This question will be addressed in Chapter 3.

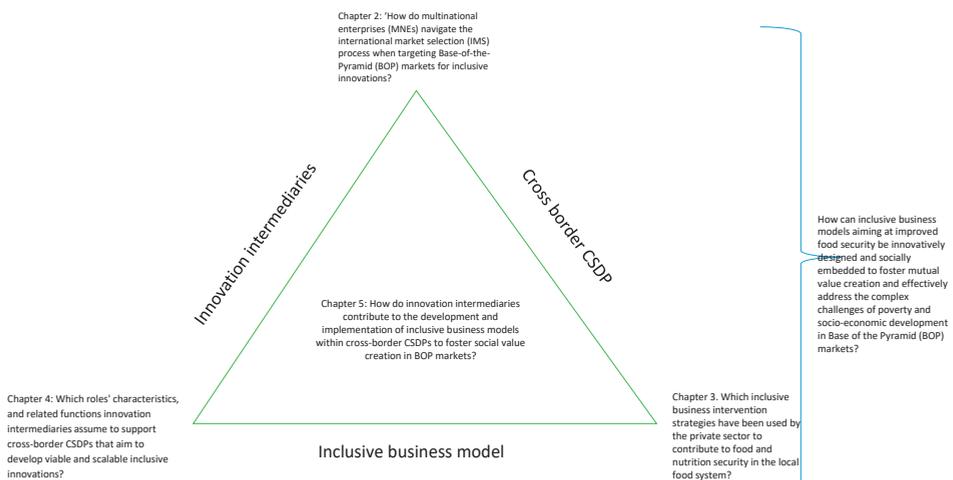
**Research sub-question 3:** Which roles' characteristics and related functions do innovation intermediaries fulfill to support cross-border Cross-Sector Development Partnership (CSDPs) that aim to develop viable and scalable inclusive innovations?

This question seeks to provide more insights on the role innovation intermediaries on business models developed by cross-border CSDPs aiming at BOP markets, by surveying 28 innovation intermediaries active in this field, combined with findings of semi-structured interviews, and drawing on 4 case studies in which international innovation intermediaries assumed these roles. This question will be addressed in Chapter 4.

**Research sub-question 4:** How do innovation intermediaries enable social value creation in Base-of-the-Pyramid (BOP) markets by supporting the design and implementation of inclusive business (IB) models and innovations through cross-border Cross-Sector Development Partnership (CSDPs)?

This question brings the three pillars of the research—innovation intermediaries, CSDPs, and inclusive business models—together and seeks to define how they contribute to social value creation in the BOP market by analyzing four cross-border CSDP case studies from Nigeria and Kenya. This question will be addressed in Chapter 5.

By answering these research questions, this dissertation collects empirical evidence to fill gaps in current business model frameworks and intermediation highlighting the importance of multifaceted and inclusive approaches to tackle the complex challenges of poverty and socio-economic development in BOP markets (see figure 1.1.). These sub-questions are answered consecutively, enabling me to build on the lessons learned from one to the other.



**Figure 1.1. Research questions of the dissertation**

## 1.7. Research design and methodology

This dissertation adopts a mixed-methods research design, integrating both qualitative and quantitative approaches to gather and analyze data. The data sources encompass a comprehensive literature review, case studies, surveys, and interviews with key stakeholders including development organizations, key representatives of the private sector, program managers of innovation intermediaries, and government officials. According to Huberman and Miles (1994), qualitative research is essential when a deep understanding of local contexts, causal relationships, and stakeholders' perspectives is needed. Case studies have been widely used in collaboration research, providing theoretical and practical insights (Gray & Wood, 1991). Given the exploratory and explanatory nature of this research, the aim is to generate insights and testable propositions, which aligns with prior research focusing on process-based analysis (Burgelman, 1996; Ridder, 2017).

To study inclusive business model development and its implementation by cross-border CSDPs in BOP markets for social value creation, the dissertation uses multiple research methods that are applied across the various chapters. In each chapter, key variables identified through literature research are used to analyze datasets or case studies. These analyses are then reflected upon to refine theoretical understanding and practical implications.

### 1.7.1. Case studies

This dissertation draws extensively on research data that originate from four in-depth case studies on cross-border CSDPs in Nigeria and Kenya. These cases illustrate the programs funded by the Dutch Ministry of Foreign Affairs mentioned in 1.4.

Following the case study methodology suggested by Eisenhardt (1989) and Yin (1989), a multiple-case approach was adopted to identify patterns across cases and avoid chance associations. Although there is no fixed ideal number of cases for such studies, four cases were selected as a balanced number to allow for thorough analysis without overwhelming data complexity. Each case explores how innovation intermediaries facilitated the introduction of a market-based inclusive innovation that contributes to improved food security for low-income populations. The four case studies developed for this research are presented in table 1.1.

**Table 1.1. Description case studies**

<b>Lead innovation intermediary</b>	<b>MNE</b>	<b>Short case description</b>
International Fertilizer Development Center (IFDC) lead party of 2SCALE consortium	Agrico	Introduction of high-quality seed potato and technical assistance to the Kenyan BOP market of smallholder potato farmers to enable them to improve their yield and quality and generate access to higher value local markets.
IFDC lead party of 2SCALE consortium	Friesland Campina/WAMCO	Development of local dairy supply chain for the Nigerian BOP market of Fulani farmers to develop an alternative income source, local access to nutritious food and supply to the processing facilities of FC WAMCO that produce dairy products for the Nigerian market.
International Trade Initiative (IDH)	IDH Cocoa coalition	To develop a fertilizer platform for the Nigerian BOP market of smallholder cocoa growers to improve their cocoa yield and cocoa quality and as such help them to improve their incomes through internationally traded cocoa.
HIVOS	ECOM Trading	To introduce biogas digesters and carbon credit schemes to the Kenyan BOP market of smallholder coffee growers to diversify the local availability of healthy food, the access to biogas for local electricity, and increased income through an income diversification strategy.

These initiatives, supported by the Dutch Ministry of Foreign Affairs in the period 2012–2018, were chosen using replication logic, allowing for both literal and theoretical replication. The cases were selected based on the following criteria: supported by the Dutch Ministry of Foreign Affairs, organizational roots of the private sector in the Netherlands/Europe, cross-border CSDP facilitation in East and/or West Africa, a focus on inclusive business development and innovation, and the potential to enhance food security for BOP markets. Initially, a case of the 2SCALE initiative on cassava in Nigeria, and an Amsterdam Initiative for Improved Nutrition (AIM) case on micronutrients for fortified food products in Kenya were also identified. However, the lead organizations of both cases withdrew from the research prior to the start of the field research activities due to unexpected negative developments in their initiatives, which they did not want to put under further pressure through exposure to external research activities.

A well-developed relationship of trust with the 2SCALE consortium and HIVOS facilitated access to documents related to the dairy, coffee and potato cases. For these cases it was also easy to arrange interviews, and the stakeholders were quick to open and share specific details about the initiation and development of the inclusive business (IB) model of the cross-border CSDP and the challenges they encountered. Data collection for the cocoa case was more difficult. The more distanced work relationship with the key account manager of this case at IDH resulted first in a lengthy process to define the right terms for the

confidentiality agreement that they wanted before data collection could start. After this agreement was reached, I received a limited number of reports and summaries of evaluation reports. I did not receive the full project plan nor the mid-term and final evaluation report. I was able to interview representatives of the intermediary organizations and local managers of some of the private partners involved. Due to these specific circumstances, the data available for this case was more limited and generic than the other three.

Prior to the interviews, relevant project documentation for each cross-border CSDP for the period 2012-2018 was analyzed which was obtained from the lead intermediary organizations. These documents included project plans, minutes from steering committee meetings, reports of field visits, annual progress reports and plans, as well as publicly available materials such as company and intermediary websites and newsletters.

A research protocol was developed based on the key concepts identified through extensive desk research. This was supported by a detailed coding structure and an interviewer guideline to ensure consistency across data collection. To address concerns of reliability, comprehensive case study protocols were established, and all documentation and transcription procedures followed standardized research practices. Internal validity was strengthened by conducting interviews with multiple stakeholders for each case, allowing for triangulation of perspectives. In total, 55 interviews were conducted across Nigeria, Kenya, and the Netherlands. Respondents included representatives from the MNEs, the Dutch and local public sectors, Dutch and local research institutes, the innovation intermediaries and representatives of the farmer groups involved in the respective cross-border CSDPs (see Appendix 1). Each interview lasted a minimum of one hour, with several extending up to two hours. All interviews were audio-recorded, transcribed, and systematically coded using the qualitative data analysis software Atlas.ti, ensuring a rigorous and transparent approach to data management and interpretation.

### **1.7.2. Data collection and methods**

A combination of data collection methods is used in this dissertation. For chapters 2, 4 and 5, data from the four case studies were used, consisting of program-related documents and key informant interviews. For this, a research protocol and interview guidelines were developed, and 55 interviews with key stakeholders related to the four case studies were conducted between 2015 and 2016. These interviews included perspectives from innovation intermediary staff, private sector representatives, and local societal actors like authorities, farmers' groups, and research institutes. Local interviews in Nigeria and Kenya were conducted with the support of part-time local researchers. All interviews were transcribed and systematically coded using Atlas.ti, allowing for comprehensive analysis and triangulation across the diverse data sources.

In the case of Chapter 2, these case study data were completed with publicly available data of international databases. Chapter 3 builds on data of an existing database of 71 private-sector initiatives focused on food security in low-income markets which are categorized in five business intervention strategies (BIS) (Chevrollier, 2012). For this research, 16 of the 71 cases were selected for in-depth analysis. These cases were further completed with secondary data available online, including publications, project reports, company websites, and social media. Additionally, verification interviews were conducted with key representatives of the lead organizations to validate the secondary data. In Chapter 4, which analyzes the roles and responsibilities of innovation intermediaries in facilitating cross-border CSDPs for inclusive business model development in BOP markets, survey data were used completed by 25 intermediary organizations supporting cross-border CSDPs in BOP markets. The survey data was complemented by verification interviews with senior managers, and further validated through feedback sessions held in workshops in the Netherlands and Kenya. Table 1.2. summarizes the research methods used for each of the four sub research questions.

**Table 1.2. Sub research questions and methods applied**

Sub research question	Methods
<b>Sub research question 1:</b> How do multinational enterprises (MNEs) navigate the international market selection (IMS) process when targeting Base-of-the-Pyramid (BOP) markets for inclusive innovations?	<ul style="list-style-type: none"> <li>- Desk research for four case studies</li> <li>- 55 key informant interviews related to the four case studies</li> <li>- Publicly available databases with country relevant data on the three dimensions: market, institutions and governance, and infrastructure</li> </ul>
<b>Sub research question 2:</b> Which inclusive business intervention (IB) strategies have been used by the private sector to contribute to food and nutrition security in Base-of-the-Pyramid BOP markets?	<ul style="list-style-type: none"> <li>- 16 case studies selected of database of 71 cases</li> <li>- Online data (websites, project documents)</li> <li>- Key informant interviews with lead organizations of 16 case studies</li> </ul>
<b>Sub research question 3:</b> Which roles' characteristics, and related functions do innovation intermediaries fulfill to support cross-border Cross Sector Development Partnerships (CSDPs) that aim to develop viable and scalable inclusive innovations?	<ul style="list-style-type: none"> <li>- Survey shared with 53 intermediary organizations, resulting in 25 respondents</li> <li>- Key informant interviews with senior management representatives of the 25 respondents of the survey</li> <li>- Desk research for four case studies,</li> <li>- 55 interviews with key informants of the four case studies</li> </ul>
<b>Sub research question 4:</b> How do innovation intermediaries enable social value creation in Base-of-the-pyramid (BOP) markets by supporting the design and implementation of inclusive business (IB) models and innovations through cross border cross-sector development partnerships (CSDPs)?	<ul style="list-style-type: none"> <li>- Desk research for four case studies</li> <li>- 55 interviews with key informants of the four case studies</li> </ul>

## **1.8. Outline of the dissertation**

Table 1.3. outlines the structure of this dissertation. Chapter 2 provides more insights on the relevance of sub-dimensions for market, institutions and infrastructure to conduct an initial international market selection for introducing inclusive innovations in BOP markets. Market selection is a critical first step, followed by the development of business strategies for market entry. Chapter 3 examines five commonly employed business model strategies aimed at developing inclusive innovations in BOP markets, highlighting the role of innovation intermediaries in fostering partnerships between international businesses and local actors. Chapter 4 delves deeper into the specific roles and responsibilities that innovation intermediaries fulfill in supporting foreign companies to develop inclusive business strategies for BOP markets. Chapter 5 integrates these factors and analyzes their relevance and implications through the lens of four case studies. The final chapter places the findings in a historical context and reflects on their current significance. Chapters 2 to 5 have been written in an article style; Chapter 3 has been published, and the others have been submitted for publication.

Table 1.3. Outline of the dissertation

Chapter	Title	Key messages	Key domains in literature to which this chapter contributes
1	Introduction	<ul style="list-style-type: none"> <li>- Main and sub research questions</li> <li>- Key concepts, literature and methods</li> <li>- Societal and scientific relevance</li> </ul>	
2	Rethinking international Base-of-the-pyramid market selection: four cases of European multinational companies introducing inclusive innovations on Kenya and Nigeria	<ul style="list-style-type: none"> <li>- A multi-dimensional approach for the early stage of international market selection (IMS) screening addressing BOP-specific factors for market, institutions and infrastructure</li> </ul>	Internationalization theory, international market selection (Dunning, 2008; Ozturk et al., 2015; Fuentelsaz et al., 2020)
3	Unravelling inclusive business models for achieving food and nutrition security in BOP markets	<ul style="list-style-type: none"> <li>- Four key elements of the inclusive business (IB) model, being: foundation level components, alliance building strategy, upgrading strategy, IB ecosystem strengthening strategy.</li> <li>- The relevance of the interaction between the inclusive business model and "business ecosystem" of BOP markets as well as the characteristics of intermediaries to overcome cultural and institutional gaps</li> </ul>	Strategic business model theory, inclusive business (Morris, 2005; Klein, 2008; (Gradl & Jenkins, 2011)
4	Roles and functions of innovation intermediaries facilitating cross-sector development partnerships for inclusive innovation at the Global North-South interface	<ul style="list-style-type: none"> <li>- The liaison role of innovation intermediaries between sources of new ideas and the users of those new ideas in innovation networks</li> <li>- Innovation intermediaries can provide access to resources, contribute to the development of capabilities and learning, facilitate new market entry, reduce organizational risk and reduce institutional distance</li> <li>- The changing role of innovation intermediaries in the development of cross-border CSDP</li> </ul>	Cross-border partnership theory, social network theory (Ma et al., 2014; Kilelu, Klerkx and Leeuwis, 2013; Manning and Roesler, 2014; (Stadtler & Probst, 2012)
5	Creating social value in Base-of-the-pyramid markets: the dynamic role of innovation intermediaries in cross-border CSDPs	<ul style="list-style-type: none"> <li>- This chapter examines the contribution of innovation intermediaries to inclusive business model development and social value creation in Base-of-the-pyramid markets by cross-border CSDPs. Drawing on the BOP 3.0 paradigm, it introduces an integrative research framework combining IB model theory with insights from intermediation and social value creation.</li> </ul>	Inclusive business model theory, International business, intermediation, and social value creation (Danse et al., 2020; Lashitew et al., 2022; Manning & Roesler, 2014; Stadler & Probst, 2012;
6	Synthesis	<ul style="list-style-type: none"> <li>- The interconnections of the research questions in this dissertation</li> <li>- Contributions to debates in the literature on inclusive business for BOP markets</li> <li>- Research relevance for the Dutch aid and trade policies since 2010</li> <li>- Reflection on research methods</li> <li>- Recommendations for further research</li> </ul>	





## Chapter 2

**Rethinking international Base-of-the-Pyramid market selection:  
Four cases of European multinational companies  
introducing inclusive innovations  
in Kenya and Nigeria**

**M.G. Danse, R. Lie, P. Wachira, L.W.A. Klerkx**

*Submitted for publication to International  
Marketing Review*

The literature on international business and developing business models for Base-of-the-Pyramid (BOP) markets extensively discuss the motives for entering BOP markets (such as the vast unmet needs) and the required adaptations to business models (such as changing mentality and working with new partners). Yet, it pays no attention to the specificities and complexities of the International Market Selection (IMS) process. Conventional IMS screening approaches rely on macroeconomic and political factors at the outset of the analysis and fail to include BOP markets' dynamism and future potential resulting from rapid change and national attributes that affect specific sectors and market receptiveness. This chapter addresses this by applying a multi-dimensional evaluation approach for the early-stage IMS screening of BOP markets. The study categorizes the country's context for inclusive innovation into three main dimensions: (a) Market, (b) Institutions, and (c) Infrastructure, with sub-dimensions addressing BOP-specific aspects such as the low-income population segment, institutional voids, and infrastructure deficiencies. The research examines four cases of European multinational enterprises (MNEs) introducing inclusive innovations in BOP markets in Kenya and Nigeria, detailing the resources used by the company representatives to screen the potential of the BOP smallholder farmer market. The research also reflects on the relevance of available secondary data sources for a more structured IMS approach. The findings reveal that private sector representatives often apply cognitive criteria based on relations and familiarity during early-stage country screening. Though existing databases allow for a more precise assessment of BOP market attractiveness, especially regarding institutions and infrastructure, these data are only being consulted by company representatives when they engage in a cross-sector development partnership and start working with locally embedded intermediary organizations. Further research is suggested to incorporate sub-dimensions related to informal institutions and cultural distance as part of the second stage of IMS assessment. This research contributes to developing market assessment tools for public-private partnership researchers, practitioners and grant managers.

**Key Words:** Inclusive innovation, International Market Selection (IMS), Base-of-the-Pyramid (BOP) market, low-income market dimensions, institutions, infrastructure.

## 2.1. Introduction

Internationalization theories have been at the core of international business (Bai, Johanson, Oliveira, Ratajczak-Mrozek, & Francioni, 2022; Dunning & Lundan, 2008). An important object of research is to understand how companies choose their markets (Andersen & Strandskov, 1997; Deaza, Díaz, Castiblanco, & Barbosa, 2020; Ozturk, Joiner, & Cavusgil, 2015; Papadopoulos & Martín Martín, 2011). International Market Selection (IMS) is the decision-making process by which firms choose the markets (Papadopoulos & Martín Martín, 2011). It encompasses different entry modes (Williamson, 2000), and its relevance has been consistently stressed in the international business, marketing, and management literature, whereby scholars and managers consider it a critical decision in the internationalization process of firms due to its complexity and limits to the company's capacity to identify, assess, select, and exploit opportunities abroad (Francioni & Martín, 2024).

The expansion of multinational big and medium-sized enterprises (MNEs) to low-income markets to develop business opportunities that include groups who are currently marginalized is the key proposition of the Base-of-the-Pyramid (BOP) paradigm (Faulconbridge, 2013; Foster & Heeks, 2013b; Heeks, Amalia, Kintu, & Shah, 2013; Kolk et al., 2014; London & Hart, 2004; Prahalad, 2004). There has been a parallel growth in academic interest, which resulted in different labels attached to this phenomenon, including "inclusive innovation", "pro-poor innovation", "below-the-radar innovation", "grassroots innovation", "BOP innovation" and more (Cozzens & Sutz, 2014; Danse et al., 2020). In this research, "inclusive innovation" is used as it is the prevailing terminology in current discourse and activity (Heeks et al., 2013; Mortazavi et al., 2021).

IMS has been addressed from several perspectives and in various research streams. The decision to move to specific foreign markets starts with the screening and selection of international markets (Ozturk et al., 2015). The conventional IMS screening approach relies on macroeconomic and political factors at the outset of the analysis (Andersen & Buvik, 2002; Deaza et al., 2020; Koch, 2001; Sakarya, Eckman, & Hyllegard, 2007). Industrialized countries produce a vast array of information about their home markets, which can be used in the IMS screening process. However, these data are much scarcer or entirely absent for BOP markets. This makes IMS in a BOP market context complex, and international market segmentation incomplete (Fuentelsaz, Garrido, & Maicas, 2020; Papadopoulos & Martín Martín, 2011; Paul, 2019; Sakarya et al., 2007).

In the rare cases that IMS analyses have been applied to assess low income markets, they produce static snapshots that ignore their long-term potential, produce undersized Gross National Product (GNP) figures, and fail to include BOP markets' dynamism and

future potential resulting from rapid change, national attributes that affect specific sectors and market receptiveness (Arnold & Quelch, 1998; Fuentelsaz et al., 2020; Ozturk et al., 2015; Sakarya et al., 2007). Some research has been done to estimate the size of BOP markets (Hammond et al., 2007; London & Hart, 2004; Prahalad, 2005), and in some cases to examine specific market aspects such as distribution (Chikweche & Fletcher, 2011), marketing (Subrahmanyam & Gomez-Arias, 2008) and corporate strategy (Dembek et al., 2020; Hasegawa, 2022). However, a systematic approach to understanding and analyzing the specificities and complexities of BOP markets as part of the IMS process is missing in theoretical practice (Buerki, et.al., 2014; Fuentelsaz et al., 2020; Kolk et al., 2014; Lorentzen, 2010; Paul, 2019).

Adapting an IMS method to assess market opportunities in BOP markets is relevant because it allows for the screening of often-distant markets and narrows the focus to a small number of potentially attractive markets with meaningful similarities (Arnold & Quelch, 1998; Buerki et al., 2014; Fuentelsaz et al., 2020; Ozturk et al., 2015; Paul, 2019; Sakarya et al., 2007). This may contribute to a more successful introduction of inclusive innovations in these distant markets and ensure sustainable business development (Ozturk et al., 2015). Therefore, this study will first develop a more refined approach to evaluate the international selection process of BOP markets for inclusive innovations. This will contribute to understanding and analyzing the heterogeneity, presence, and potential implications of institutional voids of BOP markets, which seems to be missing (Buerki et al., 2014; Fuentelsaz et al., 2020; Lorentzen, 2010; Paul, 2019). The proposed approach emphasizes specific dimensions that reflect the characteristics of these markets and includes them in the screening phase of potential BOP markets.

The main research question is; *How do multinational enterprises (MNEs) navigate the international market selection (IMS) process when targeting Base-of-the-Pyramid (BOP) markets for inclusive innovations?* This research addresses the general research question by answering the following two sub research questions: (1) How do international BOP market selection processes integrate issues concerning data scarcity, heterogeneity, and institutional voids across specific dimensions that reflect the characteristics of these markets? and, (2) To what extent are existing data relevant, sufficient and used in international selection processes of BOP markets? The research aims to contribute to understanding the international selection of BOP markets for inclusive innovations. As such, it seeks to contribute to the BOP and international business literature. It extends this literature by applying an IMS theoretical perspective to a field predominantly studied from strategic business development by analysing four specific cases. Secondly, it contributes to international business theory by extending the international process model with aspects related to markets that MNEs rarely consider.

Section 2.2. makes a case for distinguishing specific BOP market-related dimensions relevant to a first screening of BOP market potential. Furthermore, it points to the availability of publicly available databases to facilitate assessing these dimensions. Section 2.3. introduces four case studies in Kenya and Nigeria used to evaluate private sector representatives' screening of BOP market potential. Section 2.4. presents the findings for Kenya, and Section 2.5. presents the findings for Nigeria. Section 2.6. discusses the findings and integrates insights from international business, innovation systems, and development economics theories, leading to derived conclusions. We argue for the significance of specific dimensions and identify relevant data from databases. The chapter concludes with reflections on the research's contributions and limitations, and proposes directions for future research.

## **2.2. IMS dimensions to introduce a private sector-driven inclusive innovation to BOP markets**

### **2.2.1. International market selection**

This section will define the evaluative framework for assessing the suitability of BOP markets for specific inclusive innovations. Three dimensions and their respective sub-dimensions relevant to international market selection processes will be discussed. These dimensions are market-related, institutional, and infrastructure-related. The section further discusses relevant databases that provide critical country-related figures for market selection processes.

The international markets in which companies operate are shaped by strategic decisions made throughout their internationalization process, particularly in the selection or segmentation of markets (Sakarya et al., 2007; Steenkamp & Ter Hofstede, 2002). IMS involves choosing target markets—either geographically or otherwise—for initial entry or further expansion, often relying on a systematic evaluation of national or cross-national markets (Papadopoulos & Martín Martín, 2011). This process is complex, requiring detailed data, specialized knowledge, and evolving methodologies that progressively rate markets based on attractiveness. Conventional methods often utilize secondary sources for initial screenings, enabling cost-effective elimination of unsuitable markets (Andersen & Strandkov, 1997; Ozturk et al., 2015; Sakarya et al., 2007). However, these methods are limited with respect to capturing the uncertainty, dynamism and long-term potential of BOP markets (Buerki et al., 2014; Cavusgil, 1997; Paul, 2019; Sakarya et al., 2007).

International business uncertainty is expected to affect the relationship between IMS and international performance. In particular, changes in the international business environment (implying an increase in uncertainty) may make relationships and networks

and a focus on opportunities more important (Francioni & Martín, 2024). BOP markets are characterized by issues such as the risk of turbulent change, institutional voids (i.e., weak institutional settings, lack of infrastructure, and lack of technological capabilities), limited managerial resources, and cultural differences (Arnold & Quelch, 1998; Fuentelsaz et al., 2020; Ozturk et al., 2015), all of which need to be included in the IMS methodology to avoid incomplete international market segmentation (Buerki et al., 2014; Deaza et al., 2020; Francioni & Martín, 2024; Papadopoulos & Martín Martín, 2011).

A systemic assessment of recent IMS empirical research conducted by Francioni and Martín (2024) indicates that the country has most often been adopted as a (geographic) unit of analysis, and the consumer has been the main focus of the international market segmentation literature. Traditional macroeconomic market selection models often fail to capture emerging markets' dynamism and future potential, focusing too narrowly on short-term risks and profits. Studies by Cavusgil (1985) and Sakarya et al. (2007) propose a more refined approach, advocating a nested model that assesses markets in stages, starting with broad economic indicators and moving to specific market data. This method emphasizes long-term market potential over immediate risks, recognizing the unique opportunities in BOP markets, such as less competition, rising incomes, and youthful populations. To better evaluate these markets, data from informal low-income segments alongside traditional metrics need to be considered (Ozturk et al., 2015; Schühly & Tenzer, 2017). This provides a more accurate approach to identifying growth opportunities in these markets, ensuring that companies can target and capitalize on the substantial, long-term prospects available in these regions. In addition to a differentiated view of market data, IMS models for BOP markets also need to incorporate dimensions such as informal institutions and infrastructure development, which are crucial for successful engagement in BOP markets (Buerki et al., 2014; Schühly & Tenzer, 2017). The inclusion of these factors ensures that IMS strategies account for both market selection and subsequent considerations like entry timing and mode of operation, especially in environments with institutional gaps that challenge traditional business approaches (Fuentelsaz et al., 2020; Khanna & Palepu, 1999; Kolk et al., 2014).

### **2.2.2. Market, institutions, and infrastructure dimensions**

The guiding research question seeks to identify the contextual factors relevant to analyzing the opportunities and challenges in selecting BOP markets to develop market-based inclusive innovations. The IMS for BOP markets require adapting conventional IMS dimensions, such as market, institutions, and infrastructure, into sub-dimensions that reflect the unique characteristics of the BOP segment.

### **2.2.2.1. Market dimension**

In traditional market assessment frameworks, market estimation approaches rank countries based on aggregate market potential and overall attractiveness. Market size, growth, competition and ease of access, models of indirect measures, prediction of demand for specific products, and estimates of import demand are used as indicators of market potential. The implied or measured levels reflect the country's market potential at a point in time and fail to account for the future potential resulting from the accelerating growth pattern of an emerging economy (Ozturk et al., 2015; Sakarya et al., 2007). Arnold and Quelch (1998) proposal to validate traditional market assessment frameworks for emerging markets allows for the identification of business opportunities by prioritizing national markets according to long-term market potential. Profit potential and market-entry opportunities are further assessed in relation to product or service adaptation, business partnerships, and distribution strategies.

The dimensions of product market conditions and end-users are combined into a market dimension. The market dimension is further divided into three sub-dimensions: (1) general market indicators, (2) BOP or low-income market indicators, and (3) specific market indicators for the type of inclusive innovation to be introduced. Existing databases that provide data for the assessment of these sub-dimensions are the Global Competitive Index, the Next 4 Billion and the World Development Index.

### **2.2.2.2 Institutions dimension**

North (1990) differentiates between informal and formal institutions. Informal institutions can be understood as the tacit constraints that people in a society impose upon themselves to give a structure to their relations with others and that "are part of the heritage that we call culture" (Davis & North, 1970, p. 37). Jiang, Holburn, and Beamish (2014) posit that greater informal institutional distance will result in higher information costs and reduce the attractiveness of foreign investments. On the other hand, formal institutions refer to explicit rules in a society, such as laws, regulations, sentences, property rights protection and contracts (Dunning & Lundan, 2008; Williamson, 2000). Formal institutions are more liable to change over time than informal institutions (Holmes Jr, Miller, Hitt, & Salmador, 2013), and their enforcement is crucial to ensure the effective functioning of markets with low risks and costs (North, 1990; Peng, Wang, & Jiang, 2008).

Formal institutions include the "rules of the game" intentionally and deliberately created for the functioning of the innovation system. Informal institutions include the cultural and social aspects and norms within the innovation system, such as power distance, individualism vs collectivism, masculinity vs femininity, uncertainty avoidance and long-term orientations. The governance and formal institutions dimension combines dimensions of macroeconomic and regulatory context (OECD, 2013), formal institutions (Malerba, 2005)

and the different aspects of governance (UNDP, 2013). Importantly, institutions and governance arrangements are shaped and constrained by cultural values and norms, which influence how rules are created, interpreted, and enforced across different contexts (North, 1990; Williamson, 2000). As a result, understanding cross-border partnerships also requires sensitivity to cultural dynamics.

Studies on comparative culture frequently rely on the cultural distance dimensions of Hofstede (1984) or on categories of societies by Welzel, Inglehart, and Deutsch (2005). Despite its proliferation, cultural-distance research has been criticized on multiple grounds (Beugelsdijk et al., 2018; Shenkar, Luo, & Yehekel, 2008; Tung & Verbeke, 2010). The reasons for this are (Beugelsdijk et al., 2018):

1. For presenting an overly simplistic way of using the cultural-distance construct in theory building: assuming an equivalent (negative) effect of cultural distance on different organizational outcomes (location choice, entry and establishment mode, governance, performance).
2. For ignoring important statistical properties of the index, for example, assuming uncorrelated cultural dimensions.
3. For using almost exclusively Hofstede's arguably outdated data in computing the index of cultural distance.

Despite the broad interest in cultural distance and firm internationalization, location choice studies are relatively scarce, and there is no current meta-analysis on this topic. Anecdotal evidence and consulting reports acknowledge cultural differences as a factor that should be considered when firms decide whether to enter a specific host country, but only after market size, growth opportunities, legal constraints, market stability and costs of production (Beugelsdijk et al., 2018). The existing evidence on location choice suggests that cultural differences may be relevant to location choice, but only after key economic indicators suggest that a location is attractive (Beugelsdijk et al., 2018). The dimensions defined in this research are meant for a first iteration of screening of host countries' attractiveness for inclusive innovation based on publicly accessible databases. After countries have been identified as attractive based on key economic indicators, further research needs to be done on informal institutions and cultural distance effects using a different research approach.

As a result, for this research, the dimensions for institutions are: (1) formal institutions, and (2) governance. Data to analyze the governance aspects of the BOP market came from the World Development Index. For the analysis of formal institutions, the Global Competitiveness index was used.

### 2.2.2.3. Infrastructure dimension

Infrastructure is required for BOP market analysis because it is often weakly developed. This includes physical transportation structure, the retail distribution network and the communication infrastructure, as well as the availability and cost of certain basic resources such as electricity (Craig and Douglas (2005).

The basic infrastructure sub-dimension includes the basic facilities, services, and installations needed for the functioning of a community or society, such as transportation systems, communications systems, water, and electricity. From the studied theoretical tools, communication infrastructure is the only aspect mentioned that can be classified as Basic Infrastructure. Additional dimensions of transport, electricity, and water are added. Basic Infrastructure is generally not emphasized in the innovation system analysis in developed countries' contexts because it is assumed to be prevalent. However, in low-income markets, a lack of infrastructure can challenge the diffusion of innovation; hence, additional aspects of Basic Infrastructure are added.

The technology infrastructure sub-dimension includes the factors required for development, manufacturing, distribution, maintenance, and service of the technology. This includes the sub-dimensions of technology developers, providers, and services (Malerba, 2005). The knowledge infrastructure sub-dimension integrates factors of know-how, skill and actors involved in the development and diffusion of knowledge. The aspects of knowledge and knowledge actors introduced in Paunov (2013) and Malerba (2005) are combined under this category.

In addition to the infrastructure directly contributing to technology, knowledge development, and diffusion, this dimension also relates to additional supporting infrastructure for smooth functioning. These include financial organizations, capital markets (Paunov, 2013), and other organizations, such as NGOs and law firms, grouped under supporting infrastructure.

As a result, the sub-dimensions for infrastructure of the BOP market are: (1) Basic Infrastructure, (2) Knowledge Infrastructure, (3) Technology Infrastructure, and (4) Supporting Infrastructure. The existing database that provides relevant data to analyze the infrastructure aspects of the BOP market is the Global Competitiveness Index.

### 2.2.3. IMS screening based on secondary sources

The limitation of screening the BOP market is the absence of specific databases. For this research, data from several publicly available global indices are combined to complete generic macro-economic country data with specific data related to the BOP market. The aim is to contribute to a more systematic but low-cost and easily accessible IMS screening

approach that provides a comprehensive overview of the minimum required information on the three dimensions contributing to the first phase of IMS of investors in BOP markets. The dimensions and their sub-dimensions are based on a diversity of data (see Table 2.1). The following databases have been selected for this purpose because they are publicly accessible online, frequently updated, and include sufficient reliable data series for multiple low-income markets:

- Global Competitive Index ([https://tcdata360.worldbank.org/indicators/gci?country=BR&indicator=632&viz=line\\_chart&years=2007,2017](https://tcdata360.worldbank.org/indicators/gci?country=BR&indicator=632&viz=line_chart&years=2007,2017))
- World Development Indicators (<https://datacatalog.worldbank.org/search/dataset/0037712>)
- Worldwide Governance Indicators (<http://info.worldbank.org/governance/wgi>)
- *The Next 4 Billion*, World Resources Institute (<https://www.wri.org/research/next-4-billion>)

The World Development Indicators, Global Competitive Index, and Worldwide Governance database have a temporal range from 1960 to 2021, but functional, analyzable date range from 2003 to 2018. For this study, 2015 data was extracted from the databases. Additionally, data was used from *The Next 4 billion* by the World Resources Institute (2007) to supplement data from the Global Competitive Index for BOP market specific sub-dimension. These data are the most accurate ones available. For the sector-specific sub-dimension, the percentage of agricultural land compared to the total land area in 2015 was used. Table 2.1 provides an overview of the dimensions, sub-dimensions and indicator sources that facilitate the IMS first phase screening of BOP markets.

## 2.3. Research approach

### 2.3.1. Case studies

This research analyses how Kenya and Nigeria were selected as markets for four inclusive innovations introduced by European MNEs and their partners in the period 2012–2018. The introductions are studied as market selection cases. The dimensions of market, institutions, and infrastructure are reviewed, and the role of existing data is assessed, by answering the following two sub questions: (1) How do international BOP market selection processes integrate issues concerning data scarcity, heterogeneity, and institutional voids across specific dimensions that reflect the characteristics of these markets? and, (2) To what extent are existing data relevant, sufficient and used in international selection processes of BOP markets?

Table 2.1. Dimensions, sub-dimensions, indicators sources for IMS of BOP markets

Dimension	Market	Institutions	Infrastructure
<b>Sub-dimension</b>	General Market Indicators	Governance	Basic
	BoP-Specific Market Indicators	Sector-Specific Market Indicators	Technology Support
<b>Sources</b>	Global Competitive Index	Global Competitive Index	Global Competitive Index
	World Development Indicators	Worldwide Governance Indicators	Global Competitive Index
	The Next 4 billion, World Resources Institute		Global Competitive Index

The first case in Kenya relates to the Dutch company Agrico, which introduced high-quality potato seeds to the BOP market of smallholder farmers and provided technical assistance and support to improve their productivity and access to local high-end markets in the processing and fast-food industry. The second case in Kenya relates to ECOM, a global commodity trading and processing company for coffee, cocoa, and cotton from Switzerland. It supported the Kenyan BOP market of smallholder coffee growers in diversifying their cash crop coffee cultivation to vegetable production and cows for milk production, and it stimulated the introduction of biogas digesters. This inclusive innovation aimed to improve the viable business case for the smallholder coffee growers by generating alternative income through the sales of horticultural products and dairy, alternative energy sources and carbon credits. The third case is in Nigeria and relates to the local subsidiary WAMCO of the Dutch dairy cooperative Friesland Campina. The company responded to new local regulations to substitute imported raw material for local fresh milk production by developing a local fresh milk supply chain connecting to the BOP market of nomad cattle tribes. As such, the inclusive innovation aimed to contribute to alternative income and local access to nutritious food for these Fulani communities. The fourth case is also in Nigeria and relates to a consortium of European cocoa trading and processing companies, where Ferrero and Continaf were in the lead for this specific initiative. Together with international and local NGOs and smallholder farmer communities, they initiated a national fertilizer distribution platform for smallholder cocoa farmers in the BOP market. The aim was to improve the purchasing power of the farmers so they could negotiate a better price for the inputs and at the same time improve the access to good quality inputs so they could improve the quality and volume of cocoa beans and generate a higher income. Table 2.2. summarizes the 4 case studies.

**Table 2.2. Description of case studies**

Country	Case study	Foreign MNE involved
Kenya	High-quality potato seed for improved productivity and local high-end market access for smallholder potato farmers	Agrico
Kenya	Diversify coffee smallholder income by the introduction of biogas digester and carbon credits	ECOM
Nigeria	Cold chain facility for the development of fresh milk supply chains to connect nomad cattle herders to high-end dairy processing factory	Friesland Campina/WAMCO
Nigeria	Introduction of fertilizer distribution platform to increase costs and improve productivity of smallholder cocoa farmers	Ferrero and Continaf

The case study approach consisted of document analysis and 55 semi-structured interviews with the companies' representatives, the innovation intermediaries supporting the initiatives, public entities, and research institutions in Kenya, Nigeria, and the Netherlands (see Appendix 1). The documents analyzed were project plans, meeting minutes, and baseline documents that provide information about the market selection process covering 2012–2018. This is the period in which these inclusive innovations were introduced. Besides that, progress reports were analyzed to collect insights on BOP market dynamics encountered during the implementation of the inclusive innovation that affected the performance. The interviews, lasting one to two hours, explored stakeholder experiences in developing inclusive innovations, the engagement of other stakeholders, and the collaboration dynamics. The first part of the interview focused on the information used for the market selection process and the stakeholders that facilitated the screening and market selection process. Data was systematically coded using Atlas.ti, with iterative analysis refining the research protocol through an abductive approach (Van Maanen, Sørensen, & Mitchell, 2007).

### **2.3.2. Market screening based on publicly available databases**

IMS is a complex topic due to the intrinsic features of the process, the data and information required, and the knowledge needed to evaluate this information for IMS decisions. The aim is to provide an efficient and effective means of analyzing information at an early stage of selecting low-income markets. Several methodological and conceptual issues hinder the collection of data and the conduct of research. Detailed marketing research is not economically feasible at the early screening stage, so IMS screening at an early stage of market selection can be done using secondary data from publicly available sources to narrow down target markets for further research (Andersen & Buvik, 2002; Andersen & Andersen, 2017; Andersen & Strandskov, 1997).

The global datasets indicated in Table 2.1. were assessed for Kenya and Nigeria to enhance the analysis. For the research, data were used for 2007–2018, covering the period related to the case studies. An important factor to consider in the IMS of BOP markets is the long-term market potential of the markets under consideration, which has been defined based on the country responsiveness introduced by Ozturk et al. (2015). For this research, the country's expenditure was projected against the country's GNP. A linear regression model is used based on the country's expenditure as the dependent variable and the country's GNP as the independent variable. The coefficients for income represent the income elasticity that reflects the unit change in the country's expenditure by one unit change in GNP. The coefficient is referred to as income elasticity or country responsiveness. The countries with higher income elasticity are considered better markets with long-term potential (Ozturk et al., 2015). The secondary data of the indicated period 2007–2018 were used to analyze the income elasticity of the BOP market.

BOP-specific market data are very scarce. The only more detailed reference source is the one developed by the World Resources Institute in 2007 and published in their report *The Next 4 Billion* (Hammond et al., 2008). For this research, data from that report were completed with data for the period 2008–2018 from the World Bank’s World Development Indicators.

## **2.4. Findings—Kenya**

### **2.4.1. Case studies**

#### ***2.4.1.1. Market dimension***

Respondents acquired their knowledge of market characteristics through direct interactions with farmers, data analyses, and long-standing involvement in Kenyan coffee value chains. For instance, the manager of Sustainable Management Services (SMS) explained that they conduct detailed studies of farmer income data from recent years, allowing them to gauge which farmers are financially positioned to invest in biogas or other sustainable technologies. By assessing the historical earnings of farmers, they were able to design initiatives that aligned with the financial capabilities of the farmers with whom they would collaborate. They also combined market data with experiential knowledge to better understand how farmers manage their resources and to design holistic programs that enhance coffee production, food security, and environmental sustainability. SMS and UTZ Certified conducted baseline analysis at community level to assess income, expenses, daily activities and future aspirations (UTZ certified, April 15, 2016). Their offer responded to the smallholders’ need to access more knowledge and skills by providing training and support, including credit support. Besides that, they also identified food security as an important issue to consider. They observed the irregular income of farmers due to coffee cultivation. Farmers need cash daily and coffee cultivation is only taking up one-third of the farm, so the other part of the farm could be used for other crops or activities. The inclusive innovation introduced was designed to contribute to improved food security by stimulating crop diversification activities, cost reduction by introducing biogas digesters, and improved cultivation practices through agro-forestry activities and the use of compost.

In the seed potato case, the Dutch Embassy for Kenya played a significant role in the early stage of IMS by sharing market information and fostering relationships that helped the Dutch seed potato sector to enter and succeed in the Kenyan market. The Embassy conducted market studies that provided insights into Kenya’s agricultural practices, regulatory landscape, and market conditions, which were essential for Agrico’s strategic planning (Agrico Netherlands, Dec 12, 2015). The Embassy also facilitated connections

between Agrico and local stakeholders, supporting the establishment of Agrico East Africa, which aimed to increase local potato seed production and reduce dependency on costly imports. Agrico first engaged with bigger potato farms to introduce their seed potato and obtain local sales permits. They developed a strategy for the local production of seed potatoes. The local market of seed potatoes consisted mainly of smallholder potato farmers. Stakeholders emphasized that smallholder farmers typically struggle with low productivity and market prices that often do not cover the costs of input. The Agrico representative noted that smallholders commonly achieved yields of only 8–9 tons per hectare, far below the potential of 45–50 tons with better practices and inputs (Agrico Kenya, March 22, 2016). Respondents collected market information on various fronts to better understand and support these small-scale farmers, focusing on demand trends, input costs, infrastructure, and potential barriers. Collaboration with locally active international Non Governmental Organisations (NGOs) was instrumental in collecting information about these communities and introducing them to community leaders.

Respondents also monitored future demand trends for potato consumption. Agrico's commercial staff monitored developments in urban centers where they observed a growing interest in quality agricultural produce based on research conducted with the support of the Dutch Embassy (Agrico Netherlands, Dec 12, 2015). The representative from Agrico also identified a rising demand for high-quality potatoes, especially as more urban households adopted potatoes as a staple. "Urban centers are expanding and, with that, the demand for quality produce, including potatoes, is increasing. If farmers can improve their production practices, they can tap into these markets", explained the Dutch Manager of Agrico for Kenya (Agrico Kenya, March 22, 2016). These local potato consumer market trends represented a market opportunity for smallholder potato farmers to increase productivity and meet quality standards. However, the international potato experts also acknowledged that this opportunity would remain limited without affordable access to inputs and reliable market linkages.

Regarding trends in the local and international coffee sector, the ECOM manager highlighted the growing demand for sustainably sourced coffee by foreign expert markets as an opportunity for Kenyan farmers, which is information they manage daily because coffee trading is their core business (ECOM, March 24, 2016). Programs like 4S@scale sought to equip farmers with the knowledge and practices necessary to meet international certification standards, tapping into high-value export markets. However, ECOM and UTZ certified managers also pointed out that seasonal fluctuations and cash flow gaps posed a challenge to fully capitalize on this demand, which is being exacerbated by the increasingly unpredictable weather caused by climate change (Smart Champion Sacco, April 2, 2016, and UTZ Certified, April 15, 2016).

The data collection of the Kenyan smallholder farmers' BOP market differed for the two cases. For the coffee sector, stakeholders and the managers of ECOM gained insights through direct interactions with farmers, data analyses, and long-term engagement in the coffee value chain that was facilitated by two internationally active service providers, SMS and UTZ Certified. The key stakeholders involved in this inclusive innovation for smallholder coffee farmers had worked together with groups of Kenyan smallholder coffee growers since 2006. They had already organized 100,000 farmers and provided them with training and technical assistance (SMS, March 21, 2016). The manager of SMS explained how their detailed analyses of farmer income data allowed them to tailor initiatives that met farmers' financial capabilities (SMS, March 21, 2016). The representative of UTZ Kenya explained that these data taught them that the seasonal characteristics of coffee cultivation only covered a third of the farmer's yearly income needs, driving the need for complementary activities, as coffee alone is inadequate for sustaining households over the long term (SMS, March 21, 2016). The manager from ECOM underscored that by diversifying into other agricultural activities such as horticulture and dairy, for instance, farmers could gain a more stable monthly income, alleviating cash flow gaps between coffee harvests and contributing to financial resilience. The respondents combined market data with experiential knowledge to better understand resource management, aligning interventions to boost coffee production and addressing broader issues of food security and environmental sustainability. The informal nature of many transactions complicated efforts to gather consistent market information. As the SMS manager stated, "Without reliable data on prices and demand, it's hard to advise farmers on when to sell or what to plant. We need more structured data collection to guide our strategies" (SMS, March 21, 2016). This gap in reliable market information underscores the vulnerability of smallholder farmers, who often make decisions based on anecdotal evidence rather than comprehensive data.

The representatives of Agrico, on the other hand, had a very limited understanding of the Kenyan market context and had not acquired any information on the BOP smallholder potato farmer market when they started their first business activities in the country. The early contact with a locally based Dutch potato expert with experience in the Kenyan potato sector laid a foundation for general market knowledge, but it was related to bigger-scale commercial potato cultivation. Agrico manager: "I happened to know someone in Kenya through a good friend... When the market started to open, I approached him and asked if he would consider taking on an agency for Agrico" (Agrico The Netherlands, Dec 12, 2015). Initially, Agrico managers based in the Netherlands relied on his insights to interpret the potato market's potential in Kenya, eventually leading to him taking on a representative role for Agrico in the region. Through this network, Agrico learned that potato farming in Kenya operated under conditions quite distinct from European standards, characterized by small-scale farmers with minimal access to high-quality inputs,

inconsistent production practices, and a lack of market structure that could support scaling up. Through a sector assessment study endorsed by the Dutch Embassy and the engagement with experts from local governmental organizations, Agrico management and the local representative collected information that showed that smallholder potato farmers typically struggle with low productivity and market prices that often do not cover the costs of inputs. Agrico's representative noted through sector analysis conducted by local research institutes and field visits that smallholders commonly achieved yields of only 8–9 tons per hectare, far below the potential of 45–50 tons with better practices and inputs (Agrico The Netherlands, Dec 12, 2015). After they had already started their first business development activities, they engaged with the international research center IFDC, an innovation intermediary. IFDC facilitated expert meetings and field visits to some potato communities, which helped Agrico to learn that this significant yield gap was mainly due to a lack of access to quality seeds and agricultural inputs, compounded by financial constraints that prevented farmers from investing in improved technologies and practices (IFDC, Dec 15, 2015). Furthermore, they identified that market prices for potatoes were volatile and often influenced by seasonal fluctuations and supply chain inefficiencies. The CEO of the Kenyan company Smart Champion Sacco pointed out that during peak harvest periods, prices dropped dramatically: “When the market is flooded with potatoes, prices fall significantly, and many farmers end up selling at a loss,” he explained (Smart Champion Sacco, April 2, 2016).

Respondents from both cases indicated that the informal nature of many transactions complicated the ability to gather consistent market information. In the potato sector, many farmers sell their produce through local markets or to middlemen without official records, leading to significant gaps in understanding pricing trends and consumer demand. This lack of formal documentation made it challenging for stakeholders to develop accurate market assessments. Respondents also indicated that trust issues between farmers and various stakeholders complicated the flow of market information. Farmers may be hesitant to share their experiences or challenges with agronomists or cooperatives for fear of repercussions or misunderstandings. This mistrust can lead to incomplete or inaccurate data being shared, which hampers effective analysis. The manager of SMS pointed out, “Building trust takes time. If farmers don't feel secure in sharing information, it affects our ability to gather accurate insights” (SMS, March 21, 2016).

#### **2.4.1.2. Institutions**

The respondents in both cases indicated significant engagement with local authorities and cooperative structures that shaped market access and agricultural productivity. This provided them with information and insights into the governance and formal institutions in Kenya during the early stage of market selection, particularly concerning the smallholder potato and coffee markets. The cooperative system for coffee farmers in Kenya

was essential for organizing smallholder farmers and facilitating market access. However, the respondents also knew from their own experiences that many cooperatives faced inefficiencies and corruption, hindering profitability. An interview with the 4S@SCALE program manager (Hivos, March 16, 2016) illustrated this: "Many cooperatives suffer from inefficiencies, corruption, and poor governance, limiting the profitability and success of smallholder farmers." In response, initiatives like the 4S@Scale program aimed to improve governance through training and transparent pricing mechanisms, emphasizing the importance of institutional support in strengthening cooperative structures. The manager of SMS shared experiences where local policy shifts necessitated midstream adjustments to the collaboration with the coffee cooperatives, stating, "During our program in Nyeri County, changing government policies forced us to restructure the program and select new farmers midstream." (SMS, March 21, 2016). This disruption required additional training and resources, revealing the delicate balance between policy changes and program stability. The manager of SMS articulated this concern: "One of our greatest barriers...is whether a particular cooperative that is working with us will be with us tomorrow because these marketing contracts are one year." The instability complicated the continuity necessary for effective farmer engagement and investments in hardware such as biogas digesters and the development of a credit fund. The one-year contracts and high competition among marketing agents made establishing continuity in farmer engagement and program implementation challenging. Consequently, the short-term nature of contracts limited the ability to ensure sustained progress over the program's multi-year timeline (SMS, March 21, 2016).

The emphasis on public-private partnerships by the Kenyan government, particularly for initiatives like the potato seed initiative, demonstrates the government's commitment to enhancing agricultural productivity. A respondent from the Dutch Embassy noted, "The Kenyan government had been encouraging public-private partnerships to increase agricultural productivity, and partnerships with agricultural research institutes and seed companies have proven vital" (Dutch Embassy for Kenya, March 25, 2016). This collaborative approach is essential for facilitating market access for smallholder farmers and fostering a favorable policy environment.

For the potato case, Agrico management benefitted from the approach taken by the appointed agricultural council of the Dutch Embassy for Kenya when they started to explore opportunities for investing in Kenya. The council adopted a direct and assertive strategy to engage with Kenyan officials. The Dutch manager of Agrico noted: "The agricultural council pointedly highlighted the bureaucratic and cumbersome hurdles impeding the import of Dutch potato varieties and emphasized that reforms were essential for sustained support and development aid from the Netherlands." (Agrico The Netherlands, December 12, 2015). The Dutch Embassy's findings on Kenya's local potato market and its

institutions highlighted a blend of opportunities and challenges. Embassy representatives observed that while Kenya's government actively supported public-private partnerships to boost agricultural productivity, particularly in the potato sector, institutional barriers persisted. The local government's policies to protect domestic potato varieties created resistance to importing Dutch seed potatoes, driven partly by concerns over potential crop diseases and local market protectionism. Furthermore, while collaboration with local agricultural research institutes and cooperatives was essential for introducing new varieties, these relationships were complex, with some local stakeholders apprehensive about foreign varieties disrupting traditional farming systems. Despite these challenges, the Embassy representative recognized that Kenya's focus on food security and innovation offered a promising environment for initiatives to increase productivity and improve the quality of potato crops. Therefore, they also stimulated Agrico to access the Kenyan market and invest in local seed potato production.

Respondents of both cases further underscored the importance of local governments as key partners in agricultural development, emphasizing that their involvement is crucial for aligning programs with community needs and ensuring the active participation of farmers. Integrating local governance into agricultural strategies fosters a sense of ownership among farmers and enhances the likelihood of successful outcomes.

#### **2.4.1.3. Infrastructure**

In both sectors, geographical disparities significantly impact access to market information. Smallholder farmers in remote areas often lack the means to access timely information on market prices and trends. In the coffee sector, stakeholders noted that farmers in isolated regions are often unaware of broader market conditions or pricing fluctuations in urban centers. The country manager of UTZ Certified remarked, "Farmers who are far from the market centers often rely on hearsay for information, which can be misleading" (UTZ, April 15, 2016).

Technological barriers hinder the effective gathering of market information. Many smallholder farmers lack access to mobile phones or internet services, which limits their ability to obtain real-time information. Although some organizations are working to develop mobile apps and platforms for information dissemination, adoption rates among low-income farmers remain low. The manager from SMS emphasized the need for technology that is user-friendly and accessible: "Even when information systems are available, if farmers can't use them, they won't benefit" (SMS, March 21, 2016).

On the other hand, the increased penetration of mobile technology in Kenya is an opportunity for digital tools to support coffee farmers. The 4s@SCALE program manager identified these opportunities at an early stage of the development of the inclusive in-

novation and explored ways to leverage mobile platforms for farmer training, market price information, and payment systems, allowing smallholders to be better informed and connected to markets (Hivos Kenya, March 25, 2016).

Limited financial resources among farmers also contribute to difficulties in acquiring market information. The respondents learned during the field visits and the interaction with the potato and coffee cooperatives that many farmers cannot afford to invest in technologies or services that could provide them with better market insights. In the potato sector, stakeholders indicated that many smallholders are focused on immediate survival and do not prioritize investments in market intelligence. “With tight margins, farmers often choose to invest in immediate needs rather than in systems that could help them understand the market better” (Agrico Kenya, March 22, 2016).

Several respondents highlighted that limited land access and low input use are significant barriers to increased productivity for small-scale potato farmers, constraining their ability to sustainably produce enough to meet market demand. For instance, the CEO of Smart Champion Sacco noted that while farmers are keen to improve yields, high-quality inputs, like certified seeds, are often financially out of reach (Smart Champion Sacco, April 2, 2016).

Farmers’ limited access to agricultural training and extension services was another insight shared by respondents. The coffee and potato experts with international experience indicated that many Kenyan smallholder farmers lack technical training in sustainable practices, making it challenging to improve productivity and quality in ways that meet international standards. Agrico representatives in Kenya also reported that many potato farmers did not fully understand the benefits of certified seeds, which influenced the type of support they provided (Agrico Kenya, March 22, 2016).

One of the main pieces of information that was collected by the respondents regarding infrastructure was the cost of inputs, especially certified seeds and fertilizers, which affect both potato and coffee farmers. For instance, the CEO from Smart Champion Sacco explained that the high cost of imported potato seeds—due in part to shipping fees—was prohibitive for many farmers, limiting their ability to improve yields. As an alternative, Smart Champion Sacco gathered data on locally adapted seed production, seeing this as a solution to reduce costs and improve adoption rates (Smart Champion Sacco, April 2, 2016). In coffee, SMS collected data on the economic feasibility of biogas production for farmers, using it as an affordable source of energy while also providing by-products that could enhance soil quality. The high initial investment in biogas was noted as a barrier, but understanding farmers’ financial positions helped design financing models that would support sustainable investment over time. However, the introduction of the

biogas digester did not reach the commercial viability stage due to the challenges of developing funding structures between local impact investors, trading companies, and coffee cooperatives (SMS, March 21, 2016).

Understanding the logistical hurdles of reaching rural markets was another focus area. Respondents identified infrastructure limitations, particularly in transporting goods to and from remote areas, as a major bottleneck. For instance, the manager of SMS explained that while coffee prices might have been promising, the cost and complexity of transportation tend to eat into potential profit margins (SMS, March 21, 2016). This understanding has led stakeholders to consider local processing options or smaller aggregation points as alternatives to reduce logistical burdens on farmers.

One of the challenges facing smallholder coffee farmers in Kenya is the lack of adequate market infrastructure, including storage, processing facilities, and transport networks. This results in post-harvest losses and diminished quality of coffee beans, especially in rural areas. 4S@Scale addressed this by facilitating better access to coffee washing stations and storage facilities, improving bean quality and marketability. Farmers also often struggle with accessing affordable and high-quality inputs like fertilizers and pesticides. The initiative aimed to improve supply chains for these critical inputs by partnering with local distributors and cooperatives.

In the case of potatoes, a significant challenge was the limited infrastructure for distributing certified seeds to remote areas (Agrico Kenya, March 22, 2016). The potato seed initiative identified this challenge during the early market entry stage and focused on creating robust supply chains that ensure farmers can access high-quality seeds. This involved working with local seed multipliers and building stronger linkages between research institutions and farmers. Post-harvest losses due to inadequate storage and transportation infrastructure were a significant concern in Kenya's potato value chain. Improved storage facilities and more efficient transportation systems were necessary to reduce losses and ensure farmers could bring their crops to market at competitive prices. While cold chains are crucial for fresh produce, their absence in many rural areas has limited smallholder potato farmers' ability to extend their products' shelf life. Agrico and IFDC identified these challenges during the inception phase and through interviews with representatives of the different supply chain actors. Based on these findings, they developed strategies to improve cold chain access through partnerships with the private sector and government bodies (IFDC, March 21, 2016).

## **2.4.2. Market screening based on publicly available databases**

### **2.4.2.1. Market**

In the period 2007–2018, the Kenyan population grew from 40 million to 45 million inhabitants. The population living below \$2.15/day was 29.4% in 2015 (WDI, 2024). While this sizable market segment presents a substantial opportunity for businesses targeting low-income consumers, income distribution and purchasing power remain constrained. Though higher than many regional counterparts, the GDP per capita of \$1,845 in 2015 still indicated considerable poverty levels, with over 33% of the population living on less than \$3.65 per day and a GINI index of 40.8 (WDI, 2024). The BOP is a significant consumer segment in Kenya, accounting for one if every five dollars spent in the country in 2016 (WDI, 2024). The BOP market was responsible for 24.3% of the country's spending on food and non-alcoholic beverages in the same year (Hammond et al., 2008). The future development prospects of the BOP market in Kenya looked positive during the research period. In 2016, 40.2% of all Kenyan households had an annual disposable income below \$2,500; this proportion was set to fall to 15.5% in 2030 (inclusivebusiness.net, November 8, 2017). This may lead to improved potential purchasing power in this market segment.

The BOP segment's reliance on affordable goods and services opens avenues for innovation in products that cater to basic needs like food, healthcare, and financial services. Mobile money services such as M-Pesa have already proven the potential for scalable solutions in the BOP market, highlighting that despite income constraints, the Kenyan population is receptive to accessible and affordable innovations (Global Competitive Index, 2024). The economy's vulnerability to external shocks, particularly in agriculture due to its heavy reliance on rain-fed farming, is an important unpredictability of this market (WDI, 2024).

The countries' future market potential was analyzed using a linear regression model with the country's expenditure as the dependent variable and the country's GDP as the independent variable. The analysis was done for the period 2008–2018. This analysis shows that Kenya has an income elasticity of 91% and a high r-squared of 0.99. This demonstrates a high long-term market potential.

### **2.4.2.2. Institutions**

Kenya's institutional framework is relatively strong compared to neighboring countries, although it still faces notable challenges. Political stability in the country is better than in many other African nations, scoring -0.9 on the political stability index (Worldwide Governance Indicators, 2024). While this indicates relative stability, periodic electoral violence and ethnic tensions are important risks for businesses and investors. Corruption is an ongoing significant issue in Kenya, with a low score of -0.98 on control of corruption,

reflecting governance inefficiencies that can deter investment and increase operational costs. Businesses face risks of bureaucratic delays and additional informal costs, which could complicate entry and scaling efforts. Government effectiveness (0.01) and regulatory quality (0.03) are areas of improvement compared to regional averages, suggesting that Kenya has a somewhat functional institutional environment that can support business development. Kenya has a fairly robust private sector, supported by institutions like the Kenya Investment Authority and the Kenya Private Sector Alliance (KEPSA), which work to facilitate investment and foster public-private partnerships. The protection of minority shareholders' interests (3.89) and the strength of auditing standards (3.98) further demonstrate a relatively transparent business environment, which provides some assurance to investors. Nevertheless, Kenya's macroeconomic environment presents challenges, particularly with inflation (9.4%) and a negative government budget balance (-6.4% of GDP) (Global Competitiveness Index, 2024). High inflation erodes consumer purchasing power and increases the cost of doing business, while the budget deficit may limit government spending on key sectors like infrastructure, education, and healthcare.

#### **2.4.2.3. Infrastructure**

The Global Competitiveness Index (2024) shows that Kenya's infrastructure is a mix of strengths and weaknesses. The country has made significant strides in information and communication technology (ICT) infrastructure, as evidenced by its high mobile penetration and growing internet user base (32.1%). Kenya is a leader in mobile money services, revolutionizing financial inclusion and creating opportunities for businesses in e-commerce, banking, and insurance. The country's openness to innovation is captured by its high score in firm-level technology absorption (4.99) and the availability of financial services (4.6). These aspects of infrastructure can provide a solid foundation for businesses, particularly those seeking to leverage technology to serve the BOP market segment. However, the data also shows that the quality of more traditional forms of infrastructure, such as transport and energy, remain a challenge. The electricity supply quality (2.46) is still weak, with frequent power outages that disrupt business operations. While higher than some regional peers, the overall infrastructure quality score of 4.08 still reflects gaps in road, port, and energy infrastructure that impact business growth, especially for sectors reliant on logistics and manufacturing. Kenya's efforts to expand its infrastructure, such as the Standard Gauge Railway (SGR) and investments in renewable energy, are positive steps but still need to be scaled up to meet the growing demand. Health and education infrastructure also present challenges. Life expectancy is 56.7 years, infant mortality is high (49.3 deaths per 1,000 live births), and diseases such as malaria remain prevalent and affect workforce productivity. While making progress, the education system still requires significant improvements in quality and access, particularly for low-income groups. The quality of primary education is rated at 3.67, and secondary

school enrollment is 50.3%, indicating a gap in developing a skilled workforce that could support long-term economic growth.

## 2.5. Findings—Nigeria

### 2.5.1. Case studies

#### 2.5.1.1. Market

Respondents of both cases provided insights into their understanding of the agricultural sector in Nigeria. Stakeholders related to the dairy case were already very acquainted and well positioned in the Nigerian market, as they had already established their dairy processing and dairy marketing to the local market decades prior to the new business activities analyzed in this case study. On the contrary, the respondents related to the cocoa case study stemmed their knowledge of the Nigerian market from experience with specific projects or from partnerships with local organizations and government bodies in neighboring Ghana and Cote d'Ivoire. Their overall knowledge of the Nigerian market and agricultural sector was limited.

By contrast, the Dutch dairy cooperative Friesland Campina has had its own dairy production plant in Nigeria since 1974: Friesland Campina West Africa Milk Company (WAMCO). Peak is the best-known brand dairy product of WAMCO in the Nigerian market. WAMCO's business is well embedded in the Nigerian formal market. WAMCO staff gather a range of information to assess Nigeria's dairy consumption market periodically, focusing primarily on consumer preferences, purchasing patterns, and the economic status of different consumer groups (WAMCO, May 12, 2015). This information is mainly qualitative and derived from community engagement, market visits, and urban and rural consumption trends analysis. Over time, WAMCO management observed the growing demand for affordable, processed dairy products in urban areas, which contrasted with a continued preference for traditional, unprocessed dairy products in rural regions. WAMCO's DDP Manager observed the connection between consumer preference and product type, explaining, "In urban areas, people are shifting towards processed milk because it's convenient, while in the villages, fresh or local milk is still valued for cultural reasons." Through local retail and market surveys, respondents related to WAMCO noted a preference for imported milk powder over fresh milk due to its affordability and longer shelf life, particularly among lower-income groups. About twenty years ago, the Dairy Development Program (DDP) began dairy farming in the region of Jos, which had favorable conditions for dairy cows. However, due to insufficient infrastructure, limited market demand for dairy products like cheese and fresh milk, and challenges in transporting milk to Lagos, the venture was ultimately unsustainable and was sold (WAMCO, May 12, 2015).

From 2008, the Nigerian Federal Government started developing initiatives to stimulate the local sourcing of raw materials. 'The Federal Government wanted dairy development because they assumed that there are a lot of cows and a lot of milk in Nigeria and it is not accessed' (WAMCO, May 15, 2015). In 2011, Friesland Campina, WAMCO management and the Federal Government of Nigeria signed an MOU to start a dairy development program (Friesland Campina, May 19, 2015) to explore opportunities to engage in BOP market segments from a sourcing perspective, specifically with Fulani smallholder livestock farmers.

For both cases, the respondents aimed to functionally upgrade the local supply chains and connect them to new higher-value markets. In the case of cocoa, the aim was to improve the local cultivation practices to increase the quality and volume of cocoa and generate better opportunities to sell to higher-value export markets in the EU and the USA through the cocoa trading companies involved. The respondents obtained local market information through regional cocoa experts working at international NGOs, and the local government got involved at the start of the collaboration. The data they obtained taught them that the Nigerian cocoa market is primarily characterized by smallholder farmers operating on aged farms with outdated practices (IDH, October 7, 2015). Many farmers faced significant obstacles due to old cocoa tree stock and a lack of investment in farm rehabilitation. Continaf's representative said that the limited adoption of new farming techniques was a significant barrier to achieving target yield increases. The initiative also included farmer training programs; however, despite training on farm rehabilitation and tree pruning, the respondents explained that adoption rates varied widely (Continaf, 28 November 2015). This ranged from "early adopters" who embraced new techniques to "no adopters" who preferred traditional methods.

The international cocoa market plays a significant role in shaping the realities faced by Nigerian smallholder cocoa farmers, as the global market largely determines cocoa prices. The volatility of international cocoa prices directly affects the local market, with farmers bearing the brunt of price fluctuations. The local project manager from Continaf highlighted this dependency: "Cocoa is a very interesting commodity, but it is unfortunate that the producers don't determine the price. It is whatever price the traders tell them. Today cocoa is so-so amount in the world market, and that is the amount we are going to sell" (IDH, October 7, 2015). The lack of value addition within Nigeria further limits the ability of smallholder farmers and cocoa traders to command better prices. Several respondents noted that while value-added products such as chocolate or cocoa powder could help boost the local economy and offer price-setting advantages, there are few processing facilities within Nigeria, and most of the cocoa beans are exported in raw form. They also shared that farmers' dependency on middlemen, known as local buying agents, created another barrier. Baseline analysis conducted by IDH showed that farmers often received advance payments or loans from these agents, binding them to sell their

cocoa yields at suboptimal prices, effectively keeping them in debt cycles. This, combined with ageing tree stock and outdated farm practices, had contributed to low productivity and compromised income stability for smallholders.

In the case of dairy, WAMCO started to explore opportunities for local fresh milk sourcing in 2010. The local governor of Kwara state insisted on collaborating. In this state, farmers from Zimbabwe and South Africa started Shong Farms. WAMCO began collaborating with them in 2010 (WAMCO, May 12, 2015). Quality improvements at the farm met milk collection standards, allowing for the first successful milk intake in August 2010. This achievement laid the groundwork for further industry development, supported by state and federal government partnerships.

To scale the DDP, WAMCO had to engage with new farmer groups, which required the analysis of new local market opportunities with smallholder cattle farmers. The managers of FC and WAMCO conducted sector analysis studies with external experts and added to this the knowledge of their own staff. Based on this information, they learned that the Fulani dairy production is critically important to the Nigerian market, as Fulani herders are the largest producers of locally sourced milk in the country, supplying an estimated 70–90% of Nigeria's fresh milk (WAMCO, May 15, 2015). Respondents from the different stakeholder groups obtained market information about the Fulani communities through direct field engagement, interviews, and collaborations with local leaders and organizations. The international dairy experts of Friesland Campina learned from local experts that milk production by Fulani women is essential in rural areas where milk is both a dietary staple and a primary source of livelihood for many Fulani communities. However, despite its significance, they also learned through expert meetings in Lagos and field visits to the Fulani communities that the Fulani contribution is limited in meeting Nigeria's overall dairy demand, as milk production per cow is relatively low and challenges with market access, transportation, and storage frequently hinder scaling (IFDC, April 14, 2015). The international dairy expert from Friesland Campina pointed out Fulani's big cultural difference in dairy handling compared to other dairy producing countries he had been active in, such as the Netherlands and Vietnam. The field visits, combined with the expert data provided by local research centers and local government, taught them that the Fulani operate within a family-based system where men manage cattle and women handle milk processing, including cheese-making for own consumption and local sales at the community level. They maintain separate cooperatives for men and women, and the income is divided, with men keeping revenue from meat and women from dairy, reflecting a structured division of labor and economic roles within their community.

Face-to-face interactions with Fulani communities provided first-hand insights into production practices, market readiness, and local challenges. Most information was

qualitative, gathered from discussions with community leaders, Fulani women involved in dairy sales, and field officers who frequently interacted with these communities. These interactions enabled them to gain firsthand insight into the pastoralists' traditional cattle-raising and milk-production methods. One of the WAMCO managers speaks Fulani and has helped communicate with the Fulani communities and build trust. The program manager of IFDC had previous experience with another dairy development program supported by USAID (IFDC, May 15, 2015). This on-the-ground approach enabled WAMCO and IFDC staff to observe the characteristics of Fulani dairy practices, such as their nomadic or semi-nomadic lifestyle, which affects milk collection logistics, and the low-yield, resilient breed of cattle they typically raise. Staff also benefited from partnerships with local government agencies and development programs, which provided additional contextual knowledge and facilitated WAMCO's outreach to Fulani herders. In addition, respondents attended local dairy stakeholder meetings and collaborated with consultancy groups working on dairy value chain studies in Nigeria. The local program manager from IFDC said, "We met with various consultants in Abuja to discuss the dairy value chain... we exchanged insights on what has worked in similar contexts and what challenges lie ahead" (IFDC, March 11, 2015).

Respondents described Fulani dairy production as a highly traditional and informal system, where pastoralist communities primarily produce milk using extensive grazing methods. Fulani dairy practices are rooted in cultural norms and subsistence needs, with women often managing milking and sales while men oversee herd movement and maintenance. Production volumes are limited by small herd sizes, low productivity, and seasonal migration patterns, which disrupt a continuous milk supply. Technical staff from the International Centre for Research in Agriculture (iCRA) noted, "Fulani dairy production is fundamentally geared toward subsistence. Milk is viewed as an additional benefit, not the main focus compared to livestock for meat" (iCRA, May 19, 2015). These insights informed WAMCO's subsequent strategies for building milk collection centers closer to Fulani communities, ensuring sustainable partnerships and improving milk quality and supply consistency.

The Dairy Development Program (DDP) introduced by Friesland Campina and WAMCO aimed to build local collection networks to integrate Fulani farmers into formal dairy value chains. However, some respondents encountered resistance from the Fulani communities during the community engagement activities, who perceived these initiatives as disruptive to their traditional lifestyles. The 2SCALE program manager from IFDC remarked, "While Friesland Campina looks to boost milk yields, some Fulani view formal market integration with caution as it requires adjustments to their way of life" (IFDC, March 11, 2015).

Local leaders, including religious and community heads, were crucial in facilitating access to the Fulani communities, as they acted as gatekeepers and influencers. However, these leaders sometimes presented contradictory perspectives, particularly in cases where rivalry existed between religious and community leaders, complicating the information-gathering process. The local project manager from IFDC noted, “In some clusters, religious and community leaders don’t see eye to eye... If one leader advocates for change, the other may resist, affecting our ability to get consistent data” (IFDC, March 11, 2015). Furthermore, cultural sensitivities and language barriers posed additional obstacles. Many Fulani community members were hesitant to provide detailed information due to a distrust of external actors and a perceived lack of benefit from participating in formal data collection efforts. Some respondents reported that attempts to introduce standardized milk collection processes and hygiene practices were met with skepticism, as Fulani producers saw these standards as costly and unnecessary. For example, Friesland Campina’s attempt to promote stainless steel milk containers was met with resistance due to the higher cost and maintenance involved. “We assume stainless steel will improve milk quality,” explained the representative of ICRA, “but the Fulani prefer their traditional wooden containers, which are cheaper and more familiar” (ICRA, May 19, 2015).

The findings revealed notable contradictions among respondents regarding market information, particularly in terms of formal vs. informal market perspectives. Commercial dairy stakeholders perceived increased Fulani integration into formal value chains as critical for Nigeria’s dairy market development. Meanwhile, some Fulani producers viewed these formalization efforts as intrusive, threatening their traditional subsistence practices and mobility. These conflicting perspectives were particularly evident regarding introducing crossbreeding programs to improve milk productivity. Friesland Campina and other commercial actors saw crossbreeds to increase production, while Fulani herders expressed concerns that crossbreeds would be less suited to extensive grazing and seasonal migration (IFDC, April 14, 2015).

Additionally, while commercial actors emphasized standardized quality improvements, Fulani farmers questioned the need for these changes, especially when they involved significant expense. WAMCO representatives noted the economic potential of higher-quality milk, yet many Fulani producers were skeptical about the actual financial benefits of formal quality standards. The WAMCO DDP manager remarked, “The Fulani don’t see time as a cost... for them, resources like wood for traditional storage are seen as for free, so introducing paid alternatives feels unnecessary” (WAMCO, May 13, 2015)

### **2.5.1.2. Institutions**

All respondents confirmed that the institutional and governance dimensions of the Nigerian agricultural market played a fundamental role in shaping market dynamics and

that they affected the implementation of the activities planned, farmer engagement, and funding continuity. Insights from respondents reveal a complex picture of governance, marked by reliance on influential individuals, inconsistent government participation, and structural challenges within the financial sector.

One of the central themes identified was the critical role played by specific individuals within governmental and institutional frameworks. Respondents related to both cases pointed out that the success or failure of projects in Nigeria often hinged on the influence of specific individuals rather than a stable and consistent institutional process. The senior manager from WAMCO explained the challenges of decision-making in Nigeria compared to other countries where decisions are more procedurally structured: "Here it is... If you don't have the right person that can pull the strings and take decisions... If you can't demonstrate that it really has to happen now, it just doesn't happen. In other countries, these things go via departments, and in the end, there is someone who takes the decision, but before that, it has been discussed so many times within the different departments, so that person has no choice but to follow the advice of the departments. Here it really depends on the person, and if he says 'no,' then it just doesn't happen" (WAMCO, May 12, 2015). This dependency on key decision-makers rather than institutional processes leads to unpredictability, creating risks for long-term project planning and implementation.

Respondents from both cases noted changes in government engagement over time, influenced by economic factors. The DDP manager from WAMCO describes the shift in government commitment, with an increased emphasis on local sourcing due to economic pressures from declining oil revenues: "In recent times, we have seen that it is very important. Why? Because now the government is more severe about it... They are more intense about ensuring it succeeds. They want to drive it more. Why? Because there is no money. The crude oil that is the basis for all our plants has come down in price. That means not much foreign exchange. They are discouraging import" (WAMCO, May 19, 2015).

Also, respondents reported mixed experiences with government support, describing it as crucial for aligning projects with national policy but often unreliable in terms of operational backing. The local program manager from IFDC shared his perspective on the Ministry of Agriculture's role, noting the importance of having government representatives at the table during project discussions, even though he did not expect much operational support: "It is important to have them around the table when we make decisions because of the ministry's policy for local sourcing. So it is important that these people sit at the table when we talk about volumes, constraints, etc. In this way, they are part of the project and cannot blame later on for not respecting the policy. But we know we cannot expect anything from them operationally" (IFDC, March 11, 2015). These insights reflect a

governance environment that is reactive to economic conditions, with government support for local sourcing fluctuating based on broader financial considerations.

The impact of institutional shifts and changes in government leadership on project continuity emerged as a common theme. The IFDC program manager highlighted how changes in government often disrupted project funding and affected the consistency of governmental contributions: “What happened was that when there was a change in government, everything also changed... So, that one is affecting our continuity in some of the programs where we pay our counterpart contribution” (IFDC, March 11, 2015). This lack of continuity undermined the reliability of governmental funding, leading to project delays and adjustments. For projects requiring significant institutional backing, such as the cases described, this instability posed a risk to sustainable implementation. The representative from The Nigerian Ministry of Agriculture explained the importance of governmental endorsement for Nigeria’s cocoa fertilizer platform initiative, noting that while they eventually secured formal approval, the process required sustained engagement and negotiation with the Ministry of Agriculture (FMARD, August 18, 2015).

Several respondents noted the importance of international partnerships in navigating the governance landscape. By aligning with organizations such as IDH and USAID, companies and local actors could bring in external support, which provided additional leverage when negotiating with the government. The representative from Multitrex highlighted how the company’s affiliation with IDH and USAID helped facilitate cocoa development initiatives in various states (Multitrex, September 1, 2016).

### **2.5.1.3. Infrastructure**

The respondents shared only limited insights on the information they had obtained that enabled them to better understand the Nigerian market’s infrastructure dimensions. In general terms, most respondents noted that the Nigerian agricultural market suffers from systemic challenges. These include a lack of adequate infrastructure, limited access to credit for smallholders, and fluctuating market prices influenced by global forces.

One of the major infrastructure challenges respondents pointed out is the bad road quality and logistics. The IFDC program manager explained, “In Europe...logistics...is really working perfect...but for this to happen it needs a business environment and some specific conditions which usually we do not have here.” (IFDC, March 11, 2015). For both cases, MoUs were signed with the local and national governments, and their support was agreed upon to contribute to improved road infrastructure. Although road maintenance typically falls under government responsibility, respondents observed limited action in maintaining essential feeder roads, hampering timely and efficient transport. These delays degrade the quality of agricultural produce and raise transportation costs, putting

financial strain on local producers and reducing the profitability of dairy businesses (Confinaf, November 28, 2015; IFDC, March 11, 2015). Without government intervention in infrastructure, businesses are forced to adapt their operations around these constraints, often resulting in inefficiencies and additional costs that could be mitigated with better infrastructure support.

Local banks offer financing, but prohibitively high interest rates (around 40% per year) make it difficult for small dairy producers to cover costs (IFDC, June 1, 2015). The respondent added that “the milk they are producing is still local” and “the capacity of milk production is not so high,” making it challenging for businesses to afford these rates and sustain profitability.

Another significant challenge is the reluctance of small-holder farmers to engage in the formal banking sector. This increased operational risks but hindered financial integration and the potential for more streamlined payment systems within the dairy and cocoa sectors. The respondents of the dairy case shared their experiences concerning the lack of trust among farmers in the Nigerian banking system, which impacted payment systems and posed security risks. The community manager from WAMCO recounted issues where farmers preferred cash payments over bank transactions due to distrust in the financial system: “No, there were banks there, but they didn’t want to go to the banks. Because they don’t trust the banking system. Some of them believe: ‘If I give money to the bank, I may not have access to it when I need it. And some policies might come to deny me of my right to my money.’ So they said: ‘No bank, give me my cash’” (WAMCO, May 15, 2015). This distrust in banking institutions necessitated cash transactions for the dairy farmers who sold their milk to the cold storage facilities, which led to security concerns such as armed robberies targeting staff transporting cash. This environment required WAMCO to develop creative solutions, such as incentivizing farmers to open bank accounts through community leaders who helped mediate payments, albeit with limited success.

Respondents of the cocoa case shared insights on account management and governance issues that emerged around control over project funds because of difficulties in opening an account in the bank because many board members were outside the country (Confinaf, August 18, 2016).

The respondents identified in an early stage of engagement that land access remains a contentious issue in Nigeria. In the case of the dairy initiative, this situation also leads to cultural clashes around ownership. The project manager from iCRA noted, “The Fulanis believe that there’s no man’s land... But you didn’t create that land, and after all if I graze my animals on that land, I have not taken the land away” (iCRA, May 19, 2015). This view contrasts with the Yoruba perspective of private ownership, creating tensions that disrupt

agricultural projects (iCRA, May 19, 2015). In the case of the cocoa initiative, securing large plots for projects, such as the 2,000 hectares required by Multitrex, proved challenging. Delays in government land allocations further stalled progress, even though it is a crucial part of partnership agreements with local governments (Multitrex, September 1, 2016).

The infrastructure dimensions of Fulani communities' markets are characterized by limited access to formal systems, which constrains their economic potential. Many Fulani herders operate in remote and underserved areas with inadequate road networks, making transporting livestock or dairy products to larger, more profitable markets difficult. Poor access to reliable electricity and water infrastructure also affects their ability to adopt more modern livestock management practices, such as refrigeration for dairy or water-efficient grazing systems. Additionally, limited access to digital infrastructure reduces their connection to market information, financial services, and modern agricultural technologies. These infrastructural gaps reinforce reliance on traditional, informal markets, which offer lower prices and fewer opportunities for economic growth. Improving infrastructure in these areas could significantly enhance Fulani communities' market potential and productivity. Markets with poor infrastructure, notably lacking cold storage and transportation networks, require more upfront investment, which could slow down market entry (WAMCO, May 12 2015). On the other hand, the Nigerian market size and its future growth prospects compensate for these challenges.

Friesland Campina/WAMCO's investment in milk collection centers (MCCs) was crucial for creating formalized supply chains, preserving milk quality, and ensuring a consistent supply from Fulani farmers. Investment in cold storage and refrigeration technology has minimized spoilage and losses, allowing WAMCO to collect and transport fresh milk over greater distances while maintaining quality standards. They established partnerships with local governments to improve road networks and logistics, but implementing these agreements was challenging (IFDC, April 14, 2015).

## **2.5.2. Market screening based on publicly available databases**

### **2.5.2.1. Market**

The Nigerian population grew from 160 million in 2010 to 184 million in 2015, representing a very large market in the African region (WDI, 2024). The poverty headcount ratio at \$2.15/day was 32% in 2015 (WDI, 2024). The GDP per capita of \$2,412 and BOP income levels indicate significant income inequality, with many Nigerians living under severe economic constraints. The high poverty rate, with 53.5% of the population living on less than \$1.25 per day, indicates a population heavily dependent on affordable and accessible products and services (WDI report 2007). Despite these challenges, the purchasing power of the BOP segment is considerable when aggregated, making the market viable

for innovative and scalable business models, particularly in sectors addressing essential needs such as food, healthcare, and energy. Nigeria's BOP market will expand to 23.2% of total households and 8.5% of the country's spending in 2030 (Inclusivebusiness.net, 8 Nov 2017).

The countries' future market potential was analyzed using a linear regression model with the country's expenditure as the dependent variable and the country's GDP as the independent variable. The analysis was done for the period 2008–2018. This analysis shows Nigeria has a high-income elasticity of 131% but a very low r-squared of 0.33 and an extremely negative intercept. This means that the model does not fit the data very well; hence is unreliable for modelling market fit.

#### **2.5.2.2. Institutions**

The Global Governance Index (2024) shows Nigeria's institutional environment reflects significant governance and regulatory hurdles in the period 2012-2018. The country's governance indicators, such as political stability (-2.04), control of corruption (-1.17), and rule of law (-1.15), suggest systemic inefficiencies that can hinder business operations and investments. Corruption and weak rule of law pose substantial risks for investors, increasing transaction costs and complicating market entry. Additionally, low government effectiveness and regulatory quality scores highlight a challenging business environment in which navigating bureaucracy and implementing contracts can be time-consuming and costly. On a more positive note, formal institutions related to business practices, such as the strength of auditing standards (3.72) and the protection of minority shareholders' interests (3.69), show some strength (Global Competitive Index, 2024). These factors can reassure investors, particularly in sectors where transparency and corporate governance are key. However, the overall institutional framework still requires substantial improvement to facilitate a more conducive business environment. Nigeria's macroeconomic environment, marked by high inflation (13.72%) and a negative government budget balance (-7.2%), further complicates the economic landscape. Inflation, in particular, undermines consumer purchasing power and creates volatility for businesses. While Nigeria's savings rate is high (31.1%), government debt levels and persistent budget deficits may pose future risks.

#### **2.5.2.3. Infrastructure**

The Global Competitiveness Index (2024) shows that Nigeria's infrastructure presents one of the most significant barriers to sustainable economic growth and business development. The overall infrastructure quality (3.03) is low, particularly in critical sectors like electricity, where the supply score (1.45) is alarmingly poor. Power outages and unreliable energy infrastructure severely limit productivity and increase operating costs for businesses. Furthermore, the low quality of roads (2.72) and other basic transportation

systems hampers logistics and access to markets, especially in rural areas. These deficiencies in transport and energy infrastructure create bottlenecks for growth, particularly in sectors reliant on efficient supply chains. Regarding health and education, Nigeria faces additional challenges that affect workforce productivity. With a life expectancy of just 48.1 years and an infant mortality rate of 85.8 per 1,000 live births, the overall health infrastructure is underdeveloped. Malaria is a major issue which not only affects public health but also has a direct impact on workforce productivity. Similarly, the education infrastructure is weak, with only 61.4% of children enrolled in primary education, and the quality of primary education is rated at 3.12. This educational shortfall limits the availability of a skilled workforce, affecting business performance in the long term. On the other hand, Nigeria has made some progress in technology infrastructure, with an increasing number of internet users (28.4%) and relatively high scores in technology absorption (4.69) and availability of financial services (4.13). These indicators suggest that, despite challenges, Nigeria has a growing technological and financial ecosystem that could support future business growth, particularly in sectors like fintech, telecommunications, and digital services (WDI, 2024).

## 2.6 Discussion

This discussion section will first address the research sub question '*How do international BOP market selection processes integrate issues concerning data scarcity, heterogeneity, and institutional voids across specific dimensions that reflect the characteristics of these markets?*' by assessing the case performances on the three dimensions of market, institutions and infrastructure. Then, the second research sub question '*To what extent existing data are relevant, sufficient and used in international selection processes of BOP markets?*' will be answered by reviewing the relevance of existing databases for IMS.

### 2.6.1. Comparative case performance on the three dimensions

The company's representatives for the coffee case in Kenya and the dairy case in Nigeria were already based in the countries. They had built longer-term experience in the conventional market of their sectors. The development of the inclusive innovations resulted in the case of Nigeria in a market expansion strategy towards the BOP market of small-holder dairy farmers. For coffee, a market expansion strategy in biogas was needed. As part of their market selection assessment process, they used existing data managed by the company, such as the consumption of coffee and dairy, existing producers, income sources and new income opportunities. In addition to this, they conducted baseline studies and community engagement activities to collect specific BOP market data such as population size and poverty characteristics. However, their focus was on collecting sector-specific information regarding the agricultural sector's performance and the mar-

ket performance of the consumer side. All respondents share the poor availability and quality of BOP market-specific data, which caused delays at the start of activities and multiple adjustments to the design of the business model during the implementation phase. The assessment of the institution's dimension and infrastructure dimension were based on their own experience in the countries. They were explicitly updated for the market assessment of this BOP market opportunity, meeting with representatives of the national and local governments, and defining MoUs prior to the introduction of the inclusive innovation to try to prevent institutional challenges related to the introduction of new technology, and the commitment to co-invest in the required infrastructure. In practice, the local government did not meet the agreements defined due to political changes, lack of resources, bureaucracy and corruption.

The company representatives of the potato case in Kenya and the cocoa case in Nigeria were entering a new market. In the case of Kenya, a vital part of the information for the three dimensions was provided with the support of the Dutch Embassy and locally based trade representatives. However, this did not include information on the dimensions that would give more insights into the BOP market of smallholder farmers. The cocoa sourcing companies, on the other hand, collected some data with the support of their partner, the innovation intermediary IDH. Nevertheless, for these cases, the data collection was mainly aimed at the BOP market dimension and hardly at the institutions and infrastructure dimensions.

All cases relate to supply chain innovations by making input, technologies, and business development services available to smallholder farmers. The companies decided to focus on the BOP smallholder farmers as a response to changes in the institutional environment, such as new regulations, changing policies, or new local and international market requirements. New regulations and sector support programs allowed investors to invest in these changes. The lack of easy-to-access data and the relevance of informal market dynamics made it difficult for the companies to assess this market segment. The collaboration with innovation intermediaries resulted in the development of baseline studies, which improved the availability of information about the BOP market, institutions and infrastructure and informed the design of strategies to respond to the identified challenges. This only happened for the dairy and potato cases after the first business development activities had already started. By incorporating BOP-specific sub-dimensions, such as local market dynamics, the role of informal institutions, and infrastructure gaps, the initiatives at the early stage of market selection and business development planning would have been better equipped to navigate these contexts.

The analysis above reveals that personal knowledge and experience-based factors play an important role in the market selection and entry of MNEs to BOP markets, in line with

the research findings of Schuster and Holtbrügge (2012) and opposing Hart and Sharma (2004), who consider the industry structure and the technology life-cycle relevant factors. This finding could also explain why only some MNEs in a specific industry enter BOP markets while others do not realize these opportunities. Not all MNEs have a particular knowledge base or current activities in these countries.

The analysis also shows that managers' familiarity with a country influences the process and outcome of the initial foreign market selection decision-making, which aligns with observations by Clark, Li, and Shepherd (2018). Evaluating candidate countries in the initial stage of the process was only partially based on a structured data collection approach. The managers primarily made intuitive decisions, influenced by familiarity. Thus, country familiarity is expected to be highly impactful in the initial foreign market selection decision-making process. Besides the familiarity with the countries, the managers of the MNEs had substantial international experience, among others, concerning developing new businesses in other BOP markets before the investments described in the cases. This finding is in line with prior research that has shown the positive influence of international experience on IMS in the case of non-BOP markets (Kaczmarek & Ruigrok, 2013; Lu, Liu, Wright, & Filatotchev, 2014; Yu, Wang, & Brouthers, 2015), and adds evidence that international experience can contribute to a sense of country familiarity and has been highly impactful on the initial decision-making process for market entry and business development in these BOP markets.

The analysis further shows that cognitive processes dominate the managers' IMS decision-making. This result builds further on (Andersen & Buvik, 2002), who contributed to traditional IMS literature of structured and unstructured company approaches to select a country market, with the relationship approach focusing on the business relationship as the level of analysis. Our findings reveal that the MNEs build partnerships with non-market partners who have already gained BOP experience instead of business sector partners. This is how they deal with data scarcity, heterogeneity, and institutional voids. The result supports the argumentation of Hart and Sharma (2004, p. 17), who state that MNEs "require building the managerial capacity for empathizing with diverse and disconfirming stakeholder perspectives; understanding the culture, thought processes, and language of distant stakeholders; and acquiring the capability to reconcile the contradictions between the existing business model and the views of fringe stakeholders". But it also shows that replacing a more structured approach of IMS market assessment based on the three dimensions by international experience, familiarity, and partnership generates the risk of bias and tunnel vision, which may affect the decision-making of IMS and the design of the business model to introduce an inclusive innovation. For the first screening of several BOP markets, the indicators of existing database sets can be combined to conduct a more integrated assessment of BOP market opportunities and challenges.

### 2.6.2. The relevance of existing databases

The findings underscore the importance of a multidimensional approach to IMS screening of BOP markets. BOP market data provide insights into the current size and characteristics of the BOP, but also potential market demand and expected consumer trends such as growing urban population and demographic characteristics can be easily derived from publicly available data sources, while infrastructure assessments help gauge the scalability and operational feasibility of introducing the envisioned inclusive innovations. The institutional environment and governance aspects shape market opportunities and constraints. By incorporating data on these dimensions into the IMS screening phase, managers of MNEs and policymakers who support the companies to invest in these markets can make more informed decisions when selecting countries in which to introduce the inclusive innovations, and they can incorporate components in the business model and implementation strategy to mitigate institutional and infrastructure deficiencies.

Including the BOP market characteristics in the data collection and IMS screening is crucial in assessing the feasibility of smallholder farmer initiatives, particularly in low-income markets where subsistence agriculture is dominant and resources are scarce. For instance, in Kenya, the 4S@Scale and seed potato initiatives targeted smallholder farmers by introducing improved inputs (seeds and biogas digesters) and training in agronomic practices to increase productivity. The success of these initiatives was largely dependent on understanding local market dynamics, such as demand for high-quality seeds and alternative energy solutions, local farmers' purchasing power, and market access through intermediaries and cooperatives. The managers involved in the coffee sector were already well acquainted with the sector, the coffee smallholders and the local institutional environment. In contrast, the private sector representatives of the seed potato case were new to the country and the BOP market of smallholder farmers. Their lack of knowledge about the challenging institutional circumstances and infrastructure led to import delays that proved critical for the smallholder farmers during the sowing season.

In Nigeria, the Fulani dairy sourcing initiative was deeply influenced by changes in the local regulatory environment. A commercial dairy supply chain had to be developed. The fragmented and often unregulated market structures required WAMCO to develop a tailored approach that integrated local market practices, ensuring that the farmers could supply milk to formal value chains while maintaining their traditional livelihoods. Similarly, the fertilizer platform for cocoa farmers responded to the need for more efficient input delivery and collective sourcing to improve cocoa yields, which depended on organizing informal smallholder networks into more structured cooperatives. The companies involved had very limited knowledge upfront of the Nigerian smallholder context of the agricultural sector, which resulted in challenges working with the farmers and navigating the institutions and infrastructure.

Institutional characteristics strongly influenced the outcomes of these initiatives. All cases developed at an early stage of market entry collaboration agreements with the national and local governments. But the results were in all cases poor. The companies related to the dairy case in Nigeria and the coffee case in Kenya could better calculate risks in their engagement and implementation process due to their previous experience and relationship with its institutional environment. The companies related to the cocoa case in Nigeria and the potato case in Kenya encountered more difficulties, including failed delivery of inputs to the farmers. The data available in existing databases for these countries already provides good insights into the weak institutional environment and infrastructure. Accessing this data during the preparation phase of the potato and cocoa cases would have provided the stakeholders with valuable indications of the challenges they would face; these could then have been used to design the implementation strategy better.

## 2.7 Conclusion

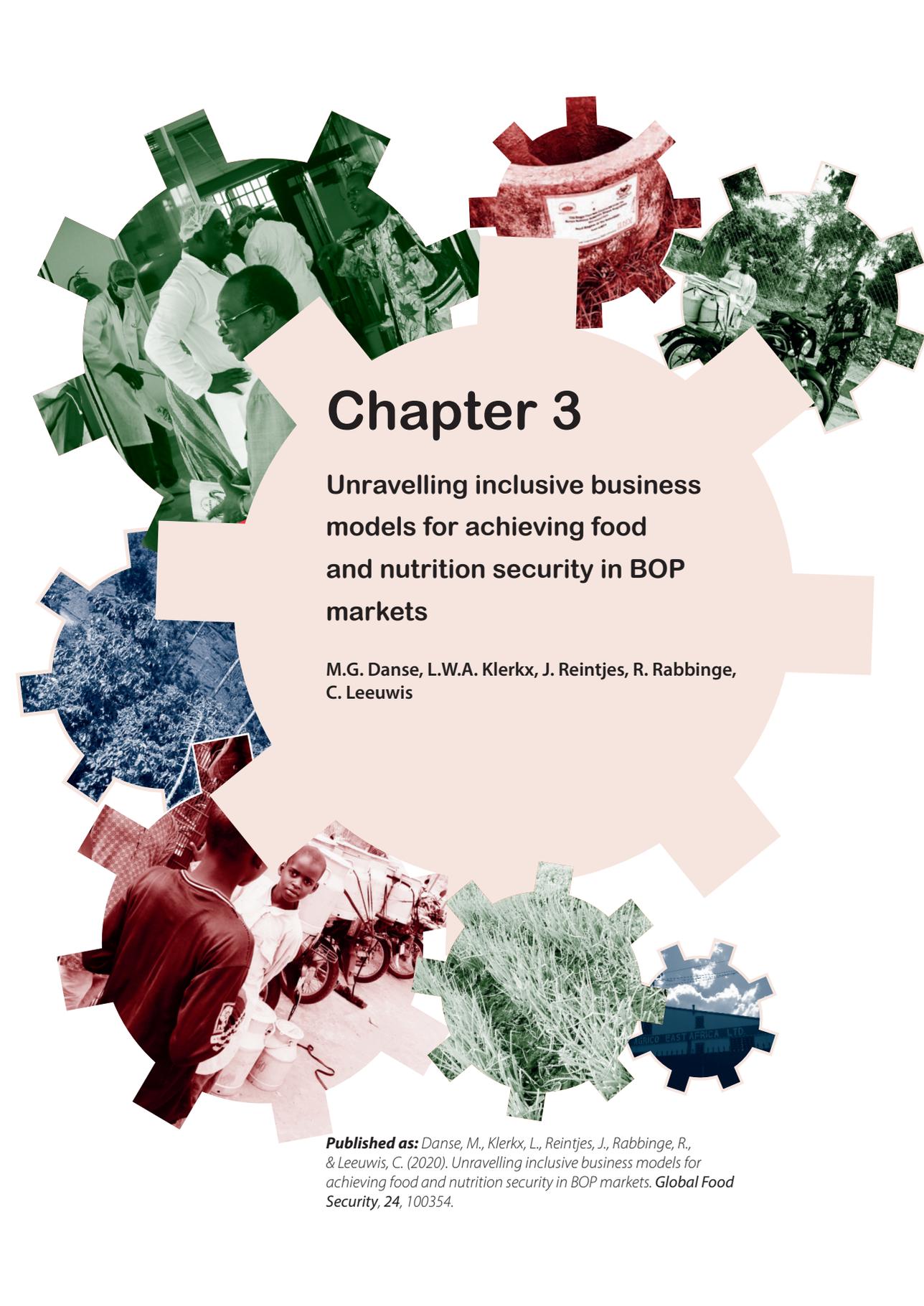
The research presented in this chapter sought to answer the main question: *How do multinational enterprises (MNEs) navigate the international market selection (IMS) process when targeting Base-of-the-Pyramid (BOP) markets for inclusive innovations?* It examined four inclusive innovation cases in Kenya and Nigeria, which provided valuable insights into how companies navigate data scarcity, heterogeneity, and institutional voids in selecting BOP markets. Traditional IMS models, which rely heavily on structured data and macroeconomic indicators, are unsuitable for selecting BOP markets because the data are unrelated to the key characteristics of the BOP market and the complexity of informal market dynamics. Moreover, the limited efforts by the MNEs to collect reliable BOP-specific market data led to delays, multiple business model adjustments, and challenges in navigating institutional environments. The cases showed that MNEs relied on other related internal sector-specific data, baseline studies, and community engagement to fill these gaps.

While existing data sources provide valuable starting points, primary data collection and partnerships with local stakeholders remain essential for navigating the unique challenges of BOP markets. The findings underscore the importance of country familiarity and prior international experience in shaping IMS decision-making for these markets. However, reliance on personal knowledge and intuition-based decision-making introduces the risk of bias and tunnel vision, potentially leading to sub-optimal market selection and implementation strategies. Managers with previous exposure to specific markets were better able to anticipate institutional and infrastructural challenges, thereby mitigating risks associated with market entry. Additionally, partnerships with non-market actors,

such as innovation intermediaries and local government entities, were instrumental in overcoming information gaps and adapting business strategies. A more structured IMS approach integrating available datasets with qualitative insights from industry experts and local stakeholders can provide a more balanced assessment.

For future international BOP market selection processes for inclusive innovations, there is value in using the refined approach presented in this chapter, addressing the complexities of BOP markets by incorporating market, institutional, and infrastructure dimensions. By integrating BOP-specific dimensions into IMS screening, managers and policymakers can make more informed market selection decisions and design compelling business models for inclusive innovation. Combining data from the data sources proposed in this research generates a more integrated insight into a BOP market context. Using secondary data sources helps save time and money and is sufficiently reliable for the first iteration of the IMS assessment of BOP markets. Nevertheless, for some countries, it might have limitations as datasets may not be up to date or incomplete. Given the limitations of secondary data in capturing informal institutions, further research could explore methodologies that combine experimental approaches with survey data to quantify these factors better. Additionally, longitudinal studies would help capture the evolving nature of BOP markets, particularly in response to policy changes and infrastructure developments. Therefore, future studies could develop a practical IMS assessment tool that integrates structured datasets with qualitative insights, making it more accessible for practitioners.





# Chapter 3

## Unravelling inclusive business models for achieving food and nutrition security in BOP markets

M.G. Danse, L.W.A. Klerkx, J. Reintjes, R. Rabbinge, C. Leeuwis

**Published as:** Danse, M., Klerkx, L., Reintjes, J., Rabbinge, R., & Leeuwis, C. (2020). Unravelling inclusive business models for achieving food and nutrition security in BOP markets. *Global Food Security*, 24, 100354.

There is a growing consensus that one of the key priorities to address food and nutrition security is to aim at the transformation of the agriculture and food systems. And the private sector can fulfil an important role in this. It is often argued that the success at low-income markets requires innovative business models. However, research findings on this have been quite descriptive and generic, and the literature on private sector engagement and food and nutrition security has a strong focus on the participation of businesses in the value chain and the food system but does generally not unravel the specific characteristics of the inclusive business (IB) model itself. This paper aims to contribute to an improved understanding regarding business model characteristics of private sector interventions aiming at food and nutrition security improvements, by scrutinizing 16 cases from Africa, Asia and Latin America, on the internal fitness of the strategic business model by analysing the foundation level components of the inclusive business model. Important findings are the relevance of quality of product or service besides its affordability, marketing and distribution strategies to link the different actors in the value chain, and training as well as coalition building to overcome institutional and cultural gaps and increase the success of the inclusive business model for improved nutrition and food security. An important conclusion is that the business model and “business ecosystem” of BOP markets is crucial. Also, the findings indicate a need for intermediaries to overcome cultural and institutional gaps in implementing IB models.

**Key Words:** food and nutrition security, inclusive business, private sector, Bottom-Of-the-Pyramid (BOP), business models, cross-sector partnerships.

### 3.1. Introduction

Food and nutrition security is a central and persistent challenge for global development<sup>1</sup>. A substantial proportion of the world's 795 million people who are unable to meet daily food needs are food-producers, such as small-scale farmers and fishers. It has been argued that global targets for improving nutrition cannot be solved by nutrition-specific interventions implemented at scale only (Carletto, Ruel, Winters, & Zezza, 2015). There is a growing consensus that one of the key priorities to address undernutrition is to aim at the transformation of the agriculture and food systems (Maestre, Poole, & Henson, 2017; Masset, Haddad, Cornelius, & Isaza-Castro, 2012). According to Maestre et al. (2017), agriculture has strong potential to contribute due to the many ways in which it can influence the underlying determinants of nutrition outcomes, including through improving global food availability and access and through enhancing household food and nutrition security, dietary quality, income, and women's empowerment. Scholars and policymakers increasingly recognize the relevance of the involvement of the private sector in the fight against poverty issues such as food insecurity (Breeman, Dijkman, & Termeer, 2015; FAO, 2013; Fuglie, 2016). The benefits of involving the private sector in strategies do not only contribute to the increase of food production but may tackle also consumption and undernutrition (Maestre et al., 2017).

Rather than the aid and charity approaches that have dominated the scene for the past few decades, the alternative line of discussion around inclusive business (IB) and Base-of-the-Pyramid (BOP) approaches emphasize more on the role of inclusive innovation and pro-poor entrepreneurship (Halme, Lindeman, & Linna, 2012; Prahalad, 2004; Veglio, 2011). There is some clear distinction between the IB and BOP approach (Halme et al., 2012). The BOP proposition emphasizes on the untapped opportunities for win-win business as companies engage in serving this previously neglected socio-economic segment—the BOP market (Goyal et al., 2014; Hart, 2005; Prahalad, 2004). Inclusiveness has been advocated to overcome negative effects such as adverse power relationships within poor communities, hierarchies between the poor and outsiders who administer poverty-reduction interventions, and local vulnerabilities induced by global currents in products, services, information and ideologies (Arora & Romijn, 2012). IB focuses on the potential for development opened up by the integration of the previously excluded poor in the global economy, also emphasizing the role of governments and other institutions in creating conducive conditions (Veglio, 2011). The IB approach may be the way to reach scale in BOP markets (Gradl & Jenkins, 2011). In this article we use the terms BOP market

1 Food and nutrition security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food, which meets their dietary needs and food preferences for an active and healthy life" (FAO, 2013).

or context when talking about the low-income socio-economic population segment, but refer to IB models or IB development when describing business efforts in this area.

Private sector involvement could bring sizeable gains to companies and poor food producer and/or poor food consumer, achieving food and nutrition security by increasing food production, enhancing food distribution and/or ensuring food consumption (Gaffney et al., 2016; Patel, Wiebe, & Seburn, 2014). The private sector is interested in entering low income food markets (roughly 4.5 billion low income people in developing countries) as they offer growth opportunities, a source of innovation, efficiency advantages, and reputation advantages (Christensen, Craig, & Hart, 2001; Hamilton, 2013). Food-insecure communities may benefit of collaborating with the private sector, as they offer research and extension services, inputs, infrastructure, equipment, and marketing (Tuttle, 2012), and in some cases the introduction of international sustainability standards (Kleemann, Abdulai, & Buss, 2014). But there has also been criticisms on the extent these advantages have been effectively realized (Arora & Romijn, 2012) and as to its negative effects (Hall et al., 2012; Karnani, 2009, 2010; Landrum, 2007). The characteristics of food value chains may leave little space for business models and management strategies starting from capacities, skills and ideas embedded in the constraints faced by smallholders and micro and small business in the food sector in developing countries, which may result in exclusion of these actors from agri food chains (Bekele, Jon, & Geoffrey, 2011; Danse & Vellema, 2005; Vellema & Danse, 2007). Also, a growing world population for at least another half century, combined with changing diets arising from increasing urbanisation and consumption of meat products, will bring greater pressures on the existing food system (Allen & de Brauw, 2018; Pretty, Morison, & Hine, 2003), and require new business models to satisfy this growing demand for food to meet the marketing mix for the BOP: awareness, accessibility, affordability and availability (Chikweche, 2013; Prahalad, 2004), and to bring sizeable gains to both poor, food-insecure communities and the private sector itself (Poulton, Dorward, & Kydd, 2010; Prahalad, 2004; Simanis & Hart, 2006; Vellema & Danse, 2007).

It is often argued that the success at the BOP requires innovative business approaches of which the logic significantly differs from approaches used at other tiers of the pyramid (Gradl & Jenkins, 2011; London & Anupindi, 2012; London & Hart, 2004; Christian Seelos, 2014; Christina Seelos & Mair, 2006). However, research findings on this are still quite descriptive and reflect on IB models at the BOP in general (Gradl et al., 2008; Jun, Lee, & Park, 2013; Klein, 2008; Kolk & van den Buuse, 2012; Prahalad, 2004; Ricart, 2010; Christina Seelos & Mair, 2006), and as such don't provide specific insights for IB models on improved food and nutrition security.

The literature on private sector engagement and food and nutrition security has a strong focus on the participation of businesses in the value chain and the food system (Berti, Krasevec, & Fitzgerald, 2004; Bird, Pradhan, Bhavani, & Dangour, 2018; Chevrollier, 2012; Dangour et al., 2012; Hawkes & Ruel, 2012; Kracht & Huq, 1996; Maestre et al., 2017; Kayser, 2014; Pinstrup-Andersen, 2013; Reardon, Barrett, Berdegue, & Swinnen, 2009). In the context of improved food and nutrition security at the BOP, a number of IB intervention strategies (BIS) have been identified (Chevrollier, 2012; Poulton et al., 2010; Vorley, Lundy, & MacGregor, 2009), which Chevrollier (2012) groups in 5 clusters that cover both the food production and food consumption aspects:

1. Farmer development services: the private sector supplies BOP food producers as customers of goods and services that aim to improve their own food production for the local market;
2. Secured sourcing schemes: the private sector sources from BOP Food producers for local or international higher income food consumers;
3. Rural retail hubs: the private sector acts as retailer and supplies an assortment of products and services to BOP food producers and BOP food consumers;
4. Food product adaptation: the private sector expands its existing healthy food product to BOP Food consumers;
5. Hybrid market creation: the private sector co-creates with local parties new healthy and nutritious food products for a new BOP food consumer market;

While IB approaches hence have been found in the context of food and nutrition security, a systematic mapping of the business model aspects of these intervention strategies is lacking. The research of Chevrollier (2012), to the best of our knowledge, is one of the few that makes an attempt to structure the characteristics of the business model aiming at food and nutrition security, but describes mainly the interaction at value chain level. Drawing on the generic literature on business models for the BOP, relevant elements to analyse the IB model to achieve improved food and nutrition security strategies, are to analyse the strategic business model on key components of its foundation as this is a prerequisite for better decision making for the parties involved to scale up to serve more poor people or for replicating these models in different geographic context (Goyal et al., 2014; Hamilton, 2013; Klein, 2008; London & Anupindi, 2012; Christian Seelos & Mair, 2010), and how it interacts with its context (Allen & de Brauw, 2018; Carletto et al., 2015; Hawkes & Ruel, 2012; London & Anupindi, 2012; London & Hart, 2004; Maestre et al., 2017),

This paper aims to fill these knowledge gaps and a need for an improved understanding with regard to business model characteristics of private sector interventions aiming at food and nutrition security improvements. The paper is organized as follows: Section 3.2.

provides a review of pertinent literature that contribute to the selection of the relevant scope and components to analyse 16 cases from Africa, Asia and Latin America. Section 3.3. presents that findings, followed by Section 3.4. in which the merits and limitations of the private sector in supporting scalable solutions on food and nutrition security is being discussed. The paper concludes with theoretical and practical implications of the findings.

## 3.2. Research approach

### 3.2.1. IB model for food and nutrition security: a focus on foundational level

Conventional business model scholars presuppose a well-functioning and supportive environment for business to develop and function (e.g., well-functioning infrastructure, clear institutional frameworks). Inclusive business scholars emphasize different circumstances in low income markets as opposed to developed markets, which may influence the configuration of the business model (Goyal et al., 2014; Gradl & Jenkins, 2011; Gradl et al., 2008; London & Anupindi, 2012; Prahalad, 2004). Institutional voids are extremely important in this context (Khanna & Palepu, 1999; Ricart, Enright, Ghemawat, Hart, & Khanna, 2004). The lack of formal market institutions in low-income markets causes high transaction costs and thus the firm has to look for alternative ways to organize such transactions. One way to work around this is engaging “fringe stakeholders”<sup>2</sup>, which helps to embed the business model in the local context (Breeman et al., 2015; Hart & Sharma, 2004; Patel et al., 2014). But often firms decide to internalize solutions for market failures (e.g. building water facilities, training of suppliers, and provision of financial services). However, these high-touch models are expensive (Gradl & Jenkins, 2011). Deliberately improving the “*business ecosystem*” around inclusive business models can help overcome the market gaps that make those models high-touch, high-cost, and- often—small-scale (Foster & Heeks, 2013a; Gradl & Jenkins, 2011).

The business model has been recognized as a useful unit of analysis to better understand the characteristics of firms that develop inclusive business strategies to improve the food security of the BOP market, as it takes a multi-theoretical approach (Klein, 2008; Kolk & van den Buuse, 2012; London & Hart, 2004; Christina Seelos & Mair, 2006). Though identified as very relevant for the better understanding of the performance of the private sector in connecting to the BOP, scholars and practitioners remain vague when specifying what

---

2 Fringe stakeholders are typically disconnected from or invisible to the firm because they are remote, weak, poor, disinterested, isolated, non-legitimate, or non-human. They may be affected by the firm but have little, if any, direct connection to the firm’s current activities. However, fringe stakeholders may hold knowledge and perspectives that are key both to anticipating potential future sources of problems and to identifying innovative opportunities and business models for the future.

the business model entails and often refer to different phenomena (Klein, 2008). Research by Klein (2008) points to the relevance of the strategic business model for the analysis of value creation and value appropriation in the BOP context, as it is more concerned than the economic and operational business model with market positioning, overall direction in the organizational boundaries, and growth opportunities. Morris (2005) emphasizes on the importance of internal and external fitness of the strategic business model to develop sustainable business. Where external fitness reflects on the degree to which the strategic business model is adapted to, suited for, and optimally uses its external business environment, and the internal fitness refers to the business model's ability to maintain externally fit under environmental changes.

This research aims to unravel the business model characteristics that contribute to internal fitness, as we need to understand better the capacity of the private sector itself to position itself in its context. Internal fitness can be attained by creating a robust business model, and by creating a flexible business model (Zajac et al., 2000). A robust business model is resistant to external perturbations, fluctuations, and noise without a qualitative structural change (Jen, 2003). A flexible business model maintains external fit by adjusting in response to environmental change, while a robust business model maintains external fit through the ability to buffer environmental change. There are two ways to create a robust strategic business model (Zajac et al., 2000). One way is by creating an effective business model that suffices in itself to parry any external changes (Nilsson & Rapp, 2005). The other way is to build or select a local environment that shelters the business model from larger changes in its business environment (Zajac et al., 2000). It is the first form of robustness that is created by internal fit between components, and it is this form of robustness that this research focuses upon.

Morris (2005) proposes an integrative framework that allows designing, describing, categorizing, criticising, and analysing a strategic business model for any type of company at three increasingly specific levels of decision making, termed the *foundation*, *proprietary* and *rules* levels. Research on the business model for the BOP by (Klein, 2008) indicates that the foundation level is most relevant for IB model analysis as it allows to compare business initiatives in different context. The foundation level refers to generic decisions on what the business is, ensures that such decisions are internally consistent and relate to its context. This level consists of six components: value proposition (eg. is it tailor-made or standardized, internal manufacturing or reselling), market (eg. business to business, local or international, what type of customer), internal capability (e.g. production systems, supply chain management), competitive strategy (eg. competition on quality or cost, innovation leadership, customer relationship), economic factors (e.g. pricing and revenue sources, volumes), personal/ investor factors (e.g. pricing and revenue sources).

The framework is useful for the analysis of IB models that aim to contribute to improved food and nutrition security at the BOP, as it allows comparing across different business models from a broad universe of ventures. This is important due to the great variety of ventures involved in improved food and nutrition security for the BOP, such as: Multi National Enterprises (MNE) , Small and Medium sized Enterprises (SME), and Public Private Partnerships (PPP), both based in industrialized economies as developing economies (Kolk et al., 2014) as well as specifically focussed on food and nutrition security (Forum, 2010). Additionally, the framework provides some generic features to analyse the adaptability of business models to complex environments through the characteristics at proprietary levels and the basic set of operating rules a business puts in place. There is *internal fit* when there is a coherent configuration of foundation factors. The *external fit* addresses the appropriateness of the configuration given specific and often changing external environmental conditions (Morris, 2005). Consequently, the model responds to the presence of many in-company and external interdependencies. Business model components may have little value in isolation but can offer a sustainable competitive advantage as a bundle. Linkages govern the way components connect together, thereby having a governing/control function, as well as the choice to include certain components (Klein, 2008). Table 3.1. summarizes the elements and specific variables that are used to analyse the IB models that aim to contribute to improved food and nutrition security.

**Table 3.1. Foundation components for a strategic business model**

Foundation component	Characteristics
<b>Component 1 factors related to the offering: How do we create value?</b>	<ul style="list-style-type: none"> <li>- Primarily products/primarily services/heavy mix</li> <li>- Standardized/some customization/high customization</li> <li>- Broad line/medium breadth/narrow line</li> <li>- Deep lines/medium depth/shallow lines</li> <li>- Access to product/ product itself/ product bundled with other firm's product</li> <li>- Internal manufacturing or service delivery/ outsourcing/licensing/reselling/value added reselling</li> </ul>
<b>Component 2 (market factors): Who do we create value for?</b>	<ul style="list-style-type: none"> <li>- Type of organization: b-to-b/b-to-c/ both</li> <li>- Local/regional/national/international</li> <li>- Where customer is in value chain: upstream supplier/ downstream supplier/ government/ institutional/ wholesaler/ retailer/ service provider/final consumer</li> <li>- Broad or general market/multiple segment/niche market</li> <li>- Transactional/relational</li> </ul>
<b>Component 3 (internal capability factors): What is our source of competence?</b>	<ul style="list-style-type: none"> <li>- Production/operating systems</li> <li>- Selling/marketing</li> <li>- Information management/mining/packaging</li> <li>- Technology/R&amp;D/creative or innovative capability/intellectual</li> <li>- Financial transactions/arbitrage</li> <li>- Supply chain management</li> <li>- Networking/resource leveraging</li> </ul>

**Table 3.1. Continued**

Foundation component	Characteristics
<b>Component 4 (competitive strategy factors): How do we competitively position ourselves?</b>	<ul style="list-style-type: none"> <li>- Image of operational excellence/consistency/dependability/speed</li> <li>- Product or service quality/selection/features/availability</li> <li>- Innovation leadership</li> <li>- Low cost/efficiency</li> <li>- Intimate customer relationship/experience</li> </ul>
<b>Component 5 (economic factors): How we make money?</b>	<ul style="list-style-type: none"> <li>- Pricing and revenue sources: fixed/mixed/flexible</li> <li>- Operating leverage: high/medium/low</li> <li>- Volumes: high/medium/low</li> <li>- Margins: high/medium/low</li> </ul>
<b>Component 6 (personal/investor factors): What are our time, scope, and size ambitions?</b>	<ul style="list-style-type: none"> <li>- Subsistence model</li> <li>- Income model</li> <li>- Growth model</li> <li>- Speculative model</li> </ul>

**Source: Morris (2005)**

### 3.2.2. Research method

Understanding business models in a poverty context requires explorative approaches able to deal with rich contextual data (Seelos & Mair, 2006). This research builds on a database of 71 carefully selected private sector driven initiatives on food and nutrition security for the BOP created by Chevrollier (2012). These cases were identified through desk research and semi structured interviews with an international pool of experts in the field of private sector initiatives and food and nutrition security. Key selection criteria were: 1) agro/food activities focused at the local and/ or regional market (no export to industrialized economies) and with the ambition to contribute to improved food and nutrition security, 2) the innovations aim at poor food producers and/ or poor food consumers, 3) not strictly grant or subsidy dependent, and 4) still active at the time of research (end of 2012). Consecutively, the 71 cases were clustered in 5 business intervention strategies (BIS) spread over the food value chain, including interventions that relate to food production as well as the market introduction of nutritious food products. This is relevant because agricultural growth may contribute to reduced levels of hunger (Hoddinott, 2013). And even institutional developments such as contract farming have been found to reduce food insecurity among participating households, either through income effects or through productive spill-overs from commercial to subsistence crops (Maestre et al., 2017). However, value chain interventions in the past aimed mainly on increasing income for farmers or other actors along the value chain, but this is not necessarily sufficient for alleviating malnutrition. We followed here the ordering into 5 BIS by Chevrollier (2012) which we found to provide a useful base for such analysis as it organizes BIS along the food value chain and helps to look at the IB model for improved food and nutrition security from different angles. Hence, the 5 BIS defined, are: 1. farmer

development services (BIS1), 2. secured sourcing schemes (BIS2), 3. rural retail hubs (BIS3), 4. food product adaptation (BIS4), and 5. hybrid market creation (BIS5) (Chevrollier, 2012).

In the case of BIS1 the private sector supplies products and value-added services to small and medium farmers to increase the quality and volume of food products and improve the market position of the farmer. Most of the farmers involved are BOP farmers/ consumers themselves. The production of these farmers is mainly aimed at the local market, and supplies for a good part BOP consumers. The other part goes to middle and higher income consumers. BIS2 put the (large) commercial buyer (e.g., agribusiness firms, processors, retailers) central, which link to smallholder agricultural producers to improve the quality of raw material and create economies of scale of processing and retail activities. The farmers involved are mostly based in the BOP, but often this is combined with bigger, more commercial farmers whom can be a cluster leader. The food produced under this strategy is mainly supplied to middle and high income consumers. The income generated can contribute to increased purchases of nutritious food by BOP producers involved. BIS 3 is an innovative combination of forward and backward integration strategies in the value chain. Intermediaries offer goods and services to both BOP food producers and food consumers for improved food production and to improved access to food products. BIS4 is a market development strategy by businesses already active in the local food market. By adapting their business case they expand the sales of existing food products to the BOP with the aim to contribute to improved nutrition security. Finally BIS5 is a diversification strategy. It is the most risky strategy because both product and market development is required (Ansoff, 1964). Cooperative models and partnerships appear to be crucial business model elements to achieve success for this BIS.

For this article, we further elaborate on the cases that Chevrollier (2012) used to show case the characteristics of each of the 5 BIS. These are; 3 cases for BIS1, 4 for BIS2, 3 for BIS3, 2 for BIS4 and 4 for BIS5. More detailed information for each case is presented in Appendix 2. Only one of the cases is related to Latin American, nine are related to Asia, and six to Africa. This is most probably a research bias caused by conducting the online research only with English search terms. All cases are partially or fully funded by the private sector, which is due to one of the selection criteria used to define the delimitations of the database. All cases that depend mainly on public funding were excluded from the overall database (Chevrollier, 2012). The 16 selected cases were analysed based on online available secondary data (publications, project reports, business website, information available on social media), and verification interviews with at least one key representative of the lead organisation involved.

### 3.3. Results

#### 3.3.1. Inclusive business model initiator

Half of the 16 BIS analysed are led by bigger companies. These are either locally based (LC) or Multi National Enterprise (MNE). One case concerns a MNE joining forces with a multilateral governmental organisation (Heineken and the European Union). All BIS 1 are led by SMEs. This BIS aims at providing services to farmers to improve their local food production. All BIS5 are led by social enterprises. This BIS aims at developing new nutritious food products for BOP consumers. MNEs lead BIS that aim at sourcing from the BOP (BIS2), or retailing to BOP food producers and BOP food consumers (BIS3) & (BIS4) strategies. In the case of BIS 2 the selling of the food produce is directed at middle and high income food consumers. In BIS 3 large commercial retail companies supply inputs to BOP food producers (seeds, equipment, fertilizers), and (nutritious) food to different consumer segments, among other BOP food consumers. In the case of BIS 4, MNEs and LCs purposely sell nutritious food in high volumes to BOP food consumers. Finally, large commercial companies participate in BIS5 but in these alliances they don't lead the business interventions, but the SE does instead. Table 3.2. presents the BIS by type of lead organization.

**Table 3.2. Business intervention strategy by type of lead organization**

	SMEs	PPP	MNE	LC	SE
BIS1	3				
BIS2	1	1	2		
BIS3			2	1	
BIS4			1	1	
BIS5					4

#### 3.3.2. Foundation level components of IB models for food and nutrition security

The 16 business cases were analyzed based on the 6 foundation level components of table 3.1. The summary of the results per BIS is presented in table 3.3. The detailed information on the elements for each case is presented in Appendix 3.

Table 3.3. Foundation level components per BIS on improved food and nutrition security

	How does lead organisation create value to improved food and nutrition security?	For who is improved food and nutrition security created?	Which are the internal capabilities?	Which is the main competitive value?	What is the main pricing strategy?	Personal/investor factor	Growth model
<b>BIS1</b>	Adapts high end market product or service for BOP farmers, distribution mainly through indirect channels, product manufactured by lead organisation, establishes vertical alliances to get to the customer, and develops process and functional upgrading strategies in the value chain	Product/ service enable BOP farmers to access higher value food market. Contribute to food and nutrition security by income generation of farmers and more and better food for the local market. The intervention often results in an improvement of the livelihoods of BOP food producers	Mainly research and technology combined with market intelligence, they offer BOP awareness raising or capacity building strategies and stimulate coalition building to improve the capacity of their customers. The majority conduct research, engage in public policy dialogue, and build new organisations to strengthen the link between the customer and the market	Product quality	Average volume-average margin		Growth model
<b>BIS2</b>	Better food quality by improving the sourcing, processing and/or storage techniques mainly by process and functional upgrading strategies. They enable linkages to higher value customer. Distribution is mainly organized through indirect distribution chains.	The process improvements enable BOP food producers to connect to higher value food markets. Impact on food security mainly through the increased income of value chain actors, including BOP food producers.	Supply chain management, they develop awareness and capacity building strategies to improve their position in the market. Most of them establish new organisations to support their BOP customers to position themselves better in the market. Half of them develop policy dialogues and only one invests in research	Product quality and operational excellence	Big volume-low margin		Growth model

Table 3.3. Continued

How does lead organisation create value to improved food and nutrition security?	For who is improved food and nutrition security created?	Which are the internal capabilities?	Which is the main competitive value?	What is the main pricing strategy?	Personal/investor factor
<p><b>BIS3</b></p> <p>Introduces direct distribution systems and reselling services to BOP food producers and BOP food consumers. They invest in functional and product upgrading strategies to strengthen their position in the value chain.</p>	<p>The supply chain improvements enable BOP food producers to improve their production and storage practices, and BOP food consumers to get access to a bigger range of affordable food products.</p>	<p>Marketing and supply chain management, they invest in BOP awareness and capacity building strategies for their customers to help them to improve their position in the market, and participate in policy dialogue to stimulate changes in the regulatory system, they also establish new organisation to support their customers to improve their performance. The majority build coalitions and half of them conduct research</p>	<p>Product selection and availability</p>	<p>Big volume-low margin</p>	<p>Growth model</p>
<p><b>BIS4</b></p> <p>Adapt existing food product and introduce a narrow range of highly standardized nutritious food products through indirect distribution channels to BOP consumers</p>	<p>It improves the access to affordable nutritious food to BOP food consumers which contributes to an improved food and nutrition security</p>	<p>Strong in marketing, they develop BOP awareness and capacity building strategies to improve the performance of other actors in the value chain, they establish new organisations for their customers to improve their position in the market, invest in establishing new organisations, policy dialogue and research .</p>	<p>Brand and reliable product quality</p>	<p>Big volume-low margin</p>	<p>Growth model</p>

Table 3.3. Continued

How does lead organisation create value to improved food and nutrition security?	For who is improved food and nutrition security created?	Which are the internal capabilities?	Which is the main competitive value?	What is the main pricing strategy?	Personal/investor factor
<p><b>BISS</b></p> <p>Lead organisation develops tailor made food product for BOP food consumer and introduces this through indirect multiple distribution channels of partners, which are part of a coalition that becomes part of a new social business.</p>	<p>Product innovation and supply chain strategy improve the access to affordable, nutritious food products to BOP food consumers, which contributes to their improved food and nutrition security</p>	<p>Production system, R/D and marketing, they develop BOP awareness raising and capacity building strategies for their customers, and invest in research and policy dialogues</p>	<p>Product quality and product features</p>	<p>Big volume-low margin</p>	<p>Growth model</p>

### 3.3.2.1. Value creation

The cases do not provide a singular answer to the question on who the value has been created for. Over time, all cases seem to evolve from a narrow focus on either BOP food producers or BOP food consumers, to strategies where they target both. This might be a response to institutional voids in the food system that force lead organisations to take care of multiple activities in the value chain in order to safeguard their competitive position and develop a sustainable business model. In the case of BIS1 and BIS2, BOP food consumers need to buy the products of the farmers to create demand for the inputs, processing and/ or distribution services. In the case of nutritious food products, raw materials need to be available and brought to the processing units to assure food product availability. The type of market (general/broad/niche) and the nature of the customer relationship (transactional/relational) differ considerably between cases and there is no specific distinction between different BIS types.

For thirteen cases product or service quality is an important competitive value of the business model. Technology development and research and development (R&D) are relevant for BIS1 and BIS4. In these cases, these investments enable the private sector to adapt technology to the needs of low-income users, such as high-tech processing techniques to small holder farmers (f.e. BIS1 Dadtco cassava processing AMPU Nigeria), inputs to farmers (f.e. hybrid vegetables seeds BIS1 East West Seeds Thailand) or nutrient powders to food consumers (BIS4 Valid Nutrition South East Africa) at low cost. This creates a unique access to innovative products or services to BOP food producers.

All cases develop over time upgrading strategies to improve their value proposition. Product upgrading strategy is prevalent in the retail based BIS3, and the BOP food consumer focused BIS4 and BIS5. Process upgrading strategy is a preferred strategy for BOP food producer focused BIS1. This means that adjustments are made in the process, f.e. by introducing an innovative technology to process cassava at farm site such as in the BIS1 Dadtco AMPU case in Nigeria. Only in one case interchain upgrading happened, which is the Heineken sorghum case in Sierra Leone. In this case, small holder farmers were stimulated to supply sorghum for local beer production. Sorghum was not a major food staple in the target country. Farmers were taught to produce sorghum that complies with the brewery requirements. The extra income generated by selling sorghum to Heineken, provided farmers more financial means which eventually could be used to improve their food and nutrition security, but the business model did not monitor that side effect.

All cases of process upgrading were led by SMEs. It shows that SMEs use the collaboration with value chain actors to adapt or innovate on process activities and as such increase the added value of the business. This seems logical as collaboration with others to add process improvements is a relatively easy and low risk collaboration strategy. SMEs also

used functional upgrading, but product or chain upgrading was not observed in SME led cases. On the contrary, 3 cases of product upgrading were led by social enterprises. The only case in which the intervention can be defined as interchain upgrading had a PPP as lead agent, which is the collaboration between Heineken and the EU.

For some cases, more than one upgrading strategy could be observed. In these cases the introduced business intervention provided the opportunity for upgrading strategies at two or more levels of the value chain, such as product and process upgrading. The time that the business is already active in the BOP market seems to influence this result as well. Most cases that were active for several years in the BOP market show a number of consecutive upgrading strategies that have been implemented over time.

All cases add value to the business model by engaging with one or more partners. NGOs are the most common partner, followed by governments. Interestingly, in the cases where NGOs were partners, the lead organization is always a bigger company and never an SME. In the case of BIS4 Valid Nutrition South East Africa and BIS5 KeBal Indonesia the social enterprise was established by an NGO.

#### **3.3.2.2. Market factor**

BIS 1 and BIS2 aim to create value for BOP food producers. In the case of BIS1, the customer relation is more personalized which enables the private sector to develop products and services that help BOP food producers to position themselves better in the local food market. The companies in the BIS2 use a more standardized/ impersonal customer relation strategy. For both BIS the business development leads to increased income for the BOP food producers which may contribute to an improved food and nutrition security situation, however this effect is not measured by the private sector or other partners involved in the business cases.

In the case of the BIS3, the strategy aims at BOP food consumers and BOP food producers, and the customer relation is more personalized to meet their needs. They introduce a variety of products and services, and their use is evaluated by the customers. BIS4 and BIS5 aim at BOP food customers. The business model is based on selling big volumes. The customer relation is more standardized and not so personal. These BIS aim to improve the food and nutrition security of the customer by increasing the availability and affordability of nutritious food, however the impact of these products on nutrition security is not specifically measured by the company or the other partners involved in the business case.

#### **3.3.2.3. Internal capability factors**

The most important internal capability of a business model on food and nutrition security is supply chain management and selling/marketing. All cases include in their business

model specific arrangements to supply their products or services to BOP food producers and/ or BOP food consumers. Supply chain management is a key factor for cases ranging from BIS1 to BIS4. Six cases use a direct distribution strategy based on a retail business model, which means that distribution is part of the core responsibilities of the lead organisation itself. In the case of BIS2 Metro AG Vietnam the lead firm provides direct distribution services from the farmers to the supermarket sales points in urban areas, while in the case of BIS5 KeBal Indonesia the lead firm provides food sales points to low-income food consumers in slums. All other cases leverage on indirect distribution channels, in which case this service is provided by third parties. The BIS that aim at BOP food producers mostly define a service supplier contract with local commercial traders, in case they add the product to their existing assortment. The BIS that aim at BOP food consumers (BIS4 and BIS5) mostly leverage on public agencies and development aid parties such as Pushticon on development agency BRAC, Grameen Foundation distributing Danone's Shokti yoghurt, Britania Biscuits distributed by the Indian public sector for school feeding programs, and World Food Program including micro nutrient powder of Valid Nutrition in their product assortment and distributing it to emergency areas in South East Africa. Only in the case of BIS4 Minute Maid Uganda the success of the business model is due to the commercial distribution system of the lead organisation- Coca Cola- itself to distribute fruit juices to the BOP.

Additionally, having the right production/operating system in place is another key factor in all cases. Only for the BIS3 this is not a key characteristic to create value, as in this case retailing instead of production is the core of the business model. Efficient production/operating systems enable firms to generate big volumes of low-price products and to get them to the right location. The product itself is central to the offering of the business model, and internal manufacturing is the central value creating activity in the business model.

Nine cases provide narrow product lines of one to a limited number of products. Cases that offer a broad product line are retail concepts distributing input supplies for food production to farmers (f.e. BIS3 DCM Hariyali Kisaan Bazaar India), or nutritious food products to consumer (f.e. BIS2 Metro AG Vietnam).

None of the cases showed evidence of building horizontal alliances to create linkages with other actors in the food value chain that are based at the same level of the chain. Twelve cases established vertical alliances, of which ten are related to BIS1, BIS2 and BIS3. These BIS are focused at strengthening the position of BOP food producers. The vertical alliances are mostly led by MNEs and SMEs. Diagonal alliances are only found for BIS5 cases, and these are all led by social enterprises. In all diagonal alliances at least one non-governmental organization (NGO) is involved. Other alliance partners identified in

these diagonal alliances are government (2 cases), businesses (2 cases) and multilateral organization (1).

Further, internal capabilities also relate to the development of capacities of their customers and other actors in the food system. All BIS invest in awareness raising/ capacity building of their customers, and coalition building with other actors in the value chain to influence the institutional context. In some cases even new organisations are established. For BIS 2 this situation applies to all cases, while the other BIS only some cases develop that strategy.

#### **3.3.2.4. Competitive strategy**

Product quality combined with affordability is the most important differentiator of the competitive strategy of the vast majority of BIS. In the case of BIS3 its on product selection, as this business models brings products of other suppliers and producers together through retailing.

#### **3.3.2.5. Economic factors**

Only in the case of BIS1 the pricing strategy is based on the average volume and average margin. This can be explained by its more personal relation with the BOP food producer in order to be able to offer products and services that relate to their needs. For the other 4 BIS the strategy is based on high volume and low price. For none of the cases we were able to collect detailed financial information, which limits the possibility to provide a detailed analysis of the financial strength of the cases.

#### **3.3.2.6. Personal/ investor factor**

The personal/investors factor is for all the cases of this research a growth model. This is the result of applying the selection criteria “long term viability and scaling potential” as part of the election of the cases. Only cases entered in the sample that showed results of consolidation and scaling.

## **3.4. Discussion**

### **3.4.1. Lead firms of IB models for food and nutrition security**

As table 3.2. shows, 5 of the 16 cases analyzed are led by MNEs. This can be explained by to the global scope of the food industry driven by MNEs (Filippaios & Rama, 2008), as well as the declining economic growth of the European and USA home markets of these companies which has stimulated companies to search for new growth markets (Regmi & Gehlhar, 2005). But the majority of the cases are initiated by small, rather than large, and local, rather than multinational firms.

This research also shows that all cases of BIS 5 are developed by partnerships between the private sector and a local or international NGO. And this collaboration is then structured in a social enterprise. This creates advantages for the business model as it leverages on rural distribution systems of the aid organizations like the Bangladeshi BRAC, to distribute nutritious food products BIS 5 Pushtikona to the rural poor in Indonesia, and the UN World Food Program to distribute BIS 5 Valid Nutrition micronutrient powder to BOP food consumers in emergency camps in East Africa. And it also contributes to the strengthening of the internal capabilities to reach out to value chain actors.

### **3.4.2. Standardized low cost but high-quality products contribute to BOP food and nutrition security**

The most relevant foundation level components of an IB model on food and nutrition security are; end user focused (either small holder farmers or low-income food consumers), highly standardized products, supplied in big volumes, for low prices but based on quality. This finding confirms Prahalad (2004) observation that low income markets appreciate quality and innovation, and means that also business models for improved food and nutrition security have to take this into account.

Most cases aim at BOP food producers and food traders rather than BOP food consumers. But one can also observe that the cases diversify their customer focus over time to both BOP food consumers, BOP food traders and BOP food consumers. This is positive and in line with recent findings that both nutrition specific interventions and sector improvement strategies especially in the agriculture sector has strong potential to influence the underlying determinants of nutrition outcomes (Ruel, Quisumbing, & Balagamwala, 2018).

The higher number of BOP food producer BIS in the dataset is probably a time bound result. More recently the attention of business ecosystem actors such as donor agencies, NGOs and research institutes on food and nutrition security strategies has moved from strengthening food producers to improving the access and quality of food for low income consumers (Fiorella, Chen, Milner, & Fernald, 2016; Godfray et al., 2010). This can also be noted by the characteristics of the cases. All food consumer focused cases (BIS4 and BIS5) were initiated less than 5 years ago, while the BOP food producer driven cases started more than five years ago.

The results of the case analysis confirm that the business model for improved food and nutrition security at the BOP is based on an alternative marketing mix that aims at awareness, accessibility, affordability and availability (Chikweche, 2013). Marketing, sales and supply chain management are key internal capability components of the business model for improved food and nutrition security, which is in line with findings of (Hawkes & Ruel,

2012; Kayser, 2014) . This can be explained by the contextual characteristics of BOP food market. Most BOP food producers are situated in remote rural areas, and most BOP food consumers are situated in crowded urban slump areas that lack proper infrastructure. It requires appropriate distribution strategies and structures to be able to reach these customers.

For some cases it was a challenge to distinguish singular unique foundation compounds characteristics using Morris' business model framework, as the parties involved develop double (or mixed) business models over time. This may be explained by the observation of Poulton & Macartney (2012) that companies engage in service delivery in addition to their core activities to overcome value chain challenges and institutional voids. This creates situations in which some cases started their business model with a strong focus on product delivery activities, but developed over time into a business model with a strong focus on end-market distribution and marketing activities to enable the businesses they were serving to sustain themselves.

### **3.4.3. Uniqueness of business model for food and nutrition security**

The elements used to unravel the IB model for food and nutrition security are generic and can be used for business models analysis of different BOP markets and development challenges. However, the findings of the case analysis show that applying the variables of these elements on business model for food and nutrition security generate specific insights for business models. It confirms findings of (Maestre et al., 2017; Ruel et al., 2018) that a crucial element of the inclusive business model to distinguish and create a unique impact on food and nutrition security is by investing especially in infrastructure and/ or the distribution system. The set of cases show that either direct distribution systems are developed by the private sector initiative or leverage on existing networks of distribution systems, which is in line with findings of Kayser (2014). Reaching innovation in product development on nutritious food and getting it to the BOP requires at least vertical linkages with actors in the food value chain, but eventually even beyond that and engaging in diagonal alliances in order to be able to implement IB ecosystem strengthening strategies that help to overcome institutional voids as well as to get locally embedded by engaging with fringe stakeholders.

The initiatives that developed the systems themselves all relate to either retail companies, for which distribution is their core business, or combine sourcing of food products with direct sales of food or beverages. The distribution strategies that leverage on existing networks, either established by the distribution provider itself, or by establishing an innovative partnership with organizations that already reach the BOP market. These partnerships can be explained by the fact that building a loyal customer (and producer) base at the BOP, the supply (and uptake) of products and services needs to be stable

and constant. This is a challenging endeavor in markets that lack an established logistics infrastructure. Leveraging on existing distribution strategies, enables the company to enter immediately with certain volumes, and they can benefit of the trust base these distribution parties have already established in these markets, which confirms insights of Maestre et al. (2017). These partnerships are mainly established for the food and nutrition security strategies aiming at BOP food consumers (BIS4 and BIS5), rather than BOP producers (BIS1 and BIS2). It requires further research to obtain a more in-depth understanding on the unique characteristics of food consumer driven business model versus producer driven business models that require partnerships with fringe stakeholders, such as street vendors, community leaders, health workers and public authorities, with which businesses normally do not work together.

However, the models limitation while using it for the analysis of an IB model is the lack of insight it can provide on the characteristics of the interdependencies that may exist between the firm and “fringe stakeholders” (London & Anupindi, 2012; London & Hart, 2004), the type of value chain upgrading that is desired (Hawkes & Ruel, 2012; Maestre et al., 2017; Vellema & Danse, 2007), and the interaction between the business model and the broader business ecosystem (Gradl & Jenkins, 2011; Mashelkar, 2012; Pretty et al., 2003). Reviews of the different pathways for agri-food value chain interventions show that parties involved face multiple challenges in distributing their products to undernourished consumers (Maestre et al., 2017; Kayser, 2014). The success of such interventions relies heavily on well-functioning markets and distribution systems, and on consumer awareness of the value of nutrition, which is often lacking (Maestre et al., 2017). All appear to be relevant for the local embeddedness of the business model in low income markets that face food and nutrition security challenges.

#### **3.4.4. Linkages aim more at achieving upgrading than economies of scale**

A company establishes linkages with other external parties to improve its competitive position, to reach economies of scale, to acquire unique competences or to reach new market segments. Horizontal alliances often aim at reaching economies of scale or to improve the countervailing power. While this is an important strategy that contributes to a stronger business model and can contribute to improved food and nutrition security, the lead organizations of the BIS do not focus specifically on horizontal alliance strategy in the period data were collected for the case studies. This may be explained by the fact that other business ecosystem parties such as the public sector or NGOs may take care of horizontal alliances among producers or other actors in the food value chain parallel to the business model development that was the focus of this research. But this result may also be explained by the fact that most BIS were analyzed in their initial stage of business model development. At this stage collaboration for scaling up is most of the time not

the focus, as the business model first has to show its viability in the local context. Hence, it requires more research to obtain a better understanding on the opportunities and constraints of horizontal alliances by lead organizations of IB models aiming at improved food and nutrition security.

All the cases develop vertical alliances. Only in the case of BIS4 and BIS5 two of the six cases related to these BIS have developed diagonal alliances. These cases combine a product development strategy of nutritious food product with marketing and distribution strategies to reach out to BOP consumers. The complexity of these business development strategies requires the collaboration with a diversity of stakeholders to respond to institutional voids and create local embeddedness and acceptance of the product. This finding is in line with London and Hart (2004) regarding the relevance of collaborating with fringe stakeholders, and Kayser (2014) on the marketing and distribution strategies that are being developed to improve the access to nutritious food for BOP consumers. These cases also invest in a full package of “IB ecosystem” strengthening strategies, which requires the collaboration with multiples parties, which explains also the establishment of a diagonal alliance as part of the business model.

The majority of the cases aim at strengthening producers which explains the dominance in using vertical alliance strategies. Functional and process oriented upgrading strategies are used to strengthen the business model along the food value chain. Consumer driven cases require the involvement of other actors besides the value chain parties.

#### **3.4.5. Business ecosystem strengthening aims mostly on creating awareness**

The business model for improved food and nutrition security includes awareness raising activities with customers and other actors of the value chain as an important internal capability. Awareness raising is a strategy that can contribute to an improved external fit of the business model to the market, as suppliers and/ or consumers obtain a better understanding of the unique proposition (e.g. product, functional or process upgrading) that is being introduced.

Coalition building is a common used strategy for BIS development to improve food and nutrition security at the BOP to overcome risks on institutional voids, overcome cultural differences, or to overcome innovation challenges (Calton et al., 2013; London & Anupindi, 2012). Also, in most cases one or more organizations have been involved that facilitate the lead organization of the BIS and other actors to develop the business case and the process of embedding. This confirms findings on the relevance of intermediary or brokering organizations to develop coalitions and partnerships (Manning & Roessler, 2014; Stadler & Probst, 2012) . It requires further research to obtain a better understanding on the way

the business ecosystem of the BOP market influences the business model, as well as the characteristics of intermediaries to facilitate the development of inclusive business in BOP markets.

### 3.5. Conclusion

The aim of this article was to unravel the business model characteristics of private sector initiatives that intend to contribute to improved food and nutrition security of the BOP. This links to current debates on the role of private sector to contribute to poverty alleviation, and its specific added value to improve the quality and volume of food production for local markets, as well as the availability of nutritious food (Allen & de Brauw, 2018; Berti et al., 2004; Breeman et al., 2015; FAO, 2013; Fuglie, 2016; Maestre et al., 2017). At the same time, we acknowledge the existing debate of the effects of the private sector on nutrition and health in society ie. growing obesity problems on the one hand and access to more fresh food and less ultra processed ones on the other. This article doesn't contribute to this debate. It requires further research to explore how enabling environments can be created that promote business models aimed at healthy and diverse diets.

This paper makes several contributions to the understanding of the role of private sector in enhancing food and nutrition security. Firstly, this research sharpens the five BIS clusters proposed by Chevrollier (2012) by deepening the understanding of the foundation level components that contribute to the internal fitness of the strategic business model for improved food and nutrition security. The analytical perspective used provides more detailed insights in the interrelation between foundation components vital to the IB model on food and nutrition security which are: affordable product quality, personalized customer relations combined with appropriate distribution strategies and structures, and investments in building relations with value chain actors. It shows that BIS aimed at improved local food production tend to embed more by establishing vertical alliances, while the BIS on nutrition and food consumption embed both by vertical alliances but also the more complex diagonal alliances. It also reveals insights on the stage of the IB model and predominant embedding strategies, and eco system strengthening strategies. The early stage of business development of the IB cases analyzed, shows that the focus of the lead party is more on strengthening its internal fitness combined with upgrading strategies, than economies of scale. Further research on the different stages of business development or public private partnership development and IB model elements, is required to provide more insights on similarities and differences of the IB model over time.

Secondly, the case studies confirm the importance of the 4's of the marketing mix with the BOP also for business models on food and nutrition security. The research adds insights

to this by showing that IB models for food and nutrition security for the vast majority combine affordability and product quality with accessibility through the appropriate strategies on marketing and distribution. These appear to be crucial elements to be able to reach the BOP with products and services that contribute to improved food and nutrition security.

Thirdly, the research shows that BIS that aim at improved nutrition through the development and sales of new or adapted food formulas require the collaboration with multiple actors in the food system. These BIS always involve one or more intermediaries that are supportive to these processes by brokering partnerships. Intermediaries have also been identified by others as relevant parties to build inclusive business partnerships (Mair, Martí, & Ventresca, 2012; Manning & Roessler, 2014; Stadler & Probst, 2012). Future research on the roles and responsibilities of these intermediaries would be relevant, to create more detailed insights on the way intermediaries contribute to inclusive innovation processes and the efficiency and effectiveness of the development of BIS on food and nutrition security.

The study also has a number of policy and practical implications. The clustering in 5 dominant BIS by Chevrollier, (2012) is helpful for policy makers, private sector representatives and innovation intermediaries to benchmark a plan for IB on food and nutrition security. This enables policy makers and innovation intermediaries to interact with private sector representatives, identify the dominant BIS proposed, and check and eventually complete key elements and variables in the design and implementation of the IB model proposed. This may contribute to a more successful and sustainable business. The elements for embedding and ecosystem strengthening strategies enable policy makers and intermediaries to deep dive better into an IB model they support and reflect and act upon the appropriate embedding strategy as well as specific variables of ecosystem strategy options. This may contribute to a faster or better change of the context, which may favor the performance of the IB model.

Our study also has certain limitations. One limitation is that the cases do not provide specific information on the impact of the business model foundation components on the change of food and nutrition security of its customers. There is a strong suggestion that food-based programs could plausibly have effects on nutritional outcomes due to their impacts on intermediate factors associated with nutrition outcomes (e.g. dietary diversity). In spite of these attributes, methodological limitations are still largely limited which hampers the understanding of the effects of household food production interventions on nutrition security. It requires further research on methodologies to measure the impact of inclusive business strategies on the change of the food and nutrition security

of its customers, and awareness as well as access to tools for practitioners to include data collection and monitoring activities in the development of the BIS.

The research provides qualitative information on the challenges and opportunities of returns of the BIS as well as its sustainability over time. However, no detailed information could be obtained on income and profit/ loss data and the viability of the business model. Hence the relation between the level of impact of the business model on improving food and nutrition requirements and having a viable business model could not be assessed in this study, and further research on this aspect is required.





# Chapter 4

**Roles and functions of  
innovation intermediaries  
facilitating cross-sector  
development partnerships for  
inclusive innovation at the Global  
North-South interface**

**M.G. Danse, L.W.A. Klerkx, R. Lie, K. Rijswijk**

How Could  
Intermediary organisations  
Play a Role in  
a cross-cultural  
Se

Scholars have pointed to the critical role of intermediaries in mediating and supporting cross-sector development partnerships (CSDPs) that develop innovations that aim to include low-income users in a low-income country (LIC) context. These so-called innovation intermediaries perform various roles and functions to facilitate connections among partners. While innovation intermediaries have been studied widely in a high-income country (HIC) context, there is much less knowledge of their roles and functions in a LIC context. Research has mostly focused on single country contexts, and there is very limited knowledge on the role of innovation intermediaries in cross-border collaboration settings. This chapter aims to address this gap by unravelling the diverse roles' characteristics and related functions innovation intermediaries fulfill to support cross-border CSDPs that aim to develop viable and scalable inclusive innovations in a BOP market context. These characteristics are described based on survey findings collected from 28 innovation intermediaries active in this field, combined and complemented with the findings of semi-structured interviews held with stakeholders involved in four case studies on food security-related inclusive innovations in Kenya and Nigeria. This research reveals that innovation intermediaries in cross-border CSDPs for LICs fulfill distinct roles, such as Learning Catalysts, Conveners, Mediators, and Co-Creators. And each of them are associated with specific functions and varying levels of local embeddedness that influence the success and sustainability of inclusive innovations. The findings highlight that deeper engagement and contextual embeddedness are critical for bridging institutional and cultural distances, underscoring the importance of strategically selecting intermediary roles to support viable and scalable innovations in LIC contexts.

**Key words:** Innovation intermediaries, BOP markets, cross-sector development partnership, convener, mediator, learning catalyst, co-creator.

## 4.1. Introduction

Inclusive innovation, defined as the “development and implementation of new ideas which aspire to create opportunities that enhance social and economic well-being for disenfranchised members of society” (George, McGahan, and Prabhu (2012a)—see further section 2.1—offers the potential to drive development impact sustainably and at scale (Foster & Heeks, 2013b; Hoffecker, 2021; Mortazavi et al., 2021; Prahalad, 2004). However, only few have managed to realize inclusive innovation potential for business growth and development impact at scale (Gradl & Jenkins, 2011; Heeks et al., 2013; London, 2008; Molina-Maturano, Speelman, & De Steur, 2020; Mortazavi et al., 2021). Cross-sector development partnerships (CSDPs) (Manning & Roessler, 2014) are increasingly recognized as an answer to addressing inclusive innovation challenges (Austin, 2000; van Hille et al., 2019). In 2015, one of the UN’s Sustainable Development Goals was to “revitalize the global partnership for sustainable development” (Duane, Domegan, & Bunting, 2021). This high-level recognition of CSDPs has stimulated academic debates, where the potential value of CSDPs for sustainable development and sustainable supply chain management is widely recognized (Bitzer & Glasbergen, 2015; Kolk, van Dolen, & Vock, 2010; Kolk et al., 2008; London & Hart, 2004; Stadtler, 2015; van Tulder et al., 2016; van Hille et al., 2019).

Often these CSDPs engage parties based in different geographic contexts and across national boundaries (Ma et al., 2014). Such partnerships also can take different shapes and occur at different levels: between large (multinational) companies at a global level, North-South collaboration involving firms from high-income countries (HIC) developing products for low-income markets (LIC) in collaboration with the intended customer base; South-South collaboration involving local entrepreneurs (Blok, Sjauw-Koen-Fa, & Omta, 2013; Foster & Heeks, 2013a; Fu & Gong, 2011; Pansera & Owen, 2015); and between the private sector and various other societal actors, such as research centers, NGOs, and the public sector (George, McGahan, & Prabhu, 2012b; Hart & Sharma, 2004; Kolk et al., 2014; London & Hart, 2004; Stadtler & Probst, 2012). For this research, we focus specifically on partnerships that engage the private sector from HIC and other societal actors from both HIC and LIC to develop inclusive innovations for the BOP market.

Parties benefit from CSDPs as these “may provide access to complementary resources, contribute to the development of organisational capabilities and learning, facilitate the entry into new markets, reduce the organisational risk, and bridge the structural holes across the nationally bounded inter-firm networks” (Ma et al., 2014, p. 704). The potential benefits of the collaborative approach of the CSDPs are often jeopardized by challenges hampering the partnering process, including the cross-sectoral nature of this type of collaboration, the partners’ limited experience, poor governance, complex settings (Kolk et

al., 2008; Manning & Roessler, 2014; van Hille et al., 2019, 2020), the difficulty of aligning different interests, inequality between organizations related to resources or the misallocation of costs and benefits, struggles over power and influence, or cultural differences involving communication problems and/or lack of trust (van Hille et al., 2020).

The last two decades of research have shown that, despite their promise and potential, there are manifold challenges associated with CSDPs. These include the difficulty in aligning different interests (Selsky & Parker, 2005; van Hille et al., 2020); inequality between organizations related to an unequal share of resources or misallocation of costs and benefits, which can lead to struggles over power and influence (Austin & Seitanidi, 2012; Berger, Choi, & Kim, 2011; Hart et al., 2016); and cultural differences involving communication problems and/or lack of trust (Selsky & Parker, 2005; Sharma & Kearins, 2011; van Hille et al., 2020). To facilitate collaboration between heterogeneous actors, CSDPs can benefit from the involvement of “third-party actors” to mitigate the challenges mentioned above and to ensure the effective formation and implementation of the CSDP.

Research on these third party actors uses a range of terms to explain what we call intermediaries (Howells, 2006; Kivimaa et al., 2019). These include “brokers” or “broker organizations” (Lee, 2015; Stadler & Probst, 2012; Stott, 2022), “bridging agents” (Manning & Roessler, 2014), “interveners” (Gray & Purdy, 2018), “orchestrators” (Horan, 2019), or “innovation intermediaries” (Kilelu et al., 2011; Klerkx et al., 2009; Ma et al., 2014). For this research we will use innovation intermediaries. These are organizations specifically focused on bridging gaps among diverse actors and connecting them with essential innovation support services. They perform a wide range of functions, including knowledge translation, partnership brokering, conflict mediation, and resource mobilization.

While their role has been widely studied in sustainable development contexts (see Kivimaa et al., 2019), there remains limited insight into how they operate in inclusive innovation processes developed by cross-border CSDPs. Although scholars recognize the importance of intermediary organizations in facilitating partnership processes (Heeks et al., 2014; Manning & Roessler, 2014), there is still a gap in understanding how innovation intermediaries navigate institutional and cultural distance—characteristic of inclusive innovation contexts—to improve partnership performance and support inclusive outcomes (Ma et al., 2014), and under which conditions they are most effective (Batterink, Wubben, Klerkx, & Omta, 2010). While existing CSDP literature acknowledges that partner diversity can lead to more proactive innovation outcomes (Lin, 2012), the multiple roles of innovation intermediaries in such collaborative settings remain underexplored. Consequently, our understanding of how these intermediaries contribute to social change processes through the design and implementation of CSDPs is still limited.

The growing interest for CSDPs to accompany the process of inclusive innovation for sustainable development (and innovation in general) has led to the emergence of innovation intermediaries specifically focused on the context of CSDPs that bridge gaps among the diverse actors and facilitate links with necessary innovation support services (Kilelu et al., 2011; Klerkx & Leeuwis, 2008b; Manning & Roessler, 2014; Stadtler & Probst, 2012; van Hille et al., 2020; Yan et al., 2018). In general, innovation intermediaries perform a wide variety of intermediation roles in innovation to facilitate connections among partners by translating knowledge, forging linkages, mediating in the case of conflict, and seeking out financial resources. Though innovation intermediaries have been studied widely in contexts of sustainable development (see a review by (Kivimaa et al., 2019), there is limited knowledge of their role in inclusive innovation processes developed by cross-border CSDPs. Although scholars acknowledge the importance of intermediary organizations in facilitating these partnership processes (Foster & Heeks, 2013b; Manning & Roessler, 2014; van Hille et al., 2019), little research has been done on understanding how innovation intermediaries bridge institutional and cultural gulfs in such cases to improve partnership performance and support inclusive innovation (Ma et al., 2014), and under which conditions they function most effectively (Batterink et al., 2010). Existing CSDP studies recognize that partner diversity may cause more proactive outcomes (Lin, 2012). However, there is still a limited understanding of innovation intermediaries' various roles in collaborative settings. Understanding how innovation intermediaries facilitate such social change processes via the formulation and implementation of CSDPs remains limited.

The main question this research aims to answer is; *"Which roles' characteristics, and related functions do innovation intermediaries fulfill to support cross-border CSDPs that aim to develop viable and scalable inclusive innovations?"* The research contributes to theoretical debates on intermediaries, CSDPs, and inclusive innovation by deepening our understanding of the roles and functions intermediaries fulfill to support these cross-border CSDPs in BOP markets. It does so by expanding on prior theoretical frameworks by elucidating the contextual specificity of intermediary engagement, highlighting their distinct contributions to bridging cultural and institutional gaps, fostering local embeddedness, and supporting the development of viable, scalable inclusive innovations. The research is based on survey findings collected from 28 innovation intermediaries active in this field, combined with findings of semi-structured interviews held with stakeholders involved in four case studies on food security-related inclusive innovations in Kenya and Nigeria.

The chapter is structured as follows. Section 4.2 presents the conceptual framework of the research based on literature insights. Section 4.3 explains the research method. Section 4.4 presents the survey and interview findings, followed by a discussion in Section 4.5 of the merits and limitations of innovation intermediary involvement in

cross-border CSDPs for inclusive innovation. The chapter concludes in Section 4.6 with theoretical and practical implications of the findings.

## **4.2. Conceptual framework**

This Section reviews the literature on inclusive innovation, the relation between intermediaries and cross-sector development partnerships, and the roles and functions of innovations intermediaries in a LIC context, to develop a conceptual framework against which to assess and order the findings.

### **4.2.1. Inclusive innovation**

While innovation has been instrumental in increasing overall economic growth, it has also contributed to increasing economic and social inequalities (Schillo & Robinson, 2017; Yan et al., 2018). Since the 1980s, alternative models of innovation have been introduced, such as the appropriate technology approach, which seek to develop and deliver innovative technologies (goods and services) incorporating the needs and interests of the poor, and which seek to stimulate growth for those on lowest incomes (Altenburg & Lundvall, 2009; Kaplinsky, 2011). More recently, these practices have been evolving into alternative models of innovation paradigms, including “frugal innovation”, “grass-root innovation”, “below the radar innovation” (BRI), “inclusive business”, and “base-of-the pyramid (BOP) innovation” (Cozzens & Sutz, 2014; Heeks et al., 2014; Kaplinsky, 2011; Kaplinsky & Readman, 2001; Knorringa, Peša, Leliveld, & Van Beers, 2016; Molina-Maturano et al., 2020; Papaioannou, 2014; Papaioannou, Watkins, Mugwagwa, & Kale, 2016; Prahalad, 2004; Veglio, 2011). In a transdisciplinary context, the literature on these types of innovation not only shows terminological confusion but also lacks a strong theoretical basis (Molina-Maturano et al., 2020). For this research, we therefore frame this phenomenon as “inclusive innovation”, which is currently the prominent terminology found in this discourse and work (Heeks et al., 2013; Kalkanci, Rahmani, & Toktay, 2019; Mortazavi et al., 2021; OECD, 2013; Paunov, 2013).

Inclusive innovation is about “harnessing science, technology and innovation know-how to address the needs of lower-income groups” (Paunov, 2013, p. 9). While each of these paradigms has specific characteristics, and inclusive innovation can be seen through different lenses and framings (e.g. innovation targeting the marginalized, innovation for accessing lower income markets—see Opola, Klerkx, Leeuwis, and Kilelu (2021), one influential body of literature sees inclusive innovation as “market-based development”. The emphasis of this perspective on inclusive innovation is on free-market dynamics and private enterprise involvement, and innovation is aimed at co-production of profit with social goods (Pansera & Owen, 2018), the development of poor consumers as an

accessible mass-market (Prahalad, 2004), growth of technological capabilities within developing countries (Kaplinsky, 2011), and the involvement of new technologies (Foster & Heeks, 2013b; OECD, 2013). In contrast, other scholars challenge or directly oppose this approach. These contrasting perspectives, which Pansera and Owen (2018) describe as a “grassroots approach”, call for alternative patterns of innovation and development. In their view, technology is seen as being a partial and temporary solution to problems that are fundamentally social (Smith, Seyfang, Hielscher, & Hargreaves, 2013) and political (Papaioannou, 2014). Often, in practice, different conceptualizations of inclusive innovation are used in a mixed fashion (Opola et al., 2021). However, all these differing innovation perspectives share an emphasis on inclusion of actors in LIC in innovation processes, which presents a potentially important discursive bridge linking innovation and development (Heeks et al., 2014).

#### **4.2.2. Intermediaries and cross-sector development partnerships**

Since the late 1990s, there has been a trend towards forms of governance in which collaborative activities have become more prominent and extensive in all sectors (Austin, 2000; Selsky & Parker, 2005). They seek to address societal challenges (e.g., in the areas of health, education, water, and poverty alleviation) that unilateral public approaches have failed to address, or for which they are likely to provide insufficient results (James Austin & Seitanidi, 2012; Kolk et al., 2010; Tulder et al., 2016; Yan et al., 2018). Some refer to these collaborations as “cross-sector partnerships” (Selsky & Parker, 2005), “social alliances” (Sakarya, Bodur, Yildirim-Öktem, & Selekler-Göksen, 2012), or “multi-stakeholder processes” (Gray & Wood, 1991). Such processes have become particularly important in international development and transnational governance contexts (Manning & Von Hagen, 2010; Murphy, Perrot, & Rivera-Santos, 2012; Stadler, 2016). Government agencies increasingly collaborate with the private sector, NGOs, and other societal actors to accomplish complex societal and development objectives (Bartley, 2007; Geppert & Williams, 2006; Kolk et al., 2008). Manning and Roessler (2014) call these arrangements cross-sector development partnerships (CSDPs), the term used for this research. The number of CSDPs has grown very rapidly in recent years (Dentoni, Bitzer, & Pascucci, 2016).

This research focuses on cross-border CSDPs between high-income and low- and middle-income countries to develop inclusive innovations which involve one or more private companies. Private sector actors from high-income host countries are interested in entering low-income markets that offer growth opportunities, a source of innovation, efficiency advantages, and reputational advantages (Christensen et al., 2001; Hamilton, 2013). The communities in BOP markets may benefit from collaborating with the private sector, as they offer research and extension services, inputs, infrastructure, equipment, and marketing (Tuttle, 2012). In the CSDP context, attention has been paid to the

participation of multinational companies (MNEs) and NGOs to instigate processes of sustainable change, given the utility of their complementary resources and capabilities (Austin & Seitanidi, 2012; Laasonen, Fougère, & Kourula, 2012; Yan et al., 2018). But there have also been criticisms on how effectively these advantages have been realized (Arora & Romijn, 2012) and their negative effects (Hall et al., 2012; Karnani, 2009, 2010; Landrum, 2007). Critics argue that market-based solutions cannot address the root causes of many social-ecological problems in value chains (Arora & Romijn, 2011; Banks & Hulme, 2014) and may neglect wider issues of inequality and power imbalances (Bitzer & Glasbergen, 2015).

The potential benefits of the CSDP approach are often jeopardized by challenges hampering the partnering process (Huxham, Vangen, Huxham, & Eden, 2000; Ma et al., 2014). Such challenges, which stem from among others the cross-sectoral and cross-cultural nature of this type of collaboration, the partners' limited experience, poor governance, and complex settings, have caused a growth of intermediary organizations specializing in facilitating partnerships for innovation (Howells, 2006; Manning & Roessler, 2014; Stadler & Probst, 2012; van Hille et al., 2019). The complex models of collaboration and innovation with multiple or geographically distant partners has augmented the need for intermediation as the relationships become more complex and multi-faceted (Kilelu et al., 2011; Stewart & Hyysalo, 2008; van Hille et al., 2019; van Lente et al., 2003; Yan et al., 2018).

Intermediaries have been studied from several theoretical perspectives, such as social network theory (Granovetter, 1973), economic theories on market brokerage (Khurana, 2002), and innovation systems literature (Edquist, 1997; Lundvall, 2007). Within this notion, a large set of actors has been described for this role in a development context: brokers (Stadler & Probst, 2012; Winch & Courtney, 2007), bridging agents and infomediaries (Manning & Roessler, 2014), living labs (Katzy et al., 2013), animateurs (Howells, 2006), architects (Agogué, Yström, & Masson, 2013), and conveners (van Hille et al., 2019). A distinction is made here between internal and external intermediary organizations (Tennyson, 2018). Internal intermediaries, also known as "boundary spanners" (Williams, 2002), are managers from a partner organization that promote the partnership. External intermediaries are independent professionals and organizations mandated to facilitate the partnership.

For this research, we group these descriptions under the generic name of innovation intermediary. An innovation intermediary acts in a liaison role between the sources of new ideas and the users of those ideas in innovation networks and is also set up specifically to perform this mediating role (Dalziel & Parjanen, 2011; Howells, 2006). They have been found to play important roles in optimizing linkage formation in innovation systems and

in helping to build social capital for innovation, including cross-sector partnerships. Given suboptimal linkage formation and linkage underperformance in CSDPs, several studies have recommended strengthening the role of innovation intermediaries in Latin America (Ekboir & Vera-Cruz, 2012; Klerkx et al., 2015; Klerkx et al., 2009) as well as in Africa (Kilelu et al., 2011; Szogs et al., 2011) and Asia (Intarakumnerd & Chaoroenporn, 2013).

Early linear innovation models denoted simplistic relationships between knowledge suppliers and knowledge users. In these models, the role of intermediation was limited, often through consultants and technology brokers such as researchers who sought out potential partners as part of a search phase. With the arrival of more complex innovation models with multiple or geographically distant partners, the need for intermediation has increased (Howells, 2006). Their distinct attribute is that they generally do not focus on creating and implementing innovations themselves but on supporting other organizations to innovate. They do not contribute substantively to the *content* of the innovation (e.g. technology, infrastructure, knowledge, finance) but merely facilitate the process that leads to it (Kilelu et al., 2011; London & Anupindi, 2012). Van Hille et al. (2019) identified two potential tensions due to the position and strategies of innovation intermediaries. First, innovation intermediaries are often the initiators and drivers of the partnerships and, as such, are expected to play a leading role in the process. At the same time, they do not have any formal authority over their partners and lack the power to impose change upon their partners. Second, in theory they have a position as an unbiased party, while in practice they often engage as one of the partners in the process who also has a vested interest in the collaboration.

While innovation intermediation can already provide value in CSDPs within countries, given the potential for additional institutional and socio-cultural gaps in cross-border CSDPs, innovation intermediaries are here key (Klerkx & Guimón, 2017). Cross-border CSDPs benefit from the involvement of innovation intermediaries as these can provide access to complementary resources, contribute to the development of organizational capabilities and learning, facilitate entry into new markets, reduce organizational risk, and reduce institutional distance (Ma et al., 2014; Yan et al., 2018). However, the cross-border context also adds an additional layer of complexity, beyond the tensions identified earlier, as they need to navigate different institutional and cultural contexts. Mediating cross-border partnerships imply new challenges for innovation intermediaries as they normally face at least two different institutional and cultural environments. The institutional and cultural context influence the cross-border collaborations decisions, besides the internal resources and/or capabilities (Ma et al., 2014). There is what is called a “dual embeddedness” in both the context of HIC and LIC with related expectations of partners (Klerkx and Guimon, 2017).

### **4.2.3. Roles and functions of intermediaries in a BOP context**

Several ways of categorizing exist for innovation intermediaries. A common denominator describes a shared set of roles, which in some cases are further specified in functions (Batterink et al., 2010; Howells, 2006; Manning & Roessler, 2014; van Lente et al., 2003); (Agogu  et al., 2013). There is very limited research on this for innovation intermediaries active in a development context. And there are no specific accounts of innovation intermediaries supporting cross-border CSDPs to develop inclusive innovation, hence the general literature on intermediaries in CSDPs is used.

For this research we build on Stadtler and Probst (2012) categorization for innovation intermediation of public-private partnerships aiming to contribute to change in a development context. They define three roles: Convener, Mediator and Learning Catalyst. In the Convener role, the innovation intermediary moderates stakeholder discussions, mediates in joint problem diagnosis, helps craft a shared vision, and builds relationships and trust. The role seems to be focused on the relational aspects of the partnership. The Learning Catalyst contributes to the development of the partnership by building knowledge. It does this by conducting research and feasibility studies and providing expertise on the development of the collaboration on the one hand and developing tools and training partners on the other. As a Mediator, the innovation intermediary seems to play an active role in influencing the outcome of the partnership. In this role, the intermediary identifies intervention areas, important stakeholders and resources for the CSDP and connects partners and other actors to contribute to creating legitimacy and eventually helping to scale up approaches. The Mediator and Convener role appear to be more generic role descriptions that can be found both in research on innovation in developed and development contexts, while other scholars such as Altenburg & Lundvall (2009) and Kilelu et al. (2011) identify the relevance of the Learning Catalyst role specifically in a development context and in improving access to knowledge and contributing to knowledge development.

So far, most research on the intermediation of innovation refers to cases where technologies, actors, and markets already exist and where relevant actors can initiate contacts with intermediaries to launch brokering or networking processes (Agogu  et al., 2013). However, the context in which inclusive innovation is typically being developed is mainly in the fuzzy front end in which networks and brokered knowledge and ideas still must be designed. In this situation, the level of engagement of the intermediary goes beyond simply match-making between different actors, providing bridging ties or accessing knowledge and training of partners. Research of Agogu  et al. (2013) on innovation development in such fuzzy front-end situations indicates an additional fourth role of Co-Creator. Within this role, the intermediary contributes to creating new content, new knowledge and on utilizing the creative state of mind of the stakeholders in the projects

to work towards the innovation. For this research, we thus categorize intermediaries that contribute to inclusive innovation in these four roles: Convener, Learning Catalyst, Mediator, and Co-Creator.

A comprehensive overview of the specific functions' intermediaries fulfill within each of these four roles does not exist. A review of various authors who have looked at the functions of intermediary roles in supporting and managing innovation processes in general (Howells, 2006; Stewart & Hyysalo, 2008) as well as specifically in a developing country context (Agogu e et al., 2013; Kilelu et al., 2011; Ma et al., 2014; Manning & Roessler, 2014; van Lente et al., 2003) provide a collated range of functions that innovation intermediaries can fulfil. In this research, they are applied to understand the role of innovation intermediaries that facilitate CSDP that develop inclusive innovations. These functions include (Kilelu, Klerkx, & Leeuwis, 2013):

1. Demand articulation: Facilitating the process of identifying innovation challenges and opportunities as perceived by the various stakeholders through diagnostic exercises, visioning, needs assessment. The needs could include access to information, technologies, finance or institutional gaps.
2. Institutional support: Facilitating and advocating institutional change (e.g. strategy development, policy change, new business models, financial management, access to funding, and stimulating collaboration with other actors).
3. Network brokering: Identifying and linking different actors and building partnerships.
4. Capacity building: Strengthening and incubating (new) organizational forms and training of human resources.
5. Innovation process management: Coordinating interaction and facilitating negotiation and learning among different actors and lobbying support.
6. Knowledge brokering: Identifying knowledge/technology needs and mobilizing and disseminating the technology and knowledge from different sources.

The four roles and six functions provide the framework for analyzing selected intermediary organizations contributing to the development of cross-border CSDPs to develop inclusive innovation. The framework is visualized in Table 4.1.

**Table 4.1. Roles and functions of intermediaries**

Roles \ Functions	Convener	Mediator	Co-creator	Learning catalyst
<b>Demand articulation</b>				
<b>Institutional support</b>				
<b>Network brokering</b>				
<b>Capacity building</b>				
<b>Innovation process management</b>				
<b>Knowledge brokering</b>				

This framework will be applied to a sample of innovation intermediaries that facilitate cross-border CSDP to introduce inclusive innovations in LICs. The next section explains the research approach used.

### 4.3. Research approach

Huberman and Miles (1994) suggest using a qualitative research design when there is a need for in-depth understanding, local contextualization, causal inference, and revealing the points of view of the people under study. A prominent methodology in past research on collaboration has been case studies, which have proven particularly useful for generating theoretical and practical insights (Gray & Wood, 1991). This research is based on a qualitative and inductive approach to understanding better the role of intermediaries in cross-border CSDPs for inclusive innovation.

The first part of the research is based on survey findings that provided insights into 25 selected intermediary organizations active in facilitating cross-border CSDPs for inclusive innovation. Additionally, four case studies of innovation intermediaries that facilitate cross-border CSDPs on food and nutrition security inclusive innovations in Kenya and Nigeria were developed.

#### 4.3.1. Selection of innovation intermediaries

To define the characteristics of the role of innovation intermediaries in cross-border partnerships on inclusive innovation, a long list of relevant actors across regions and

sectors was generated. As a first step, search terms were defined based on the different paradigms fitting with inclusive innovation. These included inclusive business, inclusive innovation, social innovation, frugal innovation, Base-of-the-Pyramid (BOP) innovation, Gandhian innovation, jugaad innovation, and grassroots innovation. Additionally, a set of descriptive names being used as an alternative for an intermediary of CSDP was defined. This set included intermediary, public-private partnership, co-creator, facilitator, broker, consortium, joint venture, and innovation platform.

The combinations of the inclusive innovation paradigms and descriptive names were then systematically typed into Google search in March–June 2016. The results on the first three pages of the search results were then carefully analyzed for the relevance regarding the topic. The website of an apparent relevant result was browsed to check for an initial match with the research topic. Only the first three pages of the search were considered because most of the time the results on page four and beyond were duplicates or irrelevant, or the combination of search terms did not lead to more than three pages of results. The first browse of a relevant intermediary's website was also used to identify further partners, subsidiaries or other linked organizations, which could also be relevant for the research. This systematic online search combined with the snowballing method on the organizations' websites led to a long list of 228 different names. Some of the organizations identified were not necessarily relevant for the research, such as the ones that had only participated once in the intermediation of the development of inclusive innovation, or others that work on innovation for development but not with the private sector. Also, some hits appeared to refer to temporary programs instead of an organization with a formal judicial entity. For this reason, seven selection criteria were defined to identify organizations that matched best with the definition of an innovation intermediary for this research. The criteria used were:

1. The ambition of inclusive innovation/innovation for development is core to the organization and its purpose.
2. The home base of the organization is either in Europe or the United States, to allow focus on the North/South relationship of cross-border partnerships.
3. The organization actively engages with intermediary roles in bridging the global North/South relationship for development purposes.
4. The organization is involved in public-private partnership(s).
5. The organization is involved in multiple projects related to the search terms used.
6. The organization is permanent or has a long-term existence (i.e. not a project or a program).
7. The organization is a legal entity.

### 4.3.2. Survey

The 53 organizations that fulfilled all seven criteria were included in the shortlist and were invited to participate in the research by completing an online survey. The survey contained 12 questions (see Appendix 5). The first five questions related to the organizations' general characteristics, such as location, judicial state, and numbers of employees. The sixth and seventh questions focused on thematic area and country focus. The remaining questions focused on creating insights into the roles and functions of innovation intermediary organizations involved in inclusive innovation. The survey was shared with the key staff of each intermediary organization through the online program Qualtrics.

### 4.3.3. Case studies

In addition to the survey, four cross-border CSDP case studies were developed to deepen the knowledge on how innovation intermediaries contribute to the development of inclusive innovation in a development context (Eisenhardt, 1989). The overall research aims at innovation intermediary organizations that support partnerships on inclusive innovations that contribute to food and nutrition security. For this reason, the cases that were selected focus on sustainable coffee growing in Kenya, cocoa cultivation in Nigeria, local dairy sourcing in Nigeria, and seed potato cultivation in Kenya. The innovation intermediary organizations involved in these cases are part of the 53 shortlisted organizations to which the survey was applied. Table 4.2 provides a brief description of the 4 case studies.

**Table 4.2. Description case studies**

Lead innovation intermediary	MNE	Short case description
International Fertilizer Development Center (IFDC) lead party of 2SCALE consortium	Agrico	Introduction of high-quality seed potato and technical assistance to the Kenyan BOP market of smallholder potato farmers to enable them to improve their yield and quality and generate access to higher value local markets.
IFDC lead party of 2SCALE consortium	Friesland Campina/ WAMCO	Development of local dairy supply chain for the Nigerian BOP market of Fulani farmers to generate an alternative income source, local access to nutritious food and supply to the processing facilities of FC WAMCO that produce dairy products for the Nigerian market.
International Trade Initiative (IDH)	IDH Cocoa coalition	To develop a fertilizer platform for the Nigerian BOP market of smallholder cocoa growers to improve their cocoa yield and cocoa quality and as such help them to improve their incomes through internationally traded cocoa.
HIVOS	ECOM Trading	To introduce biogas digesters and carbon credit schemes to the Kenyan BOP market of smallholder coffee growers to diversify the local availability of healthy food, the access to biogas for local electricity, and increased income through an income diversification strategy.

This data was analyzed through systematically coding the transcribed interviews in Atlas.ti (version 7) against the concepts identified in the theoretical framework. The problem of internal validity was addressed by drawing up detailed case study protocols and by following the required documentation and transcription standards. External validity was increased by studying multiple organizations and analyzing multiple findings. In total, 55 interviews were held in Nigeria, Kenya and the Netherlands. These interviewees included representatives of companies, the public sector, research institutes, farmers and the innovation intermediaries involved. The interviews lasted from one to (in some cases) two hours. In addition to the interviews, we collected multiple documents related to the CSDP development for 2012–2018. These documents included: meeting minutes, annual progress reports, general information on the company and innovation intermediary websites, CSDP newsletters. This contributed to an increase in the construct validity through multiple sources of evidence. To analyze the roles and functions of the innovation intermediary involved, we combined interview data with data from the consulted documents. All interviews were tape-recorded, transcribed and coded in the qualitative data analysis and research software Atlas.ti.

The interviews targeted the interviewee's expectations of cross-border collaboration during the different phases of the partnering and inclusive innovation process. The questions also queried the roles and responsibilities of the innovation intermediaries in these different phases and the main challenges to working towards sustainability and scalable impact. The main result consisted of an overview of qualitative answers regarding the roles and functions, which the key stakeholders involved in the cross-border collaboration expected of innovation intermediaries within the inclusive innovation initiative of each case. To analyze the answers, an inductive approach was followed. A system of categories on intermediary roles was defined in 4.2., and these categories were inductively completed based on the survey findings and interview results.

## 4.4. Findings

### 4.4.1. Survey findings

The survey received responses from 28 organizations, which is a response rate of 47%. Appendix 6 presents the basic characteristics of all these organizations, based on the survey data and completed with information collected from the organizations' websites. All innovation intermediaries that were part of this research operate as external intermediaries. They are independent professional organizations that are mandated to facilitate the partnership. Most of the organizations started to contribute to the development of inclusive innovation in the early 2000s, while 40% started after 2010. Also, most organizations or units of organizations working on inclusive innovation are small: 63% of the

respondents have between 1 and 20 staff working directly on inclusive innovation. Most of the organizations surveyed are based in Europe and the USA, with the only exception of the Asian Development Bank, whose unit working on inclusive innovation is based in the Philippines. Specific countries of origin are The Netherlands, Germany, Spain, Switzerland, Austria, Germany, Italy, Finland, Sweden, the United Kingdom, the USA and the Philippines.

#### **4.4.1.1. Judicial status**

The judicial status of the innovation intermediaries is diverse: foundations (37%), corporations (20%), social enterprises (13%), associations (3%), financial institutes (3%), and others (23%). In the case of the “others” category, six of the seven respondents are applied research units of research institutes. Four of the foundations have been working for decades on poverty alleviation strategies, tilting their strategies towards inclusive innovation since the late 1990s.

#### **4.4.1.2. Funding sources**

The innovation intermediaries have a mixed base of funding sources. Only three organizations limit themselves to one type of funding source. Two European research organizations receive public funding, and the US-based research organization receives private investments. The other innovation intermediaries receive a blend of two or three different types of funding. Most organizations still depend mostly on public grants (83%), often combined with private grants provided by private foundations (70%). Nevertheless, 46% of the respondents also indicate that they receive funding from private sector investments. User fees (27%) and private funding through investment capital (6%) are the least deployed funding sources. Five innovation intermediaries stated they used “other” funding sources, specifying risk capital in innovative finance constructions, in-kind contributions (e.g. companies making their staff members available), or fees for services from private sector companies. However, these funding schemes are still quite rarely used by this type of innovation intermediaries.

#### **4.4.1.3. Thematic areas**

These innovation intermediaries operate in a wide range of thematic areas. Most intermediaries operate in three to five areas, and one organization was even active in seven. Most organizations are active in the agri/food sector and the energy sector. The 15 organizations that indicated “other sector” refer to ICT, textiles, education, tourism, housing or construction, and financial services. The broad range of thematic areas involved may be explained by the vast diversity of needs people have that live in extreme poverty experience. But it may also be caused by the fact that these intermediaries receive funding from multiple sources. Each funding agency has its own thematic area priorities. These inno-

vation intermediaries may try to spread risk by requesting funds from various agencies, implying they have to offer a diversified portfolio of thematic areas they target.

#### **4.4.1.4. Geographical focus**

The intermediaries also cover a broad geographic spread. All organizations, except for one, operate in multiple countries in Africa. Only three intermediaries are only active in Africa, while 25 intermediaries also operate in Asia and 16 in Latin America. This can be explained by the strong presence of European-based innovation intermediaries in the sample. An important part of their funding originates from European public agencies. They prioritized Africa as their focus region and rarely allowed grant receivers to develop activities in Asia and Latin America.

#### **4.4.2. Intermediary roles and functions**

The majority of the surveyed innovation intermediaries support cross-border CSDPs for inclusive innovation in the role of Learning Catalyst (34%) or Mediator (31%). The intermediaries act less like Conveners (24%) or Co-Creators (10%). All innovation intermediaries fulfil multiple intermediary functions. Demand articulation and network brokering are the most frequently offered functions, while institutional support is the least offered. Strategy development, access to funding and research are the most frequent specific supports offered as part of the demand articulation function. All intermediaries facilitate the administration of funds. Half of the respondents also support the development of innovation prototypes. The latter seem specific functions innovation intermediaries provide in this inclusive innovation context that appear to be additional to those identified in earlier research of (Kilelu et al., 2013).

Intermediaries' engagement in developing CSDPs already start at the problem setting phase of the partnership development. They promote the founding of operational CSDPs and help build up their networks and partnership relations at an early stage of partnership development. This is in line with findings of Stadtler & Probst (2012) that non-public sector based intermediaries follow a proactive approach of early engagement, while state-owned intermediaries are commonly mandated in the direction setting phase and focus on the facilitation of the successful implementation of the selected CSDPs. All innovation intermediaries of this research sample are non-public based, resulting from the selection criteria applied.

The different roles will be explained below, based on the survey results and illustrated with findings of the case studies.

#### **4.4.2.1. Learning Catalysts**

The intermediaries that act in the role of Learning Catalyst fulfill a specific set of functions of demand articulation, institutional support, network brokering, capacity building, and knowledge brokering. In this case, the intermediary creates the conditions to assess the inclusive innovation opportunity and monitors the development process of the innovation. It contributes to an enabling environment by supporting capacity development, data collection, and institutional support development. Ten of the intermediaries act as a Learning Catalyst. Three of them combine this role with the Convener intermediary role and all Learning Catalyst intermediaries are research organizations. Some of them are independent research centers with a commercial business model others are units of public universities. They all receive public funding, but 50% of them also receive grants from the private sector, members fees, and professional services sales. They work in multiple thematic areas and multiple geographic regions in the Global South. They all indicate that they fulfil intermediary functions related to demand articulation, capacity development, and knowledge brokering. In the case of demand articulation, seven intermediaries support brokering and building alliances, five conduct market analysis, five conduct research, and six provide support in strategy development. Additionally, three intermediaries support innovation prototype development.

The in-depth interviews conducted for the four case studies provide more detailed information on the intermediary functions. Of the three innovation intermediaries researched, IFDC acts predominantly in the role of a Learning Catalyst. It facilitated the development of cross-border CSDP on local dairy sourcing and processing in Nigeria and a cross-border CSDP that worked on the introduction of Dutch seed potato to smallholder farmers in Kenya. In the early stage of partnership development, IFDC engages staff and external experts to conduct scoping studies, sector research and formulate strategies to respond to the challenges identified. During the implementation phase of the partnership collaboration, they engage mainly sector and production-related experts who help to respond to challenges the partner's encounter. They also develop demonstration pilots, for example, on the introduction of lactometers to dairy processing sites that receive milk from local nomad farmers. In this case, key stakeholders explained that IFDC selected the technology, introduced it to the milk collection center, trained the people involved and monitored its use. They also explained that introducing the technological solution often takes a long time or even never happens due to the slow adaptation by local actors. The training support they provide is focused on skills development, knowledge building on sound production practices, and the adaptation to new technology. The training support is provided at multiple levels. Training activities with the local farmers are done by engaging local experts with roots in these communities and using the local radio. They organize regional and national lectures, workshops and training courses that are hosted by national and regional authorities. The content is often provided by a combination of

local and European experts. They often invite experts from Europe to contribute to these training courses. They also send local professionals to Europe for training at practical schools and research institutes and organize study tours to Europe for local experts and authorities.

#### **4.4.2.2. Convener**

Seven respondents to the survey can be qualified as Conveners when they support CSDP development. Their legal entity is diverse. Two are social enterprises, three are foundations, one is an association, and one is a multilateral financial institute. Two of them are active as innovation intermediaries facilitating CSDP since 2005–2008. The others started more recently, around 2012. Three focus only on agri-food related areas. Besides agriculture, they cover energy, water, health, and commercial services. They all receive public and private funding. Two of them receive member fees.

These intermediaries have extensive networks of private, public and civil society organizations. They are respected in their networks and for assuming a relatively neutral facilitating position. They help connect stakeholders for specific CSDP. The functions they offer in the initial phase of CSDP development relate to raising awareness, identifying relevant stakeholders, motivating them to get involved, and advocating partnership development. Once the CSDP gets into an implementation phase, the Convener facilitates the connection between partners, providing legitimacy and assuring the commitment of key stakeholders. This role aims to facilitate contact among parties, create access to information, and provide examples of inclusive innovations introduced by other parties. During the implementation phase of the CSDP, the Convener regularly organizes small events such as workshops and inspiration lunches. Moreover, if the Convener facilitates several CSDPs, it also organizes more extensive network and learning events where the different members of these CSDPs meet each other. The exchange of experience with other partners might motivate the partners to commit to achieving their partnership's ambitions and stimulate senior management engagement. The Convener role focuses on bridging social capital to connect actors. Bonding social capital is based on solid relationships and norms that create trust, communication, and information sharing (Coleman, 1990).

In the case of the four case studies, the innovation intermediary IDH acts as a Convener. In this case it convenes a cross-border CSDP on cocoa in Nigeria. International traders approached IDH, requesting help to design an initiative to improve local cultivation practices in Nigeria. The specific initiative the case study focused on was to develop a national fertilizer sourcing and distribution platform to respond to the need of cocoa growers to get access to specific fertilizers needed to grow their crops. In the early stage of CSDP development, IDH contracted an international cocoa expert organization that organized quarterly meetings between traders and local farmer organisations to facilitate

the agenda-setting process. IDH officials also attended these meetings, including field visits. IDH also facilitated funds for the design phase. These funds were topped with co-funding arrangements with the private parties involved. IDH selected a third party for the coordination of the implementation. This party administrated the funds provided, organized field visits, built a monitoring approach and collected periodic data to monitor the progress and impact. They also negotiated with local authorities on conditions that needed to be improved in the local enabling environment. The local stakeholders in Nigeria hardly knew IDH and perceived that their primary function in the CSDP was providing funds. During the implementation phase, IDH used its convening power to facilitate the engagement of local authorities and traders to define strategies to improve the enabling environment for the CSDP. One specific strategy was to develop a national procurement platform for pesticides. This initiative was based on prior experiences with such a platform in Côte d'Ivoire. However, it did not work out in Nigeria due to a lack of trust between the stakeholders involved. In this case, the Convener creates the conditions to enable others to take action. They facilitate the development of bonding social capital between partners. The focus here is on relational and cognitive dimensions.

#### **4.4.2.3. Mediator**

Innovation intermediaries that fulfill the role of Mediator engage in the CSDP partners relation and contribute to a change in the way the parties continue together and forge peer networks. In that way, these intermediaries aim to contribute actively to improved alliance performance and the stimulation of innovation. Ten of the survey respondents can be qualified as Mediators when they facilitate a CSDP. Eight of them are foundations and two, corporations. All of them are financed with a blend of public and private grants. Two of them also receive membership fees, and three receive private investments. Four of these Mediators work only in agriculture and food. The others work in a wide range of sectors and thematic areas. They are all active in two to three continents in the Global South.

The Mediator engages more actively in the CSDP process than the Convener. In the explorative stage of agenda-setting, the Mediator talks to the stakeholders, collects information and helps partners to build relationships. The majority of the respondents indicate that they fulfill an active role in influencing the change process towards an inclusive innovation by facilitating the initial meetings, motivating the participants and helping them to navigate in a particular direction by helping to define the agenda. They also actively approach other stakeholders and engage interested new partners in the CSDP. All of them indicate their involvement in the early stage of agenda-setting. They often convince the parties to draft a Memorandum of Understanding to confirm their commitments and clarify each party's roles and responsibilities. They often keep some distance from the implementation during the implementation phase as the partners lead

that part. However, their support is often related to introducing external expertise and helping build an enabling environment through lobby and advocacy.

Regarding the four case studies, the innovation intermediary Hivos can be qualified as Mediator. They facilitated a cross-border CSDP on coffee in Kenya. Hivos brought the stakeholders together at an early stage of ideation by suggesting that private sector parties and farmer cooperatives should collaborate. This idea originated from prior experiences of Hivos working in the coffee sector in East Africa. Hivos organized quarterly meetings between traders and local farmer organizations to facilitate the agenda-setting process, and they also facilitated fundraising. Public grants were topped with a co-funding arrangement with the private parties involved. Hivos contracted its staff to coordinate the CSDP implementation. They organized meetings, administrated the funds, helped install a biogas digester pilot and negotiated the collaboration agreements between the traders and the cooperatives. They also facilitated the introduction of carbon credit certification schemes to create alternative income opportunities for the smallholders involved. They also negotiated with local authorities' conditions that needed to be improved in the local enabling environment. The local stakeholders knew the staff of Hivos and relied on them for knowledge building, convening power towards traders and local authorities, and the support to introduce new practices in their farm. In the coffee case, Hivos also helped to develop a training facility for farmers. The trading company involved developed this later into an independent business. Direct involvement in the implementation also posed challenges for Hivos. When local policies changed and the prices of coffee decreased, they had to assume the loss in co-funding. This would not have happened if they had been involved as a Convener or Learning Catalyst.

#### **4.4.2.4. Co-Creator**

Four of the survey respondents fulfill the role of Co-Creator. Two are social enterprises, and two are public foundations. Three of them are only active in Africa and Asia. All of them work in at least four different sectors; three of them are active in health, and three in energy and water. Three of them receive public and private grants, and all of them also receive investment capital. One of them also receives a user fee.

The Co-Creators provide mainly functions that support the innovation development process. They contribute to the innovation management process and support demand articulation, among others, by improving market access. These innovation intermediaries engage in the design phase and facilitate the prototype design and testing. They identify an early-stage innovation in its prototype testing phase and then help improve the conditions for this testing phase. They help the CSDP in looking for funds. They organize meetings, workshops and engage experts for the specific innovation that is being tested. They have staff with capabilities in facilitating innovation testing but also stakeholder

engagement processes. As part of the innovation process management, they also support the preparation of the market launch. None of the innovation intermediaries acted as a Co-Creator, so this research only reaches limited findings on the functions of this role.

## **4.5. Discussion**

This research aims to provide an answer to the diverse roles' characteristics, and related functions innovation intermediaries fulfill to support cross-border CSDPs that aim to develop viable and scalable inclusive innovations in BOP markets. The findings of the survey and the case studies provide new insights into the specific roles and functional characteristics of the inclusive innovation intermediaries that support cross-border CSDPs between Europe-based parties and their partners in LICs.

### **4.5.1. Intermediaries and cross-sector development partnerships**

The research shows that cross-border CSDPs focusing on inclusive innovations had been receiving the support of an innovation intermediary since a very early stage of partnership development. The innovation intermediary convenes, mediates and sometimes co-creates the design of the partnership and facilitates at a later stage its implementation. In the preparation phase, they help bring the relevant parties together, facilitate the agenda-setting process, and help to build trust and enthusiasm for the collaboration. During the implementation phase, the innovation intermediaries contribute to the innovation process, capacity development, enabling environment and knowledge sharing. The involvement of these various parties helps better address the root causes of the diverse social-ecological problems in value chains, build trust with local actors, and collaborate with a variety of actors in the design and development of inclusive innovation.

The research also shows that CSDPs with a cross-border ambition benefit from innovation intermediaries' engagement for access to complementary resources such as funds and the research and knowledge provided by international experts. They also contribute to developing organizational capabilities and learning by organizing study tours and field visits at multiple levels of the partnership; local for local, regional for local, and cross-border for national. Besides that, they facilitate information that supports access to new markets. They help reduce the organizational risk by assuming part of the project management and fund administration roles and bridge the structural holes across the nationally bounded inter-firm networks. Due to their engagement in project management and fundraising activities, they also take care of mid-term and final evaluations of specific phases of the partnership development process and innovation process. These findings add to earlier work of Howells (2006) and Manning & Roessler (2014) by showing that innovation intermediaries fulfill specific roles and functions in an LIC context.

## 4.5.2. Roles and functions of intermediaries in a developing context

### 4.5.2.1. Roles

Stadtler and Probst (2012) show that an intermediary fulfills diverse roles and responsibilities to support a public-private partnership for development during the four phases of the partnering process. However, this research shows that most innovation intermediaries that support CSDPs focused on inclusive innovation engage based on one dominant role during the partnership development process. They act either as Learning Catalysts, Conveners, Mediators or Co-Creators.

Innovation intermediaries that act as Learning Catalysts differentiate from the other three by offering more functions on knowledge brokering, knowledge building and evidence searching support in the different phases of the partnership development. The advantage of these more research-oriented support roles to CSDP development processes may be a fact-based support focus and more attention for technical assistance by engaging local and international experts. However, a potential risk may be that more resources are dedicated to research than business development, which may jeopardize the long-term sustainability of inclusive innovation.

Innovation intermediaries that act as Conveners and Mediators seem less involved in the value chain activities. They leave that to the leading parties of the CSDP. They tend to focus more on partnership engagement processes, capacity development of the local partners involved, and preparing proposals that help improve the enabling environment. More than half of the innovation intermediaries active in this inclusive innovation context go well beyond the process facilitation described in prior research of Stadtler & Probst, (2012) and actively support the development and testing of prototypes as part of the innovation process. The case study results show that the prototypes being developed by the innovation intermediary in the role of Learning Catalyst aim at process and technology innovation, such as introducing information technology, processing equipment, and quality monitoring equipment. The innovation intermediary in the Convener and the Mediator roles focused more on business model innovations by increasing the purchasing power of local pesticide buyers for the cocoa sector in Nigeria and by introducing carbon credit certification schemes as alternative cost reduction and/or income generation opportunities for coffee growers in Kenya. It requires more case studies and more in-depth research to better understand these differences in innovation focus.

Only four innovation intermediaries showed a more exclusive focus on innovation process facilitation, demonstrating similar characteristics as the Co-Creator role identified by (Agogué et al., 2013). However, because none of the innovation intermediaries of the

4 in-depth case studies fulfilled the role of Co-Creator, the research only revealed limited insights on the specific functions of these intermediaries.

#### **4.5.2.2. Functions**

Appendix 7 presents the functions associated with each identified intermediary role across six key functions: demand articulation, institutional support, network brokering, capacity building, innovation process management, and knowledge brokering. Additional functions identified in this research have been added. These are fund management, process coordination, and prototype development & testing.

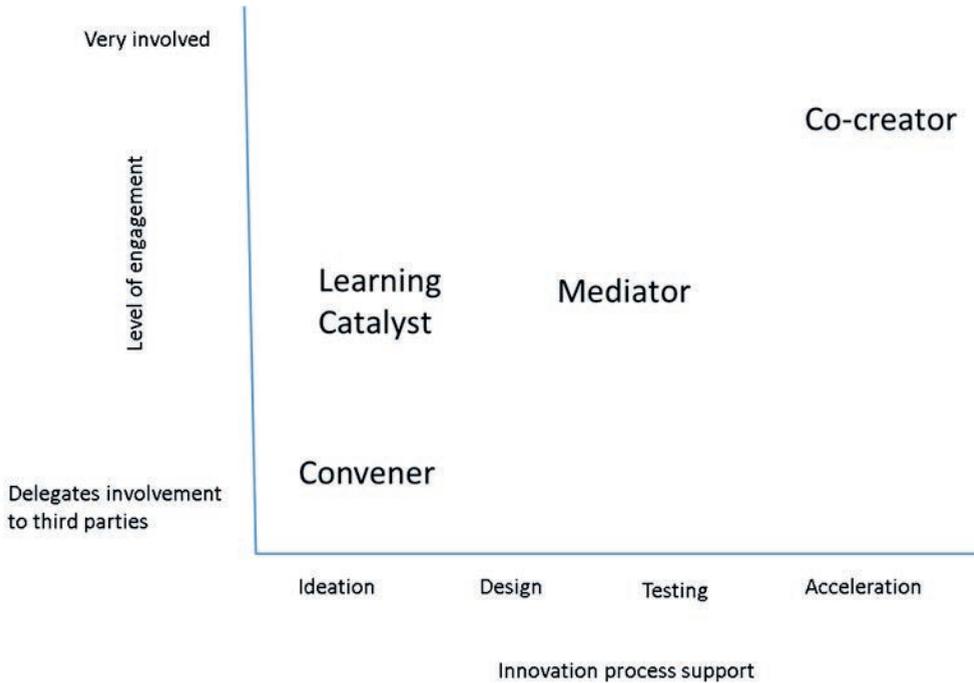
The proactive engagement of intermediaries in the early stages of CSDPs aligns with findings by (Stadtler & Probst, 2012), who emphasize the role of intermediaries in the problem-setting phase of partnerships. This proactive stance is further corroborated by Howells (2006), who posits that innovation intermediaries are not merely passive conduits of information but actively shape innovation processes by facilitating interactions among diverse actors.

Kilelu et al. (2013) and Kilelu et al. (2011) extend this understanding by highlighting the multifaceted roles of innovation intermediaries in evolving agricultural systems, particularly in smallholder contexts. They argue that intermediaries often transcend traditional knowledge brokering to engage in capacity building, network development, and institutional change, especially in settings characterized by institutional voids and resource constraints. This perspective resonates with the roles observed in this research, where intermediaries adapt their functions to the specific needs and stages of CSDP development. Kilelu et al. (2011) offered important insights into the multifaceted nature of innovation intermediaries in Kenya's smallholder agricultural system, emphasizing their hybrid roles beyond knowledge brokering, such as facilitating linkages, nurturing networks, and supporting institutional innovation. This research builds on and extends those findings by examining intermediary engagement within cross-border, multi-actor CSDPs, adding a transnational dimension that includes actors from both the Global North and South. Whereas Kilelu et al. (2013) focused on national systems, this study explores how intermediaries navigate institutional, cultural, and geographical differences, particularly in BOP market contexts. It contributes a more dynamic, temporal understanding of how intermediary roles evolve over time by showing a shift from proactive engagement in agenda setting to more facilitative or reactive support in later stages of implementation and consolidation. The research also introduces a structured typology of the four intermediary roles, each mapped to the six key functions, offering a clearer comparative framework than the more fluid categorizations in previous work. Moreover, by integrating perspectives from inclusive innovation and international market selection (IMS), the research highlights how intermediaries address data scarcity, institutional voids, and

market heterogeneity to support inclusive innovation in BOP markets, which is an aspect that was not addressed by Kilelu et al. (2011). As such, the findings advance theory by demonstrating how intermediaries strategically enable MNEs and cross-sectoral actors to identify and navigate opportunities in LIC markets.

Winch and Courtney (2007) provide a typology of innovation intermediaries, distinguishing between those that operate in top-down versus bottom-up innovation systems. Their analysis suggests that intermediaries in bottom-up systems, like the Learning Catalyst role identified in this research, are more engaged in facilitating grassroots innovation and capacity building, which is particularly relevant in BOP markets. The findings of this research contribute to this body of literature by offering a nuanced understanding of how intermediary roles evolve over the lifecycle of CSDP development. Specifically, we observe that intermediaries often commence with a high level of engagement by facilitating stakeholder alignment, articulating demand, and initiating capacity-building activities. As partnerships mature, their role transitions to a more supportive function, allowing primary stakeholders to assume greater ownership. This dynamic aligns with Howells (2006) assertion that the effectiveness of intermediaries lies in their ability to adapt their involvement based on the evolving needs of the innovation process.

Furthermore, this research underscores the importance of context-specific intermediary functions in cross-border settings. The Learning Catalyst role, for instance, demonstrates a stronger focus on data collection, research facilitation, and engaging research experts compared to other roles. This specialization is critical in BOP markets, where data scarcity and institutional heterogeneity pose significant challenges to innovation. Analyzing the role/function combination provides a more detailed insight into the differences in approach, level and engagement and contributions of the four dominant roles of engagement of the innovation intermediaries in these cross-border CSDPs. The research reveals that the support provided by a Learning Catalyst intermediary at the different stages of cross-border CSDP development has a stronger focus on data collection, research, capacity development, and engaging research experts than when innovation intermediaries engage through the other three roles. The level of engagement in the development of the cross-border CSDP by the Learning Catalyst is bigger than the Convener but less than the Co-Creator. In the case of Learning Catalyst, experienced staff of the intermediary organization gets involved in data searches, technical assistance and monitoring and evaluation processes. But they usually outsource their capacity for processes that relate to innovation development, policy dialogues and local capacity development.



**Figure 4.1. Engagement and type of contribution of innovation intermediaries in CSDP**

The Convener, Mediator, and Co-creator differ on the level of engagement of their own staff in the partnership development process and the type of contribution to inclusive innovation management, as shown in Figure 4.1. The innovation intermediary that fulfills a Convener role appears to be more in the background and engages third parties to support the CSDP implementation process. These intermediaries are proactive in the problem-setting phase, actively contributing to the agenda-setting process. During the implementation phase, Conveners support mainly by engaging other parties, influencing the institutional environment, making resources available, and providing support to be accountable to the stakeholders on the use of these resources. The Mediator is more proactive in both the problem-setting phase and the implementation of the partnership. The Mediator engages in the design process of the partnership but also the inclusive innovation process. It contracts staff to support the cross-border CSDP in fundraising, the administration of resources, capacity-building activities, and lobbying and advocacy. It engages experts for specific knowledge-building and capacity-development support, especially for developing the innovation process. The Co-Creator distinguishes itself from the other intermediaries by focusing specifically on the innovation process during the different phases of the cross-border CSDP development. It engages more in the partnership development process than the innovation intermediaries that fulfill the other

three roles. It contributes its skills and facilitate access to resources necessary for prototype testing and scaling inclusive innovations.

This categorization and the observed differences in intermediary roles are consistent with insights from Wei & Wan (2024), who examined how different types of intermediaries, digital and individual, help bridge institutional voids in inclusive markets by facilitating collaboration and supporting entrepreneurs. Their study highlights the significant role of intermediaries in overcoming institutional gaps and fostering an enabling environment for inclusive innovations. My research builds on this by expanding the scope to cross-border CSDPs, where intermediaries not only bridge gaps but also navigate and manage the complexities of market development in resource-constrained settings, particularly in BOP markets. Moreover, while Wei & Wan (2024) focus on corporate social entrepreneurs, this study provides a nuanced exploration of the roles intermediaries play towards MNEs seeking to implement inclusive innovations in BOP markets.

By aligning with and extending the work of Kilelu et al. (2011) Stadtler and Probst (2012), and Wei and Wan (2024), this research contributes to the theoretical literature on innovation intermediaries in BOP markets, with a particular focus on their evolving roles throughout the cross-border CSDP development stages. The research offers valuable insights into the practices and strategies that intermediaries use to mitigate institutional voids, thus advancing our understanding of how MNEs can enhance their engagement in inclusive innovation processes. From a practical standpoint, these findings provide guidance on how MNEs and innovation intermediaries can structure their involvement to achieve more sustainable and scalable inclusive innovations in markets with significant institutional challenges.

The research further reveals that most innovation intermediaries supporting cross-border CSDPs for inclusive innovation development actively stimulate the development and testing of prototypes. For the Learning Catalyst and Conveners, these activities are often delegated to third parties with specific expertise and/or established trust within the local community. This approach fosters local embeddedness, thereby increasing the acceptance of the innovation among the local population (Prahalad, 2012). On the other hand, Mediators and Co-creators typically provide this support directly with their own staff. The involvement of internal staff in these activities may influence the perceived neutrality and independent position that external intermediaries typically maintain in such partnerships. Additionally, intermediaries play a key role in sourcing and/or providing funding for these innovations. This is particularly relevant in the context of inclusive innovation, where the target customer base is low-income and situated within fragile development contexts. In such environments, there is often a need to source

public funding, as opposed to relying on customers to finance the innovations introduced through CSDPs.

In line with Manning and Roessler (2014), the research findings emphasize that the intermediary role is inherently a collective process, involving multiple internal and external intermediaries that collaborate with one another and engage with various stakeholders to create collaborative arenas across multiple boundaries. Innovation intermediaries taking on the roles of Learning Catalyst or Co-Creator are particularly effective at bridging culturally distant environments in cross-border CSDPs. They do this by either providing their own local and international experts or contracting experts through their networks. Meanwhile, intermediaries in Convener and Mediator roles tend to focus on bridging institutional gaps by engaging more directly in policy dialogue activities and monitoring and evaluation processes.

The diversity of innovation intermediaries that have emerged within the BOP market context reflects the wide variety of cross-border CSDP partnerships that have entered these markets over the past decade. These intermediaries play a crucial role in enabling the private sector—particularly those from high-income host countries—to navigate the institutional and cultural challenges encountered when entering new markets. They offer essential support in engaging with local stakeholders and in the development of pilot projects to test the suitability of innovations for the local context (Altenburg & Lundvall, 2009). Furthermore, intermediaries facilitate the engagement of local recipients of inclusive innovations by organizing learning and capacity-building events, site visits to other user groups, and participation in pilot processes. This interaction creates opportunities for co-creation, allowing low-income consumer groups to have a larger stake in the appropriate design of inclusive innovations. By fostering such engagement, the partners in the cross-border CSDP are better positioned to address the root causes of social-ecological problems within local value chains, as well as broader issues of inequality and power imbalances.

### **4.5.3. Implications for theory and practice**

This research contributes to the theoretical understanding of innovation intermediaries within cross-border CSDPs aimed at developing inclusive innovations by providing new insights into their roles and functions. It extends existing frameworks by introducing a typology of four intermediary roles, being Convener, Mediator, Co-creator, and Learning Catalyst, and demonstrating how each role influences the development of inclusive innovations in BOP markets. The study underscores the importance of context-specific roles, particularly in BOP markets, where institutional voids and resource constraints pose significant challenges to innovation. It aligns with and builds on prior work, such as that of Stadtler and Probst (2012), Kilelu et al. (2013); Kilelu et al. (2011) and Wei and Wan (2024),

by highlighting how intermediaries bridge gaps in institutional and cultural contexts and facilitate collaboration between actors from both the Global North and South. By focusing on CSDPs, this research enriches the literature on innovation intermediaries by introducing a transnational perspective and showing how intermediaries navigate both institutional and cultural boundaries to support inclusive innovation.

From a practical standpoint, the findings provide insights how MNEs and innovation intermediaries can engage in developing inclusive innovations in resource-constrained environments. The research reveals that different intermediary roles provide varying levels of engagement in the CSDP process. While Conveners and Mediators typically focus on facilitating partnerships and supporting the enabling environment, Learning Catalysts and Co-Creators are more actively involved in the innovation process itself, including prototype development and testing. The involvement of intermediaries at different stages of CSDP development provides a deeper understanding of how MNEs can design their partnerships to maximize their impact, ensuring that inclusive innovations are both locally relevant and scalable.

Moreover, the research emphasizes the critical role of intermediaries in accessing resources such as funding and expertise, which are essential in BOP markets where customers cannot bear the costs of innovation. It also highlights the importance of capacity building and the development of organizational capabilities through study tours, field visits, and knowledge-sharing activities. These findings offer practical guidance for MNEs and their intermediary partners on how to structure their engagement to address the root causes of social-ecological problems in local value chains, as well as broader issues of inequality and power imbalances. By fostering co-creation and engaging local actors in the design and testing of innovations, intermediaries help ensure that inclusive innovations are both effective and sustainable in the long term.

## 4.6. Conclusions

This research aimed to answer the question: “Which roles’ characteristics and related functions do innovation intermediaries fulfill to support cross-border CSDPs that aim to develop viable and scalable inclusive innovations?” The findings offer new insights into the diverse roles of innovation intermediaries in cross-border CSDPs and underscore their significance in fostering viable and scalable inclusive innovations in BOP markets.

First, it is evident that innovation intermediaries fulfill distinct roles, such as Learning Catalysts, Conveners, Mediators, and Co-Creators, each of which entails specific functions that directly influence the partnership development and innovation processes. A key

finding is that the functions of innovation intermediaries are intricately tied to their roles, with each intermediary's level of engagement shaped by their specific focus. For example, Learning Catalysts prioritize knowledge brokering and evidence gathering, while Mediators focus more on network brokering and institutional support. These differences are crucial for understanding how intermediaries tailor their approach depending on the partnership phase and the challenges specific to cross-border collaborations in LICs.

Second, the level of engagement in the partnership development and innovation processes varies depending on the intermediary role. The deeper the engagement, the more embedded the intermediary is in the local context. This local embeddedness is essential for the long-term success of inclusive innovations in LIC, as it facilitates trust-building and adaptation to local conditions. However, the extent to which intermediaries are embedded is not uniform; for example, less engaged intermediaries, such as Conveners, are less likely to bridge institutional and cultural distances effectively. This suggests that the role of the innovation intermediary may have direct implications for the sustainability and scalability of the innovation, as the extent of local embeddedness influences the ability to address the root causes of social-ecological problems. Further research is needed to explore how these varying levels of engagement affect the ecological sustainability of innovations and to what extent the intermediary's embeddedness can drive long-term success.

Third, the research reveals that innovation intermediaries play a more active role in the design and testing of inclusive innovations in cross-border CSDPs for BOP markets compared to those operating in high-income market contexts. This engagement can be attributed to the complex and fragile environment in BOP markets, where intermediaries often have to bridge significant cultural, institutional, and geographical gaps. This highlights the distinctive characteristics of cross-border CSDPs and suggests that the role of intermediaries is more critical in facilitating the adaptation and testing of innovations in such LIC contexts. Further comparative research could deepen our understanding of the specific differences between LIC and HIC contexts, particularly regarding the involvement of intermediaries in innovation development.

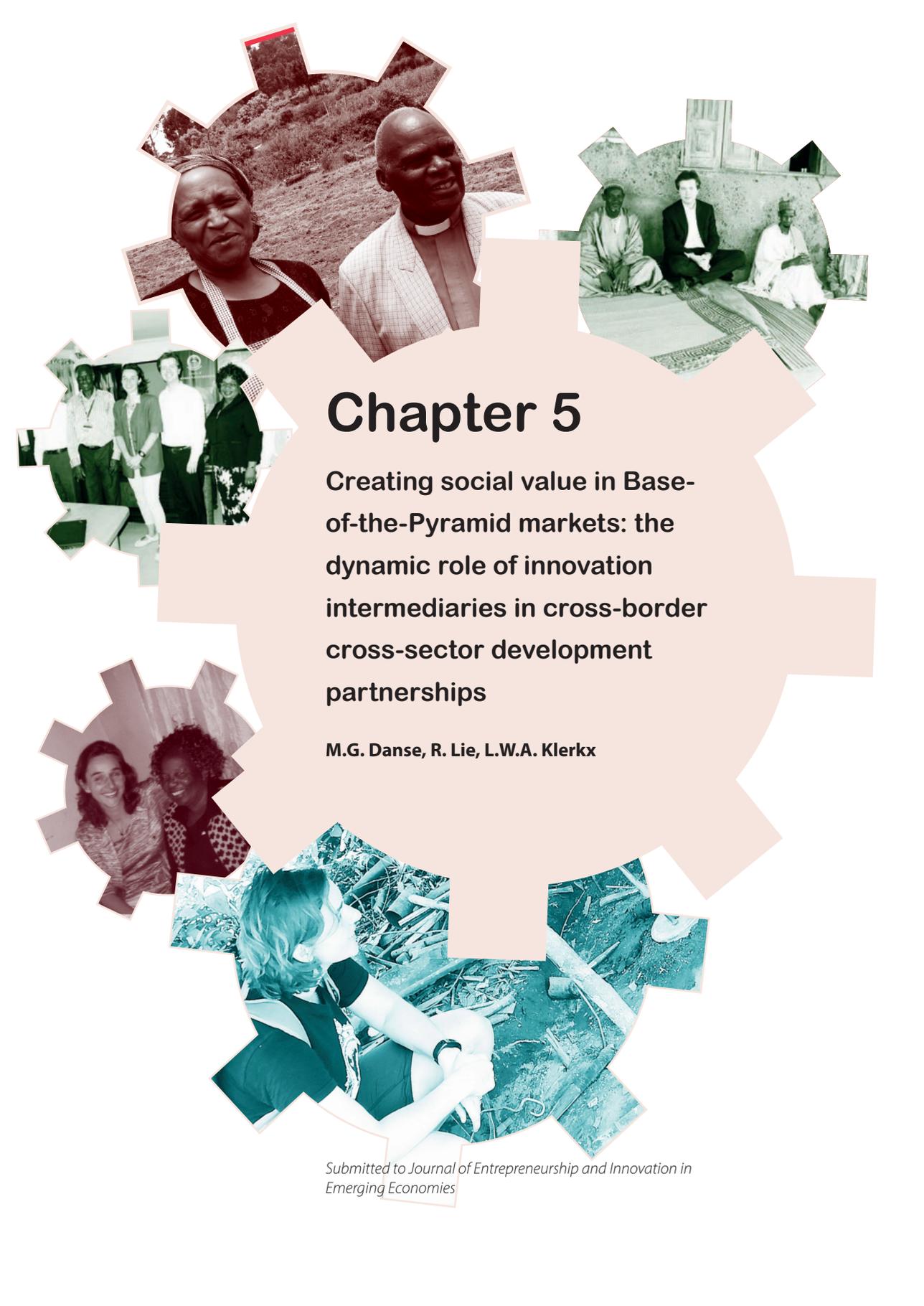
Theoretical implications of this research extend existing literature on innovation intermediaries by offering a more nuanced understanding of their roles in cross-border CSDPs in LIC contexts. By mapping the functions of intermediaries to specific roles and examining their engagement levels throughout the partnership lifecycle, this research provides a clearer typology of intermediary roles that enriches the current discourse. It also contributes to the literature on dual embeddedness Guimon, Klerkx, & De Saint Pierre (2016) by demonstrating how intermediaries navigate both institutional and local embeddedness to facilitate inclusive innovation in BOP markets. The findings also

suggest that intermediary involvement may be pivotal to overcoming institutional voids and enabling innovation in resource-constrained settings.

From a practical standpoint, the research offers valuable insights for policymakers, funding agencies, and private sector actors engaged in cross-border CSDPs in LIC contexts. Policymakers can benefit from understanding which intermediary roles and functions are most appropriate for a specific cross-border CSDP and at different stages of the partnership development process. This knowledge can guide the design of partnership support programs, ensuring that the right type of intermediary is engaged to meet the specific needs of inclusive innovation projects. Additionally, practitioners seeking to implement inclusive innovations in low-income markets can use these insights to structure their partnerships more effectively, ensuring that intermediaries are strategically positioned to bridge cultural, institutional, and market gaps.

In conclusion, the research highlights the critical role of innovation intermediaries and provides detailed findings of how their roles evolve throughout the partnership lifecycle. The findings suggest that the degree of local embeddedness and the intermediary's engagement level are pivotal to the success and sustainability of inclusive innovations in LIC contexts. These insights are vital for researchers and practitioners aiming to navigate the complexities of inclusive innovation in LIC markets and will contribute to more effective strategies for developing scalable, impactful innovations.





# Chapter 5

**Creating social value in Base-of-the-Pyramid markets: the dynamic role of innovation intermediaries in cross-border cross-sector development partnerships**

**M.G. Danse, R. Lie, L.W.A. Klerkx**

*Submitted to Journal of Entrepreneurship and Innovation in Emerging Economies*

This chapter examines the role of innovation intermediaries in cross-border cross-sector development partnerships (CSDPs) that aim to introduce inclusive innovations and create social value in Base-of-the-Pyramid (BOP) markets. Drawing on the BOP 3.0 paradigm, it introduces an integrative framework combining business model theory with insights from intermediation and social value creation. The analysis is based on four case studies in the agri-food sector in Kenya and Nigeria, each involving a European multinational enterprise (MNE), African partners, and one or more innovation intermediaries facilitating the cross-border CSDP.

The findings show that innovation intermediaries play evolving roles throughout the CSDP life cycle, shifting from Learning Catalysts and Conveners to Co-Creators, depending on contextual dynamics and governance demands. They are instrumental in designing and adjusting inclusive business models by building trust, leveraging social embeddedness, facilitating coordination among heterogeneous actors, and navigating institutional complexity across geographical and sectoral boundaries. The research also shows that carefully structured partnership governance mechanisms, often led by intermediaries, enhance the resilience and adaptive capacity of cross-border CSDPs in the face of unforeseen institutional challenges.

With respect to social value creation, the study finds that the intermediaries' ability to integrate technical assistance, capacity building, and tailored support services into inclusive business models is a critical driver of positive outcomes for small-holder farmers, including improved access to inputs, strengthened market linkages, and increased opportunities for functional upgrading. However, the cases also demonstrate that social value creation is highly contingent on the extent to which cross-border CSDPs embed strategies for local ownership, shared risk management, and long-term financial sustainability beyond the initial grant funding period. Ultimately, the study contributes new insights into how intermediaries shape multi-stakeholder collaboration to create social value in complex, cross-border BOP contexts and underscores the importance of aligning inclusive business model design with adaptive intermediation practices to achieve durable impact.

**Key words:** BOP market, social value creation, innovation intermediary, cross sector development partnership.

## 5.1. Introduction

Systematic reviews on the evolution of the Base-of-the-Pyramid (BOP) paradigm consistently show that only a limited number of multinational enterprises (MNEs) have achieved success in BOP markets (Dembek et al., 2020; Gradl & Jenkins, 2011; Kolk et al., 2014). At the same time, more development cooperation aid has been assigned to stimulate international aid and trade targeting BOP markets. Most ventures targeting these markets have either failed outright or dramatically underperformed (Dembek & York, 2022). The challenges MNEs face when entering and operating in BOP markets are significant. These include adapting their market entry strategies and business models to the institutional voids present in these markets, such as limited intellectual property rights protection, weak public services, deficient infrastructure, and varying regulatory systems (Dembek et al., 2020; Dolan & Roll, 2013; Faulconbridge, 2013; Gradl et al., 2008; Hens, 2012; Khanna, Palepu, & Sinha, 2005; London & Hart, 2004). BOP markets are often governed by informal rules, social contracts, and shared use of assets (De Soto, 2000; Fuentelsaz et al., 2020).

Given these challenges, MNEs need to adapt and customize their business models to fit the unique cultural, economic, institutional, and geographical features of BOP markets (Danse et al., 2020; Lashitew, van Tulder, et al., 2022; London & Hart, 2004; Prahalad, 2004; Voros Fregolente & Carvalho, 2023). This often requires greater inclusiveness, less reliance on formal agreements, and finding ways to engage stakeholders who have a trust base within these markets (Hart & Sharma, 2004; Hart et al., 2016). Some scholars have explored inclusive innovation to understand how it can be integrated into the business models of MNEs aiming to access BOP markets (Danse et al., 2020; Pansera & Owen, 2018). Inclusive innovation refers to the development of new goods and services that aim to create social value for and by those excluded from mainstream development, particularly the billions living on the lowest incomes (Heeks et al., 2013; Lashitew, Narayan, et al., 2022). MNEs apply inclusive innovation strategies to adapt to changing markets, attain market value and share, and gain sustainable competitive advantage in BOP markets (Mortazavi et al., 2021; Vázquez-Pacho & Payaud, 2024).

However, addressing the institutional failures in BOP markets requires more than just innovative business models. The role of innovation intermediaries becomes crucial here. These intermediaries bridge gaps among diverse actors and facilitate links with necessary innovation support services (Kilelu et al., 2011; Klerkx & Leeuwis, 2008b; Manning & Roessler, 2014; Stadler & Probst, 2012; van Hille et al., 2020; Yan et al., 2018). Innovation intermediaries, acting as liaison agents between sources and users of new ideas, optimize linkage formation in innovation systems and help build social capital for innovation, including cross-sector partnerships (Dalziel & Parjanen, 2011; Howells, 2006); (Ma et al., 2014; Manning & Roessler, 2014; Stadler & Probst, 2012).

Cross-sector development partnerships (CSDPs) are identified as important social networks to address complex international development goals (Kolk et al., 2008; Rivera-Santos et al., 2012). These project-based collaborative arrangements between the private sector, government, and civil society organizations aim to tackle issues such as food security, climate adaptation, health, and economic development (Andonova & Faul, 2022; Caldwell et al., 2017; Hartwich & Tola, 2007; Manning & Roessler, 2014; Rivera-Santos et al., 2012; Schuster & Holtbrügge, 2014; van Hille et al., 2020). In a cross-border context, CSDPs are particularly effective in creating a better understanding of local market and institutional conditions, and bridging the “liability of foreignness” for MNEs by improving their legitimacy (Dahan et al., 2010; Lashitew & van Tulder, 2020).

Despite their potential, cross-border CSDPs face challenges such as the transferability and scalability of relational contracts and the risks associated with informal coordinating mechanisms in developing economies (Lashitew & van Tulder, 2020; Mair et al., 2012; Reficco & Márquez, 2012; Webb et al., 2010). This complexity necessitates the role of innovation intermediaries to manage and navigate these partnerships effectively (Kilelu et al., 2011; Stewart & Hyysalo, 2008; van Hille et al., 2019; van Lente et al., 2003; Yan et al., 2018). Strengthening the role of these intermediaries has been recommended to enhance linkage formation and performance in regions like Latin America, Africa, and Asia (Ekboir & Vera-Cruz, 2012; Intarakumnerd & Chaoroenporn, 2013; Kilelu et al., 2011; Klerkx et al., 2015; Klerkx et al., 2009; Szogs et al., 2011).

Involving innovation intermediaries in cross-border CSDPs can provide access to complementary resources, develop organizational capabilities, facilitate market entry, reduce organizational risk, and minimize institutional distance (Ma et al., 2014; Yan et al., 2018). Their role in facilitating and shaping cross-sector arrangements is vital for fostering longer-term network relations and developing a relational capacity for social innovation (Stadtler & Probst, 2012). While their importance in sustainable development contexts has been widely studied (Kivimaa et al., 2019), there is limited knowledge on their role in private-sector-driven inclusive innovation processes and their contribution to social value creation in BOP initiatives. Given the complex nature of BOP markets, further research is encouraged to explore the relationships between the development of the BOP paradigm, business model components, innovation, ecosystems, and sustainability (Danse et al., 2020; Gradl & Jenkins, 2011; Vázquez-Pacho & Payaud, 2024).

This research aims to disentangle how innovation intermediaries enable social value creation in BOP markets by supporting the design and implementation of inclusive business models and innovations through cross-border CSDPs. The research introduces an integrative framework that is suited for analysing the processes of social value creation (Lashitew, van Tulder, et al., 2022) drawing on the business model perspective for exam-

ining the configuration of value creating activities across firm boundaries (Danse et al., 2020), and the roles and responsibilities of innovation intermediaries in the development of inclusive innovations (see chapter 4 of this dissertation).

In this chapter, Section 5.2 introduces the research framework. Section 5.3 explains the case study research method, following Eisenhardt's (1989) multiple case study approach, which involves conducting both within-case and cross-case analyses. Section 5.4 presents the findings from four cross-border CSDP international business cases that introduced inclusive innovations in the agri-food sector targeting low-income markets in Kenya and Nigeria between 2012 and 2018. These cases aimed to contribute to improved food security in the BOP market. The findings are divided into two parts:

1. The first part details the problem setting, the business model developed, and the role of the innovation intermediary for each case.
2. The second part provides the results of the cross-case analysis, focusing on the intermediation role in governance and coordination mechanisms, and its contribution to social value creation through the introduced inclusive innovations.

Section 5.5 discusses the findings by integrating insights from international business, intermediation, and social embeddedness theories, leading to derived conclusions. The chapter concludes with a reflection on the contributions and limitations of the research and proposes directions for future research in Section 5.6.

## 5.2. Conceptual framework

Cross-border CSDPs are unique collaborations that address social and development issues beyond the capacity of individual governmental, business, or non-governmental organizations (Manning & Roessler, 2014; Selsky & Parker, 2010). These partnerships are vital for promoting international development efforts such as poverty alleviation and economic growth, and supporting transnational governance initiatives like sustainability standards (Bartley, 2007; Manning & Roessler, 2014; van Hille et al., 2020; Yan et al., 2018). Their non-routine, novel, and complex nature, spanning multiple organizational, sectoral, and geographical boundaries, increases their complexity (Manning & Roessler, 2014; Rivera-Santos et al., 2012; Selsky & Parker, 2005).

Central to the effectiveness of CSDPs are innovation intermediaries, because they bridge gaps among diverse actors and facilitate essential links with innovation support services, playing a crucial role in optimizing linkage formation and building social capital for innovation (Kilelu et al., 2011; Kivimaa et al., 2019; Klerkx & Gildemacher, 2012; Klerkx &

Leeuwis, 2008a; Manning & Roessler, 2014). Acting as liaisons between sources of new ideas and their users, innovation intermediaries ensure effective collaboration and innovation diffusion within CSDPs (Dalziel & Parjanen, 2011; Howells, 2006; Ma et al., 2014).

This research adopts a business model perspective, situated at the intersection of organizational design, entrepreneurial value creation, and strategy to conceptualize social value within these partnerships. The business model framework helps analyze the coordination and governance of multi-stakeholder social value creation processes (Klein, 2008; Lashitew, van Tulder, et al., 2022; Zott & Amit, 2010). By integrating the business model perspective with the role of innovation intermediaries, this research develops a framework to understand how diverse entities collaboratively generate and capture social and economic value in complex, cross-border settings. This framework aims to unravel the mechanisms and structures that facilitate effective collaboration and value creation, highlighting the central role of innovation intermediaries in these multifaceted partnerships.

### **5.2.1. Cross-border development partnerships to manage institutional voids and embeddedness**

Cross-border CSDPs rationales for inter-organizational relations are based on a resource-dependence model, aiming to attract resources to solve an existing organizational problem, or a social change model aiming to address a shared concern or opportunity (Selsky & Parker, 2005). Bridging ties that expand the heterogeneity of the companies' network can create external linkages that provide access to unique tangible and intangible resources that would otherwise be out of the MNE's reach because of structural gaps related to institutional or geographic distance (Lashitew & van Tulder, 2020; Zaheer & Zaheer, 2006). Specifically in the BOP market context, social ties have been found to create access to intangible resources such as market-specific information and knowhow (Rivera-Santos et al., 2012), as well as social support (Lashitew et al., 2020; Lashitew & van Tulder, 2020).

In the blurred BOP market space, CSDP arise that have intentionally mixed objectives that are social-innovation driven (Selsky & Parker, 2010). Businesses may view social challenges as opportunities for creating new business models for a previously undiscovered need or for an existing need served in a new way (Porter & Kramer, 2018), such as provision of goods and services to the BOP market (Pralhad, 2004; Selsky & Parker, 2010).

Cross-border CSDP can contribute to successfully navigating institutional voids and enhancing efficiency by leveraging social capital and informal institutions (Hart, 2005; Lashitew & van Tulder, 2020). Partnerships with embeddedness assist in developing appropriate products and delivering value efficiently (Dahan et al., 2010). Cross-border

CSDP partners are typically embedded in different sectors or institutional fields and thereby exposed to different logics of action, in terms of conventional rules and beliefs guiding decision-making. Being embedded within organizational networks can provide a means of governance by facilitating resource pooling, cooperation, and coordinated adaptation (Lashitew et al., 2020; Uzzi, 2018), but competing logics also create situations of institutional complexity which increases ambiguity and uncertainty in the process of alliance formation (Manning & Roessler, 2014; van Hille et al., 2019; Van Tulder et al., 2016; Yan et al., 2018). Despite this promising potential, research has shown that CSDPs are complex and do not necessarily deliver the expected outcomes (Stadtler & Karakulak, 2020; Vangen, 2017). Instead, the outcomes are often perceived as negligible, and they are only achieved slowly and with great difficulty because of the partners' misunderstanding, frustration, power battles, cheating, and lack of participation (Huxham and Vangen 2004). Stadtler and Karakulak (2020) indicate that this is due to the tendency of CSDPs to experience slow or difficult progress due to inherent tensions between interdependence and autonomy, and the absence of hierarchical governance (Bryson, Crosby, & Stone, 2015; Lashitew, Narayan, et al., 2022; Vangen & Huxham, 2003). These tensions are amplified by cultural and sectoral diversity among partners, which can lead to conflict and friction rather than synergy, complicating efforts to align divergent goals and practices (Provan & Kenis, 2008; Quélin, Kivleniece, & Lazzarini, 2017; Saz-Carranza & Ospina, 2011; van Hille, 2020). Challenges stem from, among other things, the cross-sectoral nature of this type of collaboration, the partners, limited experience, poor governance, and complex settings (Kolk et al., 2010; Kolk et al., 2008; Rivera-Santos et al., 2012; van Hille, 2020; Voros Fregolente & Carvalho, 2023).

The complex models of collaboration and innovation with multiple or geographically distant partners of cross-border CSDPs has augmented the need for intermediation as the relationships become more complex and multi-faceted (Kilelu et al., 2011; Stewart & Hyysalo, 2008; van Hille et al., 2019; van Lente et al., 2003; Yan et al., 2018). These innovation intermediaries facilitate project and alliance formation by interacting across organizational, geographic, and sector boundaries, and by translating complex and ambiguous conditions into collaborative opportunities and constraints (Manning & Roessler, 2014; Selsky & Parker, 2010; Stadtler & Probst, 2012). Innovation intermediaries contribute by making sense of ambiguous situations (Selsky & Parker, 2010), and by framing collaborative opportunities (Manning & Roessler, 2014; Rivera-Santos et al., 2012). Additionally, they may contribute to the development of longer-term network relations across organizations and sectors which can support collaborative efforts (Stadtler & Probst, 2012), which can help develop to relational capacity for social innovation (Manning & Roessler, 2014) and social value (Caldwell et al., 2017; Lashitew, van Tulder, et al., 2022; Vázquez-Pacho & Payaud, 2024).

### 5.2.2. Innovation intermediaries to reduce organizational risk and institutional distance

Cross-border CSDPs benefit from the involvement of innovation intermediaries as these can provide access to complementary resources, contribute to the development of organizational capabilities and learning, facilitate entry into new markets, and reduce the organizational risk and institutional distance (Ma et al., 2014; Yan et al., 2018). Innovation intermediaries act as facilitators, connecting businesses with various stakeholders such as research institutions, government agencies, and non-profit organizations to promote collaborative efforts. As highlighted by Howells (2006), these intermediaries play a pivotal role in bridging knowledge gaps and promoting the exchange of ideas, technologies, and resources. By facilitating partnerships and knowledge transfer, innovation intermediaries contribute to the development of inclusive business models that address social and environmental challenges. Their role is not only to foster innovation but also to ensure that the benefits are widely shared, aligning with the principles of sustainable and socially responsible business practices. Figure 5.1. presents the conceptual framework of this research.

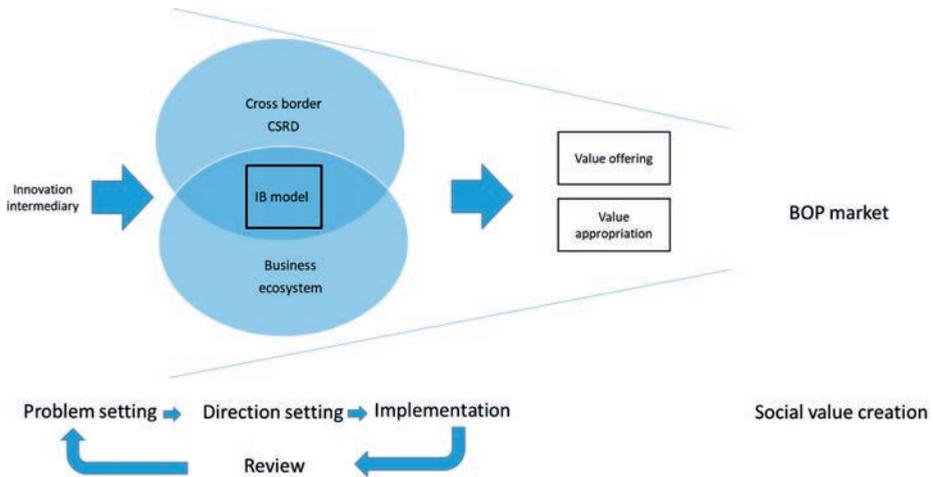


Figure 5.1. Conceptual framework

### 5.2.3. Social value creation and CSDPs

Value creation lies at the heart of management research and business practice. It involves the activities, resources, and processes that generate and deliver value to consumers (Amit & Zott, 2001). Depending on the study's focus, value creation can be conceptualized in various ways (Dembek & York, 2022; Lashitew, Narayan, et al., 2022; Ricart, 2010). This research builds on the foundational components of inclusive business (IB) models for BOP markets (Danse et al., 2020) (see Chapter 3).

From a strategic business model perspective, value creation is seen as a set of interlinked activities that cross organizational boundaries (Amit & Zott, 2001; Zott & Amit, 2010). These activities involve not only the lead firm but also its partners, suppliers, and distributors, forming an interdependent network. Key design elements of a business model, such as content, structure, and governance, are critical for understanding how value is created (Lashitew, Narayan, et al., 2022; Zott & Amit, 2010).

In the context of inclusive business (IB) models, linkages between components guide how the model is designed and whether specific elements are included. These linkages also shape how the business adapts its model in response to external change during implementation (Klein, 2008). Understanding these dynamics is essential for managing inclusive innovation in BOP markets, particularly when balancing commercial and social goals (George et al., 2012a; London, 2008).

Creating social value for the BOP market by hybrid organizational forms such as cross-border CSDPs is complex. Statistical evidence reported on alliances in general shows that they are more likely to fail than to succeed (Caldwell et al., 2017; Gulati, 2007). However, research also shows that social value is created when the partnership generates more substantial positive societal outcomes than the ones created by the individual actor working alone or limited to actors within its sector (Caldwell et al., 2017; Gradl & Jenkins, 2011). Cross-border CSDPs may outperform because of the value of networking, the access to complementary resources, and addressing bigger societal agendas (Caldwell et al., 2017; Calton, Werhane, Laura, & Bevan, 2013; Porter & Kramer, 2018; Termeer, Hilhorst, & Oorthuizen, 2010) such as accessing a BOP market with inclusive innovations that can contribute to solving issues related to health, food security, or education. Integrating the aspects of social value in the research framework facilitates the analysis of the relationship between the IB model and its external environment, particularly in multi-stakeholder social value creation efforts. Additionally, it can help understand the drivers of social value creation in terms of content, structure, and governance (Lashitew, Narayan, et al., 2022; Zott & Amit, 2010).

The value proposition is a central component of any business model (Danse et al., 2020). Lashitew, Narayan, et al. (2022) conceptualize the value proposition as comprising two key elements: value offering and value appropriation. These elements are particularly useful for analysing the creation of social value in cross-border CSDPs and the development of IB models in this research. IB models are defined as a set of activities that not only create and deliver a value offering to customers in low-income markets, but also enable the company and its partners to appropriate a share of the value created (Lashitew, van Tulder, et al., 2022; Teece, 2007).

### 5.2.3.1. Value offering

The value offering refers to the goods or services that are delivered to customers, who may either directly consume it, use it in their operations, or distribute it to other consumers. In the context of IB models, the value offering can also constitute a bundle of products and complementary services that together create a more holistic solution for the target market (Lashitew, Narayan, et al., 2022). A successful value offering typically elicits payment from consumers by providing novelty, convenience, simplicity, value for money, aesthetic appeal, or other functional benefits that resonate with user needs and preferences (Lepak, Smith, & Taylor, 2007). However, when businesses aim to contribute to broader societal outcomes, especially in low-income contexts, they need to go beyond traditional value offerings focused merely on commercial transaction or consumer willingness to pay (Anderson & Markides, 2007). BOP markets are characterized by limited purchasing power, infrastructure deficits, and fragmented demand. In this context, the value offerings must be defined differently. They need to be not only affordable, but also available through appropriate distribution channels, accessible in terms of language, design and usability, and attractive in terms of aligning with the aspirations and lived realities of BOP consumers (Prahalad, 2004). These four A's—Affordability, Availability, Accessibility, and Attractiveness—are essential dimensions in tailoring IB strategies to meet the unique needs of BOP markets.

At a broader level, the general objective of a strategic business model is to create and appropriate value for its stakeholders in line with the organization's mission and strategic intent (Morris, 2005; Porter, 1980). For a business to be sustainable in such complex settings, it must provide compelling stakeholder value propositions that go beyond financial returns to include social and environmental dimensions (Hart et al., 2016). In the context of BOP markets, (Lashitew, Narayan, et al., 2022) identify three interconnected components of social value that are particularly relevant for the development of inclusive business models:

- Consumer value, embedded within the value offering, includes the direct benefits that consumers derive from the product or service, such as improved nutrition, reduced household costs, or enhanced convenience.
- Producer value, or the value accrued to the lead firm and its partners, includes financial returns, learning benefits, and operational efficiencies generated across the value chain.
- Stakeholder value, which captures the broader effects on actors not directly engaged in production but nonetheless impacted by the business. This includes a wide array of actors such as capital owners, government agencies, local communities, and the physical environment.

Recognizing and intentionally designing for these multiple layers of value is essential in developing inclusive business models that are not only financially sustainable but also socially embedded and responsive to systemic development challenges.

### **5.2.3.2. Value appropriation**

Value appropriation refers to the aspects of a business model that facilitate the capture of economic value by various stakeholders (Lashitew, van Tulder, et al., 2022). In high-value markets, the primary goal of value appropriation is maximizing shareholder value through decisions related to pricing, customer acquisition, market development, and cost management. In contrast, social value creation in BOP markets involves a more holistic view of stakeholders, encompassing the government, business ecosystem members, the environment, civil society organizations, knowledge institutes, local communities, and increasingly, information technology providers (Caldwell et al., 2017; Howell, van Beers, & Doorn, 2018; London & Hart, 2004; Rivera-Santos et al., 2012). Creating social value requires identifying key societal segments for whom value is created and developing governance mechanisms that ensure they capture a fair share of the created value.

Advancing stakeholder value necessitates strategies that enhance economic, social, and environmental value, coupled with appropriate metrics to assess performance and inform subsequent decisions (Lashitew, van Tulder, et al., 2022). There is a growing call to expand knowledge on inclusive business approaches for BOP markets that create “shared value” by pursuing social and environmental objectives alongside commercial profit (Caldwell et al., 2017; Calton et al., 2013; Lashitew, Narayan, et al., 2022).

Success in this domain relies on incorporating culturally specific knowledge relevant to low-income consumers and addressing the needs of low-income employees, suppliers, partners, entrepreneurs, and innovators in the BOP market. Engagement with local communities throughout the value chain is essential, requiring continuous efforts to develop local skills and ecosystems for active participation in business endeavors (Goyal et al., 2014; Hart & Sharma, 2004; McCarthy & Muthuri, 2016). Beyond offering affordable products and services, IB models must adopt revenue structures that fairly distribute costs and benefits, fostering equitable relationships (Halme et al., 2012; Hart et al., 2016).

Embeddedness, which considers an organization’s social connections and structures, addresses market and institutional structures in BOP markets (Granovetter, 1973; London & Hart, 2004; Uzzi, 1996). This approach helps navigate institutional voids and enhances efficiency by leveraging social capital and informal institutions (Hart, 2005; Lashitew & van Tulder, 2020). Partnerships characterized by embeddedness assist in developing appropriate products and delivering value efficiently (Dahan et al., 2010). In BOP markets, private sector engagement requires innovative practices such as co-creating products

with customers and local entrepreneurs, cooperating with nontraditional stakeholders, and building local capacity (Hart & Sharma, 2004; Schuster & Holtbrügge, 2014a).

Innovation intermediaries play a crucial role in this process by facilitating project and alliance formation across organizational, geographic, and sector boundaries. They translate complex and ambiguous conditions into collaborative opportunities, helping to frame and develop long-term network relations that support inclusive business endeavors and social value creation. These intermediaries enhance the relational capacity for social innovation and contribute to achieving shared value in BOP markets (Manning & Roessler, 2014; Rivera-Santos et al., 2012; Selsky & Parker, 2010; Stadler & Probst, 2012).

#### **5.2.4. Innovation intermediaries' role to contribute to social value creation of cross-border CSDP**

Lashitew et al. (2020) identify four limitations that could affect the efficacy of embeddedness as a strategy for social value creation in BOP markets: non-transferability, time and financial costs, exposure to opportunism, and political and cultural risk. Innovation intermediaries reach out to potential project partners and reduce ambiguity that stems from the initial inability of partners to recognize collaborative opportunities and constraints (Lashitew, Narayan, et al., 2022; Manning & Roessler, 2014). This is particularly important in situations of institutional complexity where multiple logics of action confront each other such as CSDPs introducing inclusive innovations in BOP markets.

An important issue that may impact the social value creation of cross-border CSDPs in the BOP market context is how to coordinate and align performance across the partners involved, characterized by, for instance, different knowledge bases, divergent goals and (public and private) values, and stark differences in organizational experience. Understanding value creation involves studying how the business model of the company are interlinked with those of its partners (Dembek & York, 2022; Lashitew, van Tulder, et al., 2022; Zott & Amit, 2010). Highly effective coordination is required for such a partnership to exceed within sector value creation (Kolk et al., 2008; Lashitew, van Tulder, et al., 2022; van Tulder et al., 2016).

In this research we are interested in analyzing value creation by assessing the role of the innovation intermediary in the development of the IB model by the cross-border CSDP to facilitate the linkages between the stakeholders involved. The linkages are important for the development of the different components of the business model, and linkages also connect the business model with its external environment (Danse et al., 2020; Klein, 2008).

The ability of interdependent actors to coordinate actions stems from mutual knowledge and goal alignment. Relational coordination is vital to achieve task performance, which then drives social value creation (Caldwell et al., 2017). The relationships in cross-border are characterized by professionals and their embeddedness, meaning the interconnections surrounding a relationship (Tran, Hsuan, & Mahnke, 2011).

In this context innovation intermediaries are particularly important, as CSDPs cross multiple boundaries at the same time. The intermediaries interact with stakeholders that are embedded in different 'social worlds', such as the worlds of business and public policy which follow different logics of action and value creation (Manning & Roessler, 2014). On the other hand, these innovation intermediaries interact across different geographic contexts which increase the multiplicity of norms, agendas, and value systems they need to deal with (Manning & Roessler, 2014; Stadtler & Probst, 2012; van Hille et al., 2020). The innovation intermediary might be able to add value for the cross-border CSDP in terms of speeding up, increasing the quality, and improving the cost effectiveness of the innovation new product development process (Tran et al., 2011). One key task of the innovation intermediaries is to create linkages between the business model and the multiple stakeholders in the business ecosystem allowing for inter-firm knowledge identification, sensing, knowledge-sharing, and knowledge-combination across company boundaries (Klein, 2008; Tran et al., 2011) (see also Chapter 4).

### 5.3. Research methodology

This research is based on the case study method, because of its suitability for answering fundamental questions of why and how through an in-depth examination of an emergent phenomenon within its real-life context (Yin, 1989). Case studies are particularly appropriate for analyzing novel phenomena for which there is a need to build or extend theory (Eisenhardt, 1989). The method, therefore, suited the ambition to conduct in-depth data analysis to explain the complex process of the engagement of different innovation intermediaries in cross-border CSDP formation and development for new business development in BOP markets. The research question was studied by combining desk research and the case study method according to Yin (1989) and Eisenhardt (1989). The research is based on multiple cases rather than a single case, as this encourages the study of patterns common to cases and theory and avoids chance associations. The research is based on four cases following the recommendation of Eisenhardt (1989) that with fewer than four cases theory is difficult to generate, and with more than 10 cases, the volume of data is difficult to cope with.

Each case describes a cross-border CSDP where one or more innovation intermediaries facilitate the development of the IB model to introduce an inclusive innovation that aims to create social value in terms of improved local food security in BOP markets in Kenya, Nigeria and Côte d'Ivoire. Each case was selected by replication logic rather than by sampling logic. The criteria for selection were:

- One or more MNE involved with a European home base,
- The cross-border CSDP receives support from the Dutch Ministry of Foreign Affairs,
- The partnerships aim to develop an inclusive innovation for the BOP market in East or West Africa.

The four case studies selected for this research are:

1. 2SCALE consortium, Friesland Campina: development of a local dairy value chain from nomad beef cattle farmers to the local market in Nigeria
2. 2SCALE consortium, Agrico: high quality seed-potato for smallholder farmers in Kenya
3. 4S@Scale consortium, ECOM: biogas digesters as income diversification strategy for smallholder coffee growers in Kenya
4. IDH, Ferrero: Collective fertilizer sourcing and distribution for cocoa farmers in Nigeria.

The study combined document analysis and qualitative interviews. Project documentation from 2012–2018, including plans, progress reports, meeting minutes, field visit reports, and publicly available materials that was collected from lead intermediary organizations. Additional to the project documents, also publicly available midterm and end term external evaluation report of the grants used to finance these cases, were used to complete the findings of the case studies. However, for the coffee case in Kenya and the cocoa case in Nigeria, no specific end term evaluation report was made available. Both cross-border CSDPs were stopped at the end of the funding period due to context dynamics that jeopardized the long-term viability of the business model.

A detailed research protocol, coding structure, and interviewer guideline were developed to ensure consistency and reliability. To enhance validity, interviews were conducted with multiple stakeholders per case for triangulation. In total, 55 interviews were held in Nigeria, Kenya, and the Netherlands with representatives from MNEs, public institutions, research institutes, and innovation intermediaries. All interviews were recorded, transcribed, and systematically coded in Atlas.ti.

The interviews targeted the interviewee's expectations of cross-border CSDP during the different phases of partnership development with the aim of accessing the BOP market. They shared their views and experiences in the collaboration between the company and the innovation intermediary, and the development of the IB model. The interviewees also shared their views on the roles and responsibilities of the innovation intermediaries in these different phases of partnership development, and the main challenges encountered to work towards business sustainability and scalable impact of the inclusive innovation developed. The subsequent data analysis was iterative and overlapped with data collection as we analyzed our data after each round of fieldwork. An abductive research approach was followed, where theory and method inform each other (Van Maanen et al., 2007). We developed the research protocol and coding structure based on categories identified in the desk research. These categories were abductively completed based on the survey findings and interview results. This in turn pointed to new data needs. This iterative process helped us develop and refine the CSDP business model research framework, which guided our final analysis on the drivers of social value creation in the four cases.

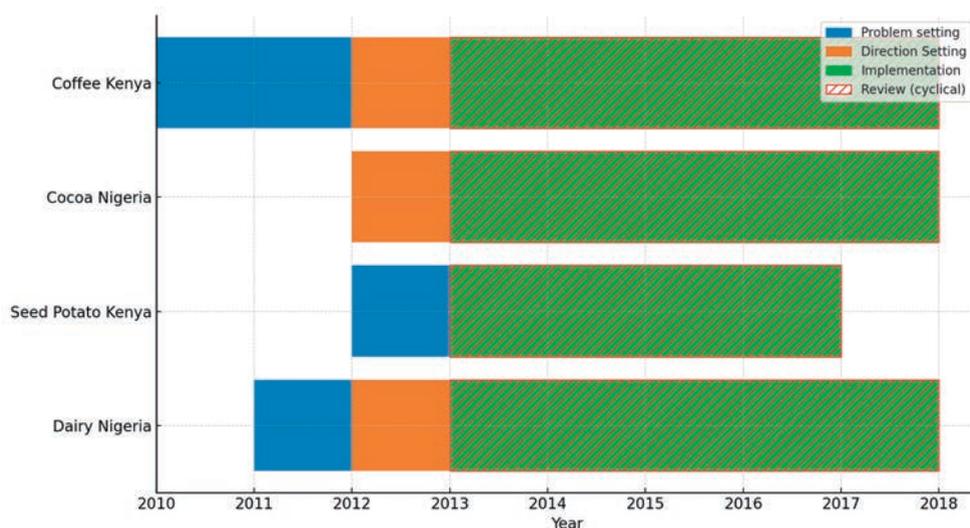
To enhance the validity of the findings, preliminary results from the analysis were presented and discussed in two validation workshops. The first took place in Kenya in March 2019 and was attended by senior management representatives of the cross-border CSDP partner organizations who had been directly involved in the development of the coffee and potato cases from their inception. The second workshop was held in the Netherlands in August 2020 and brought together Dutch senior managers from the innovation intermediaries involved in the case studies, along with representatives from Dutch research institutions engaged in research on cross-border CSDPs for improved food and nutrition security in BOP markets.

The feedback gathered during these workshops led to minor adjustments in the analysis, helping to refine interpretations and ensure contextual accuracy. In a later phase of the research, we also incorporated insights from publicly available final evaluation reports of the relevant grant programs commissioned by the Dutch Ministry of Foreign Affairs (Foreign Aid and Development Cooperation Directorate), which served to further enrich and triangulate our findings.

## 5.4. Research findings

### 5.4.1. Introduction

The four cases of cross-border CSDP were studied for the period 2010–2018. Each case represents the introduction of one or more inclusive innovations of one or more European companies in the Kenyan and Nigerian agro-food sector that were a member of a cross-border CSDP. The social value creation objective of each of these initiatives was to contribute to improved food security of BOP markets in the destination countries. The problem-setting and direction-setting phase took place in the first two years, and each of these initiatives received the approval of the grant support request in the period 2012–2015. For the dairy and potato cases within the 2SCALE program, the research focused exclusively on the initial implementation period funded by the first grant covering 2013–2018. Although the 2SCALE consortium secured a subsequent grant to support a second phase of the program, this later phase was outside the scope of this study. Figure 5.2. presents the timeline of development phases of the 4 cross border CSDP partnership case studies.



**Figure 5.2. Timeline of cross-border CSDP partnership development phases (2010–2018)**

The research findings are described in two parts. The first part describes for each case the problem-setting phase, the development of the IB model as part of the partnership cycle, and the roles and responsibilities of the lead innovation intermediary that supported the development of the cross-border CSDP. In Appendix 3 the foundation components of each case are presented. In the second part the cross-case findings are presented to analyze the role of the innovation intermediary in social value creation.

## 5.4.2. CSDP business model development and innovation intermediary role

### 5.4.2.1. CSDP FCW 2SCALE Nigeria

#### *Problem setting phase local dairy sourcing from Nigerian beef cattle Fulani farmers*

Friesland Campina WAMCO Nigeria PLC (WAMCO) is a Nigerian affiliate of the Dutch MNE Royal Friesland Campina. WAMCO is the largest importer and processor of milk products in Nigeria. The raw material for these dairy products was supplied by Dutch dairy farmers. The Nigerian government developed new regulations mandating international companies to source part of their raw materials locally. In the case of WAMCO, this implied that at least 10% of the processed milk volume or 60 million liters per year should be sourced from Nigerian farmers and cattle herders by 2016. Indications from an inventory of the actual local Nigerian production (estimated at 350 million liters per year) showed that more than 80% of this milk is produced and sold as yoghurt by nomadic Fulani. Their zebu cattle are herded in the lowlands, amidst land increasingly used by the Yoruba for crop production. Their conflicting interests with respect to land (and water) are a source of regular incidents with varying degrees of violence (DDP baseline report, 2012). In 2012 WAMCO introduced a newly established WAMCO Milk Collection Center (MCC) at Bale Fulani settlement near Fasola town, Oyo State. The aim of WAMCO was to replicate this experience in other selected states to reach the 10% local milk sourcing target. In that same period, the 2SCALE consortium started its first five-year program, and identified WAMCO as a potential partner to develop a cross-border CSDP on local dairy cluster development.

#### *IB model development*

On the initiative of WAMCO and the intermediary organization IFDC, baseline research was conducted by European dairy experts with the support of Nigerian agricultural and legal experts during the direction setting phase. The steering committee, composed of senior managers from IFDC, 2SCALE consortium partners, and the local government, used the outcomes of this research for the initial design of the IB model based on the premise to “reach this target without crossbreed cattle, using 220,000 grazing Fulani cows, supplementing 45,000 ton of concentrates per year, and install 51 MCCs” (Wolff & Koster, 2012). This strategy aimed to contribute to: improved access to resources for the smallholder such as quality feed and veterinary services; a reliable market linkage connecting the small-scale dairy farmers to WAMCO and the local dairy consumer market; improved nutrition and food security of BOP consumers; and new technology adoption, for example by introducing MCC and digital payment services to the farmers and the transporters.

Following the categories defined in Danse et al. (2020) (see Chapter 3), this case illustrates a secured sourcing inclusive business model. This model is characterized by a strong em-

phasis on building long-term supplier relationships, reducing supply risks, and improving product quality through structured collaboration with producers at the BOP. The central social value proposition here is to source milk from BOP dairy producers, both to maintain the company's license to operate in Nigeria and to improve Fulani farmers' access to higher-value markets.

In this arrangement, WAMCO provides investment and installs cattle feeding equipment and milk cold storage technologies. WAMCO and the 2SCALE consortium jointly deliver capacity development services to women, livestock farmers, and fresh milk transporters. Meanwhile, the local government commits to improving local infrastructure.

A defining feature of the secured sourcing model is the combination of technical upgrading and organizational support to enhance producers' reliability and compliance with quality standards. This is achieved through embedded services, such as training, extension support, and input provision, delivered alongside the sourcing relationship. Another characteristic is the deliberate effort to strengthen mutual commitment and trust among all value chain actors, reducing transaction costs and ensuring more predictable supply flows.

In this case, the establishment of the MCC stands out as the most important inclusive innovation introduced in the Fulani communities. The MCC required the functional upgrading of the local milk value chain (Kaplinsky & Readman, 2001), encompassing multiple adjustments in the production, transport, and processing of fresh milk. These improvements enabled farmers to increase both the volume and the quality of their milk, thereby securing access to higher-end local dairy consumer markets.

The introduction of this IB model required a change in the mindset and local practices of the Fulani: to collect the milk and hand it in to the MCC, to spend money daily buying concentrates, and to allow women's empowerment as it is women who traditionally collect the milk as a side product of cattle being used for meat and hide production. Besides this, other variables influenced the introduction of the IB model, such as the tension and conflicts between Fulani herders and Yoruba croppers over land and water (Wolff & Koster, 2012). During the implementation phase in 2012–2015, the IB model was expanded with additional activities and evolved from a secured sourcing to a rural retail hub IB model. The local partner got involved and created bank accounts for the farmers and the transporters to take care of safe payments for the fresh milk delivered to the cold storage. IFDC developed and provided training and technical assistance on financial literacy and bank account management. Gender awareness trainings were also developed and additional business development services developed in the MCC area, such as mobile phone recharge points and food sales.

Nevertheless, in 2017 it became clear that the fresh milk volumes they were able to source did not reach the planned target. This was due to a combination of low productivity of the local breed, delays in support from the local government to build the required local infrastructure in expansion regions, and challenges in changing the cultural nomad habits of the Fulani. The steering committee decided to adjust the development strategy, and incorporated crossbreeds and the engaged 50 smallholder dairy farmers before 2020 (Friesland Campina, 19 May 2015). The results of this change were out of scope of this case study.

### *Innovation intermediary role*

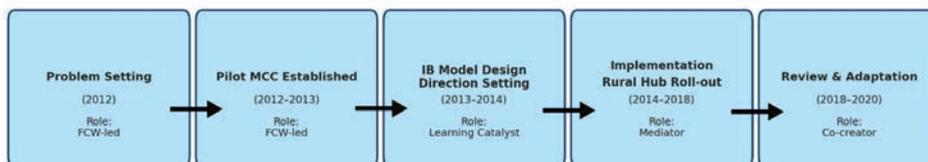
IFDC is the lead innovation intermediary for this cross-border CSDP. The intermediary can be categorized as a Learning Catalyst (see chapter 2). They contribute to the development of the partnership by building knowledge through conducting research and feasibility studies and providing expertise on the development of the collaboration on the one hand, and developing tools and training partners on the other. Key responsibilities of IFDC were partnership and program management, grant management, hiring of qualified local staff, conducting assessments, and training and technical assistance to the farmer communities. The partnership also received support from other innovation intermediaries: BOP Inc, iCRA and SNV. Together they represent the 2SCALE consortium, but IFDC is formally accountable for their performance in the program.

WAMCO started to develop the DDP prior to engaging with the 2SCALE consortium. “We entered into a partnership for Nigeria together with IFDC at the time, and with the Nigerian government. That was not as intended. We would have done it alone as Friesland Campina originally. But when we were preparing the program we learned that we do not have the knowledge and the know-how to train Fulani farmers, or to do capacity building. We are experts in milk and everything that is related to that: milk collection and milk quality. And on the other hand, because of pressure from the government, we wanted to involve the government itself in it, so that it would become co-responsible for this Dairy Development program”, (WAMCO, May 19, 2015).

During the implementation phase, IFDC gradually fulfilled additional responsibilities to the ones agreed on during the designing phase, such as: engaging and coordinating local and international partners and stakeholders; establishing market linkages between the Fulani farmers and the milk collection center; ensuring a steady quality and volume of their products for the WAMCO processing factory; extensive training programs to enhance farmers’ knowledge and skills; promoting the adoption of advanced farming techniques and sustainable practices; community engagement understanding their unique needs and challenges; tailoring solutions to ensure the inclusivity and sustainability of the program; access to credit of impact investors; and negotiating regulatory compliance

with local authorities. As such, their innovation intermediary role changed from Learning Catalyst, to Mediator, and in the implementation phase from 2015 on also to the one of Co-Creator.

The disappointing results in the growth of available fresh milk production prompted the need for collaborative innovation among the different stakeholders involved, and the intermediations required to take place in a more collective setting. In this context, IFDC started to fulfill an active role in the innovation process and the process of jointly creating knowledge. Besides the pressure caused by the ecosystem conditions, an important driver for IFDC to fulfill this Co-Creator role was their lead contracting role with the major donor, the Dutch Ministry of Foreign Affairs. These grants are granted for a fixed period, in this case five years. For this period a detailed results framework has been defined, and the aim is to deliver as close as possible to these ambitions. This causes additional pressure to deliver, even though the CSDP had to deal with multiple unexpected setbacks caused by the local business ecosystem in which the IB model was developed. Figure 5.3. presents the IB model development for the dairy cross border CSDP in Nigeria.



**Figure 5.3. IB model development for dairy cross-border CSDP Nigeria**

#### 5.4.2.2. CSDP 2SCALE – Agrico, Kenya

##### Problem setting phase seed potato cultivation by smallholder farmers for higher end markets

This case study examines the cross-border CSDP in Kenya between Agrico, the 2SCALE consortium led by IFDC, and local Dutch and Kenyan public and private entities from 2012 to 2018. The initiative aimed to enhance food security in Kenya by promoting the import of Dutch seed potatoes, building on preparatory sector development work by the Dutch and Kenyan governments from 2010 to 2013. The collaboration involved the Dutch government, private sector, and Wageningen University and Research (WUR).

The strategy included providing seeds and cultivation-related technologies, capacity building, knowledge transfer, and national performance trials over four years. The key motivation was addressing the reliance on low-quality seeds from the informal sector in Kenya, which constituted over 90% of seed potatoes. These seeds were often affected by pests and diseases, notably bacterial wilt and viral diseases, leading to poor yields and the spread of diseases in other fields (IFDC, March 21, 2016). The shortage of certified seeds forced farmers to use low-grade seeds, resulting in low incomes from potato cultivation.

The Dutch Embassy facilitated stakeholder discussions to explore developing the Kenyan potato sector through a cross-border CSDP. Agrico B.V., a leading potato breeding company, and IFDC met during a trade mission organized by the Dutch Embassy in Kenya in 2013. “Agrico was an interesting partner for 2SCALE because four varieties of the company were already registered in the country” (IFDC, 21 March 2016). Agrico recognized the need for a partner to assist with awareness-raising and training activities. Concurrently, the 2SCALE consortium received five-year funding approval from the Dutch Ministry of Foreign Affairs. IFDC reached out to Agrico, which responded positively because “IFDC was there to help us to help the farmers reach their market... we need to complete the value chain and that is something that they are good at...” (Agrico Kenya, 22 March 2016).

### *IB model development*

During the direction-setting phase of this cross-border CSDP, baseline research was conducted by external experts hired by 2SCALE. The outcomes of the research were used to design the IB model which consisted of seed trial sites, awareness campaigns, farmer training, improved storage, credit, and linkages with private firms supplying fertilizers, agrochemicals, and farm machinery. The smallholder potato farmers are the target customer of the business model.

According to the IB model categories defined by Danse et al. (2020), this case designed a farmer development center model. Agrico supplies BOP smallholder potato farmers with inputs (potato seed, cultivation and harvesting equipment) and services with the aim to improve the volumes and quality of the potato production. The farmer associations produce for the local market. The aim of the IB model was to connect them to higher-value market segments of fresh potato buyers (supermarket sector) as well as the processing industry for the fast-food sector, and as such improve the income of the potato farmers.

Agrico focused on the production side of the value chain. IFDC helped to engage and train the growers but also helped to reach out and negotiate new contracts with local buyers of the processing and retail sector (Agrico Kenya, March 22, 2016; IFDC, March 21, 2016). The local government developed a national potato expert center and helped to improve the local institutional environment and long-term technical assistance to the farmer groups.

IFDC organized clusters of small holder farmer communities to grow eight new high-yielding Agrico varieties, multiplied in the country from seed potatoes imported from the Netherlands. In the first year of implementation, the farmers planted more than 300,000 kilograms of imported seed potatoes and sold the harvest for higher prices to higher-end local market segments. More than 1,200 farmers were trained on improved production methods using low-cost planting and harvesting equipment introduced for the first time

in Kenya. Also, low-cost potato storehouses are being scaled out with co-investment by traders and processors. The yield per hectare increased. And IFDC also facilitated the engagement of a new local business partner. They introduced Kenya's first producer contracts for potatoes and purchased more than 100,000 kilograms, paying 50% above the market price. Besides that, the buyer also introduced a unique loan scheme facilitated by 2SCALE in partnership with a microfinance agency (IFDC, March 21, 2016). Farmers that had contracts with this buyer also received seeds and fertilizers on credit. Repayments were deducted from farmer payments at harvest.

IFDC raised potato producers' awareness on the benefit of using good quality seed through demonstrations sites and provided training on sustainable intensification of production as well as high-quality potato production for targeted markets. However, problems arose when many trained farmers did not receive Agrico's seed potatoes on time due to delays in the import process. As a risk mitigation measure, IFDC adjusted the service delivery model towards the farmers and expanded the scope of collaboration to local potato seed multipliers and locally based seed houses and supply systems. They intensified their focus on producer groups and firms, both small (i.e. Molly Flowers) and large (i.e. KEVIAN), to co-invest in inclusive potato value chains (IFDC, March 21, 2016). In late 2017, 33 Dutch seed potatoes varieties were registered in Kenya. The Dutch and Kenyan government established a long-term collaboration agreement, and the potato sector development initiative started to expand to neighboring countries (Dutch Embassy, November 26, 2016).

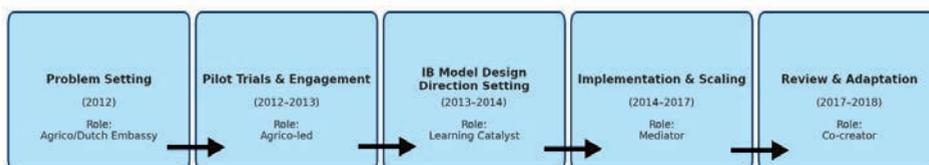
#### *Innovation intermediary role*

Agrico and IFDC (as lead organization of the 2SCALE consortium) identified the opportunity to work together in 2014. This was shortly after Agrico had finished their field trials and had obtained a license to import seed potatoes of its commercial varieties to Kenya. During the design phase of the cross-border CSDP IFDC led the process to develop a detailed consortium agreement that was signed by Agrico and IFDC. This included agreements on roles and responsibilities of Agrico, IFDC, and the Kenya potato development center, the governance structure of the partnership and the coordination mechanism that were going to be used to plan, implement, review and correct the partnership activities. This process was new to Agrico management as they are "more action oriented and had to get used to the thorough process IFDC managed to reach clear agreements on the collaboration" (Agrico Kenya, 22 March 2016).

IFDC is the lead innovation intermediary for this cross-border CSDP. At the start of the partnership development, IFDC engaged as a Learning Catalyst intermediary (see Chapter 4). This is shown in their research approach during the problem setting and direction setting phase. Baseline studies, business model development and the design of

the support programs are based on the technical capacity of the staff with the support of external experts from local and international knowledge institutes. IFDC played a key role in connecting smallholder farmers with local higher value market segments, ensuring fair pricing and improved access. IFDC and iCRA, one of the other 2SCALE consortium partners, executed the capacity building program. They organized workshops and training programs to educate farmers on the benefits of quality seed potatoes and best agricultural practices. IFDC also played a coordinating role, fostering collaboration among stakeholders, including Agrico, 2SCALE, the Dutch Embassy, and the local government. During the period in which the import of the seed potatoes was delayed, IFDC fulfilled additional roles in supporting the farmers to find a short-term solution and help to prevent this situation repeated in the future. During that phase the role of IFDC changed from Learning Catalyst to Convener, assuming more responsibilities to make the CSDP work for all parties involved. One of the main reasons for them to fulfill these additional responsibilities was because of the liability risks involved because IFDC was the lead contract partner for the grant of the Dutch Ministry of Foreign Affairs (IFDC, Dec 15, 2015).

While IFDC was the formal innovation intermediary, the Dutch Embassy played also an important role as an informal, diplomatic convener in the development of this CSDP. The Embassy fulfilled a key role in developing local sector knowledge at local ministries, knowledge center and the national potato institute. It also organized official visits at the Ministry level between the countries and hosted multiple sector stakeholder events. It facilitated the sector development strategy during the precompetitive phase by supporting the establishment of a potato platform and provided resources for exchange visits and capacity development programs. At a later stage it withdrew, and the companies assumed full responsibility. This was the period that IFDC and Agrico started the implementation phase. Figure 5.4. presents the IB model development for the seed potato cross-border CSDP in Kenya.



**Figure 5.4. IB model development for seed potato cross-border CSDP Kenya**

### 5.4.2.3. CSDP 4S@SCALE, Kenya

#### *Problem setting phase 4S@Scale smallholder coffee growers in Kenya*

In the late 1990s and early 2000s, coffee production fell strongly in Kenya due to declining global prices and falling away of public sector extension services and support for coffee

farmers due to structural adjustment programs. Kenyan coffee production also suffered from climate change, affecting the production due to drought and heat. Some high-altitude coffee regions were even being taken out of production as temperatures got too high for Arabica. Smallholders were and will remain critical to supply from this region. Large estates were declining, as there was a trend to turn them into urban settlements or other commercial activities. Coffee is only one of the range of activities undertaken by smallholders in coffee-producing regions to meet household needs. Other key activities include staple and horticulture crop production, off-farm wage labor, animal husbandry and other cash crops. Despite this, most coffee smallholders experience food insecurity and were net food buyers, making them vulnerable to national food deficits and increasing prices. Also, coffee smallholders spent an increasing part of their income on fuel due to a dwindling biomass resource base and rising fuel prices. This case study explores the collaborative efforts of the cross-border CSDP 4S@Scale consortium that consisted of the commodity trading company ECOM, the Dutch INGO Hivos, Sustainable Management Services (SMS), KUL coffee and TKL. The latter three are national marketing agents, exporters and value chain managers. The initiative focused on the implementation of biogas technology in coffee association communities as a sustainable solution, emphasizing an inclusive business model to enhance the economic, social, and environmental aspects of coffee cultivation.

#### *IB model developed*

The 4S@Scale consortium developed in the direction setting phase an IB model based on farmer development services following the categories defined by Danse et al. (2020). It consisted of a coherent package of interventions to address issues in smallholder coffee farming, ensuring each solution reinforced others. The IB model aimed to enhance the viability of coffee farming for 90,000 smallholders by improving net revenue, reducing household costs, and diversifying income streams to improve livelihoods and self-reliance.

The model included:

1. Introduction of good agricultural practices and climate adaptation techniques.
2. Biogas digesters for 22,000 households to improve compost quality and soil fertility, leading to increased production and income.
3. Support for alternative income sources like dairy cattle and intercropping with fruits and vegetables.
4. A large-scale credit facility allowing farmers to invest in coffee inputs, biogas digesters, dairy, and horticulture.
5. Business advice ensuring good returns on credit, with loan repayments partly in coffee, enhancing its value and providing tradable goods for marketing agencies.

Local service delivery companies provided materials and loan structuring services to diversify production and sales to local markets, increasing coffee producers' incomes.

The model relied on long-term commitments from both farmers and buyers to make the bundled services financially viable, while also assuming that improved yields and cost savings would lead to sustained adoption and repayment.

During implementation, the partnership faced challenges coordinating market access with sustainable practices. Balancing economic viability and environmental sustainability was complex. New local government policies limited farmer-trader contracts to one harvest season, affecting farmers' willingness for long-term investments like biogas digesters. Consequently, fewer farmers than expected adopted biogas digesters, reducing anticipated carbon credit income.

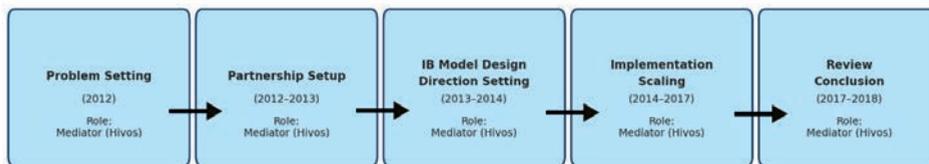
The program, funded by the Dutch Ministry of Foreign Affairs, ECOM, farmer associations, and expected carbon credit returns, faced financial constraints due to the decreased demand for biogas digesters. The collaboration agreement lacked a clause obliging the company to assume co-responsibility for this unexpected loss, leading to reduced grant size and a financial burden on the innovation intermediary, the lead contractor for the Ministry. Despite its completion, the 4S@SCALE program did not achieve financial sustainability for smallholder farmers, and during the partnership review phase it was decided to discontinue the collaboration.

The case demonstrates that while this comprehensive package of the farmer development services model had strong potential to address systemic constraints in the Kenyan coffee sector, its effectiveness was ultimately constrained by external factors such as changes in government policy on contract duration, lower-than-expected uptake of biogas technology, and the lack of shared risk arrangements among partners to cover financial shortfalls.

*Innovation intermediary role*

Hivos acts in this case as the lead innovation intermediary. Hivos fulfilled the intermediary role of Mediator (see Chapter 4). As a Mediator it is proactive in both the problem setting phase and the implementation phase of the partnership. Hivos contracted staff to support the CSDP in fundraising, the administration of resources, capacity building activities and lobby and advocacy. It engaged experts for specific knowledge building and capacity development support, especially for developing the innovation process. An important detail is that Hivos was the lead applicant for the grant request to the Dutch Ministry of Foreign Affairs, and also responsible for the carbon credit scheme. Hivos performed the overall coordination and communication of the project and management of the Ministry grant and carbon funds, developed a knowledge and learning agenda and brought in its expertise and network in capacity building of smallholder farmers and their organizations, gender and youth, biogas, carbon credits and sustainable agriculture. ECOM was responsible for the management of the farmer finance facility. The company also brought in its network of local traders and knowledge and expertise gained from years of experience in the coffee sector in East Africa and worldwide. SMS, KUL and TKL were responsible for bringing in their experience in providing technical support and sourcing coffee from large numbers of farmers, as well as their direct linkages with smallholder coffee farmers in Kenya. KENFAP is the national implementing agency for the Africa Biogas Partnership Programme.

Hivos was also responsible for carrying out activities needed to implement the biogas component of the 4S@Scale project. ECOM and Hivos worked collaboratively to align market strategies with sustainable agricultural practices. Joint workshops and training programs were conducted to integrate the economic and environmental dimensions effectively. In its capacity as lead contract holder with the Ministry, Hivos assumed responsibility for the financial risks embedded in the contractual arrangement, which required it to absorb the unrealized gains in farmers' income projected from biogas energy production and higher trader prices. The partnership failed to achieve the anticipated outcomes, as the integrated approach developed during the design phase proved unworkable in practice, with elements of the strategy disrupted by unforeseen changes in the political and institutional context. The collaborative efforts of 4S@Scale, ECOM, and Hivos contributed to some degree to a positive transformation of the coffee sector in Kenya but did not result in a financially sustainable business model. Figure 5.5. presents the IB model development of the carbon credits cross border CSDP in Kenya.



**Figure 5.5. IB model development coffee cross-border CSDP Kenya**

#### 5.4.2.4. CSDP IDH – Cocoa traders, Nigeria

##### *Problem-setting phase fertilizer trade platform for smallholder cocoa farmers in Nigeria*

This case describes the cross-border CSDP between IDH, a number of MNE cocoa traders and the local government in Nigeria. The initiative focused on smallholder cocoa growers in these countries. The productivity of cocoa in West Africa was under threat due to soil depletion and bad land management. The soil lacks nutrients and there is little land left for the cocoa farms to expand. A new approach to agricultural practices was needed. Smallholder cocoa farmers have limited access to quality inputs, market linkages, and sustainable agricultural practices. This cross-border CSDP addressed these challenges through the establishment of a fertilizer trade platform, fostering sustainable cocoa production. This initiative builds on a previous experience successfully developed in Côte d’Ivoire (IDH, Oct 7, 2015). In Nigeria it was the first time this type of platform would be set up. There was no local cocoa body of multi-stakeholders as in Côte d’Ivoire, so this platform aimed to help companies to meet regularly and start exchanging and discussing about cocoa and non-competitive issues in cocoa farming. Companies were working on their own, while in Côte d’Ivoire IDH was already assisting producers in building a bigger platform and local companies were already stronger (IDH, Oct 7, 2015).

##### *IB model developed*

According to the IB categories identified by Danse et al. (2020), the IB model of this cross-border CSDP is based on the principles of farmer development service. The main aim was to deliver fertilizer to 200,000 fertilizer-ready cocoa farmers in Nigeria by 2020, and as such contribute to improved yields, and increase sales which then result in more income for the cocoa smallholder farmers.

Key actions planned were to: develop a functional upgrading strategy for the value chain and delivery mechanisms in the cocoa industry, as well as fertilizer industry; bring cocoa fertilizer to the farm level, stimulating competition and economies of scale, thereby making fertilizer financially accessible to cocoa farmers; ensuring proper training and guidance for fertilizer use at farm level; promoting a joint knowledge agenda including studies on yield response, the farmer business case and farmers’ readiness for fertilizer uptake; and engaging the Ivorian government through its national platform. For this

initiative cocoa traders, fertilizer industry civil society organizations, and government were brought together in a public-private consortium. The Initiative was funded by the World Cocoa Foundation (WCF), Le Conseil du Café-Cacao, fertilizer suppliers and the Dutch Ministry of Foreign Trade and Development Cooperation. The main aim of companies involved was to supply BOP smallholder cocoa farmers with the fertilizer trade service to improve their productivity and yield and as such their income, while also increasing the volumes of good quality cocoa beans for the export market.

In 2014, the participating cocoa and fertilizer industry partners committed to piloting different fertilizer distribution and payment models. The three models of fertilizer-for-beans, cash-and-carry, and credit were tested to understand how to further improve these models. Over the period of the initiative's pilot phase, an important evolution was the increasing importance of savings as a precondition for fertilizer purchase. All value chain partners, many in close collaboration with the microfinance institution Advans promoted the system where farmers save at least 20–30% of the fertilizer purchase price before putting the order through to the fertilizer supplier. In parallel to testing different distribution models, a handful of companies also decided to pilot a coaching approach for a more intensive knowledge transfer. The coaching process would further assist and motivate the farmer in the correct implementation of international supply chain standards by guiding the farmer to use a farm development plan. This strategy was one among others introduced through coaching (Continaf, Nov 28. 2015).

In the first year of the implementation phase, fertilizer application trials were conducted, which resulted in promising outcomes (IDH, Oct 7, 2015). IDH ordered a big volume of fertilizer based on the results of the first-year trials, which enabled IDH to negotiate a more favorable price. The order was done using the credit schemes of the producer associations, while the Nigerian Ministry of Agriculture would subsidize half of the cost. However, "the Ministry withdrew from this commitment after the fertilizer had been imported, and after delivering the fertilizer at the producer associations, the logistic company that took care of the import and delivery encountered big difficulties to collect the co funding support" (Continaf, 29 November 2016).

During the review phase of the partnership, most beneficiary co-ops indicated that they were not satisfied with the fertilizer accessibility, while non-beneficiary co-ops were satisfied. External evaluators of the partnership observed that if the chronology of the various interventions would have been better coordinated, the overall program would have produced stronger outcomes (IDH, 2017). This disappointing result, in combination with the relatively short project funding time of four years, resulted in a discontinuation of the business model for the fertilizer import platform. "If this would have been managed by a private sector funding, the available resources would have been spread over a ten-year

period, to have sufficient time for testing, pilots and capacity building. The budget spending pressure caused by the five-year timeframe of the public sector grant was a challenge, that affected the development of the business model" (Continaf, 29 November 2016).

#### *Innovation Intermediary role*

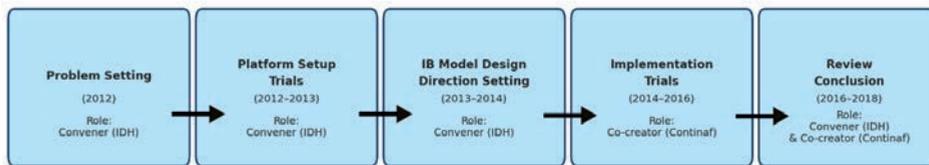
IDH served as the lead innovation intermediary for this cross-border CSDP, primarily in a Convener role, (see Chapter 4) engaging third parties to support the implementation process. IDH was proactive during the problem-setting phase, contributing to agenda-setting and engaging key stakeholders, which led to a partnership agreement in 2012. They committed grant funds covering 50% of the budget, with the other half funded by other public and private parties.

During implementation, IDH engaged Continaf, another commercial innovation intermediary, to facilitate partnership activities. Continaf, in a Co-Creator role, developed strategies to address challenges, including:

1. Collaborative supply chain management: optimized logistics to ensure timely distribution of fertilizers to remote farming communities.
2. Customized training programs: tailored training to address knowledge gaps and promote sustainable agricultural practices, creating a standard manual for cocoa farmers.
3. Engaging supporting organizations: various entities, including government agencies and non-profits, contributed to sustainable farming practices, market access, and capacity building for smallholder farmers.

IDH's role during implementation focused on monitoring and reporting adoption rates, knowledge transfer to farmers, and the financial administration of the grant. They tracked training sessions and farmer participation using a KPI table, updated biannually at partner meetings hosted by different companies. The KPI framework correlated training data with farm size or fertilizer volume, revealing a low adoption rate at the project's end.

The IB model, centered on the fertilizer trade platform and capacity building, advanced cocoa production sustainability. Strategic partnerships and training programs addressed logistics and farmer awareness challenges. However, after national elections, local government commitment waned, interrupting financial support and necessitating local follow-up. Project management was handed over by Continaf to a local organization. This case study does not cover the period after the project coordination changed, because the fertilizer platform initiative was not continued. Figure 5.6 presents the IB model development of the fertilizer platform of the cross-border CSDP in Nigeria.



**Figure 5.6. IB model development fertilizer platform cross-border CSDP Nigeria**

## 5.4.2. Social value creation in the four CSDPs

The ambition of these cross-border CSDPs was to introduce inclusive innovation in Kenya and Nigeria that contributes to (improved) social value for the BOP market. This research is based on a business model framework to conceptualize social value creation, and it empirically examines the coordination of social value creating activities in a case of cross-border CSDPs facilitated by a lead innovation intermediary. It builds on the strategic business model perspective for BOP markets (Danse et al., 2020) and the roles of innovation intermediaries in this context (see Chapter 4) (Kilelu et al., 2011; Manning & Roessler, 2014; Stadler & Probst, 2012).

This section will further describe the findings on the content, structure, and governance of the activities performed to deliver the value proposition, as these are well-established design elements for understanding value creation in inclusive business models (Lashitew, Narayan, et al., 2022; Zott & Amit, 2010). This section also reflects on the role of the innovation intermediaries in facilitating the value offer and value appropriation, by linking cross-border CSDPs to the business ecosystem of the BOP market, constitutes a key factor contributing to social value creation.

### 5.4.2.1. Content, structure and governance of the cross-border CSDP IB model

In the four cases, the content, structure and governance are not regular business model structures managed by a private sector but are all designed for the cross-border CSDP. This structure appeared not to be the first preference of the MNEs involved. All MNEs were already doing business in the countries. Agrico is the only company that was still in its market entry process and had just passed the seed registration procedure when they engaged in the CSDP process. ECOM and Ferrero were already sourcing from the local smallholder coffee and cocoa producers, and WAMCO already produced dairy products for the high-end Nigerian consumer market for decades. The MNEs engaged in a cross-border CSDP structure because they needed the other stakeholders for the successful development of a functional upgrading strategy of their value chain to enter or improve their performance in the BOP market.

During the problem-setting and direction-setting phase of the cross-border CSDP development, the innovation intermediary took the lead in the development of the baseline, the design of the partnership structure and the principles of the governance structure. The Learning Catalyst and Convener innovation intermediary engaged external research experts to collect input for the development of the content of the value proposition, while the broker innovation intermediary collected this content itself.

The senior managers of the MNEs all commented on the time investment and detailed process of developing the IB model content, structure and governance required, and its deviation from the process they were used to. The governance structure for the dairy case in Nigeria included a broad representation of stakeholders in the Steering Committee, and they managed to meet at least twice a year to discuss the progress of the initiative and the planning for the next period. None of the governance structures included the direct participation of farmers or their representatives in the Steering Committee meetings. For the dairy, coffee and cocoa initiative, the Steering Committee meetings were combined with field visits and meetings with farmers as part of the sensing of the farmers needs and farmers dynamics.

Involving external research and sector experts helped the innovation intermediary to integrate additional community development activities in the design of the business model, and more detailed description of the roles and responsibilities of the local public sector. WAMCO and Ferrero appreciate the detailed description of the governance structure the innovation intermediary proposes, because they have learned from prior experience that this else may affect the collaboration during the implementation phase, especially when unexpected situations affect the collaboration. All MNEs recognized the relevance of the content, structure and governance of the cross-border CSDP defined during the design phase when they experienced challenges working together with other stakeholders during the implementation phase.

The cross-border CSDPs for dairy, cocoa and potato dedicated time to designing the governance structure and the partnership agreement that detailed out the roles and responsibilities related to the different activities that needed to be executed. The cross-border MNE benefited in these cases from the experience of the innovation intermediary for the design of these agreements. The private sector representatives showed impatience and limited understanding for the importance of these detailed agreements, but during the implementation phase all parties benefited from these agreements when the development of the business model was affected by unexpected external impacts caused by actors in the business ecosystem. The CSDP for the coffee case defined a more generic bilateral agreement between the MNE and the innovation intermediary, and less time was dedicated to detailing out the content, structure and governance. This

had great impact on the innovation intermediary and the coffee communities when the conditions in the business ecosystem changed, and the commitments of the MNE became less attractive. The intermediary organization suffered a financial loss and had to withdraw from the initiative when public funding was finished. The coffee communities were adversely affected by the weakening of the innovation intermediary's role, as their access to training and inputs diminished and the anticipated opportunities for alternative income—through biogas digesters and crop diversification—were not consolidated.

#### ***5.4.2.2. Value offering by creating utility***

The four cross-border CSDPs designed an IB model that integrated a clear utility to small-holder farmers and their communities. Utility, as defined by Lashitew et al., (2022), refer to the capacity of a value offering to enhance consumer value by addressing a social issue in a commercially feasible and affordable way. The functionality of the value offering, which comprises of a combined package of inputs, technology, and technical assistance, emerged as a crucial factor behind the uptake of the IB models. This package addressed an essential latent demand for competitive inputs, enabling farmers to increase the quality and volume of their production, thus improving income size and stability by accessing higher-value local markets (Kaplinsky & Readman, 2001; Vellema & Danse, 2007).

#### ***Alternative to local inputs and services***

The cross-border CSDPs provided a reliable, convenient, and affordable alternative to the low-quality inputs and outdated extension services offered by local public entities. The blend of private sector experience in competitive markets and the local embeddedness of the innovation intermediaries and public entities significantly contributed to the successful introduction and rapid uptake of the IB model among the selected producer groups during the first Public-Private Partnership (PPP) cycle.

#### ***Local appropriateness and technological exposure***

Conscious design efforts to create a locally appropriate value offering enhanced the utility of capacity development services. These offerings were designed to be simple enough for ordinary people with limited technological exposure and were accompanied by training activities and technical assistance support. However, key inputs and technological solutions were managed by experienced staff from the MNEs in the cases of potato and dairy, or by the lead innovation intermediary in the cases of biogas digesters for coffee growers and fertilizer platforms for cocoa growers. This management approach may have contributed to limited local embeddedness and uptake of these business model components by the key consumers, which may have affected the local ownership and the scaling up of these parts of the business models.

### Value offering and consumer willingness to pay

In conventional commercial settings, a value offering is considered successful when consumers are willing to pay for it due to factors such as novelty, convenience, simplicity, value for money, aesthetic value, or other functional benefits. However, businesses aiming to enhance social value for the BOP market, such as those involved in the four cases, need to go beyond creating a value offering that can elicit payment (Caldwell et al., 2017; Calton et al., 2013; Vázquez-Pacho & Payaud, 2024).

In all cases studied, public grant funding played a central role in enabling this broader ambition. Specifically, each cross-border CSDP received co-funding support from the Dutch Ministry of Foreign Trade and Development Cooperation to introduce the IB model and provide technical assistance to farmer communities during the problem-setting and direction-setting phases. This external financing helped lower the initial costs and risks associated with piloting new technologies, building farmer awareness, and establishing market linkages. For example, grants covered investments in infrastructure such as the milk collection centers, demonstration plots, training programs, and financial literacy support.

During the design phase of the IB models, all four cross-border CSDPs defined functional components to connect with organized farmer groups rather than targeting individual farmers. This approach created an entry point with higher affordability, as collective purchasing power and shared infrastructure (e.g., storage facilities, processing equipment, or input delivery systems) made the value offering more accessible and appealing to the smallholder farmers involved.

Nevertheless, the findings also point to significant differences in how these partnerships are planned for longer-term sustainability and the continued management of the value offering beyond the temporary public funding period. In some cases, such as the dairy and potato initiatives, the IB designed by the cross-border CSDPs included explicit strategies to transition responsibilities to local actors, embed practices in cooperatives or farmer associations, and co-invest with private companies to sustain services after project completion. Conversely, in other cases, notably the 4S@SCALE coffee project and the fertilizer platform in Nigeria, reliance on external subsidies and fragile institutional support meant that critical components of the business model, such as credit facilities or input supply chains, faced challenges to continue operating once public funding ended.

Overall, while public funding and technical assistance were essential to launch and scale these models in the short term, the degree to which each cross-border CSDP built mechanisms to ensure long-lasting effects varied. The findings underscore the importance of designing IB models that not only create customer value and enable initial uptake but

also incorporate provisions for financial viability, local ownership, and adaptive capacity to manage the value offering sustainably over time in the BOP market. The lead innovation intermediary is well positioned during the period in which the IB model implementation is co-funded by public/external grants to fulfill the role to coordinate and follow up on creating the conditions for appropriate value offerings, creating favorable conditions for the sustainability of the inclusive innovation.

*Innovation intermediary leverage on social embeddedness and trust relationships*

Management of all MNEs involved in the four cases indicated the pivotal role of the lead innovation intermediaries by identifying farmer groups and leading engagement activities through awareness-raising efforts, leveraging their existing social embeddedness and trust relationships with farmers, which is in line with findings of (Kilelu et al., 2013; Kilelu et al., 2011; McCarthy & Muthuri, 2016). Embedded companies and entrepreneurs have a competitive advantage over non-embedded counterparts (Uzzi, 2018). In this case, the social embeddedness of the cross-border CSDP partners was part of the value offering. Engaging innovation intermediaries from the problem and direction-setting phases resulted in assigning tasks to these intermediaries to connect local communities to the initiative.

Partners of the cross-border CSDP provided training and technical advisory services to support the adoption process. In all cases, these services were provided by the innovation intermediary. The innovation intermediaries' roles in the early stages of implementation were related to filtering and interpreting information, defining situations, and helping partners recognize mutual interests and interdependencies that promote collaboration. They also pursue their own interests by tailoring collaborative conditions for potential partners to benefit from the alliance in the long term.

These findings offer important nuance for the assumption that innovation intermediary roles are a critical element to be added to existing research on social value creation. The existing literature on embedded relationships emphasizes the positive effects of trust, shared norms, and dense social ties on collaboration and value exchange (Uzzi, 2018). In the cases examined here, the embeddedness of the innovation intermediaries, which was often built over decades of working with local communities, was an asset that enabled the rapid mobilization of farmer participation and collective action.

Embedded relationships regulate the expectations and behaviors of exchange partners through trust, fine-grained information transfer, and joint problem-solving arrangements (Uzzi, 2018). Trust with the BOP market was already established at the start of the partnership, as the lead innovation intermediaries had worked for decades in the region with these communities on various activities to improve livelihoods. However, the findings

also show that high trust and visibility can create vulnerabilities when business model implementation depends on actors who are less embedded and less visible to the BOP market. In the Kenyan potato case, because the intermediary was visible and known in the community and the company not, when delays or failures occurred due to missed planting seasons caused by seed import issues, the community frustration and blame were directed toward the intermediary rather than the company responsible for delivery. This dynamic highlights how the intermediary's bridging role carries not only relational advantages but also a form of reputational risk that can undermine social value creation if expectations are not carefully managed.

Moreover, the commercial value offering in all cases was often less tangible to farmers than the longer-term promise of transformation: improvements in yields, cost reductions, and access to more lucrative markets. As a result, the trust and social capital that intermediaries leveraged in the early phases became a crucial intangible component of the value proposition itself. Yet, these relational assets alone were not sufficient to sustain engagement when operational setbacks or ecosystem constraints disrupted delivery.

These findings suggest that innovation intermediaries do more than facilitate transactions or build capabilities. They also act as custodians of collective expectations and interpreters of the commercial and social value proposition. This role goes beyond the dimensions typically captured in existing frameworks on value creation in BOP contexts, such as the ones of (Lashitew et al., 2022). It implies that future research and practice should explicitly recognize and plan for the dual nature of intermediary embeddedness: while it accelerates adoption and legitimacy, it can also magnify accountability pressures when models falter.

In this sense, the findings reinforce the proposition that innovation intermediary roles and responsibilities constitute an essential, distinct element in IB models aiming to create social value. They are not only facilitators of technical and financial arrangements but also key actors shaping how value is perceived, trusted, and ultimately realized among stakeholders in the BOP market.

#### *Financial mechanisms and in-kind contributions*

During the early stage of the implementation phase, the new inputs, technology and technical assistance support that came with the introduction of inclusive innovations were offered for free as they were covered by public sector grants and co-funding from the companies involved. Only in case of the biogas digester for coffee in Kenya did farmers contribute in-kind through their cooperative. For instance, in Nigeria's dairy case, WAMCO co-invested in equipment, materials, and labor. This grant-based value offering enabled the cross-border CSDP to pilot the inclusive innovation and bring it to a certain

scale, contributing to faster and better adoption by the core users in the BOP market. This approach also provided a basis for potential replication and scaling up under more commercial terms. The innovation intermediaries involved depended significantly on funding from the Dutch Ministry of Foreign Affairs. This also implies that their roles stop when the project funding is finished, for example the coffee case in Kenya. This is different for the private sector partners. If they have established their business in the country, they will try to sustain this as long as the business performance allows them to.

### ***Value appropriation***

Value appropriation, or the ability to capture and retain value created within a collaborative arrangement, is a critical aspect of the sustainability and impact of cross-border CSDPs. The analysis aims at addressing the way value is captured, distributed, and sustained across these partnerships, ensuring benefits for all parties involved. Cross-border CSDP use different mechanisms of value appropriation.

### ***IB models and market access***

The IB models designed by cross-border CSDPs, provided smallholder farmers access to competitive inputs, technologies, and technical assistance. This access allowed farmers to enhance the quality and quantity of their produce, which in turn increased their income and market opportunities. By integrating smallholder farmers into higher-value local markets, these cross-border CSDPs contributed to creating value for the sales of their produce for the local communities. For instance, the cross-border CSDP on dairy in Nigeria facilitated access to advanced dairy equipment and training, enabling farmers to produce higher-quality milk. The resultant increase in milk volume and quality allowed farmers to sell their produce to the WAMCO dairy processing plant and fetch a higher price for their milk, directly benefiting from the value created.

### ***Role of innovation intermediaries***

The innovation intermediaries played a pivotal role in value appropriation by bridging the gap between local communities and larger market opportunities. Their deep social embeddedness and existing trust relationships with local farmers were leveraged to ensure effective dissemination and adoption of new technologies and practices. For example, in case of the cross-border CSDP on coffee in Kenya, the innovation intermediary facilitated the introduction of biogas digesters to process cow dung. By managing the installation and initial operations, the intermediary ensured that the farmers could see the direct benefits of the technology, which encouraged broader adoption and appropriation of the value generated from using renewable energy sources for cooking, and the generation of carbon credits for the sales of carbon emission reduction units to the company involved. Ensuring that the value created was equitably distributed among all stakeholders, particularly the smallholder farmers, was a key challenge.

The innovation intermediaries fulfilled a leading role in developing transparent governance structures and contributed to defining clear benefit-sharing mechanisms. This was considered important to address potential conflicts and ensure that all parties benefited fairly from the collaboration. However, during the implementation phase the role of local authorities gradually changed, mainly due to a changing political, economic or social context. As a result, the local public entities had difficulties meeting their commitments. In these situations, the innovation intermediary actively stepped in to convene high-level partnership meetings, to redefine roles, responsibilities and the design of the IB model. This implied that the ambition of each case was scaled down, and fewer resources and services became available for the farmers, which impacted the value appropriation for the BOP market.

#### *Capacity development and local empowerment*

Capacity development initiatives were central to the value appropriation strategy of the cross-border CSDPs. Training and technical assistance were tailored to the needs and capabilities of the local farmers, ensuring that they could effectively utilize the inputs and technologies provided. This empowerment enabled farmers to independently sustain and scale up the innovations introduced by the cross-border CSDPs. The development and implementation of the training programs were led by staff of the innovation intermediary. Other stakeholders, such as technical staff of the company and researchers or public officers of local public institutes contributed to specific parts of the training design and execution. For instance, in the case of the potato farmers association, the innovation intermediary provided extensive training on the cultivation of the seed potatoes and complying with quality standards of local buyers connected to higher value markets. By building local expertise, the cross-border CSDP ensured that the value from the sales of increased potato yields and quality could be captured by the farmers, who could now negotiate better prices and terms with buyers. One of the challenges in value appropriation was balancing the involvement of local expertise and external technical assistance. While external expertise was necessary for introducing advanced technologies, it sometimes limited local ownership and uptake. Ensuring that local stakeholders were actively involved in the management and adaptation of new technologies was crucial for sustained value appropriation.

#### *Financial mechanisms and co-investment*

Financial mechanisms, including grants and co-investment strategies, were crucial in ensuring that the value created by the cross-border CSDPs was equitably distributed. Public sector grants covered most of the initial equipment and technical assistance costs, reducing financial barriers for smallholder farmers and for the private sector to test the inclusive innovation. In some cases, such as the biogas digester project in Kenya, farmers contributed in-kind, fostering a sense of ownership and commitment to the project's

success. In Nigeria's dairy case, WAMCO co-invested alongside public grants to cover equipment and installation costs. This joint investment approach ensured that both the private sector and local farmers had a stake in the success of the innovation, promoting long-term value appropriation. The reliance on public sector grants for initial funding raised concerns about the sustainability of the value created. Developing strategies for transitioning to more commercial terms and ensuring that farmers could eventually cover the costs of inputs and technologies without external subsidies was critical for long-term value appropriation.

#### *Managing risks and building resilience*

Effective risk management strategies were essential for sustaining value appropriation. The cross-border CSDPs implemented measures to mitigate risks associated with delays, market fluctuations, and technological failures. For instance, the innovation intermediary in Kenya's potato sector faced delays in seed potato imports, which led to a season without potato production. By maintaining open communication and leveraging existing trust relationships, the intermediary managed the farmers' expectations and sustained their engagement with the project. Moreover, by providing training on risk management and diversification strategies, the cross-border CSDPs helped farmers build resilience against external shocks, ensuring that the value created could be maintained over time.

## **5.5. Discussion**

This research aims to disentangle how innovation intermediaries enable social value creation in BOP markets by supporting the design and implementation of inclusive business models and innovations through cross-border CSDPs. Intermediaries facilitate knowledge transfer, support the exchange of ideas and technologies, and promote the development of business models that are both innovative and inclusive. This aligns with the theories of Stadler & Probst (2012) and Rivera-Santos et al. (2012), who highlighted the need for strategies that enhance economic, social, and environmental value while ensuring that the benefits of value creation are widely shared. Importantly, this study adds to existing research of Lashitew et al., (2022) by empirically examining how the embeddedness and evolving roles of innovation intermediaries, ranging from Learning Catalyst to Mediator and Co-Creator, shape the dynamics of trust, accountability, and adaptation in cross-border CSDPs. In addition, the research shows how the design of IB models themselves, including how they bundle services, distribute risk, and embed mechanisms for long-term sustainability, interacts with the intermediary's role to influence social value outcomes. In doing so, it provides new insights into the relational, organizational, and design-related mechanisms through which intermediaries contribute to or constrain the

sustained delivery of social value in BOP markets, offering a more fine-grained understanding of their role than previous conceptual work alone.

### **5.5.1. Innovation intermediaries facilitate, connect and translate policy into action**

The findings reveal that innovation intermediaries are instrumental in facilitating social value creation in these partnerships by acting as crucial connectors among diverse stakeholders, bridging gaps in institutional knowledge and practices, and enhancing relational capacity for social innovation. The coordination and alignment of performance across diverse partners are critical for the success of cross-border CSDPs. Innovation intermediaries provided essential linkages between MNEs, local stakeholders, and smallholder farmers. By leveraging their local embeddedness and understanding of community dynamics, innovation intermediaries ensured that IB models were not only technically sound but also socially relevant and locally accepted. This dual focus on technical feasibility and social utility was vital for the successful uptake of the inclusive innovations introduced. The ability to manage relational coordination, which involves mutual knowledge and goal alignment, is essential for achieving high task performance and driving social value creation. Innovation intermediaries contribute significantly by fostering these relationships and enhancing the relational capacity for social innovation. They help build the necessary social capital and trust among partners, crucial for the partnerships' sustainability and success.

Previous research by Manning and Roessler (2014) and Rivera-Santos et al. (2012) highlighted the complex, cross-sectoral nature of CSDPs, underscoring their tendency to navigate multiple institutional logics and geographical boundaries. The findings in this research extend this understanding by demonstrating how innovation intermediaries mitigate these complexities. They achieve this by not only facilitating resource access but also by translating ambiguous conditions into actionable opportunities, thus enabling partners to align their objectives effectively. This aligns with the insights from Howells, (2006), Selsky & Parker (2010), and Stadtler & Probst, (2012), who emphasize the intermediaries' role in bridging knowledge gaps and fostering collaboration. Additionally, this bridging role helps overcome institutional voids and reduces institutional distance, thereby enabling effective collaboration among partners with varying goals, knowledge bases, and organizational experiences. By translating complex and ambiguous conditions into collaborative opportunities, intermediaries help partners navigate institutional complexities and align their actions towards common objectives. As such, the study builds further on Manning and Roessler (2014), Hart & Sharma, (2004), and Hart et al. (2016), explaining how role clarity and the design of the partnership governance structure contributes to this added value of the innovation intermediary in the trust building with "fringe stakeholders". Innovation intermediaries' deep-rooted presence within local communities

fostered trust, which emerged as a key enabler for the acceptance and adoption of new technologies and business practices. Trust mitigated resistance and facilitated smoother implementation processes, even when faced with challenges such as logistical delays. The existing relationships that intermediaries had cultivated over years of engagement proved invaluable in maintaining project momentum and stakeholder commitment.

During the initial phases of partnership development, they fulfill responsibilities based on their core role (Learning Catalysts, Conveners, Mediators, and Co-Creators—see Chapter 4 of this dissertation). However, unexpected external circumstances that affect the performance of the cross-border CSDP and the implementation of the IB model puts the innovation intermediary under pressure and this results in expanding its responsibilities and shifting away from its natural role. This sometimes leads to tensions between the innovation intermediary and the local smallholder farmer communities, as was the case for the potato initiative, and causes stress for the staff involved and tensions between the innovation intermediary staff and the management of the MNE involved, as was the case in the coffee initiative.

This study adds to previous research by showing that these role shifts are not simply reactive or incidental but have significant implications for how effectively cross-border CSDPs can deliver on their social value propositions in BOP markets. While earlier research has recognized that innovation intermediaries help bridge institutional gaps and facilitate coordination, this study demonstrates that when innovation intermediaries are forced to fulfill unplanned responsibilities, such as absorbing operational risks, managing reputational fallout, or stepping in to maintain delivery continuity, this can undermine both the resilience of the IB model and the trust relationships of the innovation intermediary with BOP communities that underpin social value creation. Moreover, these findings highlight how the intermediary's evolving role influences the governance of the cross-border CSDP itself, as role expansion can blur accountability boundaries and lead to friction among partners. In this way, the research contributes new empirical insights into the dynamic interplay between intermediary functions, the design and sustainability of IB models, and the broader collaborative capacity of cross-border CSDPs operating in low-income markets.

### **5.5.2. Innovation intermediaries contribute to coordination and alignment of performance**

The integrative framework utilized in this research, which combines the business model perspective with the role of innovation intermediaries, has proven effective in understanding the mechanisms and structures that facilitate social value creation. The framework highlights the importance of content, structure, and governance in the configuration of value-creating activities across firm boundaries. It also emphasizes the need

for highly effective coordination and relational capacity to achieve task performance and social value creation.

Effective coordination and performance alignment across diverse partners are essential for the success of cross-border CSDPs. This research underscores that innovation intermediaries play a vital role in fostering relational coordination, which is pivotal for achieving high task performance and driving social value creation. This is consistent with the arguments by Caldwell et al. (2017) and Lashitew et al. (2020), who highlighted the significance of relational coordination in task performance. By enhancing mutual knowledge and goal alignment, intermediaries strengthen the relational capital and trust among partners that is critical for sustainability and success.

This perspective is further supported by studies such as those by Lashitew, van Tulder, et al. (2022), who identified the interconnectedness of business model components and the necessity for seamless coordination across partner networks. Our findings indicate that intermediaries not only facilitate the establishment of these connections but also support the continuous alignment of strategies and goals, thereby enhancing the overall efficacy of the cross-border CSDPs.

The initial reliance on public sector grants facilitated the piloting of inclusive innovations at scale. However, this approach also underscored the need for sustainable financial mechanisms to ensure long-term viability. The study emphasized the importance of developing co-investment strategies and transitioning towards more commercial funding models to maintain and scale the value created by these initiatives. By integrating commercial viability with social impact, innovation intermediaries can help bridge the gap between short-term project funding and long-term sustainability. At the same time, the performance of the innovation intermediary often is also defined and affected by the terms and the limited timeframe of public grants. This causes tensions among the innovation intermediary, who is also the lead contract partner for the public grant, and the MNEs involved, that engage in a market based on a long-term investment commitment.

Value appropriation in cross-border CSDPs requires strategies that balance economic, social, and environmental value for a broad spectrum of stakeholders. Our research shows that innovation intermediaries are pivotal in developing governance mechanisms that ensure a fair distribution of created value, aligning with sustainable and socially responsible business practices. This finding corroborates the work of Lashitew, van Tulder, et al. (2022) and Caldwell et al. (2017), who emphasize the importance of stakeholder engagement and the development of inclusive business models that address both social and environmental challenges. The research also shows that the value offer is developed based on the market entry and business development experience of the MNE involved,

combined with the findings of baseline assessments that include insights collected at smallholder producer level initiated by the innovation intermediary. Nevertheless, during the implementation phase, the cross-border CSDP partners adjust the value offer based on the appropriation of value by BOP actors for different products and services, such as mobile charge stations and bank account services in the case of the dairy initiative.

### **5.5.3. Innovation intermediaries contribute to local embeddedness and ecosystem development**

The research also highlights the unique challenges posed by BOP markets, characterized by extreme low income, limited access to resources, and institutional voids. Here, innovation intermediaries are crucial in developing business models that provide solutions tailored to the needs of BOP consumers. This involves co-creating products with local communities, enhancing local skills, and fostering ecosystems that encourage active participation. Prahalad (2004) concept of creating inclusive business models that are affordable, accessible, and attractive to BOP consumers is reinforced by our findings, demonstrating the practical application of these principles through the intermediary's involvement.

Innovation intermediaries play a crucial role in addressing these challenges by co-creating products with local communities, developing local skills, and building ecosystems for active participation. Their involvement ensures that the IB models are culturally relevant and capable of meeting the specific needs of BOP markets. This aligns with the work of Schuster & Holtbrügge (2014a) and Hart et al. (2016), who advocate the co-creation of products and the development of local capabilities. This approach not only addresses the specific needs of BOP markets but also ensures that the innovations developed are culturally relevant and sustainable. This study adds to existing research by providing empirical evidence of how lead innovation intermediaries operationalize co-creation in practice across different sectors and countries, and by illustrating how their embeddedness, evolving roles, and relational strategies can both enable and constrain the success of IB models over time. In particular, the findings highlight that while intermediaries are often positioned as enablers of local adaptation, they also become critical actors in managing trade-offs between commercial viability, social impact, and long-term sustainability when unexpected challenges arise in cross-border CSDPs.

While the technical expertise provided by MNEs was indispensable for ensuring the robustness of the inclusive innovations introduced, it also posed challenges related to local ownership and long-term sustainability. The research found that excessive reliance on external experts could undermine local stakeholders' sense of ownership and engagement. Innovation intermediaries played a crucial role in balancing this dynamic by progressively

transferring knowledge and responsibilities to local actors, thereby enhancing local capacity and promoting sustainable value appropriation.

The provision of training and technical advisory services by innovation intermediaries was critical in building local capacity and ensuring the effective adoption of innovations. Intermediaries filtered and interpreted complex information, helping local stakeholders understand the mutual benefits of collaboration and the potential for value chain upgrading. This capacity-building process not only facilitated immediate project goals but also laid the foundation for sustained local development and empowerment. The involvement of local staff with connections to the cultural identity of the communities, enabled the innovation intermediary to build trust and social embeddedness of the cross-border CSDP.

## 5.6. Conclusion

This research offers in-depth empirical insights towards a better understanding how innovation intermediaries contribute to social value creation in BOP markets by shaping and operationalizing inclusive business models through cross-border CSDPs. Their ability to blend technical expertise with deep local engagement contributes in an important way to the introduction of impactful and sustainable inclusive innovations. This research underscores the need for a balanced approach that leverages the strengths of both external and local actors, supported by robust financial mechanisms and comprehensive capacity-building initiatives.

This study contributes to a deeper understanding of how the role of innovation intermediaries evolves over the course of the PPP cycle in cross-border CSDPs, as well as how these roles influence the development of inclusive business models and their contribution to social value creation in BOP markets. By integrating the business model perspective of Danse et al. (2020) with the analysis of intermediary functions, the study provides empirical evidence that enables a more comprehensive assessment of the mechanisms and structures facilitating effective collaboration and value creation across diverse partner networks.

By adopting an integrative framework of social value creation in BOP markets based on Lashitew et al. (2020), and Lashitew & van Tulder (2020), combining the IB model design of Danse et al. (2020) with the evolving role of innovation intermediaries (as presented in Chapter 4), the research not only identifies what value-creating activities take place but also examines how these activities are shaped, adapted, and governed over time in response to contextual dynamics and unforeseen challenges. This approach advances

the literature by demonstrating that neither business model design nor intermediary functions alone are sufficient to explain outcomes in complex cross-border and cross-sector partnerships. Rather, it is their interplay and the way intermediaries influence the configuration, implementation, and adaptation of IB models that emerge as critical in creating the conditions for sustained social value creation in BOP markets. This integrative perspective therefore offers a richer understanding of why some inclusive business initiatives succeed in embedding themselves within BOP ecosystems, while others struggle to maintain momentum once initial funding and support diminish.

Applying the integrative framework for analyzing social value creation processes provided a comprehensive lens to understand the multifaceted role of innovation intermediaries during the PPP development process. By examining how value-creating activities are configured across firm boundaries (Danse et al., 2020), the framework illuminated the dynamic interactions and interdependencies among various stakeholders. This approach effectively captured the complexities of cross-border CSDPs and highlighted the nuanced roles of intermediaries in fostering inclusive innovations.

Additionally, the findings underscore the crucial role of innovation intermediaries in bridging institutional voids, reducing institutional distance, and enhancing relational capacity for inclusive innovation. They also highlight the importance of effective coordination and performance alignment across partners to achieve high task performance and drive social value creation. Furthermore, the study reinforces the need for IB models that offer affordable, accessible, and attractive solutions for BOP market, and ensures a fair distribution of created value among all stakeholders. Moreover, this research highlights the importance of balancing external expertise with local ownership, a nuanced insight that contributes to the broader understanding of sustainable development practices.

This research offers valuable insights for practitioners and policymakers involved in cross-border CSDPs and those aiming to develop IB models that create social value in BOP markets. It provides indications and guidance on key conditions that can be established during the problem-setting and direction-setting phase that can improve the performance of the cross-border CSDP during the implementation phase and increase the social value generated by the IB model and inclusive innovation introduced.

This research used case studies focused on the PPP development of cross-border CSDPs for a specific period that coincided with the time public co-funding support was assigned to the development of the IB model. Future research can build on this by investigating the longitudinal effects of these intermediaries on social value creation and the scalability of successful models across different regions. For example, future research could examine how intermediaries manage trade-offs between commercial viability and social objec-

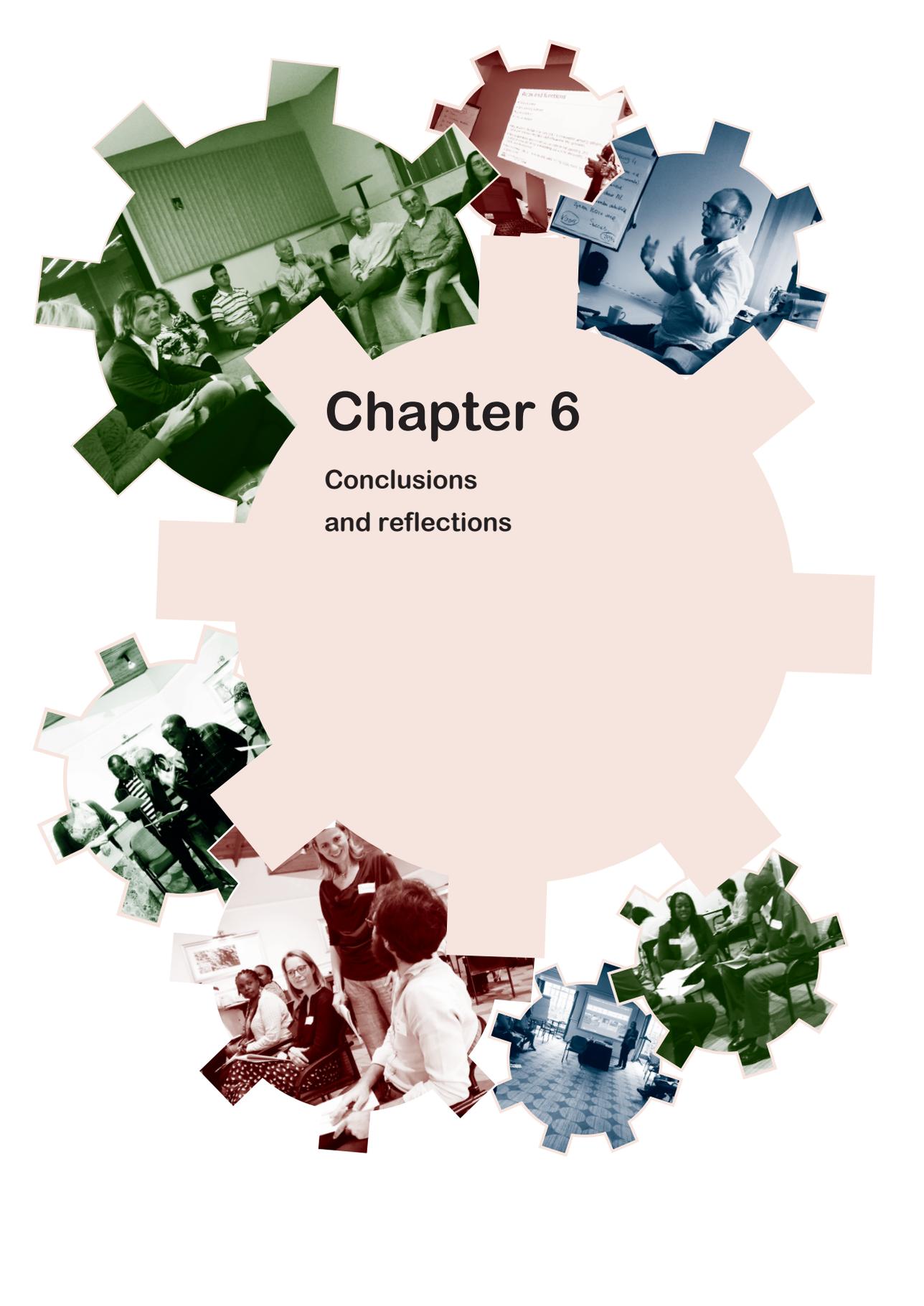
tives over time, or how their embeddedness in local networks evolves as partnerships transition from donor-funded pilots to more market-based approaches. Or the long-term impacts of these inclusive innovations on local communities and the evolving roles of innovation intermediaries as projects scale and mature.

Another promising area would be comparative research that analyzes how different types of intermediaries, such as NGOs, development agencies, or hybrid organizations, shape IB model adaptation under conditions of institutional uncertainty or policy change. By refining and applying integrative frameworks that connect intermediary roles with inclusive business model dynamics, researchers and practitioners can better understand and enhance the processes of social value creation in BOP markets, ultimately contributing to more effective and sustainable development outcomes.

Another valuable avenue for research would be to investigate the role of digital platforms and data-driven tools in supporting or transforming the intermediary function and enabling more agile business model adaptation in BOP markets. Exploring the potential for digital innovations to facilitate trust-building, knowledge transfer, and more transparent value-sharing mechanisms could provide practical insights for both researchers and practitioners.

Finally, the research framework developed in this study offers a conceptual basis that could be extended to examine adjacent phenomena, such as the development of pre-competitive industry platforms, collective impact models, or regional innovation systems in low-income settings. By building on this integrative approach, future research can continue to advance understanding of how diverse configurations of partnerships, business models, and intermediary functions contribute to more inclusive and sustainable forms of market development, and how these multi-actor constellations affect the resilience and adaptability of cross-border CSDPs.





# Chapter 6

## Conclusions and reflections



## 6.1. The interconnections of the research questions in this dissertation

This chapter synthesizes the findings of this dissertation by reflecting on the main research question and research sub-questions introduced in Chapter 1. The overarching objective of this study was to explore how inclusive business models aiming at improved food security can be innovatively designed and socially embedded to foster mutual value creation and effectively address the complex challenges of poverty and socio-economic development in Base-of-the-Pyramid (BOP) markets. These questions were examined through theoretical frameworks and empirical insights drawn from document analysis, surveys, and case studies covering the period between 2010–2020. This decade was characterized by Dutch and international policy shifts from poverty reduction to economic growth and the promotion of Dutch interests, which resulted in increased Dutch official development aid (ODA) to public-private partnership (PPP) facilities, enhancing the involvement of Dutch and other European companies in low-income markets in the Global South.

This dissertation sets out to address two key knowledge gaps. Firstly, recognizing that current efforts to engage internationally active private sector in a combined trade and aid agenda to simultaneously enhance their competitiveness while improving the social well-being of disadvantaged communities have been falling short, there is a need to identify how such efforts can be made more fruitful and deliver tangible outcomes and impacts for science, policy and practitioners. Secondly, the need for further study on the complexity of developing effective business models for BOP markets, how their internal mechanisms interact with external conditions and integrative analyses that synthesize existing evidence on the mechanisms of social embeddedness that contribute to the effectiveness of these business models. To address these, this research focused on creating greater conceptual clarity and a more detailed exploration of business model features, their operational dynamics, and the broader socio-economic contexts in which they function.

I set out with the aim of generating systematic empirical insights regarding effective IB model development in the domain of food security and agrifood value chains in the Global South, with specific empirical evidence generated by case studies developed in Kenya and Nigeria. I studied the efforts of European MNEs and internationally active innovation intermediaries in the context of cross-border CSDPs that were supported with funds from Dutch ODA in the period 2012–2018.

This dissertation sought to address the main research question—***How are inclusive business models aiming at improved food security designed and socially embedded to foster mutual value creation and effectively address the complex challenges of poverty and socio-economic development in Base-of-the-pyramid (BOP) markets?***—by answering the following related but subsidiary research questions:

**Research sub-question 1:** How do multinational enterprises (MNEs) navigate the international market selection (IMS) process when targeting Base-of-the-Pyramid (BOP) markets for inclusive innovations?

**Research sub-question 2:** Which inclusive business (IB) intervention strategies have been used by the private sector to contribute to food and nutrition security in Base-of-the-Pyramid (BOP) markets?

**Research sub-question 3:** Which roles' characteristics, and related functions do innovation intermediaries fulfill to support cross-border cross sector development partnerships (CSDPs) that aim to develop viable and scalable inclusive innovations?

**Research sub-question 4:** How do innovation intermediaries enable social value creation in Base-of-the-Pyramid (BOP) markets by supporting the design and implementation of inclusive business (IB) models and innovations through cross-border cross-sector development partnerships (CSDPs)?

Guided by these four sub-questions, the research analyzed key dimensions of market selection, inclusive business strategies, the role of innovation intermediaries, and CSDPs in advancing social value creation. The findings from Chapters 2–5 provide a comprehensive understanding of the enabling conditions and challenges European MNEs face in engaging with BOP markets to introduce an inclusive innovation.

Taken together, these findings highlight the interconnected nature of market selection, international business strategy, social embeddedness, and intermediary roles in designing and scaling inclusive business models for food security in BOP markets. The research confirms that while businesses play a critical role in addressing food security, their success is contingent on their ability to engage with and respond to local systems, institutions, and networks. Innovation intermediaries and CSDPs emerge as essential facilitators, helping foreign companies wanting to introduce an inclusive innovation in the BOP market to overcome contextual challenges and drive inclusive, systemic change. Table 6.1. visualizes the relationships between the main research question and the sub research questions. The matrix aligns each sub research question with key thematic dimensions, showing how they collectively contribute to answering the overarching research question.

**Table 6.1. Synthesizing key findings: the interconnections of research questions in this dissertation**

Key dimensions	Sub RQ 1: International market selection	Sub RQ 2: Inclusive business strategies	Sub RQ 3: Innovation intermediaries' roles & functions	Sub RQ 4: Social value creation by intermediaries in cross-border CSDPs	Contribution to main research question
<b>Market selection and context</b>	Identifies key dimensions (market, institutions, infrastructure) for early stage selecting BOP markets suitable for inclusive innovation.	Highlights inclusive business models used for food and nutrition security strategies in different BOP markets.	Examines how intermediaries address market gaps and institutional voids.	Explores how intermediaries facilitate adaptation to market conditions in cross-border partnerships, ensuring local relevance and impact.	Provides a more tailored approach to assessing where private sector driven inclusive innovations can be effectively implemented, ensuring alignment with local BOP market dynamics and needs, with intermediaries acting as knowledge brokers and innovation facilitators.
<b>Business model development</b>	Provides insights into how market conditions influence business model design.	Identifies key business intervention strategies that drive food security outcomes.	Analyzes the intermediary role in shaping business models through partnerships and innovation.	Investigates how intermediaries co-develop business models that prioritize social value creation while ensuring financial viability.	Demonstrates how inclusive business models can be adapted and refined to contribute to both financial viability and social impact in BOP markets, with intermediaries supporting co-creation and adaptation processes.
<b>Social embeddedness &amp; partnerships</b>	Recognizes institutional voids, informal institutional aspects, and infrastructure constraints that impact social embeddedness.	Highlights strategies for building partnerships with local communities and stakeholders.	Defines the role of intermediaries in fostering trust, legitimacy, and local collaboration.	Evaluates how intermediaries enhance co-creation with local actors, ensuring inclusive business models generate tangible social value.	Emphasizes how partnerships strengthen the social legitimacy, acceptance, and long-term sustainability of inclusive business models, with intermediaries acting as bridge-builders between stakeholders.
<b>Innovation &amp; Scaling</b>	Assesses the enabling environment for innovation adoption in BOP markets.	Identifies business-led innovations that address food security.	Explores intermediaries as catalysts for inclusive innovation in BOP contexts.	Examines how intermediaries enable the scaling of inclusive innovations while maximizing their contribution to local economic and social well-being.	Explains how business model innovation and scaling strategies contribute to broadening access to food security solutions in BOP markets, with intermediaries ensuring adaptive learning, co-creation and continuous improvement.

## **6.2. Contributions to debates in the literature on inclusive business for BOP markets**

This dissertation contributes to several debates related to BOP 3.0. Based on the findings and their relevance to the overall research question, it highlights the need for a more tailored approach to foreign market assessment. This approach enhances the effective introduction of inclusive innovations by MNEs in BOP markets, ensuring alignment with local market dynamics and leveraging intermediaries as knowledge brokers and innovation facilitators. The findings further demonstrate how IB models can be adapted to achieve a better balance between financial viability and social impact, with intermediaries playing a crucial role in co-creation and adaptation. Additionally, the research underscores the importance of partnerships in strengthening social legitimacy and long-term sustainability, positioning intermediaries as key bridge-builders between foreign businesses and the local contexts of BOP markets.

### **6.2.1. International business research agenda on introducing inclusive innovations in BOP markets**

This research contributes to the international business research agenda by examining how European home based MNEs introduce inclusive innovations in high-risk, informal, and distant markets. Key enablers include leveraging local partnerships, adopting flexible governance structures, and navigating institutional voids through collaborative approaches (Lashitew et al., 2022; Mair et al., 2012; Manning & Roessler, 2014; Vecchi, Tanese, & Osborne, 2022). The findings highlight the tension between global standardization and local customization, offering insights on balancing these demands to foster innovation and market access (Dembek et al., 2020; Faulconbridge, 2013; Hasegawa, 2022; Rugman & Verbeke, 2003).

The findings presented in Chapter 3 challenge the observations of Kolk et al. (2014) by demonstrating that also MNEs have been increasingly involved in BOP markets, particularly related to food security strategies. This is attributed to their global scope and economic motivations to seek growth beyond saturated markets (Danse et al., 2020; Sjauw-Koen-Fa, Blok, & Omta, 2016; Tuttle, 2012). BOP markets may benefit from collaborating with these foreign companies, as they offer access to knowledge, inputs, infrastructure, equipment and marketing and the introduction to international market standards (Bekele et al., 2011; Danse & Vellema, 2005; Vellema & Danse, 2007). However, the dominance of smaller, local firms remains consistent with earlier studies (Dembek et al., 2020; Kolk et al., 2014; Mason & Chakrabarti, 2017). The research findings reveal the significant role of social enterprises in consumer-driven IB models for food security. These organizations leverage partnerships with civil society to adapt to BOP market needs, and

as such confirm the relevance of internal-external capability integration (London & Hart, 2004; Mortazavi et al., 2021; Patel et al., 2014; Vázquez-Pacho & Payaud, 2024).

The findings presented in Chapter 2 add to this by highlighting the limitations of traditional IMS models, which overlook informal institutions and fragmented supply chains, and infrastructure deficiencies. By proposing a multidimensional approach for early-stage IMS screening, this chapter provides insights into how refinement of market, institutions, and infrastructure factors relevant to BOP contexts can shape MNEs' decisions to enter BOP markets. This complements the work of Sakarya et al. (2007), Buerki et al. (2014) and Ozturk et al. (2015), who advocate contextual adaptations of IMS frameworks in emerging economies. The research also reinforces the critical role of informal institutions in shaping market dynamics in contexts where formal institutions are weak. While the decision not to include informal institutions as a separate dimension reflects data limitations, the research provides guidance for a new research agenda echoing Voigt (2018) in advocating more granular, qualitative, context-specific methodologies to measure and compare informal institutional influences.

Chapter 2 findings confirm that managers of MNEs rely heavily on cognitive biases, familiarity, and partnerships with experienced non-market actors during IMS for BOP markets, confirming and extending theories on the influence of intuition and experiential knowledge in internationalization (Andersen & Buvik, 2002; Clark et al., 2018; Grimm, 2022). However, the empirical findings derived from the case studies in addition highlight risks associated with unstructured approaches, such as bias and tunnel vision, stressing the need for balanced reliance on both structured data and experiential knowledge.

The emphasis on partnerships with non-market actors, such as innovation intermediaries and public institutions, as key to navigating BOP markets, supports Hart and Sharma (2004) argument on engaging fringe stakeholders. Findings from Chapter 4 and 5 illustrate that innovation intermediaries serve as key knowledge brokers and innovation agents, ensuring that market selection approaches incorporate real-time, context-specific insights. Their role in supporting IMS frameworks through sector-specific data collection and stakeholder engagement appears to be crucial for de-risking market entry decisions and to reduce bias and tunnel vision.

### **6.2.2. Business model evolution for BOP markets: integrating adaptation, scaling, and the role of intermediaries**

This thesis adds empirical depth to the theoretical foundations of IB models tailored for BOP markets. While Prahalad (2004) championed the affordability, accessibility, and attractiveness of business models for BOP market, this dissertation provides practical evidence of how innovation intermediaries co-create culturally relevant and sustainable solutions.

Findings from Chapter 4 demonstrate that intermediaries enhance local embeddedness, facilitate trust-building, and mitigate institutional voids, thereby helping MNEs navigate risks associated with informal economies. As such, the research complements Schuster and Holtbrügge (2014b) and Hart et al. (2016) by showcasing how intermediaries fulfill roles to foster local participation and ecosystem building to overcome institutional voids.

The findings from Chapter 2 highlight that an adapted IMS process is not merely supportive but decisive in determining where IB models can be successfully introduced. Intermediary organizations emerge as critical actors, enabling businesses to navigate contextual challenges in market selection through knowledge, networks, and credibility as presented in Chapter 4 and 5. This reconfirms the need to go beyond the “inclusive business ecosystem” framework of Gradl and Jenkins (2011), whose limited focus on institutional constraints overlooks the equally decisive influence of market and infrastructural barriers. By proposing their inclusion as critical variables in internationalization and market access strategies, this research advances theoretical models of IB expansion. At the same time, it demonstrates in practice that business models must be carefully tailored to local conditions while safeguarding their core value propositions. Empirical evidence from Chapter 4 and Chapter 5 further shows that innovation intermediaries enhance the success of IB models by reducing transaction costs, strengthening legitimacy, and ensuring both local embeddedness and social value creation in BOP markets.

The research presented in this thesis advances our understanding of business model development for BOP markets by emphasizing adaptive, iterative approaches that prioritize co-creation with local stakeholders. The findings align with Prahalad (2004) groundbreaking work on the fortune at the BOP and extend it by exploring how hybrid value propositions that aim to balance economic returns with social impact address the dual imperatives of profitability and inclusivity (Calton et al., 2013; Dembek & York, 2022; London & Hart, 2004; Mason & Chakrabarti, 2017). The work advances debates on IB models for the BOP and food security by addressing gaps in the literature related to dimensions for IMS, actor roles, initiator characteristics, business model attributes, enabling businesses to embed their models within local “business ecosystems”.

The characteristics of IB models for food and nutrition security as described in Chapter 3 affirm Prahalad (2004) concept of BOP business models relying on high volumes, low margins, and standardized quality products. The distinction the dissertation makes between producer-driven and consumer-driven IB models, which result in functional and process upgrading for producers versus product upgrading for consumers, adds nuance to this concept. These differences provide a basis for tailoring interventions and policies based on specific target groups. Furthermore, the study underscores the importance of local contextualization, requiring foreign MNEs to integrate local knowledge and foster trust-

based relationships for scalability and sustainability (Kolk et al., 2014). Coalition-building strategies are prevalent, especially to address cultural, institutional, and infrastructural challenges (London & Anupindi, 2012; Ma et al., 2014). The preference for vertical over horizontal alliances aligns with Gradl and Jenkins (2011), while the research contributes new evidence that scaling partnerships are often secondary in the early stages of IB model development.

Findings from Chapter 2 and Chapter 5 emphasize that MNEs benefit from partnerships with innovation intermediaries and public institutions in addressing food security challenges. Intermediaries help translate ambiguous market conditions into actionable strategies, facilitating the alignment of corporate goals with development needs echoing their role as sense-makers and bridge-builders in complex multi-stakeholder environments (Lashitew, Narayan, et al., 2022; Manning & Roessler, 2014). However, findings from Chapter 2 also caution against over-reliance on unstructured approaches, which can lead to bias and inefficiencies in IMS decision-making. Balancing structured data with local knowledge and intermediary expertise is essential for ensuring sustainable and impactful market entry strategies. Moreover, intermediaries contribute to de-risking MNE investments by fostering stakeholder engagement and providing legitimacy within BOP markets. Their role in identifying market receptiveness and facilitating institutional collaborations further enhances the long-term viability of IB models.

### **6.2.3. Innovation intermediation research agenda, by developing insights on the innovation intermediary role in supporting CSDPs introducing inclusive innovations in BOP markets**

The research contributes to debates on cross-border CSDPs, and inclusive innovation by deepening our understanding of the roles and functions intermediaries fulfill to support these cross-border CSDPs in BOP markets. By focusing on the role of innovation intermediaries in CSDPs, this dissertation expands the innovation intermediation research agenda. The role of intermediary organizations in facilitating coalitions and embedding IB models is underscored, aligning with findings on the importance of intermediaries in innovation systems (Intarakumnerd & Chaoroenporn, 2013; Kilelu et al., 2013; Klerkx & Gildemacher, 2012). The findings expand on prior knowledge on cross-border partnerships and intermediary involvement in those by elucidating the contextual specificity of intermediary engagement, highlighting their distinct contributions to bridging cultural and institutional gaps, fostering local embeddedness, and supporting the development of viable, scalable inclusive innovations. They contribute to greater social embeddedness and legitimacy of inclusive business models in BOP markets. Their role in mitigating risks, fostering capacity building, and scaling innovations is explored, providing a nuanced understanding of their function within multi-actor ecosystems in line with Bessant & Rush (1995), and Kivimaa et al. (2019). The research findings also suggest that intermediaries'

active engagement in the design and testing of innovations influences the long-term success of the inclusive innovation. By embedding local stakeholders in the development process through learning events and capacity-building, intermediaries contribute to the contextual relevance and acceptance of innovations. This insight aligns with Stadtler and Probst (2012) observations on the early-stage involvement of intermediaries, but also extends their analysis by emphasizing the intermediary's role in subsequent scaling in BOP markets.

A key contribution of this research is its differentiation of the specific roles' intermediaries fulfill in cross-border CSDP development phases. Findings from Chapter 4 indicate that intermediaries operate as Learning Catalysts, Conveners, Mediators, and Co-Creators of innovation, each playing a distinct role depending on the context and phase of the business model development, which expands on studies of Manning and Roessler (2014) and Stadtler and Probst (2012), who take a more static perspective. Findings from Chapter 4 and Chapter 5 further reveal that intermediaries do more than just process facilitation—they actively engage in innovation testing, prototype development, and capacity-building, extending research by Agogué et al. (2013) from a high-income to the BOP market context. Furthermore, the research adds to Lashitew, van Tulder, et al. (2022) by revealing the role of intermediaries to ensure that the social value creation dimension is embedded throughout the business model design and implementation process, aligning with sustainable and long-term impact goals.

The research also confirms that intermediaries play a crucial role in addressing cross-border challenges in CSDPs, as they bridge institutional and cultural gaps by leveraging local and international expertise (Ma et al., 2014; Manning & Roessler, 2014). Empirical evidence presented in Chapter 4 and 5 demonstrate that intermediary organizations play an active role in reducing transaction costs, improving coordination, and fostering long-term commitment among stakeholders. By embedding local actors in innovation and scaling processes, intermediaries enhance the resilience and sustainability of inclusive innovations. Their ability to strengthen social capital and empower BOP communities further supports the transition from business partners to Co-Creators of innovation and economic development. Moreover, intermediaries play a pivotal role in navigating regulatory hurdles, ensuring compliance with local norms, and facilitating public-private collaborations, which are critical for sustainable impact. This adds depth to Manning and Roessler (2014) concept of intermediaries as collective actors and highlights their ability to adapt to the unique demands of the BOP market, where resource constraints and fragile states necessitate tailored approaches to inclusive innovation.

## 6.3. Research relevance for the Dutch Foreign Trade and Development Cooperation policies since 2010

The findings of my dissertation are relevant considering the evolution of Dutch policies of the Ministry for Foreign Affairs 2010 and 2020 and the current policy on Foreign Trade and Development. The Dutch government has positioned itself at the intersection of aid and trade, aiming to leverage Dutch private sector engagement for economic development in low-income countries while ensuring that business-driven approaches contribute to broader societal goals such as food security and poverty reduction. My research provides empirical insights into how IB models can be effectively designed, embedded, and scaled within BOP markets, aligning with the overarching objectives of Dutch policies in this domain. By offering evidence-based recommendations on the conditions necessary for the success of IB models, my findings contribute to shaping more effective policy instruments and implementation strategies. This supports the Dutch government's ambition to integrate commercial and developmental interests, ensuring that trade-driven solutions also create sustainable impact for vulnerable communities.

### 6.3.1. Research relevance for the Dutch Foreign Trade and Development Cooperation Policy 2010–2020

During the decade 2010–2020, the Dutch Foreign Trade and Development Cooperation agenda sought to integrate development cooperation with economic diplomacy, emphasizing the role of the private sector in sustainable development (IOB, 2021). This approach assumed that engaging businesses in development efforts would create mutually beneficial outcomes: fostering local economic growth while opening new market opportunities for Dutch and European companies. However, recent evaluations by the (IOB, 2021) highlight that while the Foreign Trade and Development Cooperation policy contributed to private sector engagement, the effectiveness of its interventions in achieving long-term development impact remains mixed. My dissertation directly engages with this premise by exploring how Dutch and other European MNEs attempted to introduce IB models in food security initiatives across Kenya and Nigeria, often with funding from Dutch ODA and through cross-border CSDPs. These partnerships, supported by intermediary organizations, played a critical role in bridging cultural, institutional, and market differences.

Dutch policies in the 2010–2020 period encouraged businesses to invest in BOP markets through PPPs and development-related trade missions. This Dutch policy sought to engage firms through three pathways (IRBC/value-chain sustainability; trade & investment; and solution-oriented partnerships) and deployed at least 53 instruments (IOB, 2021). Trade-oriented, demand-driven instruments were often calibrated to the needs of Dutch businesses rather than BOP market developmental relevance. In this policy context, my findings clarify why PPPs and trade missions that relied on conventional

IMS tools struggled: by privileging formal indicators, they systematically underweighted the informal rules, fragmented supply chains, and infrastructural gaps that structure BOP markets—factors the IOB’s assessment suggests were not consistently built into instrument design or monitoring. The IOB (2021) similarly concluded that many Foreign Trade and Development Cooperation initiatives struggled with long-term sustainability, as business models were not sufficiently adapted to local economic and institutional realities. My research shows that although Dutch ODA and public-sector lobbying lowered entry barriers and catalyzed business-led interventions, these levers on their own, did not generate resilience or local embeddedness. Innovation intermediaries emerge as crucial in this regard, as they bridge institutional gaps, facilitate knowledge transfer, build local trust, and de-risk investments. Yet, my findings also show that their involvement is not a panacea: without structured governance mechanisms, clear accountability frameworks, and adaptive learning processes, intermediaries risk role overstretch, blurred responsibilities, and diminished legitimacy over time.

In addition, both my research and the IOB evaluation note that many Dutch-supported PPPs relied heavily on diagonal alliances with governments and international institutions, which provided regulatory and financial leverage but often limited local ownership and long-term integration into the local economy. Top-down orientation restricts co-creation with local SMEs, producer organizations, and knowledge institutes—an omission that might have weakened embeddedness and sustainability. My findings thus reinforce the IOB’s call for more adaptive, context-driven strategies and demonstrate empirically that inclusive business models thrive when supported by intermediaries who foster local participation, relational coordination, and co-investment strategies that combine public and commercial funding. Taken together, these insights underscore the need for Dutch Foreign Trade and Development Cooperation instruments to move beyond transactional support toward enabling ecosystems of collaboration that balance business competitiveness with structural poverty alleviation.

### **6.3.2. Research relevance to the Foreign Trade and Development Policy of 2025**

The Dutch government’s recent policy shift, encapsulated in the memorandum *Doing What the Netherlands is Good At* (Ministry of Foreign Affairs, 2025), emphasizes aligning international development efforts with Dutch trade and economic interests, moving away from a primarily aid-centered approach focused on poverty alleviation and structural support toward a more instrumental use of development cooperation to advance Dutch economic competitiveness and strategic sector engagement. This strategy focuses on sectors where the Netherlands has established expertise, such as water management, food security, and health, aiming to create mutual benefits for both the Netherlands and its partner countries (Ministry of Foreign Affairs, 2025).

A central focus of this policy is to foster economic relationships that serve Dutch trade and investment objectives and the Dutch economy, while contributing to the development of partner nations. This includes supporting Dutch businesses in expanding into emerging markets and encouraging partnerships that leverage Dutch expertise to address global challenges (Ministry of Foreign Affairs, 2025). In contrast to the 2010–2020 policy framework, and most notably the Foreign Trade and Development Cooperation agenda introduced in 2013, the new policy shifts away from the dual objective of aid effectiveness and inclusive development outcomes, and instead positions development cooperation more explicitly as a strategic tool to advance systemic transitions and foreign policy priorities, using aid instrumentally to leverage Dutch private sector engagement and other forms of influence. While the earlier policy also promoted the involvement of the private sector in development cooperation, it retained a strong emphasis on structural poverty reduction, strengthening local institutions, and promoting inclusive growth in partner countries. In contrast, the 2025 memorandum places more explicit emphasis on Dutch self-interest, prioritizing sectors in which the Netherlands has competitive advantages, and using development cooperation to open markets, support Dutch exports, and foster innovation ecosystems abroad. This reflects the repositioning of development policy as a tool for economic diplomacy and a vehicle for advancing national economic resilience and sustainability goals in a changing geopolitical landscape. As such, the developmental outcomes for partner countries are framed more in terms of mutual benefit and co-investment potential, rather than developmental justice or redistribution alone.

My research provides critical insights that speak directly to the current Foreign Trade and Development policy 2025, which seeks to strengthen the nexus between trade, private sector engagement, and sustainable development. By examining how Dutch and other European MNEs have implemented IB models in food security initiatives in Kenya and Nigeria, the findings highlight that success depends on embedding these models within local socio-economic contexts rather than relying on standardized approaches. This underscores commercial viability and social impact are mutually reinforced only when business models are adapted to local realities and institutional dynamics. The IOB (2021) already warned that many past initiatives lacked long-term local embeddedness, often resulting in limited sustainability. My research goes further by showing how innovation intermediaries and context-specific IMS processes can mitigate these shortcomings, offering practical pathways for the 2025 policy to operationalize its ambition of more adaptive, locally anchored, and impact-driven strategies. My research underscores the need for policies that promote the integration of local stakeholders, the role of innovation intermediaries, and the development of governance mechanisms that facilitate effective cross border CSDP collaborations. The insights suggests that Dutch policies should encourage more balanced multi-stakeholder collaborations and the role of intermediary

organizations that bridge cross-border cultural, institutional and market differences to enhance the sustainability of business-driven interventions.

In conclusion, while the Dutch policy *Doing What the Netherlands is Good At* (Ministry of Foreign Affairs, 2025) aims to align development cooperation with national trade interests, my research highlights the importance of ensuring that such strategies are implemented in a manner that is contextually informed and inclusive. This involves fostering partnerships that are not only beneficial to Dutch economic objectives but also contribute meaningfully to the socio-economic development of partner countries. By incorporating lessons from past Foreign Trade and Development Cooperation interventions and my research on IB models targeting BOP markets, the Dutch government can better ensure that its trade-focused development policies create lasting, equitable impact.

In conclusion, while the Dutch policy *Doing What the Netherlands is Good At* (Ministry of Foreign Affairs, 2025) aims to align development cooperation more closely with national trade and economic interests, my research highlights the critical importance of ensuring that such strategies are implemented in a manner that is contextually informed, inclusive, and geared toward long-term developmental impact. The policy's strategic lines, such as promoting Dutch sectoral strengths abroad, increasing blended finance opportunities, and mobilizing PPPs, rely heavily on the assumption that economic diplomacy can deliver win-win outcomes. However, without deliberate attention to embeddedness, power asymmetries, and local relevance, there is a risk that these efforts serve primarily Dutch commercial interests while failing to deliver sustainable benefits to partner countries.

My research on IB models and cross-border CSDPs in BOP markets underscores three key areas where the new agenda must evolve if it is to avoid repeating the limitations of the 2010–2020 Foreign Trade and Development Cooperation era. First, the findings reveal the need for more refined IMS approaches that go beyond conventional market selection tools. Standard IMS frameworks often assume formalized structures and reliable data, yet BOP markets are typically shaped by informal institutions, fragmented supply chains, and rapidly changing conditions. Incorporating informal norms, trust networks, and real-time market intelligence would make market entry strategies both more responsive to local realities and more conducive to inclusive outcomes. Second, the research demonstrates the centrality of well-positioned innovation intermediaries. These actors play a pivotal role in translating between local needs and global business models, aligning diverse incentives, and facilitating experimentation across sectors. Without their brokerage functions, businesses often fail to achieve embeddedness and partnerships risk collapsing into transactional arrangements. Third, the findings stress that social value creation in cross-border CSDPs depends not only on governance structures but on the relational

and organizational mechanisms through which inclusive innovations are embedded. Intermediaries foster capacity building, co-creation with local communities, and relational coordination across heterogeneous partners, ensuring that inclusive business models are both technically viable and socially relevant. Social value is sustained when CSDPs balance external expertise with local ownership, ensure a fair distribution of created value, and embed strategies for long-term financial and ecological sustainability. Without these elements, partnerships risk producing only temporary benefits rather than transformative outcomes.

These lessons carry important implications for the current ecosystem of development actors. Cross-border innovation intermediaries must reconsider their roles as brokers, watchdogs, and systems thinkers capable of anchoring Dutch private sector engagement within locally grounded development logics. At the same time, intermediary organizations that have demonstrated capacity to operate at the nexus of public-private collaboration and innovation, merit expanded and more flexible funding. Their proven ability to coordinate diverse stakeholders, build local capabilities, and manage inclusive innovation processes makes them well-suited to deliver on the ambitions of the new trade-oriented agenda. However, this requires shifting funding models from short-term project grants toward longer-term, core support that allows for adaptive implementation and institutional learning.

Dutch policymakers can draw on these insights to strengthen the effectiveness of their Foreign Trade and Development agenda. By actively investing in innovation intermediaries and supporting adaptive, locally embedded business models, they can ensure that trade-driven initiatives align with local priorities and contribute to socio-economic resilience. Moreover, ensuring that metrics of success go beyond export volume or Dutch business presence to include outcomes like local income gains, inclusive participation, and institutional capacity, will be key to transforming development cooperation into a truly equitable and sustainable economic collaboration model.

My research suggests that foreign trade policies should not operate in isolation from development objectives, as economic growth in fragile states is often contingent on parallel investments in governance, infrastructure, and social stability. A holistic foreign policy should recognize that trade agreements, development programs, and diplomatic engagements are mutually reinforcing, rather than standalone efforts. The geopolitical landscape has shifted dramatically, making the case for a coherent Dutch foreign trade policy even more pressing. With increasing instability stemming from Russia's war on Ukraine, growing competition between the U.S. and China, and shifting power dynamics within the European Union, foreign trade and development cooperation policies must be strategically deployed to enhance both economic interests and global

stability. My dissertation demonstrates that well-structured IB models and cross border CSDPs governance structure, when coupled with targeted development cooperation interventions, can serve as powerful tools for both economic development and diplomatic leverage.

However, the Dutch government's current approach appears reactive rather than proactive. For instance, the lack of a clear commitment to integrating development aid into broader foreign trade policy goals has led to inconsistencies in engagement with key trade partners in Africa, Asia, and Latin America (Kumar et.al., 2025). One of the key findings in my research is the importance of sustainability in shaping effective foreign trade and development cooperation policies. The Dutch government has historically been a strong advocate of sustainable trade, yet recent policy shifts suggest a weakening of commitments in favor of budget efficiency and political constituency. This trend is concerning, as it contradicts the Netherlands' previous leadership in promoting fair value distribution, social inclusion, and climate resilience strategies. The Netherlands should double down on its commitment to sustainable trade policies rather than retreating into short-term economic pragmatism. Without a clear vision and integrated approach, the Netherlands risks diminishing its global influence and undermining its long-term security interests. My research provides strong evidence that foreign trade and development cooperation policies, when strategically aligned, can serve as powerful instruments for both economic development and social impact. To remain a credible and effective player on the global stage, the Netherlands must embrace a comprehensive foreign policy that is not just reactive, but proactive, strategic, and rooted in long-term sustainability and social value creation.

## **6.4. Reflection on research methods**

This dissertation employs a mixed-methods research design, integrating both qualitative and quantitative approaches to gather and analyze data, including case studies (Chapter 2, 3, 4 and 5), a survey with representatives of inclusive innovation intermediaries (Chapter 3), and key informant interviews with multiple stakeholders based in the Netherlands, Kenya and Nigeria (Chapter 2, 3, 4 and 5) and secondary source database analysis (Chapter 2 and 3). Case study documents as well as grey and peer reviewed literature were also reviewed. The diversity of methods used helped to gather different insights across the scale of the research, despite bringing challenges regarding securing responses and inputs around failures. Despite these challenges, I was able to generate new, reliable, and valid insights which also serve to identify further areas of research. The decision to adopt this multi-method approach was grounded in the complex and dynamic nature of the research subject. Inclusive innovation in BOP

markets, particularly when embedded in cross-border CSDPs, is influenced by diverse institutional, cultural, and market dynamics that cannot be adequately captured through a single methodological lens.

A central methodological choice was the use of a multiple-case study approach, guided by the work of Eisenhardt (1989) and Yin (1989). The selection of four cross-border CSDPs, all supported by the Dutch Ministry of Foreign Affairs, was based on replication logic, allowing for both literal and theoretical replication. These cases were chosen for their diversity in intermediary support, inclusive business models, and country contexts (Kenya and Nigeria), yet held together by a shared ambition: to foster inclusive innovation for food and nutrition security in BOP markets.

This design enabled in-depth exploration of both common patterns and contextual nuances. It provided a rich empirical foundation for understanding how the roles of innovation intermediaries differ and evolve across partnerships, how international BOP markets are being selected and the dynamics during the CSDP partnership development and its impact on the business model and value creation. However, the choice also had implications. While four cases offer a strong analytical base, generalizability remains limited and context specific.

The mixed-methods strategy was used to balance depth and breadth. Qualitative methods, based on interviews, document reviews, and field visits, were central in Chapters 2, 4, and 5. They were essential for capturing the perspectives of actors engaged in partnerships, and for understanding how intermediary roles played out in specific institutional and cultural contexts. The survey used in chapter 4 added a broader quantitative dimension, allowing the identification of role patterns across 25 intermediary organizations.

This integration of methods allowed for triangulation and strengthened the validity of findings. However, it also introduced complexity in aligning data sets collected with different tools and at different times. For example, while the survey provided standardized data, it could not capture the full richness of contextual engagement observed in the case studies. To mitigate this, follow-up interviews and feedback sessions were used to deepen and validate interpretations.

Another important choice was the iterative and sequential structuring of the research across the dissertation chapters. Each chapter builds upon the previous one: starting from a contextual market assessment (Chapter 2), moving to typologies of private-sector engagement (Chapter 3), deepening into the intermediary roles (Chapter 4), and culminating in an integrated synthesis (Chapter 5). This layered approach reflects the exploratory and explanatory nature of the research and supports the development

of testable propositions. It enabled theory-building grounded in empirical evidence. However, it also meant that insights evolved over the course of the research.

The selection criteria for the case studies, such as Dutch-supported programs, Dutch/European MNEs, East/West Africa focus, and inclusive innovation objectives, ensured relevance for the research question and comparability across cases. However, these choices may have shaped the findings toward certain partnership models and excluded others, such as South-South collaborations or initiatives led by African private sector actors. This limitation is acknowledged, and it invites further research into alternative cross-border dynamics.

For the four case studies, data were collected through 55 key stakeholder interviews, supported by document analysis and a structured survey. The use of local researchers in Kenya and Nigeria was critical for ensuring contextual sensitivity and improving access to stakeholders. However, it also caused some challenges of alignment and understanding on the research purpose, research protocol, and the capability to identify relevant topics during the interview by asking the relevant follow-up questions. Interviews were transcribed and systematically coded using Atlas.ti, allowing for pattern identification across cases and stakeholder groups.

An important implication of this approach is the recognition of researcher positionality. As the research was conducted in part from within Dutch-supported programs, the dual role of me as the researcher, being both observer and analyst, may have influenced data interpretation. I tried to mitigate this by triangulating sources and validating findings through independent feedback sessions in both the Netherlands and Kenya. However, my longstanding professional engagement in the field of international development and close collaboration with policy actors, including some of the implementing organizations, inevitably shaped the research focus, language, and problem framing. At the same time, the benefit of my involvement was to get easier access to confidential information regarding the case studies, and more openness of the stakeholders interviewed.

This dissertation forms part of my transition from a reflexive practitioner to a practice-based researcher, as introduced in Chapter 1. That transition involved critically interrogating the assumptions, narratives, and institutional logics I had previously worked within. While this practitioner background afforded me privileged access to internal documents, candid interviews, and the tacit dimensions of partnership dynamics, it also required ongoing reflexivity to avoid reinforcing dominant policy discourses or over-emphasizing success narratives.

Throughout the research process, I aimed to hold space for plural perspectives, particularly those of local actors whose voices are often underrepresented in cross-border partnership evaluations. At the same time, I recognize that my interpretive lens was shaped by a Dutch institutional context, and by my embeddedness in policy networks that may have influenced what questions seemed relevant or feasible to pursue. Rather than eliminate this positionality, I engaged it as a source of insight, while also exposing it to scrutiny through transparent methodological choices, feedback loops, and iterative sense-making with diverse stakeholders.

Importantly, this research sought to avoid the pitfalls of “helicopter research” or neo-colonial science, where scholars from the Global North extract data from the South without reciprocal engagement, recognition, or benefit (Minasny, Fiantis, Mulyanto, Sulaeman, & Widyatmanti, 2020). Rather than conducting research on African partnerships, this study was carried out with local stakeholders, including close collaboration with Southern researchers from Kenya and Nigeria, whose contextual knowledge, analytical contributions, and leadership in validation processes were essential. These efforts were further reinforced via participatory feedback loops with practitioners in Kenya and the Netherlands, where preliminary findings were iteratively discussed, contested, and refined. Such engagement was essential not only for validation, but also for accountability, ensuring that the research process genuinely reflected the interests, experiences, and agency of those most affected by cross-sectoral CSDP.

Ultimately, this dissertation is as much a knowledge contribution as it is a reflection on the tensions of doing engaged research at the intersection of policy, practice, and academia. It calls for more critical, context-sensitive inquiry that does not assume neutrality in development research but rather embraces the complexity and partiality inherent in co-producing knowledge from within the system.

Despite its strengths, the research approach also faced practical limitations. Limitations in the availability of time and financial resources constrained the ability to conduct repeated interviews with the same stakeholders, which could have strengthened the depth of longitudinal insights. The involvement of local researchers, while essential for contextual understanding and field access, also introduced variations in data collection styles, which required careful coordination and consistency in the research protocol.

Moreover, the challenge of studying informal institutions and cultural dimensions was significant. These aspects often operate below the surface of formal partnerships, making them difficult to capture through conventional research instruments. Their complexity underscores the need for culturally attuned and adaptive methodologies in future research.

The experience also highlighted the value of having clear theoretical frameworks to guide research design and data collection strategies. The use of frameworks such as the one for the strategic business model helped structure the inquiry and made it possible to systematically compare cases. Still, the practical constraints of aligning scientific inquiry with actionable impact in development settings were evident. Science and practice often operate at different speeds, levels of abstraction, and degrees of complexity, posing ongoing challenges for researchers aiming to bridge the two worlds effectively.

These reflections reinforce the need for flexible, theory-informed, and context-sensitive approaches in researching cross-border CSDPs and inclusive innovation. They also point to opportunities for future research that can deepen, expand, and critically reassess the assumptions and frameworks used in this study.

## **6.5. Recommendations for further research**

This dissertation has highlighted the critical role of innovation intermediaries in enabling inclusive innovation through cross-border CSDPs in BOP market contexts. A contribution of this research is the typology of intermediary roles as Learning Catalysts, Conveners, Mediators, and Co-Creators, and how each is associated with specific functions and varying levels of engagement depending also on the stage of development of the CSDP. Comparative studies might examine whether the intermediary role dynamics identified in this research hold across different sectors or shift in response to distinct social-ecological challenges. Moreover, it would be valuable to investigate how these roles evolve over time and in response to shifts in power dynamics, funding models, or political contexts, contributing to more adaptive and resilient partnership designs. Another promising avenue is the study of intermediary ecosystems: how different types of intermediaries—public, private, NGO-based, or hybrid—interact, complement, or compete within the same CSDP or geographic context, and how this affects coordination, legitimacy, and impact.

The concept of dual embeddedness, as introduced by Guimon et al. (2016), emerged in this dissertation as a pivotal factor in the success and sustainability of inclusive innovation efforts. It describes how innovation intermediaries must simultaneously navigate global institutional frameworks (e.g., donor accountability, international norms) and deeply rooted local realities (e.g., informal rules, cultural expectations). This research has shown how deeper local embeddedness enables intermediaries to navigate institutional voids and support the private sector in adapting innovations to the complexities of BOP markets. Future studies could further explore how dual embeddedness shapes intermediary effectiveness, particularly in balancing accountability to both global funders and local actors.

There is also a need to deepen our understanding of market selection processes in BOP contexts. Existing IMS tools often focus on formal criteria such as size, competitiveness, and value chain maturity. Yet, as this research shows, informal norms, social trust, political interests, and tacit knowledge play a crucial role in determining which markets are targeted and how innovations are introduced. Further research could examine how these informal dimensions intersect with formal IMS frameworks and how they shape the pathways through which business models are developed and scaled. In particular, exploring why certain markets or communities are selected (or indeed overlooked) by MNEs and intermediaries could reveal hidden biases, path dependencies, or missed opportunities for inclusive growth.

This also invites renewed attention to inclusive business model development. While the current study offers insights into how intermediaries shape business model design and governance, future research could analyze how different value propositions, delivery mechanisms, and revenue models perform over time in BOP settings. What combinations of social and commercial value create durable market footholds? How are trade-offs managed between affordability, accessibility, and profitability? Longitudinal studies that track business model evolution through different phases, from opportunity recognition to scaling, would be particularly valuable for understanding how inclusivity is operationalized and sustained in practice.

Finally, this dissertation underscores the value of studying cross-border CSDPs as a distinctive form of collaborative innovation. While much of the literature focuses on North-South or nationally bounded partnerships, cross-border CSDPs must reconcile layered cultural, regulatory, and institutional systems. Future research should compare cross-border partnerships with more localized initiatives to understand how intermediaries facilitate innovation design, testing, and value creation under different conditions. A particularly promising direction is to investigate how intermediaries balance commercial viability with social objectives, and how they enable the adaptation of business models to local preferences, constraints, and regulatory shifts.

Methodologically, this dissertation faced constraints related to time and the limited ability to conduct repeat interviews with key stakeholders, an approach that could have yielded deeper insights into evolving perceptions, trust-building processes, and adaptive strategies. While the involvement of multiple researchers brought the advantage of local access and contextual understanding, it also introduced potential inconsistencies in interpretation and interviewer effect. The ambition to link research to practice, such as integrating findings into practitioner training modules in the Netherlands, Kenya, and Nigeria, highlighted the tension between the pace and depth of academic inquiry and the urgency of real-world impact. Practice demands actionable results within short

timeframes; research demands rigor, reflection, and iteration. To bridge this divide, future studies should embrace flexible, participatory, and iterative research methods that can better accommodate the dynamic nature of CSDPs and inclusive innovation in BOP markets. Such methods would also improve the capacity to explore culturally rooted informal practices and to navigate the informality and power dynamics that so often shape partnership functioning and innovation success.





# Endnotes

References

Appendices

Acknowledgements

About the author

## References

- Agogué, M., Yström, A., & Masson, P. I. (2013). Rethinking the role of intermediaries as an architect of collective exploration and creation of knowledge in open innovation. *International Journal of Innovation Management*, 17(2).
- Allen, S., & de Brauw, A. (2018). Nutrition sensitive value chains: Theory, progress, and open questions. *Global food security*, 16, 22-28.
- Altenburg, T., & Lundvall, B. (2009). Building inclusive innovation systems in developing countries: challenges for IS research. *Handbook of innovation systems and developing countries: Building domestic capabilities in a global setting*, 33-56.
- Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic management journal*, 22(6-7), 493-520.
- Andersen, & Buvik, A. (2002). Firms' internationalization and alternative approaches to the international customer/market selection. *International Business Review*, 11(3), 347-363.
- Andersen, A. D., & Andersen, P. D. (2017). Foresighting for inclusive development. *Technological forecasting and social change*, 119, 227-236.
- Andersen, P. H., & Esbjerg, L. (2020). Weaving a strategy for a base-of-the-pyramid market: The case of Grundfos LIFELINK. *Business Strategy and the Environment*, 29(8), 3687-3701.
- Andersen, P. H., & Strandskov, J. (1997). International market selection: A cognitive mapping perspective. *Journal of Global Marketing*, 11(3), 65-84.
- Anderson, J., & Markides, C. (2007). Strategic Innovation at the Base of the Pyramid. *MIT Sloan management review*, 49(1), 83.
- Andonova, L. B., & Piselli, D. (2022). Transnational partnerships, domestic institutions, and sustainable development. The case of Brazil and the Amazon Region Protected Areas program. *World Development*, 157, 105809.
- Anita Regmi and Mark Gehlhar, e. (2005). New Directions in Global Food Markets. *Agriculture Information Bulletin*(794).
- Ansoff, H. I. (1964). A quasi-analytic approach to the business strategy problem. *Management Science*(1), 67-77.
- Arnold, D. J., & Quelch, J. A. (1998). New Strategies in Emerging Markets. *MIT Sloan management review*, 40(1), 7.
- Arora, S., & Romijn, H. (2011). The empty rhetoric of poverty reduction at the base of the pyramid. *Organization*, 19(4), 481-505.
- Arora, S., & Romijn, H. (2012). The empty rhetoric of poverty reduction at the base of the pyramid. *Organization*, 19(4), 481-505.
- Austin, J. E. (2000). Strategic collaboration between nonprofits and businesses. *Nonprofit and voluntary sector quarterly*, 29(1\_suppl), 69-97.
- Austin, J. E., & Seitanidi, M. M. (2012). Collaborative value creation: A review of partnering between nonprofits and businesses. Part 2: Partnership processes and outcomes. *Nonprofit and voluntary sector quarterly*, 41(6), 929-968.
- Austin, J. E., & Seitanidi, M. M. (2012). Collaborative value creation: A review of partnering between nonprofits and businesses: Part I. Value creation spectrum and collaboration stages. *Nonprofit and voluntary sector quarterly*, 41(5), 726-758.
- Bai, W., Johanson, M., Oliveira, L., Ratajczak-Mrozek, M., & Francioni, B. (2022). Where business networks and institutions meet: Internationalization decision-making under uncertainty. *Journal of International Management*, 28(1), 100904.

- Banks, N., & Hulme, D. (2014). New development alternatives or business as usual with a new face? The transformative potential of new actors and alliances in development. *Third World Quarterly*, 35(1), 181-195.
- Bartley, T. (2007). Institutional emergence in an era of globalization: The rise of transnational private regulation of labor and environmental conditions. *American Journal of Sociology*, 113(2), 297-351.
- Batterink, M. H., Wubben, E. F., Klerkx, L., & Omta, S. (2010). Orchestrating innovation networks: The case of innovation brokers in the agri-food sector. *Entrepreneurship and regional development*, 22(1), 47-76.
- Bekele, S., Jon, H., & Geoffrey, M. (2011). Improving market access and agricultural productivity growth in Africa: what role for producer organizations and collective action institutions? *Food Security*, 3, 475-489.
- Berger, R., Choi, C. J., & Kim, J. B. (2011). Responsible Leadership for Multinational Enterprises in Bottom of Pyramid Countries: The Knowledge of Local Managers. *Journal of Business Ethics*, 101(4), 553-561.
- Berti, P. R., Krasevec, J., & FitzGerald, S. (2004). A review of the effectiveness of agriculture interventions in improving nutrition outcomes. *Public health nutrition*, 7(5), 599-609.
- Bessant, j., & Rush, H. (1995). Building bridges for innovation: the role of consultants in technology transfer. *Research Policy*, 24, 97-114.
- Beugelsdijk, S., Kostova, T., Kunst, V. E., Spadafora, E., & Van Essen, M. (2018). Cultural distance and firm internationalization: A meta-analytical review and theoretical implications. *Journal of management*, 44(1), 89-130.
- Bird, F. A., Pradhan, A., Bhavani, R., & Dangour, A. D. (2018). Interventions in agriculture for nutrition outcomes: A systematic review focused on South Asia. *Food Policy*, 82, 39-49.
- Bitzer, V., & Glasbergen, P. (2015). Business-NGO partnerships in global value chains: part of the solution or part of the problem of sustainable change? *Current Opinion in Environmental Sustainability* 2015, 12, 35-40.
- Bitzer, V., Van Balen, R., & de Steenhuijsen Piters, B. (2017). Aid & trade in Dutch development cooperation. *What Has Worked, What Hasn't Worked*, 2013-2017.
- Blok, V., Sjaww-Koen-Fa, A., & Omta, O. (2013). Effective Stakeholder Involvement at the Base of the Pyramid: The Case of Rabobank. *International Food and Agribusiness Management Review*, 16(A).
- Borchardt, M., Ndubisi, N. O., Jabbour, C. J. C., Grebinevych, O., & Pereira, G. M. (2020). The evolution of base of the pyramid approaches and the role of multinational and domestic business ventures: value-commitment and profit-making perspectives. *Industrial Marketing Management*, 89, 171-180.
- Bouma, J., & Berkhout, E. (2015). Inclusive green growth. *PBL Netherlands environmental assessment agency. PBL publication*, 17(8).
- Breeman, G., Dijkman, J., & Termeer, C. (2015). Enhancing food security through a multi-stakeholder process: the global agenda for sustainable livestock. *Food Security*, 7(425-435).
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review*, 75(5), 647-663.
- Buerki, T., Nandialath, A., Mohan, R., & Lizardi, S. (2014). International market selection criteria for emerging markets. *IUP Journal of Business Strategy*, 11(4), 7.
- Burgelman, R. A. (1996). A process model of strategic business exit: Implications for an evolutionary perspective on strategy. *Strategic management journal*, 17(S1), 193-214.

- Caldwell, N. D., Roehrich, J. K., & George, G. (2017). Social value creation and relational coordination in public-private collaborations. *Journal of Management Studies*, 54(6), 906-928.
- Calton, J. M., Werhane, P. H., Hartman, L. P., & Bevan, D. (2013). Building partnerships to create social and economic value at the base of the global development pyramid. *Journal of Business Ethics*, 117, 721-733.
- Calton, J. M., Werhane, P. H., Hartman, L. P., & Bevan, D. (2013). Building Partnerships to Create Social and Economic Value at the Base of the Global Development Pyramid. *Journal of Business Ethics*, 117(4), 721-733.
- Carletto, G., Ruel, M., Winters, P., & Zezza, A. (2015). Farm-level pathways to improved nutritional status. *Journal of Development Studies*, 51 (8)(945-957).
- Cavusgil, S. T. (1985). Guidelines for export market research. *Business horizons*, 28(6), 27-33.
- Cavusgil, S. T. (1997). Measuring the potential of emerging markets: An indexing approach. *Business horizons*, 40(1), 87-92.
- Chevrollier, N. T. Sprenger, Danse M.G., Poniatowski B., O'Neill K. (2012). Access to food and improved nutrition at the base of the pyramid: five business interventions to achieve social impact, financial sustainability and scale. *Utrecht, BOP Innovation Center*.
- Chikweche, T. (2013). Marketing at the bottom of pyramid: Market attractiveness and strategic requirements. *Marketing Intelligence and Planning*, 31(7), 764-787.
- Chikweche, T., & Fletcher, R. (2011). Franchising at the bottom of the pyramid (BOP): an alternative distribution approach. *The International Review of Retail, Distribution and Consumer Research*, 21(4), 343-360.
- Chliova, M., & Ringov, D. (2017). Scaling impact: Template development and replication at the base of the pyramid. *Academy of management perspectives*, 31(1), 44-62.
- Christensen, C., Craig, T., & Hart, S. (2001). The great disruption. *Foreign Affairs*, 80(2), 80-95.
- Clark, D. R., Li, D., & Shepherd, D. A. (2018). Country familiarity in the initial stage of foreign market selection. *Journal of International Business Studies*, 49, 442-472.
- Coleman, J. S. (1990). Commentary: Social institutions and social theory. *American sociological review*, 55(3), 333-339.
- Cozzens, S., & Sutz, J. (2014). Innovation in informal settings: Reflections and proposals for a research agenda. *Innovation and Development*, 4(1), 5-31.
- Craig, C. S., & Douglas, S. P. (2005). *International marketing research*: John Wiley & Sons Chichester.
- Dahan, N. M., Doh, J. P., Oetzel, J., & Yaziji, M. (2010). Corporate-NGO collaboration: Co-creating new business models for developing markets. *Long range planning*, 43(2-3), 326-342.
- Dalziel, M., & Parjanen, S. (2011). Measuring the Impact of Innovation Intermediaries. An Assessment of the impact of UCLA's Global Access Program. In DRUIT Conference. Copenhagen: DRUIT.
- Dangour, A. D., Green, R., Häsler, B., Rushton, J., Shankar, B., & Waage, J. (2012). Linking agriculture and health in low-and middle-income countries: an interdisciplinary research agenda. *Proceedings of the Nutrition Society*, 71(2), 222-228.
- Danse, M.G., Klerkx, L., Reintjes, J., Rabbinge, R., & Leeuwis, C. (2020). Unravelling inclusive business models for achieving food and nutrition security in BOP markets. *Global food security*, 24, 100354.
- Danse, M.G., & Vellema, S. (2005). Small-scale farmer access to international agri-food chains. *Greener Management International*, 2005(51), 39-52.
- Davis, L., & North, D. (1970). Institutional change and American economic growth: a first step towards a theory of institutional innovation. *The Journal of Economic History*, 30(01), 131-149.
- De Soto, H. (2000). *The mystery of capitalism*: New York, Basic Books.

- Deaza, J. A., Díaz, N. F., Castiblanco, S. E., & Barbosa, M. I. (2020). International market selection models: a literature review. *Tendencias*, 21(2), 191-217.
- Dembek, K., Sivasubramaniam, N., & Chmielewski, D. A. (2020). A systematic review of the bottom/base of the pyramid literature: Cumulative evidence and future directions. *Journal of Business Ethics*, 165, 365-382.
- Dembek, K., & York, J. (2022). Applying a sustainable business model lens to mutual value creation with base of the pyramid suppliers. *Business & Society*, 61(8), 2156-2191.
- Dentchev, N. A., Michelini, L., Verbeke, A., Hall, J., & Hillemann, J. (2022). New Perspectives on Base of the Pyramid Strategies (Vol. 61, pp. 1977-1991): SAGE Publications Sage CA: Los Angeles, CA.
- Dentoni, D., Bitzer, V., & Pascucci, S. (2016). Cross-sector partnerships and the co-creation of dynamic capabilities for stakeholder orientation. *Journal of Business Ethics*, 135(1), 35-53.
- Dolan, C., & Roll, K. (2013). Capital's new frontier: From unusable economies to bottom-of-the-pyramid markets in africa. *African Studies Review*, 56(3), 123-146. doi:10.1017/asr.2013.82
- Duane, S., Domegan, C., & Bunting, B. (2021). Partnering for UN SDG# 17: a social marketing partnership model to scale up and accelerate change. *Journal of Social Marketing*, 12(1), 49-75.
- Dunning, J. H., & Lundan, S. M. (2008). Institutions and the OLI paradigm of the multinational enterprise. *Asia Pacific Journal of Management*, 25(4), 573-593.
- Edquist, C. (1997). Systems of innovation approaches—their emergence and characteristics in Edquist. 1997) *Systems of Innovation: Technologies, Institutions and Organizations*, London: Pinter/Cassell.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532-550.
- Ekboir, J. M., & Vera-Cruz, A. O. (2012). Intermediary organisations to foster the agricultural system of innovation: the Mexican Produce Foundation. *International Journal of Technological Learning, Innovation and Development*, 5(1-2), 111-125.
- FAO. (2013). Fao strategy for partnerships with private sector. Rome, FAO.
- FAO, I., UNICEF, WFP and WHO (2023). *The State of Food Security and Nutrition in the World 2023: Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum* (Vol. 2023): Food & Agriculture Org.
- Faulconbridge, J. R. (2013). Situated bottom of the pyramid markets and the multinational corporation. *Marketing Theory*, 13(3), 393-396.
- Filippaios, F., & Rama, R. (2008). Globalisation or regionalisation? The strategies of the world's largest food and beverage MNEs. *European management journal*, 26(1), 59-72.
- Fiorella, K. J., Chen, R. L., Milner, E. M., & Fernald, L. C. (2016). Agricultural interventions for improved nutrition: a review of livelihood and environmental dimensions. *Global food security*, 8, 39-47.
- Foster, C., & Heeks, R. (2013a). Analyzing policy for inclusive innovation: the mobile sector and base-of-the-pyramid markets in Kenya. *Innovation and Development*, 3(1), 103-119.
- Foster, C., & Heeks, R. (2013b). Conceptualising inclusive innovation: Modifying systems of innovation frameworks to understand diffusion of new technology to low-income consumers. *The European Journal of Development Research*, 25(3), 333-355.
- Francioni, B., & Martín, O. M. (2024). International market, network, and opportunity selection: A systematic review of empirical research, integrative framework, and comprehensive research agenda. *Journal of International Management*, 101174.
- Freudenreich, B., Lüdeke-Freund, F., & Schaltegger, S. (2020). A stakeholder theory perspective on business models: Value creation for sustainability. *Journal of Business Ethics*, 166, 3-18.
- Fu, X., & Gong, Y. (2011). Indigenous and foreign innovation efforts and drivers of technological upgrading: evidence from China. *World Development*, 39(7), 1213-1225.

- Fuentelsaz, L., Garrido, E., & Maicas, J. P. (2020). The effect of informal and formal institutions on foreign market entry selection and performance. *Journal of International Management*, 26(2), 100735.
- Fuglie, K. (2016). The growing role of the private sector in agricultural research and development world-wide. *Global food security*, 10, 29-38.
- Gaffney, J., Anderson, J., Franks, C., Collinson, S., MacRobert, J., Woldemariam, W., & Albertsen, M. (2016). Robust seed systems, emerging technologies, and hybrid crops for Africa. *Global food security*, 9, 36-44.
- Gebauer, H., Haldimann, M., & Saul, C. J. (2017). Business model innovations for overcoming barriers in the base-of-the-pyramid market. *Industry and innovation*, 24(5), 543-568.
- George, G., McGahan, A. M., & Prabhu, J. (2012a). Innovation for inclusive growth: Towards a theoretical framework and a research agenda. *Journal of Management Studies*, 49(4), 661-683.
- George, G., McGahan, A. M., & Prabhu, J. (2012b). Innovation for Inclusive Growth: Towards a Theoretical Framework and a Research Agenda *Journal of Management Studies*, 49(4). doi:10.1111/j.1467-6486.2012.01048.x
- Geppert, M., & Williams, K. (2006). Global, national and local practices in multinational corporations: towards a sociopolitical framework. *The International Journal of Human Resource Management*, 17(1), 49-69.
- Geradts, T., Jansen, J., & Cornelissen, J. (2022). Let's profitably fight poverty, shall we? How managers use emotional framing to develop base of the pyramid ventures inside a large fast-moving consumer goods company. *Organization & Environment*, 35(4), 579-606.
- Ghosh, S., & Rajan, J. (2019). The business case for SDGs: An analysis of inclusive business models in emerging economies. *International Journal of Sustainable Development & World Ecology*, 26(4), 344-353.
- Godfray, H. C. J., Beddington, J. R., Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., . . . Toulmin, C. (2010). Food security: the challenge of feeding 9 billion people. *science*, 327(5967), 812-818.
- Goyal, S., Esposito, M., Kapoor, A., Jaiswal, M., & Sergi, B. S. (2014). Linking up: inclusive business models for access to energy solutions at base of the pyramid in India. *International Journal of Business and Globalisation*, 12(4), 413-438.
- Gradl, C., & Jenkins, B. (2011). Tackling barriers to scale: From inclusive business models to inclusive business ecosystems. *CSR Initiative, Harvard Kennedy School, Cambridge MA*.
- Gradl, C., Sobhani, S., Bootsman, A., & Gasnier, A. (2008). Understanding the markets of the poor: A market system approach to inclusive business models. *Sustainability challenges and solutions at the base of the pyramid: Business, technology and the poor*, 29(50), 22.
- Granovetter, M. S. (1973). The strength of weak ties: a network theory revisited *American Journal of Sociology*, 78, 1360-1380.
- Gray, B., & Purdy, J. (2018). *Collaborating for our future: Multistakeholder partnerships for solving complex problems*: Oxford University Press.
- Gray, B., & Wood, D. J. (1991). Collaborative alliances: Moving from practice to theory. *The Journal of applied behavioral science*, 27(1), 3-22.
- Grimm, J. (2022). Cognitive frames of poverty and tension handling in base-of-the-pyramid business models. *Business & Society*, 61(8), 2070-2114.
- Guimon, J., Klerkx, L., & De Saint Pierre, T. (2016). How to bring global R&D into Latin America: lessons from Chile. *Issues in Science and Technology*, 32(2), 17-20.
- Gulati, R. (2007). *Managing network resources: Alliances, affiliations, and other relational assets*: Oxford University Press on Demand.

- Hahn, T., Kolk, A., & Winn, M. (2010). A new future for business? Rethinking management theory and business strategy. *Business & Society*, 49(3), 385-401.
- Hall, J., Matos, S., Sheehan, L., & Silvestre, B. (2012). Entrepreneurship and innovation at the base of the pyramid: a recipe for inclusive growth or social exclusion? *Journal of Management Studies*, 49(4), 785-812.
- Halme, M., Lindeman, S., & Linna, P. (2012). Innovation for inclusive business: Intrapreneurial bricolage in multinational corporations. *Journal of Management Studies*, 49(4), 743-784.
- Hamilton, H., (2013). Sustainable Food Lab Learning Systems for Inclusive Business Models Worldwide. *International Food and Agribusiness Management Review*, 16(A).
- Hammond, A., & Prahalad, C. K. (2004). Selling to the poor. *Foreign Policy*, 30-37.
- Hammond, A. L., Kramer, W. J., Katz, R. S., Tran, J. T., & Walker, C. (2008). The Next 4 Billion: Characterizing BoP Markets. *Development Outreach*, 10(2), 7-26.
- Hart, S. L., (2005). *Capitalism at the crossroads: The unlimited business opportunities in solving the world's most difficult problems*: Pearson Education.
- Hart, S. L., & Sharma, S. (2004). Engaging fringe stakeholders for competitive imagination. *Academy of Management Executive*, 18, 7-18.
- Hart, S. L., Sharma, S., & Halme, M. (2016). Poverty, business strategy, and sustainable development (Vol. 29, pp. 401-415): Sage Publications Sage CA: Los Angeles, CA.
- Hasegawa, S. (2022). BoP businesses of multinational corporations and sustainability *Sustainable Development Disciplines for Society: Breaking Down the 5Ps—People, Planet, Prosperity, Peace, and Partnerships* (pp. 201-218): Springer.
- Hawkes, C., & Ruel, M. T. (2012). Value chains for nutrition. *Reshaping agriculture for nutrition and health*, 73-82.
- Heeks, R., Amalia, M., Kintu, R., & Shah, N. (2013). Inclusive Innovation: Definition, Conceptualisation and Future Research Priorities. *Development Informatics Working Paper Series*(53).
- Heeks, R., Foster, C., & Nugroho, Y. (2014). New models of inclusive innovation for development. *Innovation and Development*, 4(2), 175-185.
- Hens, L. (2012). Overcoming institutional distance: Expansion to base-of-the-pyramid markets. *Journal of Business Research*, 65(12), 1692-1699.
- Hoddinott, J. (2013). The economic cost of malnutrition *The Road to Good Nutrition* (pp. 64-73): Karger Publishers.
- Hoffecker, E. (2021). Understanding inclusive innovation processes in agricultural systems: A middle-range conceptual model. *World Development*, 140, 105382.
- Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5): sage.
- Holmes Jr, R. M., Miller, T., Hitt, M. A., & Salmador, M. P. (2013). The interrelationships among informal institutions, formal institutions, and inward foreign direct investment. *Journal of Management*, 39(2), 531-566.
- Horan, D. (2019). A new approach to partnerships for SDG transformations. *Sustainability*, 11(18), 4947.
- Howell, R., van Beers, C., & Doorn, N. (2018). Value capture and value creation: The role of information technology in business models for frugal innovations in Africa. *Technological forecasting and social change*, 131, 227-239.
- Howells, J. (2006). Intermediation and the role of intermediaries in innovation. *Research Policy*, 35, 715-728.
- Huberman, A. M., & Miles, M. B. (1994). Data management and analysis methods.

- Huxham, C., Vangen, S., Huxham, C., & Eden, C. (2000). The challenge of collaborative governance. *Public Management an International Journal of Research and Theory*, 2(3), 337-358.
- Intarakumnerd, P., & Chaoroenporn, P. (2013). The roles of intermediaries in sectoral innovation system in developing countries: public organizations versus private organizations, . *Asian Journal of Technology Innovation*, 21(1), 108-119.
- IDH, Summary of the Cocoa Fertilizer Initiative Evaluation Report, 2012 - 2017, April 2017: <https://www.idhsustainabletrade.com/uploaded/2017/04/Cocoa-Fertilizer-Initiative-Executive-Summary-of-the-Evaluation.pdf>
- IOB. (2014). 'Op zoek naar focus en effectiviteit. Beleidsdoorlichting van de Nederlandse inzet voor private sector ontwikkeling 2005-2012'. . *Dutch Ministry of Foreign Affairs*, No. 389.
- IOB. (2021). Resultaten–Evaluatie BHOS-activiteiten Partners in ontwikkeling-Resultaten-Directie Internationaal Onderzoek en Beleidsevaluatie (IOB). *Dutch Ministry of Foreign Affairs*.
- Jen, E. (2003). Stable or robust? What's the difference? *Complexity*, 8(3), 12-18.
- Jiang, G. F., Holburn, G. L., & Beamish, P. W. (2014). The impact of vicarious experience on foreign location strategy. *Journal of International Management*, 20(3), 345-358.
- Jun, S., Lee, D., & Park, J. (2013). Determining business models in bottom-of-the-pyramid markets. *Industrial Management and Data Systems*, 113(7), 1064-1082.
- Kaczmarek, S., & Ruigrok, W. (2013). In at the deep end of firm internationalization: Nationality diversity on top management teams matters. *Management International Review*, 53(4), 513-534.
- Kalkanci, B., Rahmani, M., & Toktay, L. B. (2019). The role of inclusive innovation in promoting social sustainability. *Production and Operations Management*, 28(12), 2960-2982.
- Kania, J., & Kramer, M. (2011). Collective impact Stanford social innovation review.
- Kanungo, R. P. (2006). Cross culture and business practice: are they coterminous or cross-verging? *Cross Cultural Management: An International Journal*, 13(1), 23-31.
- Kaplinsky, R. (2011). Schumacher meets Schumpeter: Appropriate technology below the radar. *Research Policy*, 40(2), 193-203.
- Kaplinsky, R., & Readman, J. (2001). Integrating SMEs in global value chains: towards partnership for development. *Vienna: Unido*.
- Karnani, A. (2009). Romanticising the poor harms the poor. *Journal of International Development*, 21(1), 76-86.
- Karnani, A. (2010). Failure of the libertarian approach to reducing poverty. *Asian Business and Management*, 9(1), 5-21.
- Katzy, B., Turgut, E., Holzmann, T., & Sailer, K. (2013). Innovation intermediaries: a process view on open innovation coordination. *Technology Analysis & Strategic Management*, 25(3), 295-309.
- Khanna, T., & Palepu, K. (2000). Emerging market business groups, foreign intermediaries, and corporate governance. In *Concentrated corporate ownership* (pp. 265-294). University of Chicago Press.
- Khanna, T., Palepu, K. G., & Sinha, J. (2005). Strategies that fit emerging markets. *Harvard business review*, 83(6), 4-19.
- Khurana, R. (2002). Market triads: A theoretical and empirical analysis of market intermediation. *Journal for the theory of social behaviour*, 32(2), 239-262.
- Kilelu, C., Klerkx, L., & Leeuwis, C. (2013). Unravelling the role of innovation platforms in supporting co-evolution of innovation: Contributions and tensions in a smallholder dairy development programme. *Agricultural Systems*, 118, 65-77.
- Kilelu, C., Klerkx, L., Leeuwis, C., & Hall, A. (2011). Beyond knowledge brokerage: An exploratory study of innovation intermediaries in an evolving smallholder agricultural system in Kenya. *Knowledge Management for Development Journal*, 7(1), 84-108.

- Kivimaa, P., Boon, W., Hyysalo, S., & Klerkx, L. (2019). Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda. *Research Policy*, 48(4), 1062-1075.
- Kleemann, L., Abdulai, A., & Buss, M. (2014). Certification and access to export markets: Adoption and return on investment of organic-certified pineapple farming in Ghana. *World Development*, 64, 79-92.
- Klein, M. H. (2008). *Poverty Alleviation through sustainable strategic business models: essays on poverty alleviation as a business strategy*: Erasmus Research Institute of Management (ERIM).
- Klerkx, L., Álvarez, R., & Campusano, R. (2015). The emergence and functioning of innovation intermediaries in maturing innovation systems: the case of Chile. *Innovation and Development*, 5(1), 73-91.
- Klerkx, L., & Gildemacher, P. (2012). The role of innovation brokers in agricultural innovation systems. *World Bank. Agricultural innovation systems: an investment sourcebook, Module*, 3.
- Klerkx, L., & Guimón, J. (2017). Attracting foreign R&D through international centres of excellence: early experiences from Chile. *Science and Public Policy*, 44(6), 763-774.
- Klerkx, L., Hall, A., & Leeuwis, C. (2009). Strengthening agricultural innovation capacity: are innovation brokers the answer? *Int. J. Agricultural Resources, Governance and Ecology*, 8 Nos. 5/6.
- Klerkx, L., & Leeuwis, C. (2008a). Balancing multiple interests: Embedding innovation intermediation in the agricultural knowledge infrastructure. *Technovation* 28, 364-378.
- Klerkx, L., & Leeuwis, C. (2008b). Matching demand and supply in the agricultural knowledge infrastructure: Experiences with innovation intermediaries. *Food Policy*, 33(3), 260-276.
- Knorringa, P., Peša, I., Leliveld, A., & Van Beers, C. (2016). Frugal Innovation and Development: Aides or Adversaries? *The European Journal of Development Research*, 28(2), 143-153.
- Koch, A. J. (2001). Factors influencing market and entry mode selection: developing the MEMS model. *Marketing Intelligence & Planning*.
- Kolk, A., Kourula, A., Pisani, N., & Westermann-Behaylo, M. (2019). The state of international business, corporate social responsibility, and development: Key insights and an application to practice *Business and development studies* (pp. 257-285): Routledge.
- Kolk, A., Rivera-Santos, M., & Rufin, C. (2014). Reviewing a decade of research on the "base/bottom of the pyramid"(BOP) concept. *Business & Society*, 53(3), 338-377.
- Kolk, A., & van den Buuse, D. (2012). In search of viable business models for development: sustainable energy in developing countries. *Corporate Governance: The international journal of business in society*, 12(4), 551-567.
- Kolk, A., van Dolen, W., & Vock, M. (2010). Trickle effects of cross-sector social partnerships. *Journal of Business Ethics*, 94(1), 123-137.
- Kolk, A., Van Tulder, R., & Kostwinder, E. (2008). Business and partnerships for development. *European management journal*, 26(4), 262-273.
- Kracht, U., & Huq, M. (1996). Realizing the right to food and nutrition through public and private action: Two commentaries on Drèze's/Sen's book *Hunger and Public Action* in the context of food and nutrition rights. *Food Policy*, 21(1), 73-82.
- Kumar, R., & Patriotta, G. (2011). Culture and international alliance negotiations: a sensemaking perspective. *International Negotiation*, 16(3), 511-533.
- Kumar, C., Hargrave, K., Craviotto, N., & Pudusser, J. (2025). The case for development in 2025: Exploring new narratives for aid in the context of the EU's new strategic agenda. ODI Global Report.
- Kuo, T. C., Shiang, W.-J., Hanafi, J., & Chen, S. Y. (2018). Co-development of supply chain in the BOP markets. *Sustainability*, 10(4), 963.

- Laasonen, S., Fougère, M., & Kourula, A. (2012). Dominant articulations in academic business and society discourse on NGO–business relations: A critical assessment. *Journal of Business Ethics*, 109(4), 521-545.
- Landrum, N. E. (2007). Advancing the “base of the pyramid” debate. *Strategic Management Review*, 1(1), 1-12.
- Lashitew, A. A., Bals, L., & van Tulder, R. (2020). Inclusive business at the base of the pyramid: The role of embeddedness for enabling social innovations. *Journal of Business Ethics*, 162, 421-448.
- Lashitew, A. A., Narayan, S., Rosca, E., & Bals, L. (2022). Creating social value for the ‘base of the pyramid’: An integrative review and research agenda. *Journal of Business Ethics*, 178(2), 445-466.
- Lashitew, A. A., & van Tulder, R. (2020). The limits and promises of embeddedness as a strategy for social value creation. *critical perspectives on international business*, 16(1), 100-115.
- Lashitew, A. A., van Tulder, R., & Muche, L. (2022). Social value creation in institutional voids: a business model perspective. *Business & Society*, 61(8), 1992-2037.
- Lee, L. (2015). Understanding the role of the broker in business non-profit collaboration. *Social Responsibility Journal*. 11(2), 201-220.
- Lepak, D. P., Smith, K. G., & Taylor, M. S. (2007). Value creation and value capture: A multilevel perspective. *Academy of management review*, 32(1), 180-194.
- Lin, H. (2012). Cross-sector alliances for corporate social responsibility partner heterogeneity moderates environmental strategy outcomes. *Journal of Business Ethics*, 110(2), 219-229.
- London, T. (2008). *The Base-of-the-Pyramid perspective: a new approach to poverty alleviation*. Paper presented at the Academy of Management Proceedings.
- London, T., & Anupindi, R. (2012). Using the base-of-the-pyramid perspective to catalyze interdependence-based collaborations. *Proceedings of the National Academy of Sciences*, 109(31), 12338-12343.
- London, T., & Hart, S. L. (2004). Reinventing strategies for emerging markets: beyond the transnational model. *Journal of International Business Studies*, 35(5), 350-370.
- Lorentzen, J. (2010). Low-income countries and innovation studies: A review of recent literature. *African Journal of Science, Technology, Innovation and Development*, 2(3), 46-81.
- Lu, J., Liu, X., Wright, M., & Filatotchev, I. (2014). International experience and FDI location choices of Chinese firms: The moderating effects of home country government support and host country institutions. *Journal of International Business Studies*, 45, 428-449.
- Lundvall, B. Å. (2007). National innovation systems—analytical concept and development tool. *Industry and innovation*, 14(1), 95-119.
- Ma, X. F., Kaldenbach, M., & Katzy, B. (2014). Cross-border innovation intermediaries–matchmaking across institutional contexts. *Technology Analysis & Strategic Management*, 26(6), 703-716.
- Maestre, M., Poole, N., & Henson, S. (2017). Assessing food value chain pathways, linkages and impacts for better nutrition of vulnerable groups. *Food Policy*, 68, 31-39.
- Mair, J., Martí, I., & Ventresca, M. j. (2012). Building inclusive markets in rural bangladesh: How intermediaries work institutional voids. *Academy of Management Journal*, 55(4), 819-850. doi:10.5465/amj.2010.0627
- Malerba, F. (2005). Sectoral systems of innovation: a framework for linking innovation to the knowledge base, structure and dynamics of sectors. *Economics of innovation and New Technology*, 14(1-2), 63-82.
- Manning, S., & Roessler, D. (2014). The Formation of Cross-Sector Development Partnerships: How Bridging Agents Shape Project Agendas and Longer-Term Alliances. *Business Ethics*, 123, 527-547.

- Manning, S., & Von Hagen, O. (2010). Linking local experiments to global standards: How project networks promote global institution-building. *Scandinavian Journal of Management*, 26(4), 398-416.
- Mashelkar, R. (2012). *On building an inclusive innovation ecosystem*. Paper presented at the Conference on Innovation for Inclusive Development.
- Mason, K., & Chakrabarti, R. (2017). The role of proximity in business model design: Making business models work for those at the bottom of the pyramid. *Industrial Marketing Management*, 61, 67-80.
- Masset, E., Haddad, L., Cornelius, A., & Isaza-Castro, J. (2012). Effectiveness of agricultural interventions that aim to improve nutritional status of children: systematic review. *Bmj*, 344.
- McCarthy, L., & Muthuri, J. N. (2016). Engaging Fringe Stakeholders in Business and Society Research Applying Visual Participatory Research Methods. *Business & Society*, 0007650316675610.
- Minasny, B., Fiantis, D., Mulyanto, B., Sulaeman, Y., & Widyatmanti, W. (2020). Global soil science research collaboration in the 21st century: Time to end helicopter research. *Geoderma*, 373, 114299.
- Ministry of Foreign Affairs (2025), Letter of 20 February 2025 from the Minister for Foreign Trade and Development to the House of Representatives on International Development, Ministry of Foreign Affairs of The Netherlands, 20 February 2025.
- Molina-Maturano, J., Speelman, S., & De Steur, H. (2020). Constraint-based innovations in agriculture and sustainable development: A scoping review. *Journal of Cleaner Production*, 246, 119001.
- Morris, M., M. Schindehutte and J. Allen (2005). The entrepreneur's business model.pdf>. *Journal of Business Research*(58), 726/735.
- Mortazavi, S., Eslami, M. H., Hajikhani, A., & Väättänen, J. (2021). Mapping inclusive innovation: A bibliometric study and literature review. *Journal of Business Research*, 122, 736-750.
- Mortazavi, S., Laine, I., Teplov, R., Väättänen, J., & Gupta, S. (2019). *Globalization and Development: Entrepreneurship, Innovation, Business and Policy Insights from Asia and Africa*, 149-167.
- Murphy, M., Perrot, F., & Rivera-Santos, M. (2012). New perspectives on learning and innovation in cross-sector collaborations. *Journal of Business Research*, 65(12), 1700-1709.
- Nahi, T. (2016). Cocreation at the base of the pyramid: Reviewing and organizing the diverse conceptualizations. *Organization & Environment*, 29(4), 416-437.
- Narayan-Parker, D., & Patel, R. (2000). *Voices of the poor: Can anyone hear us?* (Vol. 1): World Bank Publications.
- Nilsson, F., & Rapp, B. (2005). *Understanding competitive advantage: The importance of strategic congruence and integrated control*: Springer Science & Business Media.
- North, D. C. (1990). *Institutions, institutional change and economic performance*: Cambridge university press.
- Olivier Kayser, L. K., Simon Brossard. (2014). Marketing nutrition for the base of the pyramid. *Paris: Hystra*.
- Opola, F. O., Klerkx, L., Leeuwis, C., & W Kilelu, C. (2021). The hybridity of inclusive innovation narratives between theory and practice: A framing analysis. *The European Journal of Development Research*, 33(3), 626-648.
- Ortuño, C. A., & Dentchev, N. A. (2021). We need transdisciplinary research on Sustainable Business Models. *Journal of Business Models*, 9(2), 72-86.
- Ozturk, A., Joiner, E., & Cavusgil, S. T. (2015). Delineating foreign market potential: A tool for international market selection. *Thunderbird International Business Review*, 57(2), 119-141.
- Pansera, M., & Martinez, F. (2017). Innovation for development and poverty reduction: an integrative literature review. *Journal of Management Development*.

- Pansera, M., & Owen, R. (2015). Framing resource-constrained innovation at the 'bottom of the pyramid': Insights from an ethnographic case study in rural Bangladesh. *Technological forecasting and social change*, 92, 300-311.
- Pansera, M., & Owen, R. (2018). Framing inclusive innovation within the discourse of development: Insights from case studies in India. *Research Policy*, 47(1), 23-34.
- Papadopoulos, N., & Martín Martín, O. (2011). International market selection and segmentation: perspectives and challenges. *International Marketing Review*, 28(2), 132-149.
- Papaioannou, T. (2014). How inclusive can innovation and development be in the twenty-first century? *Innovation and Development*, 4(2), 187-202.
- Papaioannou, T., Watkins, A., Mugwagwa, J., & Kale, D. (2016). To Lobby or to Partner? Investigating the Shifting Political Strategies of Biopharmaceutical Industry Associations in Innovation Systems of South Africa and India. *World Development*, 78, 66-79.
- Patel, K., Wiebe, D. G. K., & Seburn, R.-A. (2014). Promoting food security and livelihoods for urban poor through the informal sector: a case study of street food vendors in Madurai, Tamil Nadu, India *Food Security*, 6, 861-878.
- Paul, J. (2019). Marketing in emerging markets: a review, theoretical synthesis and extension. *International Journal of Emerging Markets*.
- Paunov, C. (2013). Innovation and inclusive development: A discussion of the main policy issues. *OECD, STI WORKING PAPER 2013/1*.
- Peng, M. W., Wang, D. Y., & Jiang, Y. (2008). An institution-based view of international business strategy: A focus on emerging economies. *Journal of International Business Studies*, 39(5), 920-936.
- Pineda-Escobar, M. A., & Merigo, J. M. (2020). A bibliometric analysis of the Base/Bottom of the Pyramid research. *Journal of Intelligent & Fuzzy Systems*, 38(5), 5537-5551.
- Pinstrup-Andersen, P. (2013). Nutrition-sensitive food systems: from rhetoric to action. *The Lancet*, 382(9890), 375-376.
- Porter, M. E., (1980). Corporate strategy. *New York. New York, NY*.
- Porter, M. E., & Kramer, M. R. (2018). Creating shared value: How to reinvent capitalism—And unleash a wave of innovation and growth *Managing sustainable business: An executive education case and textbook* (pp. 323-346): Springer.
- Poulton, C., Dorward, A., & Kydd, J. (2010). The future of small farms: New directions for services, institutions, and intermediation. *World Development*, 38(10), 1413-1428.
- Poulton, C., & Macartney, J. (2012). Can Public Private Partnership leverage private investment in agricultural value chains in Africa? *World Development*, 40(1), 96-109.
- Prahalad, C.K., (2004). The fortune at the bottom of the pyramid: Eradicating poverty through profits. 2004: Philadelphia, PA: Wharton School Publishing.
- Prahalad, C.K., (2012). Bottom of the Pyramid as a Source of Breakthrough Innovations. *Journal of Product Innovation Management*, 29(1), 6-12.
- Prahalad, C. K., (2004). The fortune at the bottom of the pyramid: Eradicating poverty through profits. 2004: Philadelphia, PA: Wharton School Publishing.
- Prahalad, C. K., & Hart, S. L. (1999). Strategies for the bottom of the pyramid: creating sustainable development. *Ann Arbor*, 1001(1999), 48109.
- Pretty, J. N., Morison, J. I., & Hine, R. E. (2003). Reducing food poverty by increasing agricultural sustainability in developing countries. *Agriculture, ecosystems & environment*, 95(1), 217-234.
- Prosekov, A. Y., & Ivanova, S. A. (2018). Food security: The challenge of the present. *Geoforum*, 91, 73-77.
- Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229-252.

- Quélin, B. V., Kivleniece, I., & Lazzarini, S. (2017). Public-private collaboration, hybridity and social value: Towards new theoretical perspectives. *Journal of Management Studies*, 54(6), 763-792.
- Reardon, T., Barrett, C. B., Berdegue, J. A., & Swinnen, J. F. M. (2009). Agrifood Industry Transformation and Small Farmers in Developing Countries. *World Development*, 37(11), 1717-1727.
- Reficco, E., & Márquez, P. (2012). Inclusive networks for building BOP markets. *Business & Society*, 51(3), 512-556.
- Report, W. D. (2005). *World development report 2005: a better investment climate for everyone*: The World Bank.
- Ricart, J. E., Enright, M. J., Ghemawat, P., Hart, S. L., & Khanna, T. (2004). New frontiers in international strategy. *Journal of International Business Studies*, 35(3), 175-200.
- Ricart, S. a. (2010). Business model innovation and sources of value creation in low-income markets. *European management review*, 7, 138-154.
- Ridder, H.-G. (2017). The theory contribution of case study research designs. *Business research*, 10, 281-305.
- Rivera-Santos, M., Rufin, C., & Kolk, A. (2012). Bridging the institutional divide: Partnerships in subsistence markets. *Journal of Business Research*, 65(12), 1721-1727.
- Ruel, M. T., Quisumbing, A. R., & Balagamwala, M. (2018). Nutrition-sensitive agriculture: What have we learned so far? *Global food security*, 17, 128-153.
- Rugman, A. M., & Verbeke, A. (2003). Extending the theory of the multinational enterprise: Internalization and strategic management perspectives. *Journal of International Business Studies*, 34, 125-137.
- Sakarya, S., Bodur, M., Yildirim-Öktem, Ö., & Selekler-Göksen, N. (2012). Social alliances: Business and social enterprise collaboration for social transformation. *Journal of Business Research*, 65(12), 1710-1720.
- Sakarya, S., Eckman, M., & Hyllegard, K. H. (2007). Market selection for international expansion: Assessing opportunities in emerging markets. *International Marketing Review*, 24(2), 208-238.
- Saz-Carranza, A., & Ospina, S. M. (2011). The behavioral dimension of governing interorganizational goal-directed networks—Managing the unity-diversity tension. *Journal of Public Administration Research and Theory*, 21(2), 327-365.
- Schillo, R. S., & Robinson, R. M. (2017). Inclusive innovation in developed countries: The who, what, why, and how. *Technology Innovation Management Review*, 7(7).
- Schühly, A., & Tenzer, H. (2017). A multidimensional approach to international market selection and nation branding in sub-Saharan Africa. *Africa Journal of Management*, 3(3-4), 236-279.
- Schuster, T., & Holtbrügge, D. (2012). Market entry of multinational companies in markets at the bottom of the pyramid: A learning perspective. *International Business Review*, 21(5), 817-830.
- Schuster, T., & Holtbrügge, D. (2014a). Benefits of cross-sector partnerships in markets at the base of the pyramid. *Business Strategy and the Environment*, 23(3), 188-203.
- Schuster, T., & Holtbrügge, D. (2014b). Resource dependency, innovative strategies, and firm performance in BOP markets. *Journal of Product Innovation Management*, 31, 43-59.
- Seelos, C. (2014). Theorizing and strategizing with models: Generative models of business models. *International Journal of Entrepreneurial Venturing*, 6(1), 6-21.
- Seelos, C., & Mair, J. (2006). Profitable business models and market creation in the context of deep poverty: a strategic view. *Occasional Paper OP no 07/6*.
- Seelos, C., & Mair, J. (2010). Organizational mechanisms of inclusive growth: A critical realist perspective on scaling.
- Seitanidi, M. M., & Crane, A. (2013). *Social partnerships and responsible business: A research handbook*: Routledge.

- Selsky, J. W., & Parker, B. (2005). Cross-sector partnerships to address social issues: Challenges to theory and practice. *Journal of management*, 31(6), 849-873.
- Selsky, J. W., & Parker, B. (2010). Platforms for cross-sector social partnerships: Prospective sense-making devices for social benefit. *Journal of Business Ethics*, 94, 21-37.
- Shapiro, J. M., Ozanne, J. L., & Saatcioglu, B. (2008). An interpretive examination of the development of cultural sensitivity in international business. *Journal of International Business Studies*, 39(1), 71-87.
- Sharma, A., & Kearins, K. (2011). Interorganizational collaboration for regional sustainability: What happens when organizational representatives come together? *The Journal of applied behavioral science*, 47(2), 168-203.
- Shenkar, O., Luo, Y., & Yehekel, O. (2008). From "distance" to "friction": Substituting metaphors and redirecting intercultural research. *Academy of management review*, 33(4), 905-923.
- Simanis, E. (2012). Reality check at the bottom of the pyramid. *Harvard business review*, 90(6), 120-125.
- Simanis, E., & Hart, S. (2006). Expanding Possibilities at the Base of the Pyramid. *Innovations: Technology, Governance, Globalization*, 1(1), 43-51.
- Sinkovics, N., Gunaratne, D., Sinkovics, R. R., & Molina-Castillo, F.-J. (2021). Sustainable business model innovation: An umbrella review. *Sustainability*, 13(13), 7266.
- Sjauw-Koen-Fa, A. R., Blok, V., & Omta, S. O. (2016). Critical Success Factors for Smallholder Inclusion in High Value-Adding Supply Chains by Food & Agribusiness Multinational Enterprises. *International Food and Agribusiness Management Review*, 19(1), 83.
- Smith, A., Seyfang, G., Hielscher, S., & Hargreaves, T. (2013). Constructing grassroots innovations for sustainability. *Global Environmental Change-Human and Policy Dimensions*, 23(5), 827-829.
- Stadtler, L. (2015). Scrutinizing Public-Private Partnerships for Development: Towards a Broad Evaluation Conception. *Journal of Business Ethics*.
- Stadtler, L. (2016). Scrutinizing public-private partnerships for development: Towards a broad evaluation conception. *Journal of Business Ethics*, 135(1), 71-86.
- Stadtler, L., & Karakulak, Ö. (2020). Broker organizations to facilitate cross-sector collaboration: At the crossroad of strengthening and weakening effects. *Public Administration Review*, 80(3), 360-380.
- Stadtler, L., & Probst, G. (2012). How broker organisations can facilitate public private partnership for development. *European management journal*, 30, 32/46.
- Steenkamp, J.-B. E., & Ter Hofstede, F. (2002). International market segmentation: issues and perspectives. *International journal of research in marketing*, 19(3), 185-213.
- Stewart, J., & Hyysalo, S. (2008). Intermediaries, users and social learning in technological innovation. *International Journal of Innovation Management*, 12(03), 295-325.
- Stott, L. (2022). *Partnership and transformation: The promise of multi-stakeholder collaboration in context*: Routledge.
- Subrahmanyam, S., & Gomez-Arias, J. T. (2008). Integrated approach to understanding consumer behavior at bottom of pyramid. *Journal of Consumer Marketing*, 25(7), 402-412.
- Szogs, A., Cummings, A., & Chaminade, C. (2011). Building systems of innovation in less developed countries: the role of intermediate organizations supporting interactions in Tanzania and El Salvador. *Innovation and Development*, 1(2), 283-302.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13), 1319-1350.
- Tennyson, R., & Houghton, R. (2018). Follow the leader? Leadership in a collaborative model. In *Shaping Sustainable Change* (pp. 95-109). Routledge.

- Termeer, C., Hilhorst, T., & Oorthuizen, J. (2010). Facilitating north–south partnerships for sustainable agriculture. *Journal of Agricultural Education and Extension*, 16(3), 213–227.
- Tran, Y., Hsuan, J., & Mahnke, V. (2011). How do innovation intermediaries add value? Insight from new product development in fashion markets. *R&D Management* 41, 41(1), 80–91.
- Tung, R. L., & Verbeke, A. (2010). Beyond Hofstede and GLOBE: Improving the quality of cross-cultural research (Vol. 41, pp. 1259–1274): Springer.
- Tuttle, J. N. (2012). Private-sector engagement in food security and agricultural development. Washington, DC, USA: Center for Strategic and International Studies.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American sociological review*, 674–698.
- Uzzi, B. (2018). Social structure and competition in interfirm networks: The paradox of embeddedness *The sociology of economic life* (pp. 213–241): Routledge.
- van der Merwe, M. D., Grobbelaar, S. S., Schutte, C. S., & von Leipzig, K. H. (2018). Toward an enterprise growth framework for entering the base of the pyramid market: A systematic review. *International Journal of Innovation and Technology Management*, 15(04), 1850035.
- van Hille, I. (2020). A balancing act: convening cross-sector partnerships to strengthen sustainable development in global supply chains.
- van Hille, I., de Bakker, F. G., Ferguson, J. E., & Groenewegen, P. (2019). Navigating tensions in a cross-sector social partnership: How a convener drives change for sustainability. *Corporate Social Responsibility and Environmental Management*, 26(2), 317–329.
- van Hille, I., de Bakker, F. G., Ferguson, J. E., & Groenewegen, P. (2020). Cross-sector partnerships for sustainability: How mission-driven conveners drive change in national coffee platforms. *Sustainability*, 12(7), 2846.
- van Lente, H., Hekkert, M., Smits, R., & van Waveren, B. (2003). Roles of systemic intermediaries in transition processes. *International Journal of Innovation Management*, 7(03), 247–279.
- van Lieshout, P., Went, R., & Kremer, M. (2010). *Less pretension, more ambition: Development policy in times of globalization*: Amsterdam University Press.
- van Maanen, J., Sørensen, J. B., & Mitchell, T. R. (2007). The interplay between theory and method. *Academy of management review*, 32(4), 1145–1154.
- van Tulder, R., Seitanidi, M. M., Crane, A., & Brammer, S. (2016). Enhancing the impact of cross-sector partnerships: Four impact loops for channeling partnership studies. *Journal of Business Ethics*, 135, 1–17.
- Vangen, S. (2017). Developing practice-oriented theory on collaboration: A paradox lens. *Public Administration Review*, 77(2), 263–272.
- Vangen, S., & Huxham, C. (2003). Enacting leadership for collaborative advantage: Dilemmas of ideology and pragmatism in the activities of partnership managers. *British Journal of Management*, 14, S61–S76.
- Vázquez-Pacho, M. G., & Payaud, M. A. (2024). From strategy to impact: how MNCs innovate their business models for social value in BoP contexts? *Journal of Strategy and Management*.
- Vecchi, V., Tanese, A., & Osborne, S. (2022). Do public-private partnerships still have a future? *Public Works Management & Policy*, 27(4), 337–341.
- Veglio, V. B. a. F. (2011). inclusive-business-for-sustainable-livelihoods. 5, 1–5.
- Vellema, S., & Danse, M. (2007). Innovation and Development: Institutional perspectives on technological change in agri-food chains. *Stichting DLO, Wageningen*.
- Voigt, S. (2018). How to measure informal institutions. *Journal of Institutional Economics*, 14(1), 1–22.
- Vorley, B., Lundy, M., & MacGregor, J. (2009). Business models that are inclusive of small farmers. *Agro-industries for Development, Wallingford, UK: CABI for FAO and UNIDO*, 186–222.

- Voros Fregolente, M., & Carvalho, M. M. (2023). Exploring BoP Generations through Business Model Innovation Lens: A Review and Framing. *Sustainability*, 15(17), 12817.
- Webb, J. W., Kistruck, G. M., Ireland, R. D., & Ketchen Jr, D. J. (2010). The entrepreneurship process in base of the pyramid markets: The case of multinational enterprise/nongovernment organization alliances. *Entrepreneurship Theory and Practice*, 34(3), 555-581.
- Wei, T., & Wan, Q. (2024). Filling institutional voids: interactions between digital and individual intermediaries in facilitating corporate social entrepreneurs for building inclusive markets. *Chinese Management Studies*, 19(2), 416-439.
- Welzel, C., Inglehart, R., & Deutsch, F. (2005). Social capital, voluntary associations and collective action: which aspects of social capital have the greatest 'civic'payoff? *Journal of civil society*, 1(2), 121-146.
- Williams, P. (2002). The competent boundary spanner. *Public administration*, 80(1), 103-124.
- Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, 38(3), 595-613.
- Winch, G. M., & Courtney, R. (2007). The Organization of Innovation Brokers: An International Review. *Technology Analysis & Strategic Management*, 19(6), 747-763.
- Wolff, J. d., & Koster, H. (2012). Dairy Development programme in Nigeria. Baseline\_Report. *Produced by the International Fertilizer Development Center*.
- Yan, X., Lin, H., & Clarke, A. (2018). Cross-sector social partnerships for social change: The roles of non-governmental organizations. *Sustainability*, 10(2), 558.
- Yin, R. K. (1989). *Case Study Research: Design And Methods (Applied Social Research Methods)* Author: Robert K. Yin, Publisher: Sage Publicat: Sage Publications, Inc.
- Yu, C.-L., Wang, F., & Brouthers, K. D. (2015). Domestic and foreign competitor identification and firm performance. *European Journal of International Management*, 9(4), 463-483.
- Zaheer, S., & Zaheer, A. (2006). Trust across borders. *Journal of International Business Studies*, 37(1), 21-29.
- Zajac, E. J., Kraatz, M. S., & Bresser, R. K. (2000). Modeling the dynamics of strategic fit: A normative approach to strategic change. *Strategic management journal*, 21(4), 429-453.
- Zott, C., & Amit, R. (2010). Business model design: an activity system perspective. *Long range planning*, 43(2-3), 216-226.

## Appendices

### Appendix 1: List of interviewed respondents

Case	Name organization	Date interview
<b>Cold chain facility for the development of fresh milk supply chains to connect nomad cattle herders to high-end dairy processing factory in Nigeria</b>	Director of the Department of Animal Production and Husbandry Services Federal Ministry of Agriculture and Rural Development (FMARD)	14 May 2015
	Head of milk collection and farm milk quality Friesland Campina/Wamco	15 May 2015
	Regional manager Dairy Development for Friesland Campina in Asia and in West Africa	19 May 2015
	Accountant Friesland Campina Wamco	19 May, 2015
	Coordinator extension unit of the dairy development program Nigeria of Friesland Campina/Wamco	15 May, 2015
	Fulani community leader	16 May, 2015
	Program manager DDP, WAMCO	13 May, 2015
	Trainer, ICRA	19 May, 2015
	Country manager Ghana and Nigeria International Fertilizer Development Center, IFDC	13 April, 2015
	Project manager access to finance West Africa, IFDC	1 June, 2015
	Dairy program coordinator, IFDC	11 March, 2015
	Public Private Partnership manager, IFDC	15 and 16 May, 2015
	Dairy Program coordinator, IFDC	13 April, 2015
	Chief of Staff 2SCALE, IFDC	14 April, 2015
2 technical advisors of the Department of Veterinary Services, FMARD	14 May, 2015	
<b>High quality potato seeds for improved productivity and local high end market access of smallholder farmers in Kenya</b>	Export Manager, Agrico Netherlands	12 December, 2015
	Local representatives, Agrico Kenya	22 March, 2016
	Regional business coordinator 2SALE program East and Southern Africa, and the potato value chain manager, IFDC	21 March, 2016
	Chief of Staff 2SCALE program, IFDC	15 December, 2015
	Potato farmer Kirimara Potato grower association	1 April, 2016
	Potato growers, Meru Potatoes Processing Sacco	2 April, 2016
	Regional Coordinator Eastern and Sub-Saharan Africa, Dutch Ministry for Economic Affairs, The Hague	26 November, 2015
	CEO, National Potato Council of Kenya	24 March, 2016
	Agricultural Counsellor, Dutch Embassy for Kenya	25 March, 2016
	Managing Director, Sereni Fries	22 March, 2016
	CEO, Smart Champion Sacco	2 April, 2016
Managing Director, Stockman Rozen Kenya Limited	23 March, 2016	

Case	Name organization	Date interview
<b>Income diversifying strategy by biogas digesters and carbon credit for smallholder coffee growers in Kenya</b>	Head Green Society, Hivos Netherlands	16 March, 2016
	Farmer, Kinogerama Coffee Farmers' Cooperative	23 March, 2016
	Minister for Agriculture, Livestock, Fisheries, Veterinary and Cooperative Development in Nyeri County	24 March, 2016
	Sustainability Manager, Sustainable Management Services (SMS) Kenya	21 March, 2016
	Project supervisor, SMS	21 March, 2016
	Country representative Kenya UTZ Certified	15 April, 2016
	Regional director coffee East Africa, ECOM Trading	24 March, 2016
	Program manager 4S@Scale program, Kenya, Hivos	25 March, 2016
	Technical advisor African Biogas Partnership Program SNV Kenya	21 March, 2016
<b>Fertilizer platform to increase cocoa productivity and quality of smallholder growers in Nigeria</b>	Program Officer, Sustainable Trade Initiative (IDH) in Nigeria	10 October, 2015
	Senior Technical advisor, FMARD Nigeria	18 August, 2016
	Policy officer Kokodola project, Farmers Development Unit (FADU)	11 August, 2016
	Program Controller Kokodola Project, FADU	11 August, 2016
	Programme coordinator, FADU	11 August, 2016
	Cocoa desk officer, FMARD	23 August, 2016
	4 Marketing consultants, Multitrex Nigeria	1 September, 2016
	Cocoa expert, IDH The Netherlands	7 October, 2015
	Program coordinator Kokodola project, Continaf	28 November, 2016
Coordinator sustainable land use program, Solidaridad West Africa	1 December, 2015	

## Appendix 2: General description of 16 cases

Case name	Case description
<b>Dadtco AMPU Nigeria</b>	Dadtco, a social enterprise established in 2002, develops mobile small-scale cassava processing units in Nigeria known as Autonomous Mobile Processing Units (AMPU) which allow first processing close to farms. Connecting smallholders to the processing units involves a cooperative alliance made up of Dadtco, the International Fertilizer Development Center (IFDC), and the Dutch Ministry of Foreign Affairs. Dadtco supplies the inputs the farmers need to grow and harvest their crops: reproduction, fertilizer, harvesting equipment, and credit. The semi-finished product—the “cake”—is readily marketable and yields considerably higher margins in the markets than the unprocessed crop. Dadtco purchases these products from the farmers and sells them in local and international markets.
<b>East West Seeds Thailand</b>	East West Seeds (EWS) is a Dutch-Thai seed company that was founded in 1986 to improve local seed varieties locally and sell them, via intermediaries, to local South-East Asian smallholders. EWS successfully developed suitable small-scale production formats and invested considerably in demonstrating and transferring knowledge of the improved cultivation practices. It makes hybrid seeds available to growers via the establishment of local distribution centers. Growth of 15–20% is projected by EWS for the next few years.
<b>Tanga Fresh Tanzania</b>	Tanga Fresh Ltd is a medium-scale dairy company from Northern Tanzania. Tanga Fresh Ltd operates a coordinated dairy value chain of milk collection, processing and marketing, combined with growth opportunities offered to smallholders through heifer availability and cattle credit, known as the ‘Tanga Model’. The company is market leader in Tanzania and sells several low to medium cost dairy products, mainly fresh milk and mtindi (sour milk), in Tanga and Dar es Salaam. The main innovation in the Tanga Model is the creation of rural Milk Collection Centers (MCC), that act as a one-stop-shop for farmers by providing animal feed, medicine and advice for farmers all on the same premises. Furthermore, through a cattle credit scheme combined with a modern breeding farm, smallholders are offered more opportunities to increase their productivity.
<b>Alquería dairy Colombia</b>	Alquería is a family-owned Colombia-based dairy business. Alquería's mission is to ensure the production of top-quality milk products, as well as to serve local communities by allowing them to benefit from the business and its products. The company currently sources its milk from 5,000–6,000 smallholders and is focused on expanding its reach further into remote areas of Colombia, so as to provide market access to farmers who would otherwise remain isolated. All of the milk collected, be it from smallholders or larger operations, is channeled into the same products.

Case name	Case description
<p><b>Sierra Leone Breweries</b></p>	<p>Heineken's local subsidiary in Sierra Leone, Sierra Leone Breweries Ltd (SLBL), mainly produces beer for the West African market. Sierra Leone Brewery replaced imported European malted barley with locally grown sorghum as its beer's main ingredient. Since sorghum was solely produced as a minor subsistence crop, the recipe change implied a drastic increase of smallholders in Heineken's supply chain. The underlying reason to invest in the local production of sorghum, which was rarely available on the market, was mainly operational (reduce import costs of raw materials, reduce raw material storage costs, reduce impact of currency fluctuations). Since the start of the pilot, the number of smallholders has increased to around 3,000. Due to an increase in the local consumption of the beverages produced by SLBL, Heineken expects it will expand its investments into technological innovations involving the plant as well as the establishment of a sorghum-processing facility in order to add value to the sorghum and use it for other consumer products.</p>
<p><b>Metro AG Vietnam</b></p>	<p>Metro Cash &amp; Carry Vietnam operates as a modern wholesaler and is competing with traditional wholesale markets for business customers (fresh food and catering sectors). Fruits and vegetables are important in the product portfolio of the Metro CC stores. With the support of Fresh Studio Asia, Metro CC built a fresh distribution center (DC), situated in Vietnam's premium vegetable growing area (Dalat) and within an hour of the farmer. By sourcing directly from (small-scale) farmers, instead of working with a long chain of collectors and traditional wholesalers, Metro CC ensured that vegetables could get in the cold chain as soon as they are harvested.</p>
<p><b>Unilever Kecap Bango Indonesia</b></p>	<p>Kecap Bango is a specialty sweet soy sauce made from black soy beans. It was originally produced using Javanese soy beans and was marketed and sold exclusively in Java. PT Unilever Indonesia, the local subsidiary of multinational Unilever, acquired a majority stake in the Bango brand in 2000. Unilever decided to use only locally grown beans, given that it was part of the Bango brand identity to be "local"—and that Java provides ideal conditions to cultivate black soy beans. The company decided to focus its development of new suppliers in central and East Java. The Black Soy Bean Farmers Development Program is still growing. To date it has involved, via the farmer-owned cooperatives, some 6,600 smallholder farmers, who now grow approximately 25–30% of the black soy beans used to produce the Bango brand.</p>
<p><b>DCM Hariyali Kisaan Bazaar India</b></p>	<p>DCM Shriram Consolidated Ltd (DSCL), a leading diversified Indian corporate house in the agri-input markets with first-hand knowledge of Indian farmers, established an innovative business venture called DCM Hariyali Kisaan Bazaar. The rural retailer sells agri-inputs and consumer goods through its chain of centres, which also serve as a common platform for providers of financial services, health services, etc.</p>
<p><b>MMD Kheir Zaman Egypt</b></p>	<p>Started in 2006, Kheir Zamaan is an urban retailer focusing especially on low-income groups such as government employees, retired people, drivers, manual labours, nurses and teachers. As low-income people constitute a majority of the Egyptian population, the Mansour Company capitalized on its well-developed retail experience in the Egyptian market to adapt its high-end business model to suit the needs of this important, low-income, market segment (the Kheir Zamaan supermarkets).</p>

Case name	Case description
<b>Suguo supermarket China</b>	Nanjing-based supermarket chain Suguo is consistently ranked in the top ten supermarkets in China. Suguo has successfully penetrated rural Chinese markets by persuading rural cooperatives to become franchisees of the supermarket and so building on existing networks. Helped by a central government subsidy of USD 400 per store, Suguo helps remodel retail outlets and keeps them stocked. The main innovation of Suguo was the transformation of cooperatives into retail stores. So far, around 1,500 rural outlet stores have been created (50% of Suguo sales in rural areas).
<b>Britannia Biscuits India</b>	Britannia is one of India's leading food companies and a leading name in the bakery and dairy segments in the Indian marketplace with revenues close to USD 1 Billion annually. Britannia has launched commercially an iron-fortified version of its popular Tiger biscuits in 2007, based on two different recipes. The first contains a higher dosage of iron and is distributed via the Naandi Foundation's midday meal program (250–300k children) facilitated by GAIN. The second contains a lower dosage of iron and is distributed via 3.5 million rural and urban retail outlets throughout India. Today, fortified products including Tiger Iron Zor, MarieGold, Milk Biki & staples like bread sell close to 3.6 billion units annually and constitute 55% of Britannia bakery volumes.
<b>Minute Maid Uganda</b>	Coca Cola Juices Kenya Ltd has an offering that targets both the BoP and high-end consumers. It sells its juice drinks in 300ml, 500ml and 2L PET bottles via big supermarkets, but also adopts a very elaborated distribution strategy to reach shops and kiosks in Nairobi or Kampala's townships. Each urban Manual Distribution Center services an area 1 kilometer in circumference, reaching a maximum of 150 retail outlets. Coca Cola Juices Kenya serves 15 distributors in the country, including 7 in Nairobi (60% of the total market). In addition, other bottling franchisees also have a network of MDCs operating in various other territories. Coca-Cola's Minute Maid juice brand was introduced in the market early 2010 and is inspired by Uganda and Kenya's increasingly health-conscious lifestyle. The product is affordable for people living in slums and is retailed in Uganda at UGX2,000 (USD 0.77) per 400ml returnable glass bottle and in Kenya at Ksh40 (USD 0.45) per 300ml plastic bottle and Sh55 (USD 0.62) per 500ml bottle. The sales target for a distributor in Nairobi is on average 6500 bottles per year, which leads to an average annual profit of USD 588.
<b>Danone Grameen Shokti Doi Bangladesh</b>	Grameen Danone Foods Ltd is a joint venture between Groupe Danone and the following four Grameen Companies: Grameen Business Promotions Services, Grameen Welfare, Grameen Energy, Grameen Telecom. The focus of activities is to bring healthy nutrition to low-income populations in Bangladesh and alleviate poverty through implementation of a proximity model. The actual product 'Shokti Doi' is a fortified yoghurt aimed at children 6 to 9 years old. Idea formed in October 2005 and launch of yoghurt production in April 2007. In April 2010—one in four children around Bogra classified as having eaten at least one Shokti product per week over previous three months. Grameen Danone Foods Limited plans to break even in 2013.

Case name	Case description
<b>KeBal Indonesia</b>	<p>Initiated by Mercy Corps in Indonesia, KeBal is a micro enterprise that develops and sells healthy street foods, which is an innovative solution to fight against both child malnutrition and general poverty in a country where the urban poor often do not have access to cooking facilities and largely live on processed food purchased in the street. Centralized kitchens have been set up, where nutritious meals are cooked and then sold by street vendors in carts. The various menus, which consist of a variety of snacks and main dishes, have been designed by nutritionists hired by Mercy Corps to respond to the nutritional needs of children. The street vendors emanate from the BoP as Mercy Corps employs individuals living in the urban slums of Jakarta. Through a franchise system, vendors and kitchens will have to become self-sustainable and pay a fee to the KeBal headquarters. At the same time, this system offers franchisees the possibility to gradually pay back loans and eventually own their carts or kitchens.</p>
<b>Pushtikona Bangladesh</b>	<p>Renata Limited, a producer of human and animal health products in Bangladesh, and BRAC, a large grassroots non-governmental organization with a network of rural health volunteers have teamed up, with GAIN support, to produce and sell Pushtikona (“grains of nutrition”)—a high quality and affordable sachets of vitamin and mineral powders to be added to home-cooked complementary foods for infants and young children (6 to 24 months old). This micronutrient powder contains 15 essential minerals and vitamins that improve the nutritional value of complementary foods (price per sachet = Tk. 2,50/USD 0,034). The product is being sold at the same price point across all income classes which is listed on the label. Also to be noted: a margin on the price goes to pay for breastfeeding promotion (Tk. 2,50/USD 0,034).</p>
<b>Valid Nutrition South East Africa</b>	<p>Launched in 2008, Valid Nutrition (VN) is a pure social business model (not-for-profit, but run as a business and financially self-sufficient) that develops, manufactures and distributes a range of highly nutritious ready-to-use foods (RUFs) on the African continent. These RUFs are highly fortified, lipid-based nutrient dense pastes specifically designed for the prevention and treatment of malnutrition. At this moment VN is mainly selling products to treat severe acute malnutrition, so-called ready-to-use therapeutic foods (RUTFs). To stimulate the local economy as well as providing life-saving products at affordable prices, Valid Nutrition produces RUFs in the regions in which they are consumed, under licence from Nutraset, the company that developed the original RUTF formula. It established production and sales facilities in Malawi, Ethiopia and, previously, Kenya. The end-users are children between 6 and 36 months of age that suffer from severe acute malnutrition. To reach this target group, VN sells its products on humanitarian markets; to NGOs, governments and international institutions (UNICEF 65%).</p>

### Appendix 3: Cases specified on functional factors of the business model, linkages and upgrading strategies

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>Dadtco AMPU Nigeria</b>	1	SME	heavy mix; some customization; medium breadth; shallow; product itself; internal manufacturing; direct distribution	B2B; regional; upstream suppliers and downstream processors; niche market; relational	Technology; production system; supply chain management	Innovation leadership	mixed; NA; high; low;	growth model	Vertical	Process Upgrading
<b>East West Seeds Thailand</b>	1	SME	primarily products; standardized; narrow line; deep; product itself; internal manufacturing; indirect single channel distribution	B2B; international; upstream suppliers; niche market; transactional	R&D; marketing	image of dependency; product quality	fixed; NA; high; low;	growth model	Vertical	Process Upgrading

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>Tanga Fresh Tanzania</b>			heavy mix; some customization; medium breadth; shallow; product itself; internal manufacturing and service delivery; indirect multichannel	B2B and B2C; regional; upstream suppliers and final consumers; multiple segments; B2C transactional; B2B relational	production system; technology and innovative capability; supply chain management; marketing	B2C: product quality and availability; B2B intimate customer relationship	mixed; NA; high; low	growth model	Vertical	Functional upgrading
<b>Alquería Dairy Colombia</b>		SME	primarily products to consumers and primarily services to businesses; standardized; narrow line; shallow; product itself; internal manufacturing; indirect distribution	B2B and B2C; national; upstream suppliers and final consumers; broad market; B2C transactional; B2B relational	production system and supply chain management	B2C: product quality; B2B intimate customer relationship	fixed; NA; high; low	growth model	Vertical	Process Upgrading

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>Sierra Leone Breweries</b>	2	PPP	primarily products; standardized; narrow line; medium depth; product itself; internal manufacturing; indirect multichannel	B2B and B2C; national; final consumers and downstream suppliers; broad market; transactional	supply chain management/innovative capability	Product quality	mixed; NA; high; low;	growth model	Vertical	Chain upgrading
<b>Metro AG Vietnam</b>	2	MNC	primarily products; standardized; broad line; deep; access to products; internal service delivery; direct distribution	B2B; regional; retailers; multiple segment; transactional	Supply chain management	Operational excellence; low cost	mixed; NA; high; low;	growth model	Vertical	Functional upgrading
<b>Unilever Kecap Bango Indonesia</b>	2	MNC	primarily products; standardized; narrow line; medium depth; product itself; internal manufacturing; indirect distribution	B2C; national; final consumers; broad market; transactional	marketing; supply chain management; innovative capability	product quality; image of operational excellence	fixed; NA; high; low;	growth model	Vertical	Functional upgrading

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>DCM</b>	<b>3</b>		heavy mix; some customization; broad line; deep; access to products/services; value added	B2B and B2C; national; upstream suppliers and final consumers; broad market; relational	marketing; supply chain management	product selection; intimate customer relationship	mixed; NA; high; low	growth model	Vertical	Functional upgrading
<b>Hariyali Kisaan Bazaar India</b>		MNC	reselling; direct distribution							
<b>MCC Kheir Zaman Egypt</b>	<b>3</b>		primarily products; standardized; broad line; medium depth; access to products; reselling; direct distribution	B2C; national; final consumers; broad market; transactional	resource leveraging; marketing; supply chain management	low cost; product selection	fixed; NA; high; low	growth model	Vertical	Product upgrading
<b>Suguo supermarket China</b>	<b>3</b>	LC	primarily products; standardized; broad line; deep; access to products; reselling; direct distribution	B2C; national; final consumers; multiple segment; transactional	marketing; supply chain management	product selection and availability; low cost	fixed; NA; high; low	growth model	Vertical	Functional upgrading

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>Britannia Biscuits India</b>	<b>4</b>		primarily products; standardized; medium breadth; deep; product itself; internal manufacturing; indirect multichannel	B2C; national; final consumers; broad market; transactional	Production system and marketing	Product quality/features; low cost	mixed; NA; high; low;	growth model	Diagonal	Product upgrading
<b>Coca Cola Minute Maid Uganda</b>	<b>4</b>	MNC	primarily products; standardized; narrow line; deep; product itself; internal manufacturing; indirect single channel distribution	B2C; international; final consumers; broad market; transactional	production system; supply chain management; marketing	Product quality/features	fixed; NA; high; low;	growth model	Vertical	Product upgrading

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>Danone</b>	<b>5</b>		primarily products;							
<b>Grameen</b>			standardized;							
<b>Shokti Doi</b>			narrow line;	B2C; regional;						
<b>Bangladesh</b>		Social enterprise	shallow; product itself; internal manufacturing; indirect single channel distribution	final consumers; broad market; relational	selling/ marketing	product quality/ features; low cost	fixed; NA; high; low;	growth model	Diagonal	Product upgrading
<b>KeBal</b>	<b>5</b>		primarily products; standardized;							
<b>Indonesia</b>		Social enterprise	narrow line; medium depth; product itself; internal manufacturing; direct distribution	B2C; local; final consumers; niche market; transactional	production system; selling/ marketing	Product quality/ features	fixed; NA; medium; low;	growth model	Diagonal	Product upgrading

Case name	BIS	Lead org	Component 1 (factors related to the offering): How do we create value?	Component 2 (market factors): Who do we create value on food and nutrition security?	Component 3 (internal capability factors): What is our source of competence?	Component 4 (competitive strategy factors): How do we competitively position ourselves?	Component 5 (economic factors): How do we make money?	Component 6 (personal/investor factors): What are our time, scope, and size ambitions?	Linkages	Upgrading
<b>Pushikona Bangladesh</b>	<b>5</b>		primarily products; standardized; narrow line; shallow; product itself; internal manufacturing; indirect multichannel	B2C; national; final consumers and service providers; multiple segment; transactional	selling/marketing; production system	Product quality/features	mixed; NA; high; low;	growth model	Diagonal	Functional upgrading
<b>Valid Nutrition South East Africa</b>	<b>5</b>		primarily products; standardized; narrow line; shallow; product itself; internal manufacturing; licensing; indirect multichannel;	B2B; international; government/institutional; market niche; relational	production system; technology/R&D and intellectual capability	product quality/features; low cost	mixed; NA; high; low;	growth model	Vertical	Product upgrading

## Appendix 4: Cases specified on IB ecosystem strengthening strategies

Case name	BIS	Lead org	BOP Awareness	Research as strengthening strategy	Coalition building	Public policy dialogue as strengthening strategy	Creating new organizations as strengthening strategy	Strengthening strategies used
<b>Dadtco AMPU Nigeria</b>	<b>1</b>	SME	Yes	Yes	Yes	No	Yes	BOP awareness raising or capacity building; research; coalition building; creating new organizations
<b>East West Seeds Thailand</b>	<b>1</b>	SME	Yes	Yes	Yes	Yes	No	BOP awareness raising or capacity building; Research; Coalition building; Public policy dialogue
<b>Tanga Fresh Tanzania</b>	<b>1</b>	SME	Yes	No	Yes	Yes	Yes	BOP awareness raising or capacity building; coalition building; public policy dialogue; creating new organizations
<b>Alquería Dairy Colombia</b>	<b>2</b>	SME	Yes	No	Yes	Yes	Yes	BOP awareness raising or capacity building; public policy dialogue; creating new organizations
<b>Sierra Leone Breweries</b>	<b>2</b>	SME	Yes	No	No	Yes	Yes	BOP awareness raising or capacity building; public policy dialogue; creating new organizations
<b>Metro AG Vietnam</b>	<b>2</b>	PPP	Yes	Yes	Yes	Yes	Yes	BOP awareness raising or capacity building; research; coalition building; public policy dialogue; creating new organizations
<b>Unilever Kecap Bango Indonesia</b>	<b>2</b>	MNC	Yes	No	No	No	Yes	BOP awareness raising or capacity building; creating new organizations
<b>DCM Hariyali Kisaan Bazaar India</b>	<b>3</b>	MNC	Yes	No	Yes	No	Yes	BOP awareness raising or capacity building; research; coalition building; public policy dialogue; creating new organizations

Case name	BIS	Lead org	BOP Awareness	Research as strengthening strategy	Coalition building	Public policy dialogue as strengthening strategy	Creating new organizations as strengthening strategy	Strengthening strategies used
<b>Kheir Zaman Egypt</b>	<b>3</b>	MNC	Yes	No	No	Yes	Yes	BOP awareness raising or capacity building; public policy dialogue; creating new organizations
<b>Suguo supermarket China</b>	<b>3</b>	LC	Yes	No	Yes	Yes	Yes	BOP awareness raising or capacity building; coalition building; public policy dialogue; creating new organizations
<b>Britannia Biscuits India</b>	<b>4</b>	LC	Yes	Yes	Yes	Yes	No	BOP awareness raising or capacity building; research; coalition building; public policy dialogue
<b>Coca Cola Minute Maid Uganda</b>	<b>4</b>	MNC	Yes	No	No	No	Yes	BOP awareness raising or capacity building; creating new organizations
<b>Danone Grameen Shokti Doi Bangladesh</b>	<b>5</b>	Social enterprise	Yes	Yes	Yes	No	Yes	BOP awareness raising or capacity building; research; coalition building; creating new organizations
<b>KeBal Indonesia</b>	<b>5</b>	Social enterprise	Yes	Yes	Yes	Yes	Yes	BOP awareness raising or capacity building; research; coalition building; public policy dialogue; creating new organizations
<b>Pushtikona Bangladesh</b>	<b>5</b>	Social enterprise	Yes	Yes	Yes	Yes	Yes	BOP awareness raising or capacity building; research; coalition building; public policy dialogue; creating new organizations
<b>Valid Nutrition South East Africa</b>	<b>5</b>	Social enterprise	Yes	Yes	Yes	Yes	No	BOP awareness raising or capacity building; research; coalition building; public policy dialogue

## Appendix 5: Survey

### Questions mapping

This survey aims to provide insight into the characteristics of international intermediaries that help develop inclusive business.

### Definitions:

**Inclusive business:** sustainable business solutions that go beyond philanthropy and expand access to goods, services, and livelihood opportunities for low-income communities in commercially viable ways. Innovation is the key to success for inclusive business companies, because the margin per unit is typically low given customers are the poor. For practical reasons we consider frugal innovation, inclusive innovation, social innovation and jugaad innovation all specific pathways to develop inclusive business strategies.

**International intermediaries and intermediation:** Organizations that are formally engaged in coordinating and facilitating innovation processes between two or more parties *from diverse countries or institutional or cultural backgrounds*, and which may also engage in a variety of functions related to the many aspects of intermediation.

### Survey questions prior to the interview

- 1. Name organization:**
- 2. Year initiation of inclusive business services and intermediation:**
- 3. Is your organization a subsidiary of another organization? If yes, of which organization.....**
- 4. Please indicate judicial status of the organization:**
  - a. INC.**
  - b. Foundation**
  - c. Association**
  - d. Joint venture**
  - e. Public entity**
  - f. Social enterprise**
  - g. Financial institute**
  - h. Consortium**
  - i. Public private partnership**
  - j. Other: .....**

**5. How many people in your organization are directly involved in inclusive business services and intermediation?**

- 0–5
- 5–20
- 20–100
- More than 100

**6. Please select the sector(s) in which your organization develops or supports inclusive business (multiple answers possible):**

- a. Energy
- b. Agriculture
- c. Food
- d. Commercial services
- e. Water
- f. Health
- g. Other: ...

**7. In which region(s) does your organization provide inclusive business support and intermediation (multiple answers possible):**

- a. Africa
- b. Europe
- c. Asia
- d. Middle east
- e. Latin America
- f. North America
- g. Oceania
- h. Other .....

**8. What type of inclusive business services and intermediation does your organization provide (multiple answers possible):**

- a. Market analysis
- b. Brokering in building partnerships and alliances
- c. HR development
- d. Innovation prototype development

- e. Research**
- f. Brokering funding**
- g. Providing funding**
- h. Monitoring and Evaluation**
- i. Financial advice**
- j. Strategy development**
- k. Market launch support**
- l. Lobbying support**
- m. Other: .....**

**9. What is the main purpose of the inclusive business services and intermediation provided (multiple answers possible):**

- a. To reduce poverty**
- b. To improve the market access of companies in low-income markets**
- c. To strengthen the skills of individual entrepreneurs and small and medium sized enterprises (SMEs) to develop inclusive business**
- d. To improve the performance of alliances and/ or networks of firms, government, NGOs, etc.**
- e. To stimulate innovation amongst companies or entrepreneurs in low-income markets**
- f. To forge peer networks between companies or entrepreneurs in low-income markets**
- g. To improve the opportunities for innovation within the context of a low-income market**
- h. To display knowledge and information to relevant stakeholders**
- i. To contribute to the design of research strategies**
- j. To develop lobby and advocacy strategies to influence policies**
- k. Other: .....**

**10. What is the type of private sector clients whom you facilitate the development of inclusive business with (multiple answers possible)**

- a. Individual entrepreneurs**
- b. Small companies with home base in developing economies**
- c. Small companies with home base in industrialized economies**

- d. Medium sized companies with home base in developing economies
  - e. Medium sized companies with home base in industrialized economies
  - f. Multinational enterprises
  - g. Other:.....
11. Could you elaborate on the types of funding sources your organization typically uses for its work on inclusive business? (multiple answers possible)
- a. Public funding
  - b. Private sector investment
  - c. Private funding grant based (e.g. private foundations)
  - d. Private funding through shareholding
  - e. User fees
  - f. Other (e.g. crowdfunding):
12. What are the most common difficulties you encounter in providing inclusive business support and intermediation? List 5 main issues
13. What are best practices to be successful in providing inclusive business support and intermediation. List 5 main practices

### **In depth questions during interview**

1. Can you explain why your organization focusing on inclusive business and intermediation was established?
2. Which inclusive business services and intermediation provided the organization in the first years?
3. How have the activities and services developed over time?
4. What are the current services and why this package of services?
5. If these changed, what have been the most important reasons to change them?
6. What have been the most important lessons learned on providing inclusive business services and intermediation over time?
  - a. What have been the biggest failures/ lessons learned from less successful ventures your organization supported?
  - b. Which has been the most successful support provided? Why?
7. Does your organization also play a role in building capacity of third parties? If so how?

- 8. How does learning currently take place in your organization?**
- 9. Does your organization receive training to improve own services/activities? If so, in which topics.**
- 10. In your work to support inclusive business, what are the most important external challenges (contextual/institutional level)?**
- 11. In your work to support inclusive business, what are the most important internal capacity challenges (at organizational and staff level)?**
- 12. What would your staff describe as a difficult situation in fulfilling the role of inclusive business service provider and intermediary?**

## Appendix 6: Basic characteristics of innovation intermediaries of cross-border partnerships on inclusive innovation

Name	Country of origin	Year initiation inclusive innovation activities	# staff involved in inclusive innovation	Judicial status	Focus sectors	Focus regions	Funding sources	Dominant role
Aalto Global Impact	Finland	2012	0–5	Foundation	Energy, water, other	Africa, Asia, Latin America	Public funding	Learning Catalyst
Action for Enterprise	U.S.A.	1995	6–20	Other	Agriculture, food, other	Africa, Asia, Middle East	Public funding, private funding grant based	Convener
AgriProFocus	Netherlands	2005	21–100	Foundation	Agriculture, food, commercial services	Africa, Asia, Latin America	Public funding, private funding grant based, user fees	Mediator
Asian Development Bank	Philippines	2012	6–20	Financial institute	Energy, agriculture, food, water, health, commercial services, other	Asia, Middle East, Oceania	Public funding, private funding grant based	Mediator
BoP Innovation Center	Netherlands	2010	6–20	Foundation	Energy, agriculture, food, water	Africa, Asia	Public funding, private funding grant based, other	Co-creator
BSpace	Uganda	2013	0–5	Corporation	Energy, agriculture, food, water, health, commercial services, other	Africa	Public funding, private funding grant based, private sector investment	Mediator
Centre for Development Innovation	Netherlands	2010	6–20	Foundation	Agriculture, food	Africa, Asia, Europe, Middle East	Public funding, private funding grant based	Learning Catalyst

Name	Country of origin	Year initiation inclusive innovation activities	# staff involved in inclusive innovation	Judicial status	Focus sectors	Focus regions	Funding sources	Dominant role
Centre for Frugal innovation in Africa	Netherlands	2013	0–5	Other	Energy, water, health	Africa	Public funding	Learning Catalyst
De-LAB	Italy	2013	0–5	Foundation	Energy, health, commercial services	Africa, Europe	Private sector investment	Learning Catalyst
Endeva	Germany	2007	21–100	Corporation	Energy, agriculture, health, other	Africa, Asia, Latin America	Public funding, user fees	Learning Catalyst
Ennovent	Austria	2008	6–20	Corporation	Energy, agriculture, health	Africa, Asia	Private sector investment, user fees	Co-creator
FSG	USA	2006	21–100	Corporation	Energy, water, health, other	Africa, Asia	Public funding, private funding grant based	Learning Catalyst
FUNDACION CODESPA	Spain	2006	6–20	Foundation	Agriculture, food, other	Africa, Asia, Latin America	Public funding, private funding grant based	Mediator
GAIN	Switzerland	2002	21–100	Foundation	Agriculture, food, health, other	Africa, Asia	Public funding, private funding grant based, private sector investment	Convener
Global CAD	Spain	2006	6–20	Foundation	Energy, agriculture, food, water, health, commercial services, other	Africa, Asia, Latin America, Europe, Middle East	Public funding, private funding grant based, private sector investment	Learning Catalyst

Name	Country of origin	Year initiation inclusive innovation activities	# staff involved in inclusive innovation	Judicial status	Focus sectors	Focus regions	Funding sources	Dominant role
Hivos	Netherlands	2005	6–20	Foundation	Energy, agriculture, food	Africa, Asia, Latin America	Public funding, private funding, grant based, private sector investment	Mediator
Hystra	France	2009	6–20	Corporation	Energy, agriculture, food, water, commercial services, other	Africa, Asia	Private funding, grant based, private funding sector investment	Convener
IDH the Sustainable Trade Initiative	Netherlands	2008	21–100	Foundation	Agriculture, non-food commodities	Africa, Asia, Latin America	Public funding, private funding, grant based, other	Convener
IFDC	USA	1974	More than 100	Public entity	Agriculture, food	Africa, Asia, Latin America	Public funding, private funding	Learning Catalyst
Inclusive Business Sweden	Sweden	2013	0–5	Association	Energy, agriculture, food, water, health, other	Africa, Asia, Europe	Public funding, user fees	Mediator
Path	USA	1977	More than 100	foundation	Water, health, commercial services, other	Africa, Asia, Latin America, Europe	Public funding, private funding, grant based, private sector investment, other	Co-Creator
Philips Africa Innovation Hub	Netherlands	2013	21–100	Corporation	Energy, water, health, commercial services	Africa, Asia	Public funding, private sector investment, user fees	Co-Creator

Name	Country of origin	Year initiation inclusive innovation activities	# staff involved in inclusive innovation	Judicial status	Focus sectors	Focus regions	Funding sources	Dominant role
PUM Netherlands Senior Experts	Netherlands	1978	More than 100	Foundation	Energy, agriculture, food, water, health, commercial services, other	Africa, Asia, Latin America, Europe, Middle East	Public funding, private funding grant based, user fees, other	Convener
SCOPEinsight	Netherlands	2010	6–20	Corporation	Agriculture	Africa, Asia, Latin America	Public funding, private funding grant based, private sector investment, user fees	Convener
SNW	Netherlands	2006	More than 100	Foundation	Energy, agriculture, food, water, commercial services, other	Africa, Asia, Latin America	Public funding, private funding grant based, private sector investment, user fees, other	Convener
Spark	Netherlands	2006	21–100	Foundation	Agriculture, food, water, commercial services, other	Africa, Europe, Middle East	Public funding, private funding grant based	Convener
Syngenta Foundation for Sustainable Agriculture	Switzerland	2009	6–20	Foundation	Agriculture	Africa, Asia, Latin America	Public funding, private funding grant based, private sector investment	Convener
The Practitioner Hub for Inclusive Business	United Kingdom	2010	0–5	Foundation	Energy, agriculture, food, water, health, commercial services	Africa, Asia, Latin America	Public funding, private funding grant based	Convener

Name	Country of origin	Year initiation inclusive innovation activities	# staff involved in inclusive innovation	Judicial status	Focus sectors	Focus regions	Funding sources	Dominant role
VC4Africa	Netherlands	2013	0-5	Social enterprise	Energy, agriculture, food, water, health	Africa	Private funding grant based, private sector investment, private funding through shareholding	Mediator
William Davidson Institute	USA	2005	0-5	Foundation	Energy, agriculture, food, water, commercial services, other	Africa, Asia, Latin America	Private funding grant based, private sector investment	Learning Catalyst

## Appendix 7: Roles and functions of intermediaries

Functions	Roles	Convener support	Mediator support	Co-Creator support	Learning Catalyst support
<b>Demand articulation</b>	Connecting stakeholders, raising awareness, organizing meetings, sharing other experiences, engaging third party experts for the facilitation of the CSDP development, advocating the partnership development	Facilitating the ideation process, stakeholder engagement, data collection, guidance in the agenda-setting stage	Ideation, stakeholder engagement, data collection and research facilitation	Brokering and building alliances, market and sector analysis, research, advice in the agenda-setting stage and strategy development	
<b>Institutional support</b>	Introduction of good practices, advocacy to regulatory bodies, stimulate senior management engagement	Funding, engaging authorities and value chain actors, lobby and advocacy	Acquisition of funds, engagement of authorities	Introduction of good practices, technical advice for improvement of regulatory frameworks	
<b>Network brokering</b>	Event organizer, workshops, inspiration lunches	Field visits, drafting collaboration agreements, facilitating expert meetings, network events	Expert meetings, network events	Expert meetings, field visits locally and internationally	
<b>Capacity building</b>	Learning events based on good practices, engaging experts	Engaging local and foreign experts, conducting research, data collection and organizing feedback meetings, mid-term reviews, development of training programs	On the job training as part of the prototype testing	Skills development of technical staff, engage foreign experts, data collection and data analysis, study tours to the Netherlands	
<b>Innovation process management</b>	Enable experts to engage in responding to a system innovation needs	Facilitate the innovation design, mobilizing investment funds	Design and coordination of innovation process	Strategy development, demonstration pilots	
<b>Knowledge brokering</b>	General reports with findings generated in the partnerships	Engaging experts	Expert engagement depending on the needs of the CSDP development	Research	

<b>Functions</b>	<b>Roles</b>	<b>Convener support</b>	<b>Mediator support</b>	<b>Co-Creator support</b>	<b>Learning Catalyst support</b>
<b>Other</b>	Design and testing of a prototype of social innovation	Design and testing of a prototype, lobby and advocacy to improve the enabling environment for the innovation	Prototype design and testing	Design and testing of prototypes	
<b>Other</b>	Sourcing funds, making funds available	Sourcing funds and making these funds available	Identifying opportunities for investment capital	Sourcing funds, providing grants to local partners, administering these funds	
<b>Other</b>	Administration of grant-based funds	Administration of grant-based funds	Administration of grant-based funds	Administration of grant-based funds	
<b>Other</b>		Assume financial risk			

## About the Author

Myrtille Danse does not believe that markets fail because people living in poverty lack capacity. She believes markets fail because systems are designed without them. This conviction has shaped both her professional trajectory and the research presented in this dissertation. She studied Business Administration at Erasmus University and later expanded her intellectual horizons into international development, innovation, and food systems at Wageningen University & Research.

For more than three decades, Myrtille has worked across the Global South at the intersection of private sector ambition, public policy, agricultural research, and international civil society. Her career includes work with multinational companies, the Dutch Ministry of Foreign Affairs, Wageningen University & Research through the Agricultural Economics Research Institute, and international organisations such as Hivos, the Solidaridad Network, and the Netherlands Food Partnership. Throughout this journey, she combined field-based practice with close collaboration with research institutes across Asia, Africa, Europe, Latin America, and North America, and with active engagement in academic fora. Across these contexts, her work on food systems, energy access, and basic services consistently revealed that the most persistent obstacles to change are institutional and relational rather than technical.

Rather than specializing in a single role, Myrtille has deliberately operated across boundaries between experimentation, leadership, and governance. Building on extensive fieldwork across the Global South, she founded the Base of the Pyramid Innovation Center (BOP Inc.), where practice and inquiry came together and where the questions that underpin this dissertation first took shape. She subsequently moved to Hivos as Regional Director for Latin America and the Caribbean, further developing her strategic and innovative approach in practice while continuing her research. She later led the transition of the Netherlands Food Partnership, bringing these insights into a national and international multi-stakeholder platform. Over time, this work expanded into supervisory and federation board roles at Oikocredit, Clim Eat, ANDE, and the COC Federation, offering a front-row view of how strategic intent translates—often imperfectly—into institutional practice.

This dissertation grows directly out of that experience. It examines innovation intermediaries in transnational partnerships not as neutral facilitators, but as actors who actively shape learning, power, and outcomes. It challenges linear models of change and argues that inclusive markets emerge not from blueprints, but from sustained engagement, institutional courage, and the willingness to learn in public.

## Acknowledgements

It takes a community to raise a child. But it takes the world to successfully complete a PhD journey.

By nature, I am a curious, analytical, and strategic thinker. At the same time, I thrive on contributing to impact: developing innovative change agendas, building movements, and translating ideas into practice to achieve impact at scale.

During the final period of my MScBA studies at Erasmus University, I greatly enjoyed the deep dive required for my thesis research. I left the University with a strong curiosity to engage in such an intensive research process again in the future—this time around an important challenge encountered in my professional work, one that would require research to generate new insights that contribute both to theory development and to practice, while also strengthening my own professional performance, strategic decision-making, and effectiveness in complex, real-world contexts.

I am deeply grateful to the Board of the Agricultural Economics Research Institute (LEI) for giving me the space to explore my research agenda and to develop the business plan for BOP Inc. Professor Laurens Klerkx, Professor Cees Leeuwis, and Professor Rudy Rabbinge placed their trust in me and challenged me in a highly motivating way during the design phase of the research. I also feel honoured by the financial support approved by the Dutch Research Council (NWO) through the Food & Business Global Challenges Programme (Fast-track Research) from 2015 to 2018. This support enabled me to expand the research team with Jorrit Reintjes and Kelly van Rijswijk in The Netherlands, Peter Wachira in Kenya, and Akeem Akinwale in Nigeria.

In addition, these resources allowed me to extend the research beyond the core PhD activities and into practice-oriented experimentation and learning. Together with staff from IFDC, iCRA, and SNV, we co-developed methodologies for on-location data collection, organised feedback workshops in Kenya, Nigeria, and The Netherlands, and designed and activated training materials. A special thank you goes to Henk van Duijn, Andre de Jager, Arno Maatman, Mariette Gross, and Richard Hawkins, partners in the research consortium. Your trust, valuable feedback, and the support provided by your organisations enabled us to create science with real-world relevance and impact. I also thank my employers—BOP Inc, Hivos, Netherlands Food Partnership, and Solidaridad Network—for recognising the importance of this research and for allowing me to pursue it alongside my regular work.

Balancing personal priorities and PhD ambitions inevitably involves trade-offs that are often borne by those closest to us. As a child, I remember my father working on his PhD

research; my sister and I were asked to play quietly so he could concentrate. Years later, I found myself in a similar position: my own children grew up with a mother working early in the morning, late in the evening, during the quiet hours of weekends, and throughout holidays to bring this research to completion. In both cases, it was the patience and understanding of children that made it possible for their parents to pursue and ultimately reach deeply personal academic goals.

People often ask me whether it has been worth combining PhD research with a full-time professional role. The great advantage of combining practitioner work with PhD research is the constant feedback loops, reality checks, and continuous engagement with a changing context. The major disadvantages are practical distractions and the ongoing need to adjust planning and priorities. In my case, changes of jobs, moving abroad and back again, and several unexpected personal setbacks also affected the research process. There was a moment when I wanted to give up. Yet the incredible support of my superheroes, Professor Laurens Klerkx and Dr. Rico, helped me persevere and bring this journey to a successful end. I will be forever grateful to them for believing in me and for guiding me through this process with such professionalism, warmth, and care.

I am also deeply grateful to all the dear friends and family who believe in me and nourish me with their love and care. A special recognition goes to my parents, for their love and support, which enabled me to study and develop professionally; to Eveline and Jacques, for accompanying me for so long and being there through both the highlights and the difficult moments of my life—you helped me stay grounded and supported my growth into an empowered adult. To Lilliana, for being an inspiring example throughout the long path we walked together, for believing in my abilities, and for encouraging me to realize so many personal and professional dreams. To Rinske, my soulmate, for your friendship, providing a research shelter, delicious food, good drinks, and meaningful conversations, I miss you deeply. My dearest sisters, Sterre and Berith, what would I do without you? Jo, Jetske, Christa, Johan, Cora, Marianella, Dille, Arno, Michelle, Fernando, Amber, Ramon, Martine, Ardi, Marieke, Charlotte, Roel, and Manine: thank you for being my safety net, sparring partners, and dear friends I can always rely on. Anna, for being a true surprise of life, for crossing my path, and for bringing so much light, laughter, and love into my life.

And last but not least, my dearest sons, Julian and Olivier. Thank you for being my foundation and for the love we share among the three of us. I admire your humor, resilience, and the faith you place in me.

## **Acknowledgements of financial support**

The research described in this thesis received financial support from the Dutch Research Council (NWO) through the Food & Business Global Challenges Programme Fast Track Research during 2015–2018.

Cover design by Maaïke Disco, [proefschriftopmaak.nl](http://proefschriftopmaak.nl)

Printing by ProefschriftMaken

