



## **INNOVATING SERVICE DELIVERY AND ALIGNING WITH THE STATE**

**The co-creation of scaling mechanisms for cocoa extension in Africa**



**Sander Muilerman**

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# Innovating service delivery and aligning with the State

The co-creation of scaling mechanisms  
for cocoa extension in Africa

**Sander Muilerman**

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**List of Abbreviations**

2QC	Programme Quantité-Qualité-Croissance
ADM	Archer Daniels Midland
ADP	Agricultural Development Program
ADR	Agent de Développement Rural
ANADER	Agence Nationale d'Appui au Développement Rural
ARD	Associates in Rural Development
CAN	Cocoa Association of Nigeria
CCC	Conseil du Café Cacao
CGFCC	Comité de Gestion de la Filière Café-Cacao
CIDA	Canadian International Development Agency
CIM	Centre for International Migration and Development
CLP	Cocoa Livelihoods Program
CNRA	Centre National de Recherche Agronomique
CNS	Conseil National de Sages de la Filière Café-Cacao
COCOBOD	Ghana Cocoa Board
CRIG	Cocoa Research Institute of Ghana
CRIN	Cocoa Research Institute of Nigeria
DADU	District Agricultural Development Unit
DANIDA	Danish International Development Agency
EU	European Union
FAO	Food and Agricultural Organization
FBO	Farmer-based Organisation
FDPCC	Fund for the Development and Promotion of activities of Coffee and Cocoa Producers
FFS	Farmer Field School
FIRCA	Fond Interprofessionnel pour la Recherche et le Conseil Agricole
FODECC	National Cocoa and Coffee Sub-Sector Development Fund
FUTA	Federal University of Technology Akure

GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GIZ	German Society for International Cooperation
ICI	International Cocoa Initiative
ICPM	Integrated Crop and Pest Management
IDRC	Canadian International Development Research Centre
IITA	International Institute of Tropical Agriculture
IMF	International Monetary Fund
IPM	Integrated Pest Management
IRAD	Institute of Agricultural Research for Development
KKL	Kuapa Kokoo Ltd.
MINADER	Ministry of Agriculture and Rural Development
MLP	Multi-level Perspective
MOFA	Ministry of Food and Agriculture
NCDC	National Cocoa Development Committee
NGO	Non-governmental Organisation
OSH	Occupational Safety and Health
PES	Participatory Extension Specialist
PNVRA	National Agricultural Extension and Research
PoE	Pocket of Effectiveness
PPP	Public-Private Partnership Programme
PR	Paysan Relais
PROMIS	PRactice-Oriented Multi-level perspective on Innovation and Scaling
SAP	Structural Adjustment Program
SOCODEVI	Société de Coopération pour le Développement International
SODECAO	Société de Développement de Cacao
SPACES	Sustainable Practices in Agriculture for Critical Environments
STCP	Sustainable Tree Crops Program
T&V	Training & Visit
TCU	Tree Crop Unit
TS	Technicien Spécialisé
USAID	United States Agency for International
USDA	United States Department of Agriculture
VVC	Video Viewing Club
WB	World Bank
WCF	World Cocoa Foundation



# 1

## General Introduction







## 1.1 General introduction

In this thesis, I look at how during the first decade of the new millennium a public-private partnership (PPP) initiative attempted to innovate and to achieve sector transformation. The PPP worked towards the permanent adoption of alternative training approaches, in order to tackle complex sustainability challenges among African cocoa smallholder farmers, and work toward a more sustainable and productive cocoa value chain. In this introductory chapter, I first set out to sketch the background of smallholder cocoa farming in West Africa and the historical context of agricultural extension service delivery in the region. I then concentrate on the set-up of this first of its kind PPP, and on the development of a pilot on the alternative training intervention it sought to introduce and scale. This is followed by the problem statement and research objectives. The theoretical approach outlines how the empirical chapters, two to five, contribute to the current literature, linking back to the analytical focus and research questions. After a discussion of the research design, I conclude this introduction with the outline of the thesis.

### 1.1.1 Challenges of the West African smallholder cocoa farmer

Sub-Saharan Africa has not benefited equally or equitably from the intensified global flow of capital and goods that has developed since the mid-1980s (Fold, 2001). Although cocoa has constituted a vital source of revenue for West African economies for decades (Gilbert & Varangis, 2004), the majority of cocoa households have not benefited sufficiently from cocoa to structurally overcome poverty (Ryan, 2011).

Smallholder farmers are generally facing numerous challenges on only a few hectares of land. Essentially, in West Africa, cocoa has always been farmed using an unsustainable shifting cultivation approach combined with a strong migration, as first described by Polly Hill (1961). Continuously moving into new virgin forest areas, smallholders have exploited the forest resources and moved on when yields declined. Thus, cocoa has been one of the main drivers of deforestation, natural resource exhaustion, and biodiversity loss in the Upper Guinean rainforest of which today roughly 15% remains (CEPF, 2005, 2015; Ruf, Schroth, & Doffangui, 2015) causing both social and environmental sustainability issues (Nelson & Phillips, 2018). Furthermore, smallholder cocoa farming shows spectacularly low yields, often less than 20% compared with the biological potential (Aneani & Ofori-Frimpong, 2013). With the remaining forest rapidly running out – a tropical ‘tragedy of the commons’ – the migratory and extensive farming system arguably will need to be transformed towards sedentary, resilient, and sustainably intensified agroforestry systems (Jagoret et al., 2017; Rafflegeau et al., 2014). However, this requires sector transformation; permanent changes in the way the cocoa value chain

operates and becomes more effective. On top of the ‘typical’ socio-economic challenges linked to a high incidence of poverty (Breisinger, Diao, Kolavalli, & Thurlow, 2008), smallholder cocoa farmers are faced with a myriad of challenges including low levels of professional knowledge; limited access to resources, labour and finance products; volatile market price developments and a buyer-driven value chain; complex land tenure systems and underdeveloped land markets; weak or absent farmer organizations; high pest incidence and disease loads; threats from impending climate change; and little interest from the next generation to enter the sector (see for example Fountain & Hütz-Adams, 2015). Cocoa farming is also subject to a number of health risks and specifically the risk of irresponsible pesticide application needs attention (Muilerman, 2013). Cocoa smallholders therefore need all kinds of support and access to professional knowledge and technology, which necessitates institutional innovation and technical transformation (Houkononou et al., 2012; Schut et al., 2016). Traditionally, starting from colonial times, this was attempted through large State agricultural extension programs. More recently we see more pluralistic approaches. To fully understand why it became essential for private sector, towards the new millennium, to aim for innovation and sector transformation through alternative training approaches, we need to understand the historical context.

### **1.1.2 Post-colonial agricultural extension service provision in West Africa**

After colonial times, both in the countries formerly controlled by the British and the French, the organizations for agricultural extension initially continued to be based on colonial administrative structures designed to support export crops. Extension for cash crops such as cocoa continued to be the domain of State-run and relatively better funded Marketing Boards, due to the strategic and economic importance to the countries’ economies. Progressively, however, countries diverged and focused also on supporting food production which meant extension services had to reach larger parts of the rural population. In the 1960s and 1970s the release of new high yielding varieties for staple foods by international research centres (e.g. Dalrymple, 1978; Gollin, Morris, & Byerlee, 2005; Hazell, 2010) was part of what we now know as the ‘green revolution’ (Gaud, 1968). Consequently, globally the focus of extension was put on the top-down transfer of technology. In the 1970s the novel concept of ‘Training and Visit’ (T&V) was developed (Benor & Baxter, 1984; Benor & Harrison, 1977).

The then innovative T&V approach featured dedicated agricultural extension workers, supported by technical subject matter specialists (and ideally also by researchers) who were controlled by a technocratic hierarchical management. Field visits targeted a pre-determined group of contact farmers or groups who were expected to engage in farmer-to-farmer dissemination. Extension messages focused on technical advice on

agricultural production, key crops, resource-efficient solutions, and quick-wins (based on Ganguly et al., 2006). Leeuwis and van den Ban (2004, p. 296) characterise T&V as a way of organising a communicative intervention ‘somewhat like a military operation’, drawing heavily on the adoption and diffusion of innovations approach (Rogers, 1962). However, in so doing, this reduced the role of extension staff to handing out technical advice alone. This almost standardised recipe made extension staff often feel curtailed in their work.

### **1.1.3 Reform in West African cocoa sector and concerns about sustainability**

In the 1980s West African cocoa producing countries underwent Structural Adjustment Programs (SAPs), instigated by the International Monetary Fund (IMF) and the World Bank (WB), which typically involved public sector reform, currency devaluation, and the elimination of Marketing Boards (Herbst, 1990). From the late 1980s the WB promoted T&V became the predominant agricultural approach within the extension services of many African countries. The WB continued to support national T&V implementation well into the late 1990s (Ganguly et al., 2006).

In the 1990s under the influence of SAP and liberalisation, dedicated cash crop extension services were often absorbed into declining national general agricultural programmes. Effective extension delivery and support to the extension services started to fail (Eicher,

**Box 1.1** - *Public Extension organizational behaviour in West-Africa under T&V, as presented by Ganguly, Feder, and Anderson (2006)*

1. A lack of resources prevents extension agents from servicing a large and diversified clientele, often with low capacity, leading them to focus on more successful farmers and to have little impact at scale.
2. Extension bureaucracies and the outcome of their efforts are largely controlled by and depend on policies on which they have little influence.
3. Public extension and research systems often compete for funding. Extension also depends on science for guidance and technology but has lower status, less prominence, and lacks incentives for scientists to interact with them; this creates tensions.
4. It is analytically challenging to unequivocally attribute impact to extension; this leads managers to focus on reporting input indicators such as visits made or resources distributed.
5. A lack of incentives to create (participatory) processes that foster accountability to clients can lead to low-quality, repetitive services and little in-depth interaction with farmers.
6. Because of difficulties in attributing impact to extension, politicians are more likely to support visible infrastructural works and assign lower budgets to extension.
7. Government often assigns field-level public servants with non-extension duties, some of which may not directly serve the general public.
8. Weak political support and high recurrent costs (staff and resources) in extension provide easy cost-cutting budget items.

2007; Ganguly et al., 2006; Rivera & Rasheed Sulaiman, 2009; Simpson & Owens, 2002). Scholars, including those in cocoa producing countries (Baah, 2007) have mentioned how the top-down ‘transfer of technology’ is not effective. These approaches lack the means to convey underlying processes and concepts of new technology, leaving farmers ill-equipped to adapt technologies to local circumstances and challenges (Chuluunbaatar & Yoo, 2015; Fold, 2001; Vellema et al., 2016)

Connecting this with literature on public service delivery, Feder, Willett, and Zijp (2001), as further discussed by Ganguly et al. (2006), identified eight general characteristics typifying the challenges of organisational behaviour inherent in public extension systems. I summarize these in Box 1.1 as a background to the thesis chapters, as well as a characterisation of the old non-participatory modes of public service delivery and knowledge and technology transfer. These factors help to explain why although T&V itself became increasingly criticised, changing to alternative approaches was difficult. T&V suffered from a perpetual deadlock between those who argued that countries could not afford it and those that argued that countries could not afford not to afford it (Purcell & Anderson, 1997). Scholars such as Leeuwis and van den Ban (2004), demonstrating also a scholarly shift towards more reflexive and multidisciplinary thinking, showed that the major flaw was that change and innovation in agricultural practice require more than technical advice. Today agricultural extension in sub-Saharan Africa is characterised by pluralism of approaches and increased private sector involvement (e.g. Davis, 2008). This also means a need for the emergence of new forms of public and private sector collaboration.

Towards the end of the 1990s, the international cocoa sector started to develop concerns about a sustained supply of quality cocoa beans and to perceive important sustainability risks to their existing business model (Berlan, 2004). A need for increased professionalization in the sector was identified and towards the end of the 1990s a series of global stakeholder meetings were held. These led to the 1999 “Paris Declaration” in which global leaders of the cocoa sector, and particularly multinational agribusiness corporations, made a commitment to sustainable cocoa supported by investments (Velarde & Tomich, 2006).

By the new millennium, in Africa, decades of cocoa farming had not only led to serious loss of forest cover (CEPF, 2005, 2015), but also to grave social injustices in the sector (Bass, 2004; Bøås & Huser, 2006; Lamb, 2001; Nkamleu & Kielland, 2006). Consumers and politicians called for more sustainability and for more equitable trade. However, political and institutional State capacity was lacking. Therefore, the private sector, international donors and the origin governments set out to jointly introduce

innovative farmer training programmes focused on topics including good agricultural practices (GAP), occupational safety and health (OSH), and integrated crop and pest management (ICPM).

#### **1.1.4 Focus on the case of a public-private partnership programme**

This new cocoa sustainability impulse led to the setup of a substantial public-private partnership (PPP) programme in West Africa focussed on productivity constraints, market constraints, and institutional constraints in cocoa systems. In 2001, the ‘Sustainable Tree Crops Program’ (STCP) became the first regional public-private partnership programme on cocoa sustainability. This PPP aimed to reach a critical mass of the millions of underprivileged smallholder cocoa farmers and farm workers with innovations and training, with varying levels of success. This Sustainable Tree Crops Program (STCP) is the unique focus and original case study for this thesis, both at the regional and national level. The STCP PPP united most major global chocolate manufacturers<sup>1</sup> with regional and national stakeholders in Cameroon, Côte d’Ivoire, Ghana, Liberia, and Nigeria. The STCP was led by the International Institute of Tropical Agriculture (IITA), one of the 15 international agricultural Research for Development centres of the CGIAR. Led by researchers, STCP soon evolved into the sector’s main avenue to address key issues in West-African cocoa, though the PPP’s core mandate was to address the methodological weaknesses in cocoa extension in West-Africa. STCP started from the premise that smallholder farmers should be adopting a number of ‘innovations’ to achieve sustainably productive (intensified and/or diversified) farming systems. The PPP’s baseline studies exemplified the failure of the classical under-resourced agricultural extension to achieve impact at scale, showing that cocoa farmers in West Africa did not have adequate access to information, technology, and inputs on cocoa production (IITA, 2003; IITA/KNUST, 2003; IITA/ODECO, 2003; Kouadjo, Keho, Mosso, & Toutou, 2002).

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1 Key funding and implementing partners included the following: United States Agency for International Development (USAID), International Institute of Tropical Agriculture (IITA), United States Department of Agriculture (USDA), European Union, Federal Ministry of Agriculture and Water Resources (Nigeria), Fonds de développement et de promotion des activités des producteurs de café et de cacao (Côte d’Ivoire), SOCODEVI/ Canadian International Development Agency (CIDA), Forest and Landscape Denmark/Danish International Development Agency (DANIDA), Centre for International Migration and Development (CIM Germany), Department for International Development (UK), GTZ, Dutch Ministry of Agriculture, Associates in Rural Development (ARD USA), and Transfair USA (Guyton, 2012).

At the national level the PPP endeavoured to influence institutional realities and (inconsistent) policies, for example, where it concerned extension provision and input markets. By 2010 the PPP had turned into a regional network hub coordinating many of the partnerships active in West Africa. The PPP served as a broker between researchers, local communities, donors, and companies and as a platform for technology dissemination and research and concentrated resources and expertise on farmer training (Bitzer, Glasbergen, & Leroy, 2012). Parallel to and in relation to the PPP more initiatives emerged which invested additional resources for farmer training. Numerous investments by the private sector increasingly put more attention on farmer training for compliance with different cocoa certification schemes (e.g., Fair Trade, Rainforest Alliance, UTZ).

### **1.1.5 Introduction of cocoa Farmer Field Schools as an alternative to T&V**

The PPP's key concern was how to enable professional (public) service provision to reach several hundred thousand smallholder cocoa farmers, i.e., high quality training on good agricultural practices (GAP) and better integrated crop and pest management (ICPM). A novel and participatory approach other than T&V was proposed, 'Farmer field schools' (FFS), with strong results especially on the prevention of pests and diseases.

Farmer field schools were designed within the FAO and first implemented in the late 1980s as an alternative, more participatory, and experimental learning approach. for Integrated Pest Management (IPM) of rice in Southeast Asia (Simpson & Owens, 2002). The approach quickly expanded for use with other food crops and on other topics (Chuluunbaatar & Yoo, 2015). The idea of adopting FFS for a perennial crop such as cocoa was based on experiences in Indonesia with cocoa FFS on the pod borer pest. Although FFS had been introduced to West Africa in the mid-1990s for food crops, only one small scale project in Ghana had already used FFS on cocoa (Asare, 2005). Between 2003 and 2005 the PPP therefore adapted, tested, and validated the FFS approach for training smallholder cocoa farmers on a wide range of topics (Asare & David, 2011).

The curriculum was developed in collaboration with cocoa experts from the national agricultural research and extension institutions from all participating countries during a regional workshop in 2003 (STCP, 2004a) (Asare & David, 2011). Impact results showed that yields among FFS graduates were 15 to 40% higher and pesticide use was reduced by 10 to 20% (Gockowski, Asamoah, David, Gyamfi, & Kumi, 2010). The FFS approach constituted a considerable break from the norm in agricultural extension, not only because of the structured technical curriculum and organisation but particularly because of its altogether different nature. Of prime interest for this thesis is that FFS features quite specific underlying principles (e.g. Hagiwara, Ogawa, Kariuki,

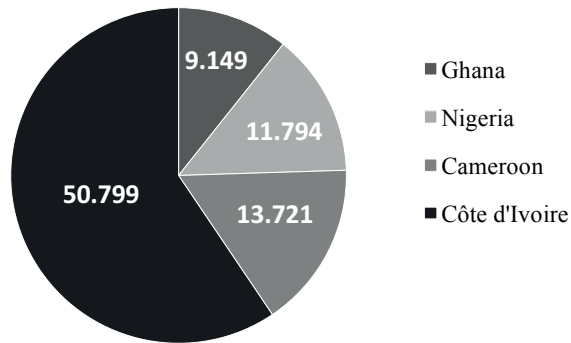
Ndeti, & Kimondo, 2011), which provide the basis for the development of completely comparable cocoa FFS pilot programmes in Cameroon, Côte d'Ivoire, Ghana, Liberia, and Nigeria (table 1).

In the next phase of the PPP, starting in 2005, the programme's objective became to take FFS and its underlying principles to scale (STCP, 2006) in Cameroon, Côte d'Ivoire, Ghana, and Nigeria. By February 2012 the President of the World Cocoa Foundation (Guyton, 2012) reported, "We reached our goal by providing services to more than 150,000 farmers through Farmer Field School trainings, Video Viewing Clubs, and a variety of additional agricultural and business skills development trainings." Although the industry's focus was primarily on achieving the training of large numbers of farmers, what is in fact of key interest here is that the PPP actively set out to influence the national

**Table 1.1 - Underlying principles of STCP's cocoa farmer field schools**  
based on exchanges with the STCP expert staff, David (2004) and Schut and Sherwood (2007)

Adult education acknowledges experience	Non-formal adult education, treating the farmer as experienced professionals who become critical thinkers and make informed decisions.
Interactive self-help group training approach	A group approach, often mixed, focussed on collective action and self-help, empowerment, interaction and the continuous exchange of ideas, and possibly the adoption of innovations.
Focus on field-based and concrete experimental learning	Practical learning focus at the field level (as compared to a technology/message focus) whereby hands-on interaction with the field provides all the necessary examples, experiments and materials in order to learn about and apply general concept to a specific situation.
Trained and competent farmer facilitators	A technically competent and adequately trained facilitator, preferably a local FFS-graduate who speaks 'the same language', has the group's trust, knows the area and needs little (financial) resources to perform. The facilitator's role and attitude focus on the creation of a suitable environment for learning and on the facilitation of learning by asking questions and by providing support.
Practical curriculum based on natural (crop) cycle and emerging issues	A curriculum of participatory topics that follows the natural cycle, considers the whole agro-ecological system and covers all key subjects while they emerge, not through lectures, but through experimental learning and learning-by-doing. Optional special topics can be chosen by the group itself.
Quality program management and M&E Sustainable financing	Dedicated program leadership addressing all operational and logistical challenges responsible also for monitoring and evaluation After initial start-up costs, especially the training of trainers and transportation costs are important recurrent costs to find sustainable financing for. In some casts cost-sharing arrangements occur.





**Figure 1.1** - FFS graduates per country (2006-2011)

Data sources: STCP annual reports

public agricultural extension systems for cocoa, and even to work towards a ‘paradigm’ change (STCP, 2004b) whereby the more participatory FFS would altogether replace and de-institutionalise the transfer-of-technology approaches.

The PPP finally has presented itself as a general FFS success story, directly training around 85,000 cocoa producers in FFS between 2006 and 2011, one third of which in the final year. However, if we look at these outputs more closely, it becomes clear that despite similar setups, results were markedly different from country to country (Figure 1.1).

## 1.2 Problem statement and research objectives

### 1.2.1 Piloting, scaling, and institutionalising an alternative training approach

Most studies on FFS have concentrated on the technical characteristics of the FFS approach and its achievements with regard to responsible pesticide use and yield improvement (e.g. Chuluunbaatar & Yoo, 2015; Fakih, Rahardjo, & Pimbert, 2003; Henk Van den Berg & Jiggins, 2007; Waddington et al., 2014). Several studies focus on a number of challenges to and criticisms of specific practices promoted under FFS (A Braun & Duveskog, 2008; Arnoud Braun, Jiggins, Röling, van den Berg, & Snijders, 2006; Feder, Murgai, & Quizon, 2004; Sherwood, Schut, & Leeuwis, 2012). This is a highly valid debate, but attention to quality and compliance in FFS is explicitly not the focus in this thesis. Rather, my thesis focuses on the under-researched institutional and interactive change process that may drive a transition to an alternative innovative model of public service delivery, in this case cocoa FFS.

Cocoa is a key strategic crop for cocoa producing countries in West-Africa. In the decade after the turn of the millennium cocoa production in West-African countries is unsustainable and hundreds of thousands of smallholders need training capacity building that traditional agricultural extension service delivery systems are unable to provide. I aim to unravel, within vastly different institutional settings and socio-political contexts, how a cocoa PPP set about to develop a niche innovation on the co-production of knowledge in agricultural extension, and how it consequently aimed to achieve a paradigm transition. This study fits well with a recent academic focus on understanding more about scaling processes of agricultural innovations, especially within multi-stakeholder settings (e.g. Westermann, Thornton, & Förch, 2015). The adoption of alternative approaches, and particularly of FFS, in national agricultural extension programmes is often reported to be problematic. Tensions arise with services geared towards the traditional top-down approaches, resulting in partnership issues, lack of capacity, and an absence of political will (Chuluunbaatar & Yoo, 2015).

I noticed that in practise the debate about achieving widespread impact on sustainability in the cocoa sector did not focus on context, processes, dynamics, and interrelations within the national extension systems, possibly because these institutions are perceived as a Pandora's box, better left untouched. The debate is rather steered by external pressures, e.g., accusations about child labour, socially or environmentally unsustainable practices, the need for professionalization, traceability, and certification, and on policy environments. In this thesis I aim to further unpack, analyse, and understand the 'enabling environment' or 'conducive context' for the scaling of a promising high-quality innovation. I aim to unravel how this cocoa sector context relates to external attempts to overhaul public service delivery in a given country, and to the potential achievement of impact at scale.

The purpose of this study is to fill a knowledge gap on why and how the processes of scaling and/or institutionalisation of FFS showed divergent outcomes in four different cocoa producing countries in Central and West Africa, by providing deeper understanding of the interactions between organisational actors than is normally provided. The central phenomenon is defined as a transitional process away from the 'traditional' top-down T&V approach and towards the 'innovative' co-learning FFS approach. The general objective of the thesis is to build a more complete understanding of the specific dynamics, dimensions, and interactions than is normally provided. Deeper insight into four, relatively comparable country case studies, helps determine whether, how and why FFS may have been institutionalised and/or may have gone to scale or not. I seek to identify clear and purposive practices that specific actors may have undertaken to allow for success (or failure) especially within and close to the State's public agricultural

extension institutions and its bureaucratic agents. This contributes to a practitioners' discussion on the scaling and institutionalisation of alternative approaches to co-production of knowledge (such as FFS), to socio-political studies on innovation and socio-technological sustainability transitions, and to an emerging field of more social anthropological literature on specific bureaucratic processes and practices and the African State's inner workings, particularly in adverse enabling environments.

### 1.3 Theoretical approach

Practitioners of FFS generally focus on the nature of the approach and the immediate impact it achieves (Van den Berg, 2004), but less often on the scaling and institutionalisation processes, and institutional practices that determine broad impact (e.g. Chuluunbaatar & Yoo, 2015). Disappointing adoption outcomes in agriculture are often simply attributed to a deficient enabling environment (Tripp, 2003), which however is all too often non-defined (Amjad, Ojomo, Downs, Cronk, & Bartram, 2015). Rather it is used as a catch-all for any ill-understood (positive or negative) socio-economic or politico-institutional mechanisms that are claimed to fall outside the direct influence of practitioners. I found this to be unsatisfying and identified four relevant strands of literature that I use and combine in a novel way to come to my conceptual framework and focus.

I took inspiration from (i) literature on a shift in 'mode' of knowledge production and extension provision in agriculture; the practical process of knowledge generation, exchange and transfer, generally first within a niche setting. This connected (ii) to literature on the process of scaling and increasingly on the institutionalisation of agricultural innovations like FFS, which generally focus on the interrelations between a niche and the dominant regime. Thinking of sustainability transitions in niche, regime and the landscape, lead to an interest in (iii) the multi-level perspective on socio-technological transitions (MLP). Finally, (iv) since I am interested in a niche intervention that related to large-scale public service delivery, I aimed for increased depth in the analysis by looking at literature that qualitatively analyses change, governance and effectiveness at the level of the African State and practises of bureaucratic career professionals.

#### 1.3.1 An alternative mode of knowledge production

FFS, an innovative agricultural extension approach, proposes a significantly different 'mode' of farmer learning. This learning-based extension approach relies on principles of learning through discovery and experimentation. Such an alternative mode of extension needs a specific institutional framework to be in place since it entails a fundamental

shift in the learning relationship between state extension professionals and farmers, as well as within the national agricultural research institutes. Baah (2007) indeed mentions how the STCP PPP proposed a clear shift or transition away from a top-down, transfer-of-technology model of providing agricultural extension training in each of the four partner countries, which all largely used the WB-supported Training and Visit approach. Here I draw a parallel with scientific literature on the emergence of a new ‘mode’ of knowledge development. This is even more valid since the STCP PPP specifically aimed to learn and collect data through FFS and use this learning for scientific advancement, in line with IITA’s research-for-development approach. It was Gibbons (Gibbons, 1994; Gibbons et al., 1994) who announced the emergence of a new, or ‘second mode’, of knowledge production. In the agricultural innovation literature this is described as a broader shift, moving away from abstract, academic, specialised knowledge production based on scientific discovery – dubbed ‘Mode 1’. Over the last decades, knowledge production shifted to more localised, reflexive, and multidisciplinary knowledge production based on application and impact – dubbed ‘Mode 2’ – (Gibbons et al., 1994; Gibbons & Nowotny, 2001; Nowotny, Scott, & Gibbons, 2001, 2003). Roughly, ‘Mode 1’ and ‘Mode 2’ point at the differences in knowledge production between (conventional) academic scientists and applied scientists or practitioners such as those working for the international agricultural research institutes of the CGIAR in the PPP. This also extended the analysis to knowledge production in a development context, including through the organisation of FFS and using these for intensive data collection. Though drawing this parallel is interesting, it needs to be stressed that FFS is not of product of this discussion, as it has existed since the nineteen eighties. Providing agricultural extension through ideal type FFS is merely a practical application of a ‘Mode 2’-inspired learning-based approach to extension and co-production of knowledge within local groups of smallholder farmers, as described in Sherwood et al. (2012, p. 104); ‘based on open, transparent, and flexible negotiations and decision-making processes that are responsive to localities’. Creating this connection is also useful since within the PPP’s rigorous scientific data collection during the interactive FFS sessions was a core priority and informed several academic publications, leading to further improvement of the curriculum and agronomic recommendations (e.g. Asare & David, 2011; David, 2007; Gockowski et al., 2010) or (STCP, 2010) for a more complete list.

### **1.3.2 Scaling and institutionalising Farmer Field Schools**

From several STCP documents it becomes clear that the objective was to go to scale with the alternative FFS learning-based extension, using a ‘mode 2’-inspired learning approach for the PPP itself, and – preferably – to also institutionalise the approach within public service delivery systems.

Over the last decades, “scaling” has been widely used in the development literature, particularly the literature on innovation diffusion, technology adoption, natural resource management, and policy transfer (WB, 2003). The very first question, however, should always be whether an initiative even deserves to be scaled. In general, it can be difficult for development practitioners to acknowledge it when this is not the case (e.g. Hartmann & Linn, 2007).

‘Scaling’ as a concept can be ambiguous. Scaling on the one hand can refer to a process; the process of moving from smaller outputs to larger outcomes, but scaling is equally used to refer to specific quantitative outputs; achieving ‘more’ of the same impact (Berg et al., 2012; Carter & Currie-Alder, 2006; Chavez-Tafur, 2009). This dual usage of the same term, relating either to process statements or quantitative statements, can be confusing.

My core interest lies in the process and practices of scaling, and the outcomes of that process, not in the technical quality of the intervention, nor in the numbers achieved. Process outcomes depend on political, institutional and organisational processes of alignment. Therefore, my interest in documenting scaling pathways is intertwined with an interest in documenting and unravelling the process alignment and ‘institutionalisation’. Institutionalisation means that the novel principles that underlie the intervention (FFS) become internalised in public service delivery mechanisms. However, these underlying principles equally drive change and development within the organisation, and are used to guide local adaptation (Chuluunbaatar & Yoo, 2015; Menter, Kaaria, Johnson, & Ashby, 2004).

From this understanding therefore, it follows that ‘scaling’ an alternative learning-based extension methodology – in collaboration with the existing institutions – needs to simultaneously entail a process of institutionalisation of a new mode of extension

**Box 1.2 - Three levels of FFS adoption according to the FAO (Chuluunbaatar & Yoo, 2015)**

*Harmonization:* promoting synergy and shared learning and exchange on FFS-related activities, and mainstreaming common features and principles of FFS to maintain quality and standards in FFS programmes across countries and regions.

*Institutionalization:* creating common understanding of FFS and its values, and integrating it into agricultural policy and rural development programmes, and creating an enabling environment in which FFS programmes and networks can succeed.

*Appropriation:* taking ownership of their innovations and decisions on the farming activities and becoming engaged in a wider range of activities and environment as a group.

delivery. The current FAO position on FFS (Chuluunbaatar & Yoo, 2015) indeed features a more prominent focus on institutionalisation, than a focus on ‘scaling’. I am primarily interested in how institutionalisation and scaling ‘happens’ within the African State and how it can be understood by examining defining practices of actors and elements of context (Berg et al., 2012). The essence of the FFS approach challenges conventional practices and contexts. In fact, scaling FFS needs a conducive set of dynamics, collaborative arrangements, and interactions with conventional public extension services to achieve the institutionalisation of its underlying learning-based principles. Only then adoption of FFS can meaningfully be expected to lead to a transition to more sustainable impact within the different public extension services institutions (Chuluunbaatar & Yoo, 2015, p. 2). Adoption of FFS, according to Chuluunbaatar and Yoo (2015), therefore takes place at different levels (Box 1.2), and this conceptually connects to the multi-level perspective.

### **1.3.3 Sustainability transitions and the multi-level perspective**

Considering the above, the key premise for this thesis is that the PPP aimed not only a scaling cocoa FFS, but also institutionalisation this sector transformation to another mode of knowledge co-development. I link this transformation within agricultural extension service delivery systems to literature on sustainability transitions, even though this field generally focusses on larger-scale socio-technological transitions. Farla, Markard, Raven, and Coenen (2012) describes transition as ‘shifts’ or ‘system innovations’ between distinctive socio-technical configurations or systems. New technologies are co-evolved during a multiplicity of changes in dimensions such as markets, user/consumer preferences, policies, socio-cultural discourses, and governance (Coenen, Benneworth, & Truffer, 2012; Geels, 2010; Kemp, 1994; Rip & Kemp, 1998; Schot & Geels, 2008). Socio-technological transitions therefore differ from ‘simple’ technological transitions, since they include changes in practices and changes in institutional structures (Markard, Raven, & Truffer, 2012), meaning that guidance and governance usually play a significant role (Smith, Stirling, & Berkhout, 2005).

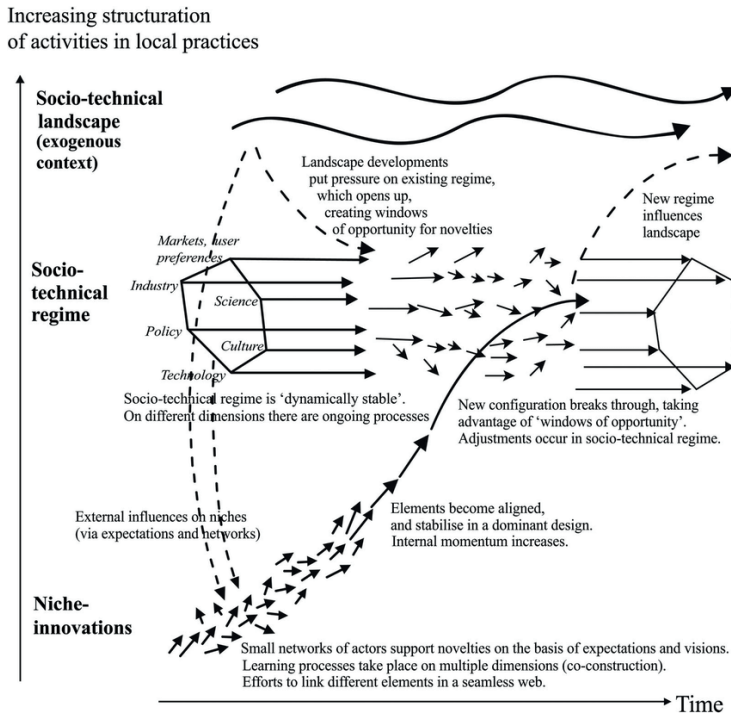
The MLP not only links well to my interest in processes of transition and sector transformation, as well as processes of scaling and institutionalisation, it helps unfold conditions and contexts of the scaling pathways (Farla et al., 2012), and links well to the FAO’s earlier mentioned three levels of FFS adoption. I explored this literature in order to find a useful typology of the FFS scaling pathways. Geels (2011, p. 24) points out that sustainability transitions are complex, multi-dimensional, and long-term dynamic processes of structural change consisting of multiple actors. This fits well with the example of the PPP, as do the comments of Smith et al. (2005, p. 1500) and Farla et al. (2012) that these processes generally have a pre-competitive but purposive

focus, rather than an emergent focus. Geels and Schot (2007, p. 402) also argue that no socio-technological transition is fully planned and coordinated from the start, but ‘every transition becomes coordinated at some point through the alignment of visions and activities of different groups’.

Though other frameworks exist (e.g. transition management, strategic niche management and technological innovation systems, see Markard et al. (2012) for a discussion), the multi-level perspective (MLP) on socio-technical transitions is most used for the reconstruction of historical processes of sector change. It has also gained popularity in international agricultural research (e.g. CGIAR, 2012).

The MLP uses three analytical levels, ‘niches’, ‘regimes’ and ‘landscapes’, that exist in ‘a nested hierarchy of structuring processes’ (Smith, Voß, & Grin, 2010, p. 6). The highest, most stable, landscape level is not a geographic landscape, but a macro-level of societal and physical factors that structures the contextual trends and dynamics. The regime level is the mainstream, institutionalised and dominant constellation of interacting institutional processes, again not necessarily a geographic or political entity. Such a socio-technical regime tends to be dynamically stable, is averse to change, and shows lock-in and path dependence (Smith et al., 2010). While incremental innovation is produced within a regime, more radical niche innovations (nurtured in protected niche spaces by dedicated actors) can disturb the regime. If favourable multi-level interactions and alignment can exist, this can cause radical reconfiguration and transition of the regime. This process shows a variety of dynamics within cultural, political, scientific, market, and industrial dimensions (Geels, 2010, 2011; Smith et al., 2010; Wigboldus & Leeuwis, 2013), see Fig. 2. Innovation processes that determine broad sustainability impact are not linear, but dependent on ever changing multi-dimensional and multi-level conditions (Geels et al., 2016). Therefore the MLP is a more satisfactory approach than, for instance, Rogers’ original S-curve on the diffusion of innovations (Rogers, 1962). The PPP purposely sought to plug a niche level intervention into the dominant socio-technical regime, the national cocoa (extension) institutions, already existing in a specific landscape that – in the case of cocoa – exerted a number of strong pressures on the regime. The MLP does problematise an innovation curve but still allows for a general typology of gradual breakthroughs or progressive scaling processes, against ideal-typical innovation curves (Geels et al., 2016; Geels & Schot, 2007). In this thesis, the MLP is not simply adopted but rather used as a core inspiration for the analytical framework. Also, criticism from the literature – especially that the MLP does not explicitly illustrate the role of specific actors (Genus & Coles, 2008), is taken on board. I do not adhere to using the MLP for the simple identification of linear processes, but rather take an interest in the description of the process of interaction and alignment.





*Figure 1.2 - Geel's MLP (with permission)*

I specifically aim to understand how organisational actors purposely shaped multi-level interactions and put things in motion within the regime and within the African State.

### 1.3.4 Effective and purposive practices within the African State

Each of the country cases, was characterised by its own bounded context and multi-level interactions. This resulted in markedly different relations between the niche (cocoa FFS initiatives) and the dominant regime (cocoa governance and bureaucratic extension institutions within the broader landscape). Douthwaite, Keatinge, and Park (2001, p. 819) stress that 'as technology and system complexity increase so does the need for successful interaction between the originating R&D team and the key stakeholders'.

From the previous sections it is clear there is recently more attention for processes of institutionalisation in the FFS literature (Chuluunbaatar & Yoo, 2015), and also attempts are made to more clearly integrate local enactment by key organisational actors into the MLP (Geels et al., 2016). This fits well an emerging area of qualitative anthropological and sociological research that asks for attention to the role of context, actors, and agency



within transformational processes in the State. My work takes inspiration from this literature on the inner workings of African States. My thesis builds insight into how career bureaucrats and related professionals within (and close to) the regime operate. These functional spaces, or pockets, of bureaucracy directly act upon these professionals' deep knowledge of historic and current institutional contexts and currents. They are driven by deep personal convictions on how innovation processes need to fit within larger societal flows and specific socio-technical and institutional regime configurations and are key to making States more (or less) developmental. This interest in career professionals within bureaucratic institutions goes back to Grindle (1977) and (Evans, 1995) and connects with current contributions on political 'development intent' (e.g. Henley, 2015). This under-researched area in the literature, especially when it comes to a focus on agriculture, features practice-oriented studies of the State with a focus on the specific practices and dynamics within bureaucratic institutions, which may or may not enable the delivery of effective public service to citizens, either in 'pockets' or 'at scale', but often in unlikely circumstances or within non-conducive environments (e.g. Bierschenk, 2010; Bierschenk & Olivier de Sardan, 2014; Leonard, 2010; Roll, 2011, 2014).

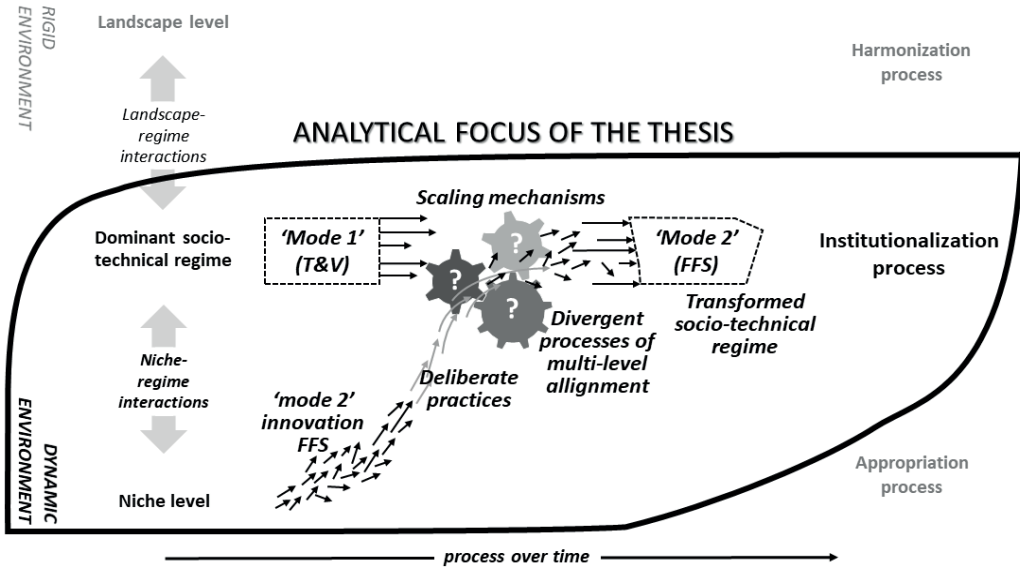
## 1.4 Analytical focus and research design

The focus of the analysis in this study is on unpacking and deciphering the dynamics and interactions between actors connected to the STCP, initially coming in from the niche level, with actors within the dominant socio-technical regime, within the context of different cocoa-producing countries of West-Africa.

### 1.4.1 Analytical framework

The analytical framework puts attention on the specific purposive actions that key organisational actors develop in their effort to achieve scaling and institutionalisation through alignment, i.e. a technological transition within the dominant regime from a top-down extension technology, to a learning-based extension technology. In this thesis, instead of 'transition', I will use 'transformation' or 'sector transformation' which seem more fitting terms for a socio-technological process that happens not a global level but at a national level within a specific agricultural value chain and sector. Figure 1.3 attempts to capture this schematically in an analytical framework and specific focus for this thesis.

From the literature review I adopt several elements into the analytical framework. Not the intervention is the main focus, but the transformation from a top-down mode of



*Figure 1.3 - Analytical framework inspired on the MLP*

knowledge production’ to a decisively more participatory and co-learning mode with FFS. This transformation is produced through intricate multi-level interactions within specific contexts, and a dynamic to rigid (enabling) environment depending on the level. In the cocoa value chain, the ‘landscape level’ shows a highly organised field of powerful multinational enterprises, united in PPPs and industry bodies such as the World Cocoa Foundation and connected to large donors. This rather uniform level in terms of agroecological factors, climate, etc., of course, but also in terms of macro-economy and cocoa sector organisation, is black boxed as it was not expected to account for much observed country-level variation in cocoa FFS scaling pathways.

The analytical focus therefore lies not on the landscape level, for which I lean on existing available literature, but on case studies of actual purposive practices, or ‘local enactment’, by career professionals that operate between niche and the bureaucratic regime actors. It is in the ‘regime’ space, that generally ill-understood multi-level interactions and emerging alignment can lead to a fundamental transformation with regard to the principal relation between the State and bureaucratic service recipients (in this case hundreds of thousands of smallholder farmers).

The PPP sought to destabilise the dominant regime and needed to seek alignment. In that process, scaling in the quantitative sense (numbers) is a highly desired though not guaranteed outcome of qualitative scaling processes at the regime level. The focus of

the process is primarily on institutionalisation within the dominant regime, not merely on appropriation within a closed project, nor over-ambitiously on complete sector harmonization. My specific analytic focus therefore seeks to refine our understanding of the purposive practices and local enactment that may lead to alignment between niche and regime level actors operating within the dominant socio-technical regime. In some cases this may allow for analysis of effective bureaucratic extension service delivery to cocoa smallholders.

### **1.4.2 Research questions**

Based on the background to the study, the literature analysis and the chosen analytical framework, the study seeks to answer the following two research questions:

1. What explains the divergence of the scaling pathways for innovative cocoa Farmer Fields Schools (FFS) in four African cocoa-producing countries?
2. Which alignment mechanisms shape the interaction on FFS scaling pathways between the original niche intervention and the existing national cocoa extension regimes?

These two research questions first guide a comparative chapter and three chapters that feature a specific country case study. Conclusions are formulated in the final chapter.

### **1.4.3 The choice for case studies and case selection**

Considering that the PPP had already been in operation for nearly a decade, and that management, approaches and outcomes seemed highly country-specific, my first choice was to do a retrospective process tracing approach. Both the analytical framework and the academic debate evoke this need for qualitative process tracing. A comparative country case study approach is most suitable. Qualitative case studies are a common, proven, and appropriate choice. In-depth qualitative case studies involve a mix of methods in social science which through narrative ‘approaches the complexities and contradictions of real life’ (Flyvbjerg, 2006, p. 237). The choice for a case study depends on the ‘case’ under study and its circumstances. In this thesis, methods involving a larger (random) sample were not an option. Case studies pursue scholarly research questions about a unique bounded system embedded in a specific context. Case studies can be reflexive and iterative. They gain credibility ‘by thoroughly triangulating the descriptions and interpretations’ (Stake, 2008, p. 120). The purpose of a case study is to represent the case, not general truths.

All four national STCP country experiences of ‘scaling FFS’ were studied as a case. Because of a high level of similarity in the initial set-up of the country-level projects,

a direct comparison between the countries was also considered to be relevant and valid (chapter 2). Comparisons among cases provide a chance to improve the ability to generalise by focusing on a few defining attributes but at the same time obscures ‘any case knowledge that fails to facilitate description’ (Stake, 2008: 139). In Federal Nigeria the focus was not put on all cocoa-producing States but on what was found to be the most interesting case-within-the-case – Cross River State. Also, for the purpose of this thesis, Ghana does not feature as a stand-alone case but is only included in chapter two as part of the comparative paper. Case study data analysis was initially performed also for Ghana, with the objective of writing a chapter in a working paper, before a PhD thesis was considered. This unpublished work, though supported by me, was led by the senior social scientist of the STCP and developed independently of the supervisors on this PhD project. This led to the decision not to feature it as an independent case study, but only in the comparative chapter.

#### **1.4.4 Methods of data collection**

Field research was performed between March 2010 and April 2011, looking back up to the start of the new millennium. Archive, literature, and desk research have mainly been performed from 2014. Several approaches were used during this retrospective process tracing study, including key informant interviews, semi-structured interviews, document analysis, some participatory observation and ad-hoc interviewing.

In chapter two, Table 2.1 shows a detailed breakdown of the 64 interviews held with 94 purposefully selected respondents. Purposive sampling and chain referral are accepted practices in social sciences for case studies, whereby the researcher speaks to every (hard to find) informant they can (still) get access to. Under this approach, unbiased sampling is impossible (Bernard, 2006). In farming communities, the large potential group of respondents (FFS graduates) was narrowed down, where possible, through the technique of assisted self-selection to ensure good gender balance and age balance in group interviews.

Key informants mainly consisted of the country coordinators and their management teams. These respondents understood the type of information I needed, were happy to collaborate (Bernard, 2006), and relatively easy to approach and talk to. Although these informants were indeed observant, reflective, and articulate, their information may have been selective in some areas or skewed by hindsight. This is part and parcel of qualitative enquiry and interviewing and was countered as much as possible by validation during other interviews. Semi-structured interviewing is the best solution when interviews can be of a substantial length, but you only get one chance at it. That was the situation with almost all the PPP’s national partners scattered all over West Africa, often in

very remote areas. A formal, written interview guide existed on the above-mentioned subjects to produce reliable and comparable data, but as interviewer I could still follow leads at my discretion. This is particularly well adapted when dealing with high-level bureaucrats and elite, who may not respond well to the researcher having total control over the interview (Bernard, 2006, p. 212).

Further data collection included active file research and historic archive research of the PPP and other relevant documents and items of evidence (among others, contracts and agreements, roles and responsibilities of each of the stakeholders, modifications made to the original 'ideal type' cocoa FFS during institutionalisation by partners, cost data on FFS implementation, and numbers of FFS organised and trainers and farmer facilitators trained). The dataset was completed by academic and grey literature reviews. Each chapter elaborates on the exact approach for that particular case study.

Some ad-hoc interviewing was used, and several observations were made during internal PPP meetings, including Executive Committee meetings which involved leaders in government, NGOs, research, and industry.

#### **1.4.5 Methods of data analysis**

Data analysis has been performed within the non-positivist paradigm, not relying on a reality or 'truth' independent or free of the observer (e.g. Aliyu, Bello, Kasim, & Martin, 2014). Inspired by the sociological tradition of grounded theory (Bernard, 2006; Suddaby, 2006), priority was given to qualitative and mixed data, before relying on the literature. Specifically, I performed process tracing, an iterative methodological approach, featuring simultaneous data collection, analysis, and sense-making.

In general, process tracing was performed to reconstruct timelines, decision processes, and specific practices and actions by key actors that shaped the scaling and institutionalisation process.

Process tracing provides a set of deceptively simple techniques for analysis, by remaining close to the cases under study. The final analysis of the empirical material aimed to identify integrated sets of theoretical concepts that have explanatory value going beyond simple synthesis and interpretation, with the specific objective to show process relations (Bernard, 2006; Denzin & Lincoln, 2008, p. 204). In general, data were collected to reconstruct time lines, decision processes, and specific practices and actions by key actors that shaped the scaling and institutionalisation process. More specifically, the focus in each of the countries was on perceptions on topics including the following:

- The background to the first scaling and institutionalisation initiatives;
- The dynamics and discussions with (prospective) partner organisations;
- Possible processes of elaboration and/or (co-)development of a model or strategy for scaling and institutionalisation;
- How a strategy worked out, and experiences with its implementation;
- Opportunities and challenges in the PPP and with regard to the capacity of partner organisations;
- Timeline construction and projections of institutionalisation, scaling, and an eventual 'exit' by the intervention PPP programme.

The fully transcribed interviews and key projects documents and texts were coded for theme identification. Analytic results were mainly used for the interpretation of processes and identification of scaling pathways, but also the construction of timelines, investigation of specific multi-level interactions, and retroactive process tracing. Each individual chapter again provides more detail in the specific data analysis performed for the specific country case study.

#### **1.4.6 Reflection on quality of study design**

Some reflections on quality are in order. Higher management of IITA had made it clear to the management of the PPP that they were merely to provide full operational and logistic support, but that the design and outputs of the study could not be influenced. Not one single manager from IITA or the PPP has ever intervened in the design, analysis, or interpretation of the data.

In the strictest sense I was based within the PPP and working for IITA and therefore not completely 'outside'. However, this participatory research approach is how I achieved sufficient opportunity for observation and archive research, and how I achieved access to otherwise hard to interview high-level respondents. Still, during partner engagement I was often perceived to be part of the PPP. To counter this, in all communication it was always stressed that the research was independent, not part of the PPP and certainly not evaluative in any way or form, nor connected to (new) funding or to any other kind of decision-making. Most interviews were held in English or French, without translation, but where interviews had to be held in local languages, where possible I depended on local facilitators, not on the PPP staff.

Independence was otherwise reinforced by full access to any meeting of PPP partners, independent research funding, and line management outside of the PPP. Right from the preparatory phase, I carefully considered issues of subconscious self-censorship, or influences from key respondents due to possible hidden agendas. I also made every

possible effort to double-check information received. I have consistently refused offers for co-authorship of any publication with IITA or PPP staff. I have waited with the final analysis and writing until after the PPP had come to an end and after all key staff had moved onto completely new positions and/or new employers. IITA has also kept its promise not to interfere in any way with the PhD at Wageningen, nor to ask for an internal review of any of the publication manuscripts. A choice that has somewhat limited the scope of this thesis has been the decision not to include interviews with representatives of the multinational cocoa agro-dealers. The private sector was an integral part of the PPP's Executive Committee, but where it comes to farmer training outside the PPP, they generally ran independent initiatives. This research would already have been immensely complicated due to the high mobility of private sector staff over a fifteen-year period but, more importantly, it would have required a radically different research approach due to the highly (competitively) sensitive and politicised nature of relations at the multinational level. I decided to focus instead on the national case studies that lie within the PPP's operational mandate.

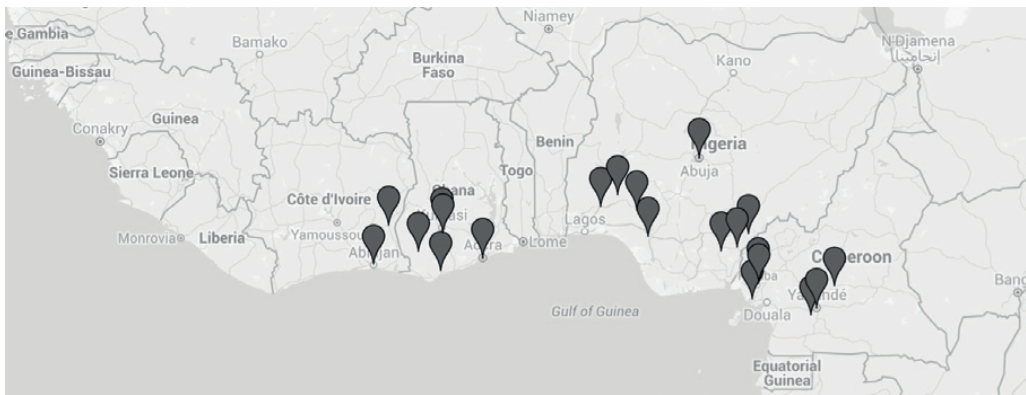
#### **1.4.7 Research locations**

Due to the objective of the thesis most key national partners involved in FFS held seat in the country capitals. Key research locations for this study have been the capital cities each of the four countries; Abidjan, Abuja, Accra, and Yaoundé. The Federal system in Nigeria also necessitated visits to five different State capitals for interviews. For each of the countries, farmer-based organisations (FBO) were also visited, and in Nigeria, specific communities that organised FFS due to the non-existence of FBOs. These locations were purposely chosen to include communities and FBOs who had succeeded in one way or another to effectively connect to the PPP's intervention, and to the bureaucratic agricultural extension agents supporting the country. In Côte d'Ivoire and Nigeria, the poor security situation in (large) parts of the national territory also heavily influenced the FBO selection. Cross River State– deemed the most interesting case study in Nigeria – also entailed safety restrictions with regard to mobility. Map 1 shows the different research locations used for this study in the West African cocoa belt; Figure 4 outlines the location names.

### **1.5 Organisation of the thesis**

In this section I briefly introduce the scope of the chapters that follow after this first introductory chapter. Figure 1.5 provides a schematic representation of the different chapters, also related to the geographic focus. The thesis is organised into six chapters; an introduction into the study, four empirical chapters, and a concluding chapter. The



**Côte d'Ivoire\***

Abengourou (district town),  
Abidjan (capital).

\*geographically limited due to socio-political crisis in 2010/11

**Ghana**

Accra (capital), Asankrangwa & Dabose (district towns, Western Region), Bekwai (district town), Kumasi (regional capital).

**Nigeria**

Abudja (Federal capital), Abo Mkpang & Ubong (communities in Cross-River State), Akure (Ondo State capital), Benin City (Edo State capital), Calabar & Ikom (Cross-River State capital & district town), Ibadan (Oyo State capital), Oshogbo (Osun State capital).

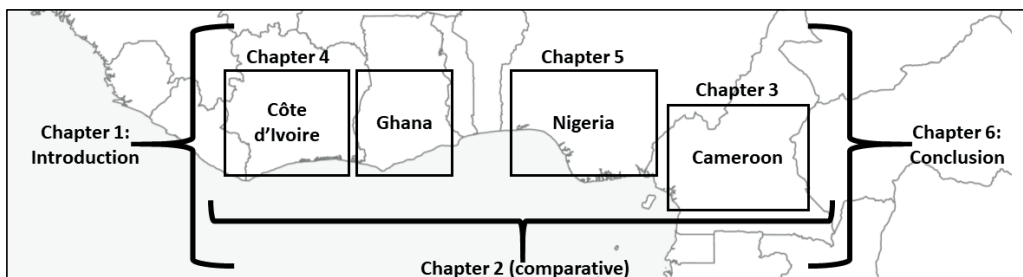
**Cameroon**

Buea (district town, South-West Region), Ikililiwindi & Konye (communities, South-West region), Ngoumou & Megang (communities, Central region), Yaoundé (capital).<sup>2</sup>

**Figure 1.4 - Overview of research locations**

case study chapters 3, 4 and 5 are in chronological sequence, with regard to their respective pilot starting time within the PPP. Depending on the empirical analysis and the emerging explanatory concepts and mechanisms, each chapter adopts a unique context-specific lens, leading to comparable yet distinct case studies.

Chapter two seeks to understand which scaling pathways have been observed in the four countries and how have these been shaped by the organisational and local actors. I take as an entry point the observation that the process of progressing along FFS scaling pathways revealed diverse outcomes in each country, and that this had



**Figure 1.5 - Geographic focus of each of the chapters**



diverse implications for the historically rooted and established system of public service delivery to smallholder cocoa farmers. By operationalising the conceptual framework, based on the MLP, I investigate whether and, if so, how the existing regime showed a transformation towards, FFS, a new mode of learning-based extension delivery. Whether or not alignment between niche and regime is achieved largely depends on the context. This means careful analysis of the regime level while a conducive context is operationalised as the presence of favourable multi-level interactions. Chapter two also emphasises to what extent systems shocks and landscape pressures can lead to a destabilization of a dominant regime causing the potential institutionalisation (and scaling) of – in this case – cocoa farmer field schools into cocoa extension service provision.

Chapter three is an investigation of whether a study of multi-level dimensions and dynamics can help diagnose the limited and ambiguous scaling and institutionalisation outcomes for FFS in Cameroon. A generally effective pilot in Cameroon did not lead to satisfactory widespread scaling or to effective collaboration with the public extension regime. We assess whether a specifically developed analytical approach inspired on the multi-level perspective can further enrich our understanding and help structure a broad-based exploration of the qualitative dataset. The focus is put on the key dimensions and dynamics that were involved, and the wider lessons that might be learned with regard to complex scaling processes. The chapter argues that different scaling and institutionalisation outcomes might have been observed with a more persistent and adaptive approach to scaling of the technical curriculum, as compared to the approach. Other necessary factors would have been investments in genuine buy-in by the extension actors, adaptations to the management approach, and strengthening of strategic competencies between the pilot and scaling phase.

The fourth chapter explores how alignment between the intervention programme and the cocoa bureaucracy led to the PPP's most notable FFS scaling and institutionalisation outcome, in the 'Failed State' of Côte d'Ivoire during a time of deep sector reform and intense socio-political conflict. When seen in relation to the increased use of sustainability standards in the international trade in cocoa that challenges companies to find effective modes of service delivery to large numbers of small-scale farmers, this example shifts attention from mechanisms of private governance to the embedding of service delivery in the institutional dynamics of the State. It demonstrates that, despite a recent history of violent conflict and civil unrest, the introduced FFS approach achieved a surprising scale in terms of numbers and geographical spread. The analysis of this outcome is focused on specific behaviour and purposeful action. It combines political science and social anthropological study of effective and developmental elements in

the State with the interest in ‘institutional work’, as found in organizational science. The achievement of both the scaling and institutionalisation objectives of the PPP is explained by the skilful practice by the PPP management. These actors showed a long-standing professional association with the sector and managed to align and had the capacity to embed a new type of service delivery in persistent ‘pockets of bureaucratic effectiveness’ within a failed State.

Chapter five demonstrates how the layered structure of the Nigerian Federal System and its 14 cocoa-producing States enabled and/or constrained the FFS scaling outcomes in each of these States. The specific case study, however, seeks to interpret the emergence of effective public FFS service delivery in Cross River State. Soon after the pilot program in Ondo State, the PPP achieved federal support for FFS and full engagement from Nigeria’s federal cocoa institutions. However, after each of Nigeria’s individual cocoa producing States entered into a federally co-funded agreement with the PPP, it did not achieve comparable outcomes of scaling and institutionalisation. Due to the complexity of federalism it was necessary to use a more political analysis in this chapter and look at the Federal and State-level regimes for cocoa extension. The case of Cross River State specifically demonstrates the importance of development intent at the individual State political levels, and the extent to which a clear mandate of bureaucratic agents can allow for pockets of effective public service delivery to emerge even in unlikely circumstances, and, in this case, also social contracts for community co-funded extension delivery.



# 2

## Scalability of knowledge-intensive development pathways: an assessment framework for public-private partnerships in global commodity chains



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**Abstract**

A major policy concern is to achieve scale with publicly funded intervention strategies. This paper offers a systematic way to assess scalability as an emergent outcome of the co-evolution of knowledge-intensive intervention strategies and the responsiveness of public policy. It provides a framework based on niche–regime interactions central to studies of sustainability transitions. This framework endeavours to explain significant differences in numbers of farmers reached by public–private partnership aiming for enhanced sustainability in cocoa production in four West African countries. Comparative analysis demonstrates that scale results from context-specific interactions between the architecture of public service delivery and the niche in which the partnership implemented the Farmer Field School approach. Multi-level alignments between policy regime and niche condition the scalability of knowledge-intensive development pathways targeting large numbers of smallholder cocoa farmers. These alignments shape the transformative capacities of national states responding to sustainability challenges in global commodity chains.

## 2.1 Introduction

In the context of privatization and deregulation of service delivery and training, the outreach and scale of knowledge-intensive intervention strategies aiming for sustainability are not just a result of the specific content and form of service delivery and extension. The scalability of these types of strategies is particularly complicated in the context of global commodity chains linked to large numbers of small suppliers of raw materials, such as cocoa or coffee. Moreover, sharing knowledge and arranging service delivery to small-scale farmers located in vast and remote areas has become a shared responsibility of the public and the private sector. Public and private actors, often in partnership, have explored processes focusing on participatory and discovery learning that are attentive to more localized, reflexive knowledge production built on group-based learning-by-doing (Gibbons et al. 1994; Gibbons and Nowotny 2001; Nowotny et al. 2003). Although considered to be an intervention with a potentially strong sustainability impact (Van den Berg and Jiggins 2007), this approach remains resource and knowledge intensive and therefore complicated to scale (David 2007). Consequently, niche initiatives embracing new forms of learning do not automatically reach large numbers, even if bounded projects demonstrate their effectiveness.

Partly as a response to the scalability issue, public–private partnerships have adopted a variety of organizational designs for delivering service and training in commodity sectors (IDH 2016a, 2016b) while targeting the hundreds of thousands of smallholder farmers in West Africa that supply the international commodity markets (Buadi et al. 2013; Poulton et al. 2010). Reaching large numbers of smallholder cocoa farmers over vast geographical areas (Dormon et al. 2007) relies strongly on the institutional mechanisms underlying service delivery (Coe et al. 2014). Hence, this paper aims to contextualize the scalability of knowledge-intensive development pathways by looking at the institutional dimensions of interactions between companies, service providers, state agencies, and end-users.

The paper explores the potential of a systematic multi-level framework for making a contextualized assessment of the scalability of knowledge-intensive development pathways, signified by the number of beneficiaries reached. In vulnerable commodity sectors, newly emerging modes of service delivery and co-learning underlie such pathways. The framework focuses on understanding the mechanisms accelerating or obstructing the scaling of the shift from one-size-fits-all, supply-driven, and technology-oriented approaches to plural and demand-driven processes of co-learning by farmer groups and different chain and non-chain actors. The framework combines literature on demand-driven extension approaches anchored in innovation systems (e.g. Klerkx

et al. 2012; Wieczorek and Hekkert 2012) with literature on sustainability transitions (Geels 2004; Geels and Schot 2007; Geels 2010, 2011; Geels et al. 2016; Smith et al. 2005; Smith et al. 2010). However, its core interest does not lie in the contents of the knowledge-intensive strategy. The analysis shifts attention to how interactions and coordination between actors acting at different levels (Genus and Coles 2008; Smith et al. 2005) influence the conditions for scaling a transformational mode of service delivery and extension and thus for making a difference on the ground (Schut et al. 2015). An explicit interest in agency is therefore added to the idea of scale (Iskandarova 2016), with a particular focus on the multiple and conflicting roles that states play in industry or sector policy supportive of sustainability transitions (Johnstone and Newell 2018).

Empirically, we present a qualitative and comparative analysis of scaling pathways of a novel (at the time) agricultural training approach for co-learning in four West African cocoa producing countries (Côte d'Ivoire, Ghana, Nigeria, and Cameroon): farmer field schools (FFSs), initiated by the Sustainable Tree Crop Programme (STCP). We build on previous work documenting the scaling of the novel extension approach in the cocoa sector in Côte d'Ivoire (Muilerman and Vellema 2016), which demonstrates how scaling depends largely on practices and negotiations aligning the intervention niche with the institutional logics and routines found in the state institutions underlying public service delivery (cf. Smink et al. 2015). Of specific interest for the comparative analysis is the interaction between private and public actors; their entanglement importantly determines what enables or constrains the scaling of a new mode of service delivery in a strategic commodity sector, in this case cocoa in West Africa (Vellema et al. 2016). The comparative analysis looks at scalability by assessing the embedding of the transformative capacity of participatory and context-sensitive development interventions in strategies of both private and public actors in the cocoa sector. This connects to the interest in contingent practices of translating knowledge and installing institutional arrangements between knowledge institutes, policy, and commodity markets (Meyer and Kearnes 2013). Consequently, the paper answers the question of whether and how the scaling of a transformational mode of extension and service delivery targeting large numbers of smallholder farmers is a consequence of the interactions of the niche-based and knowledge-intensive development pathway with the more rigid regime of public service delivery in country-specific commodity systems.

The paper first describes the multi-level framework for a contextualized assessment of the scalability of a novel co-learning approach: cocoa FFSs. We apply this scalability assessment framework to analyse and compare the transformation towards a novel system of extension and service delivery based on field studies in four countries central



to the West African cocoa sector: Cameroon (Muilerman et al. 2018b), Côte d'Ivoire (Muilerman and Vellema 2016), Ghana (Laven 2010; Vellema et al. 2016), and Nigeria (Muilerman et al. 2018a). Section 2.3 contextualizes the research in STCP and explains the research methods used. Then, the paper presents the situational analyses (section 2.4) and assesses the transformational processes (section 2.5) and scaling pathways emerging from regime–niche co-evolution (section 2.6). The comparative analysis informs a discussion (section 2.7) on why a similar transformational direction of a service delivery and extension programme results in divergent scaling pathways.

## 2.2 A multi-level and multi-actor framework for assessing scalability

The scalability assessment framework builds on the multi-level perspective (MLP) developed by Geels and Schot (2007). MLP frameworks distinguish between niche and regime as different levels of structuration (Fuenfschilling and Truffer 2014) and are mainly used for the reconstruction of large-scale historical processes of socio-technical transition (Markard et al. 2012). This paper adapts this perspective to provide a systematic and stepwise approach to a contextual and comparative analysis of divergent scaling pathways in different national settings. The paper assesses whether a niche intervention is able to trigger processes that transform regimes, which are conceptualized (Berkhout et al. 2004) as patterns of artefacts, institutions, rules, and norms assembled and maintained to perform activities of service delivery rooted in a strategic commodity sector. More specifically, the paper assesses the potential of the FFS approach to extension to achieve scale and reconfigure public and private relations in service delivery and knowledge exchange.

To assess the scalability and transformative potential of a new mode of service delivery, the framework concentrates on interactions between a niche, i.e. novel practices initiated and tested in the relatively safe boundaries of projects, and a regime, i.e. the more rigid practices and rules in service delivery regimes characterized by path dependence and lock-in (Verbong and Geels 2007). However, by making scalability contingent on context, the paper explicitly acknowledges the role of the state in taking collective decisions and mobilizing resources for societal ends (Johnstone and Newell 2018; Meadowcroft 2005), thereby shifting attention to the articulation of new ways of working in extension and service delivery to the management routines of public agencies.

The framework is composed of three stages and seven steps (see Appendix A). The three stages of analysis are: (A) situational analysis of scaling case studies, (B) assessment of transformational pathways, and (C) a description of regime co-creation and co-evolution.



### **2.2.1 Stage A: Situational analysis**

In the first stage (A), the framework demarcates the regime and niche levels (Step 1). It is recognized that how the new mode of service delivery evolves depends largely on the interactions with the specific characteristics of the rigid regime and the global landscape. Furthermore, it is assumed that the niche innovation, the FFS approach, also aims to transform agricultural extension and service delivery regimes. Case studies of the niche–regime interactions form a substantial part of the assessment framework and set the stage for identifying situated actions and actor strategies that determine whether the transformative potential is realized under specific conditions, or not (Step 2). This implicates a transformational process of rule changes. However, such a process is not self-evident, and whether it occurs depends strongly on the depth of the interactions with the contextual features of regime and landscape. Consequently, the scalability of a new mode of service delivery is an emergent outcome, which specific contextual elements enable or constrain.

### **2.2.2 Stage B: Assessment of transformational processes**

In the second stage (B), the framework applies three elements from the MLP literature as predictors of the likelihood of the niche intervention having a transformational effect. These are: (i) landscape–regime shock, (ii) the timing of multi-level relations, and (iii) the nature of multi-level relations. Each of these individually can be characterized as ‘favourable’ or ‘unfavourable’ for a transformation process. Different types of shocks at the predominantly stable landscape level may pressure the regime to change and therefore influence the conditions favourable or unfavourable to the niche (Step 3). Steps 4 and 5 aim to prevent a bottom-up niche bias (e.g. Smith et al. 2005) by assessing variations in the ‘timing’ and the ‘nature’ of multi-level interactions (Geels and Schot 2007: 405; see also Geels 2011). Timing expresses the variation in status and evolution of landscape–regime relations and niche–regime relations, which condition the development, closure, and diffusion of niche innovations and the likelihood of innovations taking advantage of a window-of-opportunity if they are sufficiently developed (Step 4). The nature of the interactions between the three different levels influences the conditions that are either favourable or unfavourable for the niche innovation to mature and scale (Step 5). A disruptive landscape may open opportunities in the regime, whereas a reinforcing landscape stabilizes the dominant regime and prevents transformation. Likewise, a symbiotic interaction between regime and niche can translate into co-learning and catalyse an ongoing transformation process. However, when the niche level seeks to replace the regime through a competitive relation, this may obstruct a transformation of the regime.

### **2.2.3 Stage C: Description of regime co-creation and co-evolution**

In the final stage (C), the framework examines whether actors at niche and regime level seek alignment in order to push in favour of the transformative agenda (Step 6) and typologizes the emerging scaling pathways (Step 7). Geels and Schot (2007) emphasize that socio-technological transitions are not planned and coordinated from the start. Yet, every transition, large or small, entails a coordinated transformation process at some point through the alignment of visions and activities of different groups. This alignment is an achievement that we consider to be an emerging outcome, unravelled in this paper by analysing the interaction between localized private and programme-led extension programmes and the public service delivery regime rooted in government. Our interest in alignment also entails investigating whether key underlying principles of the FFS approach have been adapted or lost, or possibly whether the intervention has even regressed back into a conventional mode of extension (Schut et al. 2015; e.g. Sherwood et al. 2012). Scaling is contingent on how the interaction and alignment between the niche and the service delivery regime unfolds within a specific country context. The framework makes it possible to interpret the observed (or non-observed) scaling of FFS in terms of farmers reached, and the associated transformation of the dominant service delivery regime, as emergent outcomes of multi-level interactions (Berg et al. 2012). The framework concludes by typologizing the scaling pathway (Step 7), although Geels and Schot (2007); Smith et al. (2005) stress that there are no blueprints for these processes, which remain to some extent fluid and non-linear. Enactment and contestation between a variety of actors may lead to shifts between pathways as a transformation unfolds (Geels et al. 2016).

## **2.3 Background and research methods**

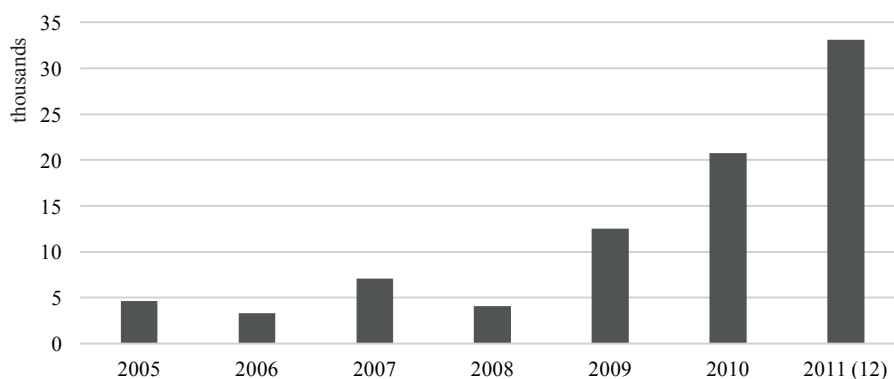
### **2.3.1 The Sustainable Tree Crop Programme in the West African cocoa sector**

Cocoa farming and trading became prime economic activities in West Africa over the last century. In fact, four countries, Côte d'Ivoire, Ghana, Nigeria, and Cameroon, account for approximately 68% of global cocoa production (WCF 2014). With rising consumer and political pressure to make cocoa more socially and environmentally sustainable (Ruf et al. 2015), the cocoa sector faced a number of important risks around the new millennium (Berlan 2004). For instance, cocoa was highlighted as one of the main drivers of deforestation, natural resource exhaustion, and biodiversity loss in the Upper Guinean Rainforest, of which today less than 15% remains (CEPF 2005, 2015). In addition, concerns about labour rights, child labour, and slavery led to public outcry (Abenyega and Gockowski 2003; CMA 2001; Mull and Kirkhorn 2005).

In the West African cocoa sector, a combination of public and private responses to such sustainability challenges resulted in intervention strategies with a strong focus on the smallholder farmer level and reliance on a particular set of instruments: certification, training, extension, and professional service delivery. Increased public–private commitment and investments aimed to ensure a steady supply of quality cocoa beans and higher revenues for cocoa producing countries, but also to bridge the immense yield gaps that smallholders experienced due to a myriad of biophysical, socio-economic challenges and other production constraints (Aneani and Ofori-Frimpong 2013). The sector’s interest in sustainable intensification stimulated working with novel agricultural extension models aimed at addressing the inadequate access to information, technology, and inputs observed under national extension programmes, generally operating under state-run cocoa marketing boards (IITA 2003; IITA/KNUST 2003; IITA/ODECO 2003; Kouadjo et al. 2002).

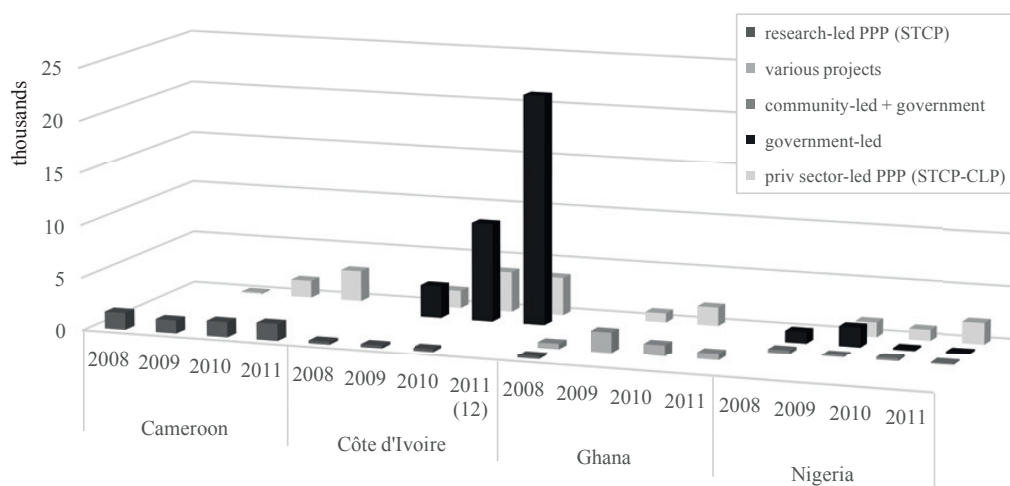
STCP, a research-led public–private partnership, contributed to the evolution in the West African cocoa sector of co-learning approaches by designing and implementing a programme on cocoa extension training (Velarde and Tomich 2006). STCP’s mandate was to address the methodological weaknesses in cocoa extension in West Africa, for which the programme relied primarily on the introduction of FFSs. This approach was originally designed by the FAO in the late 1980s for the promotion of integrated pest management in Asia (Simpson and Owens 2002). After its first use in Indonesia cocoa farming, it was piloted in Ghana in the 1990s (Asare 2005). Between 2001 and 2012, the programme introduced the FFS approach simultaneously in Cameroon, Côte d’Ivoire, Ghana, and Nigeria. The curriculum (STCP 2004) remained close to the conventional FAO FFS (Asare and David 2011). Between 2003 and 2005, STCP adapted, tested, and validated FFS for training smallholder cocoa farmers, with promising results (Gockowski et al. 2010). In 2011, the World Cocoa Foundation (WCF), channelling private sector funding, commissioned an external review of the achievements of ten years of STCP. The report called FFS ‘a hit and a “flagship” in the cocoa sector’ (Garden 2011: 7). According to the report, stakeholders agreed that STCP had adopted the right focus on Good Agricultural Practices and Integrated Crop and Pest Management. Initially, scaling was not an integral part of STCP’s programme design. In each country, the initial niche created an optimal configuration for a pilot, without a deliberate focus on scaling.

At the end of the initial pilot in 2004 however, STCP management made a presentation to its Executive Committee that clearly showed its intent to focus on scaling (STCP 2004) and consequently actively influence and transform the nature and direction of national agricultural extension provision for smallholder cocoa farmers. During the 5-year phase



**Figure 2.1** - Number of Sustainable Tree Crop Programme farmer field school graduates in West Africa (2005–2011/12)

Source: STCP annual reports (due to the crisis, Côte d'Ivoire 2011 training data include a part of 2012).



**Figure 2.2** - Number of Sustainable Tree Crop Programme farmer field school graduates in final four years of scaling (2008–2011/12), per country and per intervention type.

Source: STCP annual reports

between 2005 and 2011, the programme reported a steady increase in the number of training graduates for the West African region (Figure 2.1). However, the scale achieved in the final four years of the programme, expressed in numbers of farmers trained via FFS in the West African region, hides a diverging picture for each of the individual countries in which STCP operated (Figure 2.2). Only in Côte d'Ivoire, under strong

government impetus, did FFS scale massively. In the other three countries, the new private sector-initiated Cocoa Livelihood Programme did help to raise training numbers substantially towards the end, but the diffusion of FFS into national institutions lagged behind and, as a consequence, the reach was also limited. The WCF report (Garden 2011) also highlights this ambiguity in the perspective of scaling and directs attention to the institutional dimensions. The report indicates that public sector partners had in fact expected to be involved earlier in training and in knowledge sharing. Likewise, industry partners had expected that the promised institutionalization into national bodies would have materialized sooner. Thus, to assess the scalability of FFS as a knowledge-intensive development pathway, it is important to acknowledge that STCP's promotion of this novel mode of service delivery and extension challenged the established, mainly public, programmes to reform internal rules and practices. Therefore, the framework applied in this paper emphasizes the interaction between established rules and practices and novel ways of co-learning as an essential condition for scaling.

### **2.3.2. Methods**

This paper offers a systematic way to assess scalability as an emergent outcome of the co-evolution of knowledge-intensive intervention strategies and the responsiveness of public policy. The assessment framework is based on the conceptualization of longer-term purposive sustainability transformations in socio-technical systems (Geels 2011). This methodological perspective emphasizes the use of contextualized data on agency and specific practices of negotiation, interaction, co-creation, and scaling. The multi-level perspective has been adapted and combined elsewhere to fit a specific study context or a specific commodity or to look at a specific subsection of agricultural innovation systems (e.g. Hermans et al. 2013). We performed a retrospective analysis, but other researchers may use or adapt this methodology for the live assessment of the malleability of institutional architectures of public service delivery.

For this paper, we build on a reconstituted STCP archive, associated secondary data, and other documentary evidence from the four countries collected during a retrospective process-tracing exercise during the final year of the public-private partnership programme (2010/2011). Original data collection included sixty-four semi-structured interviews and group interviews, using a structured interview guide, with ninety-six purposefully selected respondents or cooperative groups in Cameroon, Côte d'Ivoire, Ghana, and Nigeria (Table 1). These represent all the key partners linked to STCP.

The purposive selection was made in partnership with the STCP country management teams. In Nigeria, interviews were held in five different states, resulting in much higher numbers of (state level) government extension staff. In addition, several discussions

**Table 2.1 - Data collection methods**

Country	Key objective	Sampling	Method of data collection	Sampled respondents and stakeholder groups			
				Farmer field school cooperatives/ farmers/ facilitators	Govern-ment/ extension staff	NGO staff / consul-tants	PPP <sup>a</sup> staff
Cameroon	Retrospective tracing of process of scaling and institutionalization of the farmer field school approach in the dominant socio-technical regime of public service delivery	Purposive sampling	Semi-structured interviews (individual and group) using an interview guide and follow-up interviews	4 group interviews	3	3	6
Côte d'Ivoire				1 group interview	7	2	3
Ghana				3 coop executives	5	4	5
Nigeria				2 coop executives, 4 group interviews	22	1	2

<sup>a</sup> PPP = public–private partnership

were organized with the few remaining regional STCP staff who had the required institutional memory, specifically the senior economist and the participatory extension specialist. The latter was also involved in the design of the study and in conducting interviews in Ghana. The research is confined to the duration of the STCP public–private partnership, which ran from 2001 to 2011/2012. All interviews were transcribed and analysed through an iterative process of coding and re-coding. The comparative analysis, based on extensive country-level case studies, uses the scalability assessment framework presented in this paper.

## 2.4 Situational analysis (Stage A)

### 2.4.1 Step 1: Demarcation of levels of analysis

The first step of the situational analysis demarcates the level of analysis using the MLP levels. In the STCP context, each country team was confronted with a distinct institutional context and multi-level situation, determining the available regime and niche level actors and aiding or hampering a transformation. In addition to the global context of cocoa landscape pressures as sketched previously, each country experienced specific in-country landscape pressures. Adding to this brief characterization of the landscape pressures, Table 2.2 identifies the actors at regime and niche levels in each country.

In Cameroon, during the 1980s and 1990s, liberalization and structural adjustment programmes (SAPs) increasingly reduced state and parastatal services. Until 2002, the Ministry of Agriculture and Rural Development (MINADER) had been running World Bank-promoted training and visit (T&V) programmes, until ran out of funding. President Biya's long-reigning regime was reluctant to adopt reforms in any economic sector (Pigeaud 2011), leading to a socio-political impasse and a diversified agricultural economy.

In Côte d'Ivoire, extension services have been going through continuous reforms, keeping national agricultural and cocoa institutions in a state of flux. By 1998, under World Bank-initiated reforms, the Ivorian bureaucracy defined how extension was to

**Table 2.2 - Demarcation of the regime and niche levels in Cameroon, Côte d'Ivoire, Ghana, and Nigeria (2001–2011)**

	<b>Actors in public service delivery regime</b>	<b>Actors in niche</b>
Cameroon	<ul style="list-style-type: none"> <li>- MINADER's National Agricultural Extension and Research Programme (PNVRA)</li> <li>- Société de Développement de Cacao (SODECAO), Institute of Agricultural Research for Development (IRAD)</li> <li>- Immature coffee and cocoa development fund (FODECC)</li> </ul>	First farmer-based groups, then cooperatives
Côte d'Ivoire	<ul style="list-style-type: none"> <li>- Agence Nationale d'Appui au Développement Rural (ANADER)</li> <li>- Centre National de Recherche Agronomique (CNRA)</li> </ul> <p>Established between 2001 and 2008</p> <ul style="list-style-type: none"> <li>- Comité de Gestion de la Filière Café-Cacao (CGFCC)</li> <li>- Conseil National de Sages de la Filière Café-Cacao (CNS)</li> <li>- Innovative national funding mechanism, the Fond Interprofessionnel pour la Recherche et le Conseil Agricole (FIRCA)</li> </ul>	Cooperatives and cocoa communities
Ghana	<ul style="list-style-type: none"> <li>- Ghana Cocoa Board (COCOBOD)</li> </ul> <p>In 2000</p> <ul style="list-style-type: none"> <li>- Unified extension system under the Ministry of Food and Agriculture (MOFA)</li> </ul> <p>In 2010</p> <ul style="list-style-type: none"> <li>- Mandate for cocoa extension services returned to COCOBOD and Cocoa Research Institute of Ghana (CRIG)</li> </ul>	Cocoa communities
Nigeria	<p>1999–2007</p> <ul style="list-style-type: none"> <li>- National Cocoa Development Committee (NCDC) at federal level with public and private representation from all cocoa producing states</li> </ul> <p>Since 2007</p> <ul style="list-style-type: none"> <li>- Agricultural Development Programmes (ADP) and Tree Crop Units (TCU) with support from Cocoa Research Institute of Nigeria operate at state level</li> </ul>	Both farmer-based organizations and cocoa communities



be semi-privatized. It is important to underline the pivotal role of cocoa in the national economy. The sector was too big to fail, especially amid socio-political crisis and violent conflict. International operators first largely pulled out, before increasingly replacing national exporters again. Additionally, the sector was rocked by strong allegations of child slavery.

Cocoa is a key commodity in Ghana, and, since decolonization, the Ghana government has continued to control the sector, even during its SAP. Ghana upheld its pan-territorial fixed price policy but allowed internal market liberalization from 1992 (Vellema et al. 2016). Cocoa has recently decreased somewhat in importance because of oil discoveries. Ghana is further characterized by a highly regulated system of licenced buying companies and a general situation of peace and stability.

Predominantly, oil production fuelled Nigeria's jolting economy, not agriculture. Also, because of Nigeria's federal structure, states have a particularly high degree of subnational autonomy, certainly with regard to fund allocation (Litwack 2013). Agricultural extension for cocoa is organized not only at federal level, but, since the 1990s, primarily at the level of fourteen individual states (see also Adeoti and Olubamiwa (2009)). Politicians at state level, however, display varying degrees of buy-in to federal initiatives. Nigeria was the first country to deregulate the cocoa economy under SAP, with largely disappointing outcomes, leading to the decline of farmer support and cooperatives (Adjao 2011).

## **2.4.2 Step 2: Country case studies**

This section presents the four qualitative country case studies (Step 2). Each case study first characterizes the pilot, focusing on key events exposing niche–regime interactions, and subsequently highlights actor roles, local enactment, and agency, indicating emerging scaling pathways. STCP started piloting FFS in Cameroon, the initial seat of its regional management, based at CGIAR's International Institute of Tropical Agriculture (IITA). Soon after, STCP FFS pilots started in Côte d'Ivoire, Ghana, and finally Nigeria.

### *2.4.2.1 Cameroon*

The initial entry point in 2001 was a loose network (FORCE) of 300 farmer-based organizations, representing 20,000 cocoa producers (Sonwa et al. 2002). In 2003, the programme hired a rural development professional as country manager to support the pilot. During the FFS pilot, FORCE, farmer facilitators, and resource persons from the national agricultural research institute were paid, and FFS master trainers were hired externally. A few low-level government extension agents, already connected to farmer groups, became facilitators/supervisors on a consultancy basis.



According to the interview data, IITA unilaterally decided to break with FORCE, but, with the objective of preventing collapse after the pilot, IITA/STCP rather decided to focus on a dozen cocoa cooperatives. Most had emerged from FORCE farmer groups with STCP assistance. A swiftly obtained United States Department of Agriculture grant led to an instant continuation of FFS rollout, although this was locked within a relatively rigid project framework that practically reduced the cooperatives to beneficiaries. This however presented a good fit with NGO partner SOCODEVI and its objective to build up cooperatives. FFS was presented as the service that cooperatives should provide sustainably to paying members. The terms scaling or institutionalization were not used in the discourse. In interviews, managers confirmed that they believed more in the sustainability of cooperatives than in investing in the scaling path through MINADER's national agricultural and extension programme [Yaoundé, 25/03/2010]. However, a general agreement allowed STCP to make agreements with individual agents at the decentralized level. From 2007 onwards, part-time MINADER staff were hired as master trainers to replace the original staff. These contractual arrangements were resource intensive, and the interviews indicated that performance was hampered by MINADER superiors' competing objectives.

From the case study data, it appears that, although FFS was highly appreciated, by 2010 cooperatives suffered from a high turnover of facilitators who were no longer paid by the project and had to deal with heavy monitoring demands, and FFS continued to be financially unsustainable. Five cooperatives dropped out, and three new ones joined. Moreover, cooperatives complained that they had to train extensively beyond their member base, under pressure from STCP to attain donor expectations. A cooperative member stated: 'They [the farmers] still are very reluctant to be part of the coop' [Ikiliwindi, 07/07/2010]. Demonstrating the difference in understanding of the scaling objective, the country manager remarked: '... it is regrettable that the success of scaling-up FFS methodology seems to be measured by the number of FFSs implemented and not the number of partner organizations implementing it' [Yaoundé, 01/04/2010]. Although STCP management claimed that the intention was to integrate FFS into curricula of MINADER and agricultural colleges, interviews did not substantiate this. MINADER's national agricultural and extension programme was mainly interested in the quality curriculum, but several officials were clear that FFS was too resource intensive for MINADER. A sub-director stated: 'The vision of coops is very tiny. If you reach [a dozen] cooperatives in a country with about 1.8 million agricultural households, you have done nothing. You have done nothing' [Yaoundé, 30/03/2010]. During an internal meeting, key regional STCP staff acknowledged that, although the training numbers achieved were not entirely disappointing, Cameroon's scaling strategy was in fact a misconception.

#### 2.4.2.2 Côte d'Ivoire

In Côte d'Ivoire, the STCP country manager previously held a high-level policy analysis position. This contributed to a strong understanding of the ongoing and future reform process in the institutional landscape for cocoa. The Agence Nationale d'Appui au Développement Rural (ANADER) was somewhat familiar with FFS on food crops but not on a perennial crop, and was disappointed with the T&V approach. ANADER and the national agricultural research centre, Centre National de Recherche Agronomique, readily made staff available to STCP. These conducive dynamics are discussed in more detail in Muilerman and Vellema (2016). Foreseeing the direction of change, several key ANADER staff became integrated into the management team early on. The country team resisted initial donor pressure to work with NGOs and started a small, tightly quality-controlled independent FFS pilot project within several cooperatives supported by a national roundtable of stakeholders. During the pilot, and in close collaboration with key ANADER staff seconded to STCP, the capacity of an increasing number of ANADER's technical cocoa specialists was built to run FFSs. By cultivating close linkages with the cocoa bureaucracy, the STCP team managed to scale and institutionalize the FFS methodology rapidly into the mainstream regime, once the national fund became established. A Fond Interprofessionnel pour la Recherche et le Conseil Agricole (FIRCA) member stated: 'I think they spotted this very well. The timing was good' [Abidjan, 08/06/2010]. During the scaling phase, specialized agents returned to ANADER and further built its capacity to run cocoa FFSs independently. Although ANADER integrated nearly all underlying FFS principles, high-level disagreement surfaced on the use of farmer facilitators, whom ANADER agents viewed as competition. The county manager stated: 'It is institutional ego. I do not care about that. I am here to push things forward' [Abidjan, 07/06/2010].

In 2008, the Comité de Gestion de la Filière Café-Cacao had started a national 10-year programme implemented by ANADER funding via FIRCA (Stads and Doumbia 2010), which integrated most of the STCP objectives. By then, the cocoa industry had independently launched another scaling effort featuring cocoa FFS, at a comparatively low cost (Muilerman and David 2011) and initially also managed by STCP. By 2010, ANADER remained positive about STCP but preferred to deal with donors and the private sector directly, now that they had the capacity to run FFSs themselves. ANADER expressed some discontent over STCP's continued control over field activities and seconded agents and STCP's visibility at the expense of ANADER. FIRCA sees proof of STCP's successful scaling strategy in the fact that national FIRCA funding allowed STCP to train 160 of ANADER FFS facilitators and to ensure some follow-up and quality control for ANADER's own programme. In 2010–11, government-run FFSs scaled explosively, with STCP only backstopping on quality issues before becoming defunct.

### 2.4.2.3 *Ghana*

In Ghana, a national steering committee, including the Ghanaian government agencies, guided STCP. A pilot was organized in two districts between 2003 and 2005. Cocoa FFS had previously been tested by Conservation International (Asare 2005). The STCP management and donors identified the same cocoa cooperative Kuapa Kokoo (KKL) as their pilot partner. The Ghanaian country manager was a seasoned development planner with strong experience working with decentralized government and the private sector. Therefore, through the decentralized services of the Ministry of Food and Agriculture (MOFA), nine district extension agents supervised and conducted FFS together with farmer facilitators. During the interim year (2005–6), plans were made for scaling up FFS. Contrary to its expectation, KKL was not invited again. Scaling rather started opportunistically. The International Cocoa Initiative (ICI) requested STCP to work with three NGOs, however without assessing their capacity to scale up. In this WCF-funded programme, communities were expected to organize into associations and apply for service providers to host an FFS. Participants would compensate farmer facilitators, and service providers would apply for funds from a community cocoa extension fund. This scaling up model was presented to national partners without prior consultation. Partners provided little input into modifying the model, presumably because donor funding was already secured.

In 2008, the European Union awarded funds to STCP to further implement the scaling up of FFS in Ghana through a broad cocoa sector stakeholder partnership. This significantly shaped the programme's direction. STCP still claimed to develop the capacity of partner organizations but in practice was uniquely leading scaling up through three fully donor-supported projects (European Union, MARS Inc., and WCF), also benefiting from private sector interest in cocoa certification training. The country manager stated: 'Our understanding of institutionalization was to build capacity to run training-of-trainers and did not include other aspects such as having logistics and resources to run FFS' [Accra, 04/08/2010], thereby pointing to a lack of common understanding between national and regional STCP staff of strategic requirements for effective scaling and institutionalization. Donors measured success in terms of numbers of farmers trained using available funds. According to the interviews, this functioned as a disincentive for local partners to establish their own FFS programmes.

STCP envisaged MOFA as the leader, but Ghana management decided not to approach national headquarters. Operating in familiar territory, it aimed directly for the decentralized District Agricultural Development Units (DADUs), assuming that national institutional capacity would evolve organically. Research data suggest that this strategy was based on a flawed appreciation of the relationships and funding realities

between the headquarters and the DADUs. In addition, it appears that, for fear of being too closely associated with specific donors, MOFA (and the Ghana cocoa board: COCOBOD) was averse to institutionalizing ‘brand name’ methodologies outside a niche context. In 2010, cocoa extension services suddenly returned to COCOBOD. It remains unclear why this was not foreseen. WCF soon transferred training activities to COCOBOD and effectively side-lined STCP.

#### *2.4.2.4 Nigeria*

From 2003 to 2005, STCP ran an FFS pilot in Nigeria’s Ondo State, targeting both communities and cooperatives. The pilot led to excitement among public and private partners. However, interview data show that there was an internal debate on whether or not government had to be central to scaling. Because it had less donor funding available, STCP Nigeria focused more on building capacity and less on running FFSs during the subsequent scaling phase. Visibility generated at national events resulted in a first scaling opportunity with a USAID project in Cross River State where, in addition to twenty-two project-funded FFSs, sixteen communities decided to self-fund. This initiative caught the interest of the National Cocoa Development Committee’s (NCDC) training committee during a field visit and a National Cocoa Day in 2005. Consequently, STCP was invited to present and submit a proposal to NCDC. The proposal was met, however, with resistance from the federal Cocoa Research Institute of Nigeria (CRIN), which felt that STCP was encroaching on its mandate. Reportedly, the Federal Minister replied: ‘Make your case! Do not kill the other person’s case’ [Akure, 24/04/2010] and then put pressure on CRIN to collaborate. In 2006, NCDC adopted FFS as its principal cocoa extension approach. STCP signed a memorandum of understanding with the Federal Government of Nigeria and the fourteen cocoa states for cocoa FFS capacity building and backstopping, through NCDC.

The idea was that STCP would exit after two years and the states would take over. However, NCDC could not force state politicians to invest in FFSs with promised counterpart funding. Only a few states invested straightaway. From the interview data, it appears that NCDC offered states the remarkable option to circumvent the Ministry of Agriculture and send state funding to IITA/STCP, a more direct and transparent route. NCDC deliberately no longer distributed subsidized cocoa fertilizers through farmers’ political representatives in Abuja, but straight and exclusively to FFS participants. It is here that STCP Nigeria’s weakest link became apparent. Management was not able – or equipped – to successfully engage and lobby with every state’s political processes, and the agricultural development programme’s tree crop units’ operations were completely dependent on state funding. By 2010, all fourteen states’ tree crop units had the capacity to run FFSs, but under presidents Yar’Adua and Goodluck Jonathan the political climate changed (Bergstresser 2008).

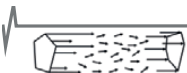



Cocoa extension policy in Nigeria has been characterized by instability and inconsistencies due to a narrow-based policy formulation process and poor institutional frameworks (IITA 2003; Okafor 2006). However, through federal support, FFS became part of the public service delivery at state level, but implementation and funding remained blocked by a lack of political and developmental intent. Nevertheless, Nigeria stood out as a country where farmers and extension officers truly worked together on an equal footing within FFS. In at least two states, extension agents and cocoa farming communities concluded novel social contracts for self-funded cocoa FFSs.

## 2.5 Assessment of transformational processes (Stage B)

### 2.5.1 Step 3: System shocks on national extension service delivery

Data analysis reveals that each country witnessed one or more systemic shocks that had a profound impact on the direction of national extension service delivery systems (Table 2.3). In Cameroon, national public agencies had already disappeared because of SAPs, leading to institutional paralysis hampering the scaling of FFS. In Côte d'Ivoire, a combination of violent crisis, institutional flux, and a strong influence of multinationals created space for cocoa bureaucrats to spread and institutionalize FFS. In Ghana, competition between the specialized commodity board and MOFA made previous (though inadequate) investments in an uptake through MOFA entirely futile and hindered FFS diffusion. Presidential elections in Nigeria in 2007 resulted in waning support for Abasanjo's 'legacy' of policies to revive the cocoa sector, undermined the revived momentum for the cocoa sector and FFS at federal level, and led to disinvestment at state level.

*Table 2.3 - Systemic shocks experienced in Cameroon, Côte d'Ivoire, Ghana, and Nigeria*

Country	Cameroon	Côte d'Ivoire	Ghana	Nigeria
<b>Graphic representation of MLP regime level and system shock</b>				
<b>National environmental change / external system shock(s)</b>	Prior to introduction of cocoa farmer field schools (FFSs), the specific shock of liberalization eroded presence of national public sector	Avalanche of landscape changes induced rapid FFS institutionalization in public service delivery system	Return of mandate to the Ghana cocoa board to provide cocoa extension generated specific unanticipated system shock	Presidential elections created disruptive shock reversing political interest in revival of cocoa sector

**Table 2.4 - Influence of timing of multi-level interactions on farmer field school (FFS) institutionalization and scaling**

Country	Cameroon	Côte d'Ivoire	Ghana	Nigeria
<b>Timing of landscape pressures</b>	<i>Unfavourable</i> - Absence of learning processes in regime - Low participation of powerful national actors in regional sustainable tree crop programme - No support by regime actors for FFS business model, despite good results on the ground	<i>Favourable</i> - Institutionalization and active learning processes in regime - Powerful actors increasingly co-leading initiative - Sustainable national funding raised for low-cost FFS operation at national scale	<i>Unfavourable</i> - Limited learning within Ministry of Food and Agriculture during pilot; Ghanaian cocoa board unexpectedly needed to drive scaling - Quality of FFS was acknowledged, regime policy obstructed brand-name approach - High (project) FFS training cost was problematic	<i>Mostly favourable</i> - Institutionalization and active learning processes within national body - All powerful federal and state actors represented - Both government levels pledged funding

**Table 2.5 - Influence of the nature of multi-level interactions on farmer field school (FFS) institutionalization and scaling**

Country	Cameroon	Côte d'Ivoire	Ghana	Nigeria
Relation landscape-regime	Reinforcing national environment averse to any change	Disruptive crisis, reform, and private sector influence opened space for novel ways of delivering services	Reinforcing Ghana's tight public control over sector meant more resilience against external pressures	Disruptive shocks at federal level Administrative reform and sector pressure stimulated spread of FFS
Relation niche-regime	Competitive FFS was in competition with traditional extension and micro-projects	Symbiotic public service delivery organizations proactively adopted FFS and reformed extension	Competitive Ghana cocoa board in particular was averse to institutionalizing brand-name approaches	Symbiotic federal authorities adopted FFS All cocoa states followed in varying ways
<b>Influence multi-level interactions</b>	Reinforcing + Competitive = <b>Unfavourable</b>	Disruptive + Symbiotic = <b>Favourable</b>	Reinforcing + Competitive = <b>Unfavourable</b>	Disruptive + Symbiotic = <b>Favourable</b>

### 2.5.2 Step 4: Timing of landscape pressures

Assessment (Table 2.4) shows that particularly in Côte d'Ivoire, and to a lesser extent in Nigeria, the timing of pressures on the public service delivery systems seemed favourable for taking advantage of windows-of-opportunity appearing in the regime that were conducive for scaling the FFS approach and steadily transforming the public service delivery regime.

### 2.5.3 Step 5: Nature of multi-level interactions

The nature of multi-level interactions (Table 2.5) again suggests a more favourable situation in Côte d'Ivoire and Nigeria, thanks to the combination of a reinforcing landscape–regime relation with a competitive niche–regime relation, whereas in Cameroon and Ghana the opposite situation existed.

The combined influences of system shocks and the timing and nature of multi-level interactions suggest that the dynamics in less stable socio-political settings, notably Côte d'Ivoire and Nigeria, created more space for grasping emerging opportunities to adopt and scale niche interventions, potentially transforming the public service delivery regimes.

## 2.6 Description of regime co-creation and co-evolution (Stage C)

### 2.6.1 Step 6: Assessment multi-level alignment

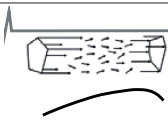
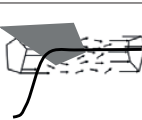
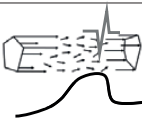
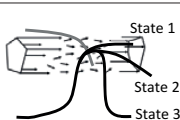
Côte d'Ivoire and Nigeria, particularly certain states, displayed the strongest levels of multi-level alignment, whereas alignment was weak in Ghana and absent in Cameroon (Table 2.6). This seems related to the influence of key actors on actual implementation and flexibility in adjusting or modifying the original mode of extension and service delivery designed by STCP.

*Table 2.6 - Observed level of multi-level alignment per country*

	Size/influence of group of key actors	Flexibility in use of designed approach	Multi-level alignment
Cameroon	Small	No	Absent
Côte d'Ivoire	Large	Moderate	Strong
Ghana	Medium	No	Weak
Nigeria	Large	High	Mostly strong



**Table 2.7** - Assessment of scalability of knowledge-intensive development pathway and typology of outcome patterns

Country	Cameroon	Côte d'Ivoire	Ghana	Nigeria
<b>Conduciveness context</b>	Unfavourable	Favourable, but complex crisis	Reasonable, but challenging competition and shifts in regime	Favourable, but complicated federal governance system
<b>Timing and nature of multi-level interaction</b>	Unfavourable	Favourable	Unfavourable	Mostly favourable
<b>Situated actions and strategies for scaling</b>	Few	Pro-active brokering by PPPa and forward-looking alignment with regime professionals	Project-driven interventions and failure to connect to dominant extension programmes	Purposeful actions by PPPa in alignment with professionals in a federal bureaucratic pocket
<b>Process of multi-level alignment</b>	Absent	Strong	Weak	Mostly strong; varying per state
<b>Scalability of knowledge-intensive development pathway as emergent outcome of niche-regime interactions</b>	<ul style="list-style-type: none"> <li>- Intervention remained niche</li> <li>- No landscape pressures on regime</li> <li>- No commitment to (dedicated) cocoa extension delivery</li> <li>- Farmer field school (FFS) seen as competing with dominant practices</li> </ul>	<ul style="list-style-type: none"> <li>- Transformation of service delivery and large reach</li> <li>- Deliberate scaling strategy negotiated with regime actors and pilot partners</li> <li>- Flexibility in use of FFS approach</li> </ul>	<ul style="list-style-type: none"> <li>- Intervention back to niche after initial transformation</li> <li>- Governance back to regime, constraining FFS scaling</li> <li>- Incremental FFS adoption induced by external funding</li> </ul>	<ul style="list-style-type: none"> <li>- High level of institutionalization at federal level</li> <li>- Diverse responses of states to joint federal-state initiative</li> <li>- Wide range of modifications to FFS approach at state level</li> </ul>
<b>Transformational capacity partnerships</b>	Low	High	Low to moderate	High to moderate, in selected cocoa states
<b>Systemic shock (grey line) and transformation curve (black line)</b>				
<b>Type of outcome pattern</b>	<i>Failed transformation</i>	<i>Technological substitution</i> Tension in regime Breakthrough of symbiotic niche Fit with regime	<i>Partial reconfiguration</i> Niche solved specific problem Some adjustments to the dominant extension regime	Niche accepted at federal level after <i>de-alignment and re-alignment</i> <i>Technological substitution</i> in some states <i>Reconfiguration</i> in others



### 2.6.2 Step 7: Typology scaling pathways

Table 7 summarizes Stages A and B and presents Stage C of the scalability assessment framework. In Stage C, the framework assesses transformative capacity contextually within the national cocoa extension system, depicts stylized transformation curves for the four countries, and typologizes the outcome patterns.

The situation in Cameroon and Ghana exhibited decisively less favourable multi-level interactions, and consequently FFS never left its protected niche environment. In both countries, a low degree of regime involvement was a condition unfavourable for scaling FFS. In Cameroon, the service delivery regime had no landscape pressure, and FFS was not able to outcompete the dominant extension system. In Ghana, FFS as a niche intervention was able to solve some specific funding and governance problems and therefore had some ripple effects in the prevalent service delivery regime controlled by COCOBOD. Partial reconfiguration of the architecture of service delivery emerged.

The situation was remarkably different in Côte d'Ivoire and Nigeria. Both countries had complex and shifting landscape and regime configurations, in less stable socio-political settings. This instability created specific opportunities for the niche innovation to reach scale by evolving interactions with the regime in processes of alignment, co-creation, and co-funding. More intense processes of alignment were possible with specific professionals strongly rooted in public cocoa extension services. In Côte d'Ivoire, FFS as a niche intervention fitted the existing regime and created momentum for technological substitution. In Nigeria, distinct dynamics at federal and state level resulted in a politicized process of de-alignment and re-alignment, which made FFS scaling highly dependent on the fit with politics and policy at state level, despite the strong commitment at federal level to installing a new service delivery regime. In both countries, regime actors interpreted the FFS approach with a moderate degree of flexibility, and the resulting adjustments and modifications enabled FFS to make a difference in the service delivery regime.

## 2.7 Conclusions

This paper developed and applied a systematic framework for assessing the scalability of a niche-based intervention providing a knowledge-intensive alternative to extension and service delivery in the cocoa sector. The framework makes it possible to unravel how interactions between the entrenched regime and the innovative niche affect the scaling of co-learning and the transformation of service delivery systems in a strategic

smallholder commodity sector. Comparative analysis of processes in four West African cocoa-producing countries demonstrates that the niche–regime linkage is decisive for the outcomes of the knowledge-intensive development pathways induced by public–private partnerships aiming for sustainability in commodity sectors. In times of political crisis, Côte d’Ivoire was outstandingly successful in reaching large numbers of farmers with a novel mode of extension and service delivery, largely attributable to the adaptive nature of the niche–regime linkage (cf. Ingram 2015). An open-ended process of reconfiguration steered by internal tensions in the regime and incremental adjustments in the niche created opportunities for scaling in the setting of a federal state system in Nigeria. In Ghana, only partial reconfiguration of the dominant service delivery system took place, with the specialized commodity board regaining control after an initial shift in the regime, and Cameroon turned out to be a failed transformation. Côte d’Ivoire and several Nigerian states exhibited high likelihoods of a transformation process triggered by the niche-based cocoa FFS. In Cameroon and Ghana, external (public and private) donor funding drove the intervention, and the weak niche–regime linkage explains the low scale achieved by STCP.

These insights align our study to the work of Johnstone and Newell (2018) and argue in favour of assessing scalability by widening the analytical lens of the multi-level framework used in transition studies and explicitly including the influence of the state’s role in regime–niche interactions. Hence, explaining differences in scale achieved by public–private partnerships inducing knowledge-intensive development pathways moves beyond whether change comes from the bottom up or the top down (Johnstone and Newell 2018: 9). Appreciating transformative capacities embedded in the state has to go beyond looking at the work of translators and brokers in the protected experimental settings of a niche and situate a potentially transformative process in the entangled reconfiguration of institutional realities in real markets and states (Dubink 2013; Meyer and Kearnes 2013). It is therefore important to complement the emphasis on a bottom-up model encouraging innovation in protected niches with explanations that consider the embeddedness of innovations in the variety of historically specific contexts of local policies and public action (Bui et al. 2016) as a condition for scaling novel modes of learning and exchanging knowledge (Berkhout et al. 2004).

We conclude that the technical quality of a niche innovation, although an important premise, does not drive or explain its diffusion, scaling, or institutionalization in the dominant socio-technical regime. This makes scaling and transformative change dependent on the fit of an induced mode of working and regulation with the prevailing institutional conditions (Schouten et al. 2016). If multi-level alignment and transformative capacity cannot be found in existing institutional fields, or if they cannot convincingly be expected

to materialize soon (e.g. through lobbying, institutional engagement, sector reform, anticipated landscape shocks, and so on), a proven technical solution is unlikely to be scaled through the dominant national agricultural service delivery regime. Our insights emphasize multi-level alignment, rather than an exclusive interest in the novelty per se (Vellema 2011); this can inform strategic thinking in programme design (Wigboldus et al. 2016). In line with Elzen et al. (2012), we propose agricultural development research agendas and scaling initiatives that favour early systematic strategic thinking about anchoring new practices and knowledge-intensive development pathways in processes that shape multi-level alignments and encourage programme managers to influence decision processes ‘beyond the safety of the niche’.

*Appendix 2.A - Scalability assessment framework: three stages and seven steps*

**Stage A - Situational analysis of scaling case studies**

<i>Step</i>	<i>Analysis</i>
1: Demarcate analytical levels within specific country context	<ul style="list-style-type: none"> <li>- Landscape: Sketch common global landscape of non-changing or very slowly changing global pressures and long-term trends in countries with a specific commodity sector (Geels 2011: 37).</li> <li>- Regime: Characterize rigidity of service delivery regimes and identify effects of path dependence and lock-in (Verbong and Geels 2007).</li> <li>- Niche: Identify dynamic processes of co-evolution, mutual adaptations, and feedback between innovative niche practices implemented in developing diverse user environments (e.g. Kemp et al. 1998)</li> </ul>
2: Analyse country-case specific niche-regime interactions on scaling	Conduct case studies to analyse local enactment (Geels et al., 2016) and agency in intervention programmes and public institutions, and map and trace scaling pathways emerging from the interaction between the niche and the service delivery regime.

**Stage B - Assessment of transformation processes per country case**

Step	Analysis																														
3: Assess potential impact of landscape-regime shocks	<p>Differentiate between five types of system shocks (Geels and Schot 2007) based on four dimensions that determine such shocks (Suarez and Oliva 2005): (i) frequency, the number of environmental disturbances; (ii) amplitude, the magnitude of deviation from the initial conditions; (iii) speed, the rate of change; and (iv) scope, the number of environmental dimensions that are affected simultaneously (Table 2.3).</p> <p><b>Typology of system shocks</b> Based on (Suarez and Oliva 2005) and (Geels and Schot 2007)</p> <table><tr><th>Shock type</th><th>Frequency</th><th>Amplitude</th><th>Speed</th><th>Scope</th></tr><tr><td>1. Regular</td><td>Low</td><td>Low</td><td>Low</td><td>Low</td></tr><tr><td>2. Hyperturbulence</td><td>High</td><td>Low</td><td>High</td><td>Low</td></tr><tr><td>3. Specific</td><td>Low</td><td>High</td><td>High</td><td>Low</td></tr><tr><td>4. Disruptive</td><td>Low</td><td>High</td><td>Low</td><td>Low</td></tr><tr><td>5. Avalanche</td><td>Low</td><td>High</td><td>High</td><td>High</td></tr></table>	Shock type	Frequency	Amplitude	Speed	Scope	1. Regular	Low	Low	Low	Low	2. Hyperturbulence	High	Low	High	Low	3. Specific	Low	High	High	Low	4. Disruptive	Low	High	Low	Low	5. Avalanche	Low	High	High	High
Shock type	Frequency	Amplitude	Speed	Scope																											
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3. Specific	Low	High	High	Low																											
4. Disruptive	Low	High	Low	Low																											
5. Avalanche	Low	High	High	High																											
4: Assess whether the timing of multi-level relations is favourable	<p>Determine whether the state of development of the niche innovation and the niche-regime relations relate favourably to the timing of landscape-regime pressures. Innovations can take advantage of a window-of-opportunity only if they are sufficiently developed. The state of development of the niche innovation is favourable when: (i) learning processes have stabilized in a dominant design; (ii) powerful actors have joined the support network; and (iii) price/performance relation has improved and actors have expressed strong expectations of further improvement (e.g. learning curves). These proxies are based on Kemp et al. (1998).</p>																														
5: Assess whether the nature of multi-level relations is favourable	<p>Assess the nature of multi-level relations as favourable or unfavourable. First, landscape-regime interactions are classified either as disruptive – exert pressure and create impulses – or reinforcing – stabilize situation and prevent transformation. Then, regime-niche interactions are classified as competitive – seek replacement – or symbiotic – strengthen ongoing change process. According to Geels and Schot (2007), only the combination of disruptive landscape-regime relations with symbiotic niche-regime relations creates a favourable nature of multi-level interactions.</p>																														

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**Stage C - Description of regime co-creation and co-evolution per country case**


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<i>Step</i>	<i>Analysis</i>								
6: Assess levels of multi-level alignment	Make a qualitative assessment of the level of alignment emerging from an inter-group process of negotiations, of articulation of expectations, and of coalition building and convergence that involves the build-up of a shared cognitive frame (Geels and Schot 2007: 405).								
7: Typologize outcome patterns per country case	<p>Typologize evolving and ongoing process and assess the likelihood of a regime's transformative capacity.</p> <p><b>Typology of outcome patterns</b> Based on Geels and Schot (2007), Geels (2011), and Geels et al. (2016)</p> <hr/> <table> <tr> <td>Transformation</td><td>Landscape developments and socio-political pressures exert pressure on the service delivery regime when (radical or non-radical) niche innovations are underdeveloped, leading either to gradual adjustments or to faster and deeper reorientation of regimes by incumbent strategic actors. Niche innovations do not fully break through, but elements can be accommodated in the regime.</td></tr> <tr> <td>Reconfiguration</td><td>Landscape development exerts pressure on the service delivery regime, and niche-innovations are more developed. When the niche is symbiotic, the innovation can be adopted to solve a specific problem and transform the system's architecture. This may lead to adjustments in the regime and new alliances.</td></tr> <tr> <td>Technological substitution</td><td>Broader landscape developments exert pressure on the service delivery regime, and protected niche innovations are well developed. Tensions in the regime lead to a window-of-opportunity for breakthrough. Potentially high internal momentum can lead to replacement of the regime, even without landscape pressure. The niche innovation may develop to fit existing institutions and rules, or vice versa.</td></tr> <tr> <td>De-alignment and re-alignment</td><td>Major landscape pressures or external shocks first cause disintegration of the service delivery regime. Niche innovations emerge and take advantage of the space. Re-alignment eventually occurs and leads to a new service delivery regime based around one innovation, after faith is lost in the old regime.</td></tr> </table> <hr/>	Transformation	Landscape developments and socio-political pressures exert pressure on the service delivery regime when (radical or non-radical) niche innovations are underdeveloped, leading either to gradual adjustments or to faster and deeper reorientation of regimes by incumbent strategic actors. Niche innovations do not fully break through, but elements can be accommodated in the regime.	Reconfiguration	Landscape development exerts pressure on the service delivery regime, and niche-innovations are more developed. When the niche is symbiotic, the innovation can be adopted to solve a specific problem and transform the system's architecture. This may lead to adjustments in the regime and new alliances.	Technological substitution	Broader landscape developments exert pressure on the service delivery regime, and protected niche innovations are well developed. Tensions in the regime lead to a window-of-opportunity for breakthrough. Potentially high internal momentum can lead to replacement of the regime, even without landscape pressure. The niche innovation may develop to fit existing institutions and rules, or vice versa.	De-alignment and re-alignment	Major landscape pressures or external shocks first cause disintegration of the service delivery regime. Niche innovations emerge and take advantage of the space. Re-alignment eventually occurs and leads to a new service delivery regime based around one innovation, after faith is lost in the old regime.
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# 3

## Scaling and institutionalisation within agricultural innovation systems: The case of cocoa farmer field schools in Cameroon



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## **Abstract**

The farmer field school (FFS) concept has been widely adopted, and such schools have the reputation of strengthening farmers' capacity to innovate. Although their impact has been studied widely, what is involved in their scaling and in their becoming an integral part of agricultural innovation systems has been studied much less. In the case of the Sustainable Tree Crops Programme in Cameroon, we investigate how a public–private partnership did not lead to satisfactory widespread scaling in the cocoa innovation system. We build a detailed understanding of the key dimensions and dynamics involved and the wider lessons that might be learned regarding complex scaling processes in the context of agricultural innovation systems. Original interview data and document analysis inform the case study. A specific analytical approach was used to structure the broad-based exploration of the qualitative dataset. We conclude that scaling and institutionalisation outcomes were impeded by: the lack of an adaptive approach to scaling the FFS curriculum, limited investments and genuine buy-in by extension actors, a failure to adapt the management approach between the pilot and the scaling phase, and the lack of strategic competencies to guide the process. Our findings support suggestions from recent literature that pilots need to be translated and adapted in light of specific contextual and institutional conditions, rather than approached as a linear rolling-out process. These findings are relevant for the further spread of similar approaches commonly involved in multi-stakeholder scaling processes such as innovation platforms.

**Keywords:** Africa, Cameroon, cocoa, agricultural extension, innovation

### 3.1 Introduction

The farmer field school (FFS) concept and such schools' positive impact on agricultural development and wider societal benefits (e.g. poverty alleviation) have been studied by many scholars (e.g. van den Berg & Jiggins, 2007; Feder, Murgai, & Quizon, 2004; Friis-Hansen & Duveskog, 2012; Davis et al. 2012; Larsen & Lilleør, 2014; Phillips, Waddington, & White, 2014; Tripp, Wijeratne, & Piyadasa, 2005; Yorobe, Rejesus, & Hammig, 2011). Waddington et al. (2014) report FFS as one of the most common approaches to rural adult education and agricultural extension involving 10–20 million people in more than 90 countries. This means that use of the FFS approach has scaled up significantly since its emergence in the 1980s, although the nature and quality of its application may vary (Sherwood, Schut, & Leeuwis, 2012). Neither individual studies nor comprehensive reviews such as that conducted by Waddington et al. (2014) address systematically what is involved in processes of scaling-up the application of the FFS approach so that it becomes an integral part of agricultural innovation systems. The focus is generally on what the FFS is about and what its effects are. Although in numbers FFS has evidently gone to scale, questions remain regarding what is involved in the success and failure of purposefully attempting to scale it up and institutionalise it in agricultural extension systems.

We were particularly confronted with this question when assessing the Sustainable Tree Crops Programme (STCP). This public–private partnership (PPP) initially focused on designing, testing, and validating an innovative cocoa FFS curriculum – designed to augment cocoa farmers' income by sustainably increasing the yield and quality of their crops – and in a next phase set out to take the approach to scale. STCP was the first large PPP focusing on scaling agricultural innovations for cocoa in sub-Saharan Africa (David, 2007, 2011; Gockowski, Asamoah, David, Gyamfi, & Kumi, 2011). The programme was implemented in Cameroon, Côte d'Ivoire, Ghana, and Nigeria (and to a lesser extent in Liberia) between 2001 and 2011. Although in each country except Liberia FFS was introduced in virtually the same manner and with similar staffing, the scaling-up processes led to significantly different results (Muilerman, Vellema, & Schut, 2018). In Cameroon, a country with stable leadership and a stable institutional landscape for cocoa, FFS went to scale in terms of numbers of schools but in fact spread to only a dozen emerging cocoa cooperatives. By 2011, the programme had trained virtually all the members of these relatively small cooperatives, often including recruited non-members. During an internal regional STCP management meeting in early 2011 (first author's notes), the regional management assessed that the focus on a limited number of cooperatives with limited membership would not enable FFS scaling. Impact was not significant, there were important quality concerns, and the sustained adoption of cocoa



FFS in the national innovation system in Cameroon was deemed highly unlikely. Nor was there clear proof of adoption of core FFS principles by government or by national NGOs. This analysis was corroborated by interviews with government officials in July 2010.

Côte d'Ivoire, a war-torn country in crisis, managed to take FFS to scale through institutionalisation in the national professional extension services (Muilerman & Vellema, 2016). A general retrospective, a comparative analysis of what happened in the four STCP countries, provided several clues regarding differences in the extent to which, and the reason why, scaling did – or did not – occur in Cameroon, Côte d'Ivoire, Ghana, and Nigeria (Muilerman et al., 2018). This general comparison showed that in Cameroon (contrary to particularly Côte d'Ivoire and Nigeria) STCP faced a more challenging institutional context. The programme experienced decidedly less favourable interactions with the national agricultural institutions. A lack of involvement with the dominant national cocoa system meant that virtually no room was made for the FFS innovation, and this contributed to FFS never leaving its protected niche environment. The general analysis indicated that the necessary preconditions for the scaling of FFS were simply not present, nor evolving in the right direction. However, the case of scaling cocoa FFS in Cameroon remained substantially more ambiguous and more difficult to interpret in terms of the specific mechanisms and factors that led to the limited level of scaling and the failure to institutionalise FFS.

Here, we propose to analyse the Cameroon case in more depth, using an analytical framework that has the potential of helping to uncover a broad range of potential factors and dynamics that may have played a role in impeding the scaling of cocoa FFS and in the failure to institutionalise it in the agricultural innovation system. This may also provide relevant insights for scaling similar participatory approaches and multi-stakeholder processes, such as innovation platforms and innovation labs (e.g. Kilelu, Klerkx, & Leeuwis, 2013). Going to scale is an important theme in the FFS literature. Discussions in STCP focused on approaches to scaling, changes to the methodology in the course of expansion (Schut & Sherwood, 2007), and modalities for ensuring financial sustainability (Feder, Murgai, & Quizon, 2008). Investing in an intervention is a key element for reaching scale, especially if a donor-funded extension-led FFS is to be followed by sector-funded and/or community-led initiatives (Settle, Whitten, Dilts, & OOI, 1998), although this idealistic model of fiscal sustainability has been strongly criticised (Feder et al., 2008). Worldwide, the combined start-up and recurrent FFS costs are highly variable, ranging between US\$ 10 and 80 per participant for FFS on food crops (van den Berg & Jiggins, 2007; Duveskog, per. comm., 2011), with cost depending also on the type and scope of the implementing organisation and the length of the training.

This study builds on findings from earlier impact studies that focused on the programme (e.g. David, 2011). The PROMIS methodological approach (Wigboldus et al., 2016, 2017) was selected because of its suitability for understanding a range of dimensions and dynamics involved in scaling processes (see section 3.3). This choice is in line with findings by van de Fliert et al. (2010) who emphasised the need for a systems perspective when introducing innovations. PROMIS builds on the multilevel perspective (MLP) on socio-technical innovation (Geels, 2002) and the theory of modal aspects (e.g. Brandon & Lombardi, 2010), enabling the development of integrative, analytical, and strategic perspectives on scaling initiatives. Selecting key elements from this approach, we developed a conceptual framework that matches the needs of this study, which sets out to answer three main research questions:

- 1 What factors and dynamics provide the best explanation for the failure to achieve scaling and institutionalisation in the case of STCP and cocoa FFS in Cameroon?
- 2 To what extent does the broad analysis as applied in this study provide additional insights that lead to a deeper understanding of factors and dynamics involved in scaling and institutionalising FFS?
- 3 What wider lessons can we learn from this case for the design and implementation of future scaling initiatives?

Section 3.2 briefly describes the relevant context. Section 3.3 elaborates on the conceptual framework and methodology used in this study, using illustrations from section 3.2 to clarify this paper's orientation. Section 3.4 provides a narrative account of the findings, and section 3.5 provides an analytical account of the findings. These two research angles are then further discussed in section 3.6, which revisits the three research questions, discusses possibilities for the wider application of the findings, and presents conclusions from this study.

## 3.2 Context and Background to the Case

### 3.2.1 History and Environment of the Cocoa Sector

Cocoa was introduced into Cameroon as early as 1890 (Monga, 1996). Agriculture contributes to nearly a quarter of Cameroon's GDP (World Bank, 2015) and is the main source of employment (UNdata, 2015). Reportedly, 600,000 smallholder farmers produce cocoa. FAO data (FAOSTAT, 2015) show that, at the onset of STCP, cocoa productivity was low (~375 kg/ha). The STCP baseline on Cameroon (IITA/ODECO, 2003) attributed this mainly to an aging tree stock (av. 32 years; 2 years over what is considered the maximum optimal productive age), high farmer age (av. 50 years), and

widespread prevalence of pests and diseases. Most cocoa smallholders grow their own food, but cocoa sales constitute their primary source of revenue. The STCP baseline also showed that 24% of cocoa farmers were members of some formal rural organisation and that 35% had had contact with governmental extension workers in the previous three months (IITA/ODECO, 2003). Although Cameroon was better serviced by governmental extension in 2001, as compared to major cocoa producers Côte d'Ivoire (31%) and Ghana (23%) (Kouadjo, Keho, Mosso, & Toutou, 2002; IITA/KNUST, 2003), extension focused primarily on larger farmers. International multinationals became increasingly worried about this situation. A dozen years later, Cameroon's production of over a quarter of a million tonnes of cocoa continued to be based on the use of vast areas of land, not on intensification. Smallholder households continued to obtain low yields (~400 kg/ha) (FAOSTAT, 2015) on hundreds of thousands of relatively small plots.

### 3.2.2 Cocoa Extension and Innovation System in Cameroon

In this paper, we focus in the agricultural extension institutions for cocoa in Cameroon. Private and NGO extension was practically non-existent. Previously, cocoa farmers could call upon specialised cocoa extension agents from the Cocoa Development Corporation. However, even though the government of Cameroon was sluggish in adopting reforms, in the 1980s and 1990s liberalisation and various IMF and World Bank programmes, including structural adjustment programmes, progressively put an end to large state and parastatal extension services (IITA/ODECO, 2003). For many years, MINADER (*le Ministère de l'Agriculture et du Développement Rural*: Ministry of Agriculture and Rural Development) in Cameroon had been running World Bank-promoted Training & Visit (T&V) programmes. Each of its extension agents focused on multiple crops. From 2002 onwards, MINADER adopted a single crop focus. All of this transpired during the presidency of Paul Biya, which was characterised by a socio-political status quo (Ngwafu, 2014). In 2010, President Biya, having already served for 29 years, was re-elected in 2010 'against a background of general indifference'; and the IMF reported that same year: 'although [Cameroon] has plentiful resources, its economic results do not match its economic potential because of the government's reluctance to adopt reforms' (Pigeaud, 2011, p. 1).

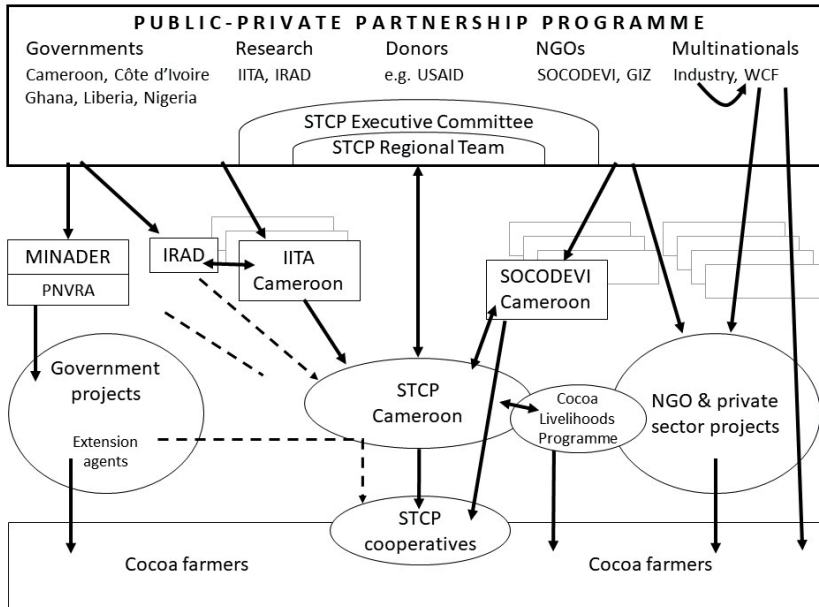
By 2010, MINADER's PNVRA (*Programme National de Vulgarisation et de Recherche Agricoles*: National Programme for Agricultural Extension and Research) still had the mandate for agricultural extension, including for cocoa. Interview data suggest that the technical modules on integrated crop and pest management and good agricultural practices that featured in FFS were in themselves considered to be very valuable and could perhaps have been integrated into PNVRA's programmes if they had not been treated as part of a fixed package. As a result, although MINADER and IRAD (*Institut*

*de Recherche Agricole pour le Developpement*: Institute for Agricultural Research for Development) contributed to the technical curriculum, MINADER/PNVRA did not feel that it had specific ownership of the FFS approach. The STCP/FFS programme included a number of principles and components (sections 3 and 4), but Cameroonian enthusiasm for FFS outside partner cooperatives related not so much to FFS as process principles, but rather to the technical curriculum and what quality training could do for farmers (i.e. responsible use of chemicals, social organisation, enhanced profitability). The inflexible FFS approach came with package deals such as the reduction of pesticide use. A conflict of interest therefore arose as MINADER was promoting pesticide use. The lack of flexibility in applying the FFS concept meant that STCP did not focus on the purpose behind FFS – a purpose that might have been achieved in other ways as well (e.g. innovation platforms or other forms of participatory [technology] development).

A new development in 2006 was the inception of the National Cocoa and Coffee Sub Sector Development Fund (FODECC), a national fund based on export levies, which in a complex configuration was to be managed collaboratively by three different ministries. FODECC struggled to become operational and by 2010 was yet to develop into a more serious financier of cocoa extension. The STCP country manager reported that STCP never made a functional connection with FODECC and therefore did not manage to secure national funding for FFS.

### **3.2.3 The STCP Cocoa FFS Initiative**

In the 1999 Paris Declaration, the chocolate industry, donor agencies, trade organisations, producer groups, and major research institutions made a commitment to sustainable cocoa production. In 2000, STCP – worth US\$ 8 million (Velarde & Tomich, 2006) – was set up as a broad PPP platform to address farmer and business support services, research and technology transfer, policy change and implementation, and market and information systems. It adopted a focus to ‘identify, test, and validate innovations in tree crop systems that could serve to guide future development investments in tree crop sectors’ (STCP, 2006, p. ii). In a typical West-African context of weak public and private agricultural extension systems and inadequate training approaches, a pilot was conducted in Cameroon, Côte d’Ivoire, Ghana, and Nigeria (David, 2007). Funded mainly by the global chocolate industry, represented by the World Cocoa Foundation (WCF), and by the United States Agency for International Development, the programme was hosted by the International Institute of Tropical Agriculture (IITA). This is an agricultural research institute with a mandate to conduct research to support development initiatives, although not necessarily to implement development activities on a large scale. STCP’s organisational structure consisted of a regional team of a programme manager and technical experts and country teams consisting of a country manager and technical field

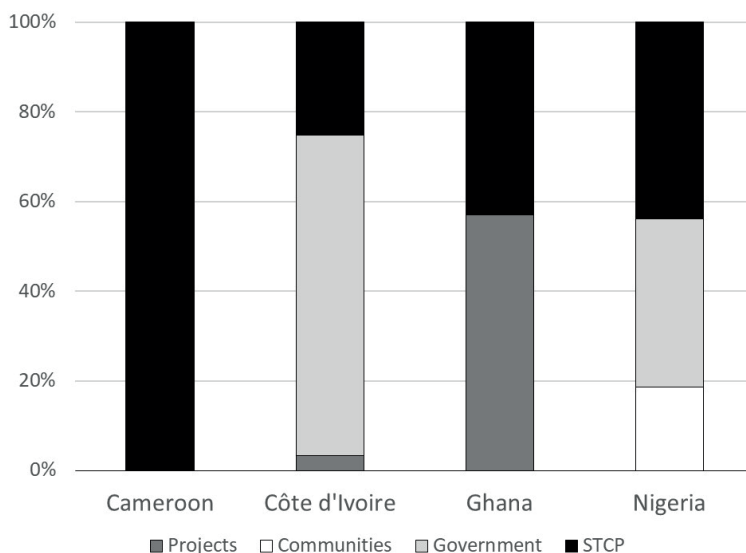


**Figure 3.1** - Simplified overview of flow of decisions from regional to local for STCP Cameroon and its key partners with regard to service provision to cocoa farmer and (the scaling of) FFS.

staff (Velarde & Tomich, 2006). Programme direction was largely decided at country level. The regional staff focused on developing methodologies, technical backstopping, monitoring and evaluation, and scientific production.

The cocoa FFS programme in Cameroon needs, therefore, to be considered as part of a larger regional STCP. STCP Cameroon's connection to the wider regional programme is visualised in Figure 3.1. It shows that STCP Cameroon was an entity largely operating independently, having a less than optimal connection with public and private partners, directly intervening in cooperatives. However, as it operated under a regional PPP programme, the four different country management teams met at least twice a year during the programme's Executive Committee meetings, where experiences were shared and discussed and cross-fertilisation was expected to take place. Participatory observation during several of these bi-annual meetings, however, found that these could not be characterised as (academic) critical spaces, but rather as classic implementer–donor reporting.

Figure 3.2 presents the type of organisation(s) driving the scaling phase in each country after the initial research-led pilot phases (2001–2005) and how Cameroon remained primarily research-led (percentages are used because the otherwise similar



**Figure 3.2** - FFS leadership by country and by programme type during STCP scaling phase (2006–2011), based on STCP annual reports.

country programmes differed in size). During the STCP scaling phase, the same PPP under WCF leadership started the Cocoa Livelihoods Programme, similar to STCP and initially also implemented by IITA but later by WCF itself.

### 3.2.4 STCP's Cocoa Farmer Field Schools and their Attributes

Farmer field schools were designed and first implemented by the FAO in the late 1980s, as a participatory and experimental learning approach focusing on integrated pest management and food crops in Asia (Simpson & Owens, 2002), rapidly expanding to multiple crops and geographies. After some FFS success with cocoa in Asia (J. Mangan & Mangan, 2003), FFSs for the perennial crop cocoa in West Africa were set up only in a small pilot in Ghana (Asare, 2005) before STCP and national experts adapted, tested, and validated cocoa FFS between 2003 and 2005 for use on a wide range of topics (STCP, 2003) (Asare & David, 2011; STCP, 2004). The approach constituted a considerable break from the norm because of the altogether different nature of extension provision and underlying principles, as presented in Table 3.1.

In 2005, recommendations from an external review (STCP, 2005a, 2005b) of STCP activities identified FFS, among other things, as a key innovation to be scaled in collaboration with national partners. The STCP PPP itself had been identified as an important innovation 'from which all stakeholders derive value. This unique partnership

**Table 3.1** - Underlying principles of STCP's cocoa farmer field schools (based on David, 2004; Schut & Sherwood, 2007)

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**Principles of farmer field schools**

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- Adult education that acknowledges experience
  - Interactive self-help group training approach
  - Focus on field-based and concrete experimental learning
  - Trained and competent farmer facilitators
  - Practical curriculum based on natural (crop) cycle and emerging issues
  - Quality programme management and monitoring and evaluation
  - Sustainable financing
- 

has never existed for the cocoa sector, which is the most important tree-based commodity in West Africa' (STCP, 2005a, p. 1). The programme's second phase focused on three desirable scaling outcomes: (i) increased numbers of FFS organised in line with the key principles, (ii) increased applications of the principles underpinning FFS in (local) cocoa innovation systems, and (iii) increased use of a cocoa FFS curriculum (STCP, 2006, p. iv).

### 3.3 Conceptual Framework and Methodology

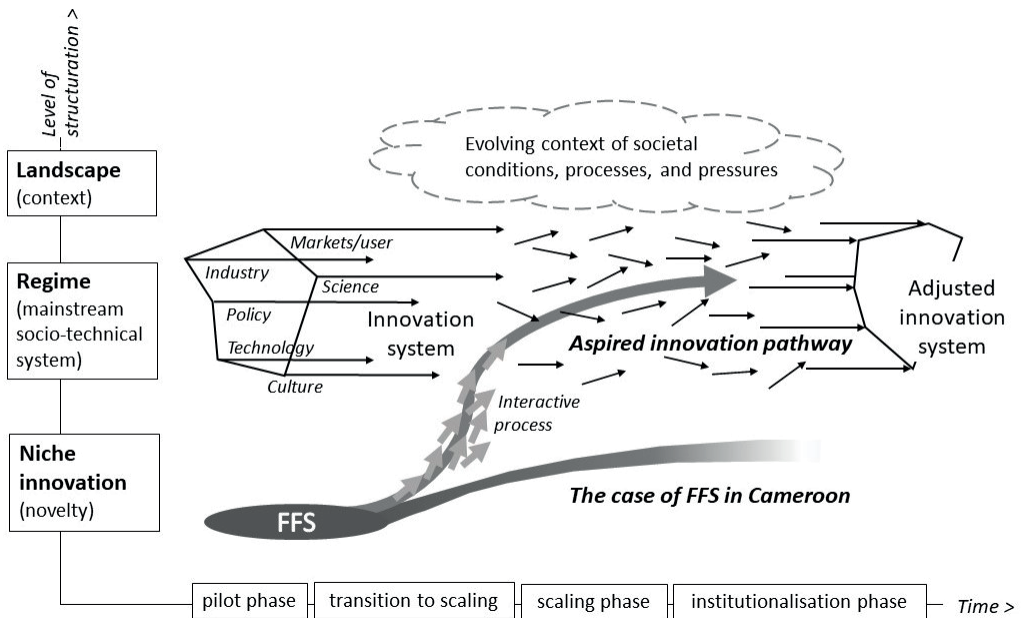
In this section, we explain the conceptual framework and methodology used for retrospective analysis of STCP's FFS scaling initiative in Cameroon to ascertain why it did not achieve the desired results.

#### 3.3.1 Conceptual Framework Used in the Analysis

Innovations are embedded in broader societal processes that influence – and simultaneously are influenced by – scaling processes. To better understand how the scaling-up of FFS in Cameroon unfolded and what factors and dynamics were at play, we chose to apply and test an analytical approach specifically designed to analyse and interpret scaling processes (Wigboldus et al., 2016). Called the PRactice-Oriented Multi-level perspective on Innovation and Scaling (PROMIS), it can be used to enhance learning from, and planning for, scaling initiatives. PROMIS involves two main methodological elements: the MLP (Geels, 2002) and the theory of modal aspects (e.g. Brandon & Lombardi, 2011). The first element is particularly useful for making sense of dynamics in innovation and scaling, and the second helps to unpack the multifaceted nature of innovation and scaling.

The MLP is particularly useful for 'reading' and interpreting the unfolding FFS scaling process in Cameroon. Geels (2011, p. 26) describes the MLP as 'a middle-range theory that conceptualizes general dynamic patterns in socio-technical transitions.' Within the





**Figure 3.3** - Application of a simplified MLP to the case of cocoa FFS in Cameroon (based on Geels, 2002; Geels & Schot, 2007).

MLP, three analytical levels are used to describe non-linear processes and interrelated developments. At the lowest level, we find (i) innovation niches or protected spaces. These may eventually challenge (ii) the stable socio-technical regime(s) with their established rules and practices. A (iii) socio-technological landscape (the wider context) influences both these levels. Niche and landscape influence, and are influenced by, the regime level, which involves constant interactive alignment, adjustment, and reconfiguration of processes. MLP has been used to analyse the scaling of participatory extension approaches before (e.g. Minh, Larsen, & Neef, 2010; Schut et al., 2016). Figure 3.3 is a simplified way of expressing, within an MLP, what the FFS scaling processes were aiming to do in Cameroon.

It is particularly in the interactions between the niche and the regime, during reconfiguration processes, that we expect PROMIS to be able to help further unpack and interpret context and process dynamics at play in scaling processes. As already stated, PROMIS uses the theory of modal aspects, which comprises an ordered collection of 15 modal aspects of experienced reality (Table 3.2). Innovation and change processes are considered to involve a reconfiguration of these different aspects (e.g. Leeuwis, 2013). Scaling processes involve a multitude of such reconfiguration processes as they take place

**Table 3.2** - Aspects of experienced reality that can in various ways be affected by, or affect, innovation and scaling processes (adapted and abbreviated from Wigboldus et al., 2016)

Aspects of experienced reality	What the aspects typically relate to
<b>Natural and physical aspects</b>	
<i>Quantitative, spatial, kinematic, physical</i>	Numbers, location, atmosphere, climate, water, soil, natural forces, chemistry, transportation, infrastructure, buildings, equipment
<i>Biotic, sensitive</i>	Plants, animals, birds, fish, organic processes, ecosystem, biodiversity, forest, desert, habitat, farm, crops, livestock, animal behaviour
<b>Human aspects</b>	
<i>Biotic, sensitive</i>	Awareness, health, physical and mental abilities, emotion, personality, disposition, passion, observation, population dynamics, safety
<i>Analytical–logical</i>	Knowledge, theory, logic, conceptual framework, science, research, education
<i>Formative</i>	Construction, creativity, skill, computer software, design, power (in relationship): technology, strategy, methodology, innovation, adaptation
<b>Social and financial aspects</b>	
<i>Lingual, Social</i>	Symbols, signs, language, communication, information, media Relationships, roles, social cohesion, competition, collaboration, organisation, societies, alliances, partnerships
<i>Economic</i>	Resource management, conservation, stewardship, exchange of goods and services, transactions, efficiency, sustainability, economy, land use, market, value chain, firm, employment
<b>Cultural, political, and moral aspects</b>	
<i>Juridical</i>	Rights, law, responsibility, appropriateness, policy, legal system, constitution, mandate, police, the state, democracy, ownership
<i>Aesthetic, ethical, certitudinal</i>	Appeal, beauty, enjoyment, leisure, sports, art Attitude, care, sharing, goodwill, integrity, equity, being right, solidarity identity, belief, trust, faith, vision, commitment, aspiration, worldview, ideology, paradigm

in a variety of specific contexts. This relates directly to, and expands, MLP dimensions such as industry, markets, and science, which characterise innovation systems in socio-technological regimes (see Figure 3.3). A niche, a regime, and a landscape level can be characterised along the lines of those same aspects of experienced reality. ‘Experienced reality’ is not about this or that person’s way of experiencing reality; rather, it is a term that refers to a general concept of reality as it can be experienced.

Together, the MLP and the theory of modal aspects provide a rich framework for analysing both the processes involved in scaling initiatives and the *dynamics* of how these play out between the niche and the regime level. The PROMIS approach further identifies 13 types of such dynamics related to what may hinder and what may help an envisaged scaling process. For the purpose of this paper, we have translated general categories from PROMIS into a set of four simplified analytical categories (Table

**Table 3.3** - Analytical categories derived from the PROMIS approach (abbreviated and adapted from Wiggboldus et al., 2016)

Analytical categories	Description
<i>Social dynamics</i>	Stakeholder decision-making dynamics Stakeholder diversity and social impact
<i>System dynamics</i>	Complexity of scaling Dominance/deviance dynamics System/practice inertia System/practice instability
<i>Scale dynamics</i>	Path dependence and past imprinting Anticipated futures Cross-scale, cross-domain dynamics
<i>Management dynamics</i>	The process of engaging stakeholders The scope of analysis and evaluation, and preparation/anticipation The connection between strategy and situational reality The capacity to facilitate convergence

3.3): (i) social dynamics (interpersonal and group interactions), (ii) system dynamics (interrelationships and interconnections between system dimensions within the cocoa innovation system in Cameroon and related emerging outcomes), (iii) scale dynamics (how social and system dynamics play out at different scale levels, including the temporal scale), and (iv) management dynamics (managerial arrangements, including roles and responsibilities and related capacities and competencies for task achievement).

### 3.3.2 Method of Data Collection and Analysis

Field research was performed between 2010 and 2011, towards the end of STCP, by the first author who was not previously connected with the programme. The process tracing method was used for retrospective analysis involving both narrative and analytical categories. Qualitative research, using semi-structured interview guides, was performed, targeting key process actors in Cameroon. A total of 16 in-depth interviews were held in English, French, or a local language (assisted by a translator) with 12 different persons or farmers' groups from STCP, programme partners, and four partner cooperatives. All interviews were recorded and transcribed. In addition, STCP's extensive electronic and paper archive<sup>2</sup> was reviewed. STCP did not continue, leaving the data unused. This study takes up the exercise again as an ex-post study.

2 This included among other things: baseline report; pilot report; transition report; summary external impact review; the monitoring, financial, and training databases; 5 years of annual and semi-annual reports, work plans, budgets and results frameworks, and country summary reports for the scaling phase; 15 relevant studies or working papers; 9 impact briefs/reports; 30 newsletters; 22 collaboration agreements, 7 training manuals, 31 miscellaneous project documents, and 3 speeches by cooperative leaders.

The following two sections present two different and complementary accounts of our findings. In section 3.4, we present a narrative account that allows for developing a perspective on how things evolved over time. In section 3.5, we present an analytical account, applying the analytical categories as described in Table 3.3. The discussion (section 3.6) synthesises findings from the two research angles, including a discussion of findings along the MLP lines as visualised in Figure 3.3.

### 3.4 Narrative Account of Findings and their Interpretation: Evolution of the Scaling Initiative

In this section, we examine the STCP chronology, building on the research data and background on the landscape, dominant extension regime, and the niche intervention, as presented in section 3.2.

#### 3.4.1 Phase One: Introduction of FFS and the Pilot Process

Interview data and interviews show that STCP's pilot at first focused on a partnership with a vast loosely organised farmer-based organisational network, FORCE. By 1996, FORCE had emerged through a merger of 25 associations, combining 300 farmer groups or 20,000 farmers (FAO, 2002). Although it aligned with the national policy direction to support micro projects, the pilot did not involve MINADER/PNVRA or any other national cocoa institution (except for resource persons from IRAD). This pragmatic choice was based on achieving optimal pilot quality, not on an analysis of necessary capacity among prospective partners for running or scaling FFS later on. The choice to pay FFS farmer facilitators during the pilot served the same purpose. A few MINADER extension agents became facilitators, but only because they had a pre-existing and constructive training relationship with a specific cooperative. A general agreement was signed in 2000 and 2002 (MINADER, 2009), but this service agreement did not focus on building an institutional relationship with the objective of later scaling-up nationwide.

The pilot employed mainly externally hired expert staff. According to the country manager, the initial objective was to organise a high-quality pilot, not to influence the existing socio-technical regime or to get national acceptance of the principles underpinning the FFS approach. From the interviews, it is clear that MINADER demonstrated a keen interest in the quality of technical training under FFS, but the approach was not felt to connect with a pressing need for innovation within existing extension practice. Because STCP marketed FFS as the sole methodology to accompany the curriculum, in interviews senior MINADER officials called STCP dogmatic.

### **3.4.2 Phase Two: The Transition Process from Pilot to Scaling-Up**

The FFS pilot ran roughly from 2002 to 2005, after which an external review of the regional STCP programme (STCP, 2005a) advised the scaling-up of FFS. When the pilot ended and conflict arose with the farmer network, IITA and the expatriate programme manager felt that the idea of a representative network of farmer-based organisations as principal partner had been implemented prematurely. IITA took over full management. When funding was relatively easily granted by the United States Department of Agriculture, the focus was put on working directly with a dozen (emerging) cooperatives, sustainably strengthening their capacities and scaling FFS among the membership.

This meant investing considerable resources in slow, small-scale, local processes. National management pointed out that the United States Department of Agriculture's funding was 'so rigid that farmers had no voice. But [cooperatives] were benefiting from the STCP activities. [Therefore] we just continued.' The country manager confirmed: 'Yes, people are saying they are our baby,' although he disagreed. This approach resulted almost automatically from STCP's close partnership with the Canadian NGO Société de Coopération pour le Développement International (SOCODEVI), which had the objective of building cooperatives and establishing independent cooperative service provision. The SOCODEVI management confirmed this restricted vision: 'When I die I hope to leave at least two or three cooperatives behind that at least are not so clumsy.' This decision may have closed scaling pathway opportunities later on.

A lack of true partnership – a result of different orientations, different expectations, and a lack of shared effort – in effect meant that the STCP/FFS in this programme was not in partnership with MINADER/PNVRA. The data suggest that the extension system (dominant regime) was not ready to embrace FFS seriously, though possibly it might have accepted the curriculum. FFS was introduced perhaps to supply a rigid extension tool rather than to involve an institutional innovation in any meaningful way.

### **3.4.3 Phase Three: Management and Guidance of Scaling Process**

During this scaling phase, STCP organised a high quality FFS programme (Velarde & Tomich, 2006). However, STCP's scaling strategy (or lack thereof) certainly was criticised. The resolute belief in cooperatives did not result in the desired level of buy-in from the dominant regime. Managing the scale-up alone was a logistical challenge, especially when external master trainers left, resulting, among other things, in a failure to monitor and evaluate, despite heavy research involvement.

By 2010, five cooperatives had dropped out and three new cooperatives had joined, and several cooperative members voiced their concerns about training pressure. Targeted

training numbers (scaling) were finally obtained through a questionable tripling of training numbers through farmer-to-farmer training (one trainee transferring knowledge to two non-trainees). The country manager was hesitant about reporting this to the donors. Interviews show diverging perspectives on what scaling FFS would involve.

MINADER agents started to co-facilitate, supervise, and monitor FFS on an expensive consultancy basis, and in competition with other initiatives. Under private sector influence (key donors), this increasingly also happened in ‘unstructured’ communities, resulting in low participation. This case is therefore not about success or failure of scaling-up FFS in general, but rather about scaling-up the STCP-type of cocoa FFS in Cameroon. It was clear that MINADER/PNVRA could never support FFS. It could not even sustain old-school T&V. The rigid donor-driven framework for implementation in effect reduced farmers to beneficiaries, undermining the whole FFS ideology. FFS was increasingly reduced to a tool for scaling-up the adoption of a technology, and not primarily for addressing farmers’ participation. The emerging outcome contradicted the country manager’s original objective. The participatory process of setting up sustainable farmer-led FFS programmes within cooperatives was finally not reflected in the partnership and scaling-up processes.

Table 3.4 outlines the direct cost of FFS, taking into account that an FFS facilitator in STCP Cameroon performed on average three training cycles. STCP Cameroon incurred a direct cost of US\$ 84 per farmer trained. Low participation numbers, resulting from working only with cooperative members (on average 20), meant that the cost could have been US\$ 56 at an optimal participation of 30.

**Table 3.4 - Farmer field school cost per farmer**

Item	Amount in US\$
Start-up: Training of trainers for one facilitator*:	291
Resource persons; training venue and equipment, facilitators and trainers; food, accommodation, and expenses; per diems and stipends; materials and stationary; transportation	
Recurring: Implementation per farmer field school**:	1385
Materials, supervision, facilitator	
Cost per farmer in Cameroon under STCP***	84
Training of trainer + implementation cost.	

\* Assumes that the programme starts with new facilitators, trained and supervised during the first training cycle, who run two more cycles as experienced facilitators.

\*\* Assumes a 20% cost reduction for supervision costs during the second and third years.

\*\*\* Based on average recorded participation of 20, although the target for FFS is 30. Includes the costs borne by the cooperatives.

Muילerman and David (2011) outline several options to reduce STCP's implementation cost for public and private sector operators interested in taking cocoa FFS further to scale, including more training cycles per facilitator, bulk procurement of materials, and farmer contributions. Arguments to justify the relatively high cost of FFS include the long-term sustainable impact of improved decision making, the benefits of strengthening human and social capital, and the ability to use FFS facilitators' skills for other development initiatives. FFS costs must therefore be rated against both immediate and long-term development goals.

#### **3.4.4 Phase Four: Institutionalisation and Phase-Out**

Research data do not support STCP's claim in reports that it pursued a two-pronged approach with cooperatives and MINADER/PNVRA. STCP shied away from a structured relationship with the national extension service and never managed to transfer non-training tasks such as monitoring and evaluation to the 20–30 MINADER agents with whom it had worked. In 2010, STCP had lost contact with nearly all of them.

Research data gave reason to doubt the management's belief in, and commitment to, the chosen approach towards the end, but, with mounting donor pressure on the programme, giving up on it was not an option. This led to the over-pressuring of cooperatives that had reached their training limits and to a continued discourse that MINADER would still come on board through a ripple effect.

MINADER, on the contrary, carefully considered the consequences of adopting FFS. Rather than aiming for the rapid scale-up of novelties, MINADER/PNVRA considered the lack of resources and the absence of a clear political decision, and held on to its T&V-inspired approach. STCP allegedly aimed for a long-term approach with MINADER by integrating FFS in the curriculum of agricultural colleges. Surprisingly, and only after serious probing, it became clear that cocoa FFS did not make it into the revised 2010/2011 school curriculum. MINADER appears to have tolerated STCP's FFS, as funds were made available for something beneficial that Cameroon could otherwise not afford. Real space for institutionalisation and scaling did not exist and, from inception, there was no purposeful engagement with key institutions. A MINADER director stated: 'The vision of coops is very tiny. If you reach [a dozen] cooperatives in a county with about 1.8 million agricultural households, you have done nothing!' During an internal regional STCP management meeting in early 2011, key regional STCP experts opined that the cooperative scaling model was flawed, training numbers were too ambitious, and FFS impact in Cameroon (in terms of farmers reached) was insignificant (first author's notes).



Outside STCP's control, the envisaged future cocoa fund mechanism FODECC did not become operational until STCP was starting to wind down. Even then, it still promised to be a complex procedure involving application to three ministries at the same time, with no clarity about whether a cooperative might be fundable.

### 3.5 Analytical Account of Findings and their Interpretation: Considering Conditions for Scaling

Complementing the narrative account of the previous section, this section presents an analytical account along the lines of the dimensions and analytical categories as introduced in section 3.3 (Tables 3.2 and 3.3). Section 3.5.1 focuses on the kinds of dimensions (as aspects of experienced reality) that contributed to the performance outcomes of the scaling initiative, and section 3.5.2 complements this perspective with a focus on the kinds of dynamics that did so.

#### 3.5.1 Dimensions of Conducive and Constraining Factors

Findings from the analysis of conditions for scaling (as summarised in Table 3.5) demonstrate the existence of both conducive and constraining dimensions.

On the one hand, we found a situation characterised by farmers strongly motivated to make a long-term living from cocoa farming in an agro-ecological zone that is very suitable to cocoa and by a programme introducing an in-principle very suitable approach for addressing challenges faced by cocoa farmers. This presented a good point of departure for STCP. On the other hand, the pathway to scale required dealing effectively and appropriately with the prevalent socio-political conditions and with related organisational structures and institutions, which through their history had made farmers wary about working with government officials. STCP, despite having strong (research) capacity and related values, proved unready to navigate and adjust to socio-political and socio-cultural conditions; this led to a mismatch between the chosen strategic and operational approach and what was actually needed. This demonstrates the need to consider a wide range of dimensions in assessing readiness to guide innovation pathways to scale. An early wider-ranging institutional analysis and feasibility study could have alerted the programme to the need for more caution in the design phase and for flexibility and adaptive management in the scaling phase, even though a strong pilot seemed to indicate that the time was appropriate to take cocoa FFS to scale.

#### 3.5.2 The Interplay of Conducive and Constraining Dynamics

Having presented results in terms of the dimensions that proved to be important to

**Table 3.5 - Summary overview of findings in relation to key dimensions involved in the performance of the STCP/FFS scaling initiative**

<b>Group</b>	<b>Summary characterisation of how this played a role</b>
<b>Natural and physical aspects</b> <i>Quantitative, spatial, kinematic, physical; Biotic, sensitive</i>	<p>Cameroon's agro-ecology has a potential for high yields of quality cocoa, grown by tens of thousands of smallholder farmers. However, formidable challenges exist, such as high incidence of pests and diseases, limited access to improved planting materials, lack of extension provision, and poor road infrastructure. Unsustainable exploitation of fertile forest soils for cocoa causes significant deforestation, causing the loss of biodiversity, and global climate change is increasingly impacting agriculture and the natural landscape.</p>
<b>Human aspects</b> <i>Biotic, sensitive; Analytical–logical; Formative</i>	<p>Growing cocoa is motivated primarily by the need for security of income, land tenure, and general livelihood support. Not all smallholder producers have an entrepreneurial focus. Because STCP focused on entrepreneurship, general participation levels were low, resulting in a bias of the programme towards already organised farmers. STCP's management came from a development NGO background and built on that specific skillset, showing confidence in government institutions and favouring cooperatives. At the same time, cocoa being an underresearched crop, the research-led STCP often let academic data needs, knowledge acquisition, or theory development prevail over a focus on development outputs.</p> <p>STCP's service proposition was based on the proven FFS approach with strong underlying principles and came with an expert-written, high quality technical cocoa curriculum. The quality of the innovation was not contested, but the lack of flexibility in the curriculum and its role-out left little room for creativity and alignment with prevailing conditions.</p>
<b>Social and financial aspects</b> <i>Lingual, social; Economic</i>	<p>The FFS methodology is uniquely focused on applying a participatory, experimental learning language, which facilitates communication and helps cement relationships and roles at farmer level. STCP initially tried to work with hundreds of smaller farmer associations instead of cooperatives. However, hardly any partnerships were developed with the cocoa institutions. Although cost-effective in the long term, FFSs are relatively resource-intensive. STCP could not manage more than 12 cooperatives, mainly owing to challenges regarding the necessary resources, cooperative contributions, logistics, and timing. STCP did build its own expert institutional capacity and memory, but it was unable to retain this in the long term.</p>
<b>Cultural, political, and moral aspects</b> <i>Juridical; Aesthetic, ethical, certitudinal</i>	<p>Cocoa plays a central role in farming systems and associated livelihoods in large parts of STCP's pilot area, and effective cocoa cooperatives and cocoa officials are viewed as providing pivotal services in communities. Cocoa farming is important for them and seen as investment over generations. However, Cameroon's socio-political situation was characterised by a persistent political status quo, strong hierarchy, little incentive for innovation, and under the long-term rule of its president. Resource appropriation by government officials through farmer organisations undermined participation, and smallholder farmers did not expect much support from the government in general.</p>

take into account and how these played out interactively, in this section we focus on the complexity of the interacting processes and related dynamics that shaped the programme's outcome. The research findings and their interpretation are summarised in four steps: 1) social dynamics, 2) system dynamics, 3) scale dynamics, and 4) management dynamics, reflecting the analytical categories derived from the PROMIS approach (see Table 3.3).

### 3.5.2.1 Social Dynamics

The essential findings regarding social dynamics (summarised in Table 3.6) demonstrate how an initially strong partnership in relation to the introduction of FFS turned into malfunctioning decision-making processes in terms of appropriate participation and discussion of alternative perspectives. STCP's choices with regard to scaling processes soon became rigid, allowing hardly any functional connection with the national

**Table 3.6 - Summary of interpreted findings on social dynamics involved in the performance of the STCP/FFS scaling initiative**

Analytical category	Summary of interpreted findings
<i>Stakeholders' decision-making dynamics</i>	STCP represented key research, public, and private sector actors. After the FFS curriculum was adapted for Cameroon with broad stakeholder participation through a large network of farmer-based organisations, only a few emerging cooperatives became part of the strategy for the pilot and possible scaling. MINADER/PNVRA was shunned, except for specific technical staff. Initially, private sector involvement was limited. A large donor's requirements drove STCP to gain technocratic control over the process and to further decrease stakeholders' decision making. With external NGO support, existing and newly created cooperatives were nurtured into incorporating FFS, limiting ongoing feedback opportunities. Finally, quantitative scaling – training numbers – became the key driver, under donor pressure, but increasingly also under private sector pressure due to growing impatience.
<i>Diversity of stakeholders' perspectives, social impact</i>	The research-led STCP did not facilitate discussion between conflicting perspectives on extension delivery options and the scaling thereof. STCP and SOCODEVI as key implementers believed in the approach of scaling through cooperatives, although IITA and donors increasingly expressed their reservations about this. Everyone involved strongly appreciated the value of the technical curriculum, but STCP would not consider a different methodology to accompany it in Cameroon. MINADER/PNVRA in principle valued FFS but could not realistically support or responsibly scale it. PNVRA always regarded STCP as a small closed pilot around a valuable but otherwise unadoptable innovation. Fragile and under-supported cooperatives were happy with donors' interventions but behaved as beneficiaries. Five dropped out, and those that remained expressed doubts about the strategy and complained about pressure.

**Table 3.7** - Summary of interpreted findings on system dynamics involved in the performance of the STCP/ FFS scaling initiative

<b>Analytical category</b>	<b>Summary of interpreted findings</b>
<i>Complexity and connectedness</i>	Implementation of cocoa FFS is not particularly complex, nor does it involve many actors. The intervention conflicted with the existing mode of extension provision, the existing regime. Faced with this stalemate, STCP chose to persist, not reorient. STCP minimised external complexity by creating minimal linkages. Internally, the complexity and connectedness was high because of the logic of working within the values, practices, and facilities typical of cooperatives.
<i>Dominance/deviance dynamics</i>	Extension institutions look to politicians for direction. STCP's interactions with either institutions or politicians were almost non-existent. Niche (FFS) and regime (extension system) did not respect each other's discourse (without contesting the innovation's value). The regime was not prepared to integrate FFS because it was not considered scalable within the socio-political context of Cameroon.
<i>System/practice inertia</i>	The regime was rigidly stable, showing institutional and political lock-in, with disincentives for actors to change. In the absence of political decisions or fund allocation, only the status quo could persist.
<i>System/practice instability</i>	The Cameroonian socio-political landscape has been extremely stable, with practically no mobility. True, in the recent past, the dominant regime had experienced deficiency shocks, particularly after the structural adjustment programmes. Thus, with no resources and no alternative capacities to fall back on, the extension system had not sufficiently recovered to adopt novel technologies like FFS.

**Table 3.8** - Summary of interpreted findings on scale dynamics involved in the performance of the STCP/ FFS scaling initiative

<b>Analytical category</b>	<b>Summary of interpreted findings</b>
<i>Path dependence, past imprinting</i>	Cameroon had previously adopted new approaches, particularly T&V. This logic persisted within its operations, despite resource shortages inducing a shift to micro projects. Earlier pilots on food FFS were evaluated positively. Management did not successfully anticipate ongoing processes or what a scaling-up scenario would entail. It erroneously counted on an emerging cocoa/coffee fund, FFS integration into agricultural colleges, and improving relations with MINADER/PNVRA after management rejuvenation. Soon, STCP's scaling strategy reached maximum capacity, when all cooperative members had been trained.
<i>Anticipated futures</i>	The powerful STCP, supported by the private sector and increasingly by WCF, integrated the latest technologies. FFS was designed to address common challenges and respond to international (consumer) pressure on sustainability and certification and particularly on issues of child labour and pesticide residues. Sector-wide calls for increased smallholder support and training resonated in Cameroon, although some recommendations (e.g. input use) conflicted with existing policy.
<i>Cross-scale, cross-domain dynamics</i>	

extension actors. The obligation to donors and the private sector to achieve a fast return on investment in the form of thousands of trained farmers was a major cause of this.

### 3.5.2.2 *System Dynamics*

The essential findings regarding system dynamics (summarised in Table 3.7) demonstrate how the fundamental absence of institutional space for taking FFS to scale continuously crippled the potential of FFS as such, the potential of the programme, and the potential for emerging partnerships. They also demonstrate how the situation in a country or locality cannot be taken at face value, as initially Cameroon appeared to be more suitable than Cote d'Ivoire (see reference to STCP in Cote d'Ivoire in the introduction), but subsequently proved to have a more rigid institutional context for taking innovations such as FFS to scale; and key stakeholders did not consider this an attractive proposition.

### 3.5.2.3 *Scale Dynamics*

The essential findings regarding scale dynamics (summarised in Table 3.8) demonstrate a mismatch between prevalent institutional conditions and emerging institutional

**Table 3.9** - Summary of interpreted findings on management dynamics involved in the performance of the STCP/FFS scaling initiative

Analytical category	Summary of interpreted findings
<i>The process of engaging stakeholders</i>	Sustainably investing in broad stakeholder interaction was not a priority, particularly with the public and private sector. Working with a broad network of farmer-based organisations was initially unsuccessful. A subsequent focus on a rather restricted group of immature cooperative partners and individual government agents during scaling caused a paternalistic style of interaction. STCP's unsubstantiated vision resonated well with the cooperatives' mandate and strengthened their services but failed to attract large numbers of new members or create new farmer-based organisations. Management seemed to lack the institutional and entrepreneurial skills set to successfully navigate a route across the broader institutional landscape and take on the existing socio-technological regime – even if that were possible.
<i>The scope of analysis and evaluation, and preparation/anticipation</i>	At the level of STCP Cameroon, the scaling process was clearly not by design. No scaling process tracing or monitoring was performed. This precluded any opportunity for evaluation, learning, and/or reorientation.
<i>The connection between strategy and situational reality</i>	This connection was practically non-existent, and the observation of high levels of 'wishful thinking' was consistently made by most stakeholders outside the STCP team. What remains unclear, however, is why regional researchers and the increasingly powerful private sector did not manage (or dare) to reorient a clearly struggling initiative, but rather let it run its course and expire.
<i>The capacity to facilitate convergence</i>	No evidence of any activity other than impromptu, unstructured high-level dialogue on the topic has been recorded.

realities on the one hand, and STCP's strategic approach and operations on the other. They demonstrate the need to pay attention, and connect, to the dynamic history in which programme are to be located, and the need for strategic foresight, neither of which were addressed appropriately by STCP in Cameroon.

#### *3.5.2.4 Management Dynamics*

The essential findings regarding management dynamics (summarised in Table 3.9) demonstrate serious deficiencies with regard to the process of engaging with partners and stakeholders, in the capacity for adaptive management, and in the capacity to facilitate the convergence of competing perspectives and orientations. These were not part of STCP's original design, but were also not prioritised over the programme's lifespan in Cameroon later on. Even though during a 10-year programme there was no clear outlook for improvement in the State's (financial) capacity to take FFS forward, this did not lead at any point to a no-go decision; this further demonstrates the lack of capacity for adaptive management.

### **3.6 Discussion and Conclusions**

This section discusses the research findings in terms of an integral consideration of the various research angles. In section 6.1, we identify the key factors and dynamics that were considered of particular importance for understanding what happened in the STCP/FFS scaling process in Cameroon, and we examine which of these provide the best explanation for the failure to achieve the desired results. In section 6.2, we discuss why the multifaceted nature of scaling processes requires matching comprehensive (analytical) perspectives. In section 6.3, we discuss how learning from this study may benefit other (research) initiatives, and in section 6.4 we draw our general conclusion and make suggestions for further research.

#### **3.6.1 Main Factors and Dynamics Causing the Programme Not to Achieve the Desired Results**

In this section, we answer our first research question regarding main factors and dynamics causing the failure of the programme. This is a synthesis of insights emerging from research findings as described in previous sections. We discuss related issues in light of the MLP as visualised in Figure 3.3.

##### *3.6.1.1 Context for Scaling*

Cameroon, with its political status quo, started the new millennium with top-down agricultural extension services that had been scaled down during the structural

adjustment programme and liberalisation, and continued using outmoded extension approaches. STCP, with its focus on FFS, a participatory learning approach, in effect proposed a socio-technological transition to another extension approach (or paradigm). This proved to be unattainable by the government services, which lacked the resources and incentives to challenge the status quo. STCP proved insufficiently equipped to navigate institutional obstacles and complications. We may therefore conclude that FFS in the case of STCP Cameroon never really scaled up from its niche environment because of an absence of interaction and alignment processes with the dominant socio-technical regime. The cocoa sector, and agriculture in general, were stagnant during the STCP era, and the dominant socio-technological regime was still recovering from system shocks experienced in the 1980s and 1990s. The private sector focused mostly on the main cocoa producers, Côte d'Ivoire and Ghana, and powerful national institutions helped to maintain a socio-political status quo in the absence of clear political intent to provide more resources for extension services (innovative or existing). This was also demonstrated by delays in setting up mechanisms for internal funding. Thus, there were few external pressures or internal incentives for change.

The above characterisation of the situation underscores the importance of contextualising programmes, particularly in scaling processes (Klerkx, Seuneke, de Wolf, & Rossing, 2017). FFS had a strong track record in terms of its potential for engaging farmers in participatory ways to address challenges in agriculture (Braun, Jiggins, Röling, van den Berg, & Snijders, 2006). STCP was meant to capitalise on this potential, but management paid insufficient attention to the fact that even a model as successful as FFS needs to become institutionally embedded through contextualised processes (Chuluunbaatar & Yoo, 2015).

### *3.6.1.2 Readiness for Scaling*

The programme suffered from general management issues that became an impediment to scaling. STCP Cameroon underestimated what was needed managerially, after the pilot, to appropriately embed an innovation and manage an inclusive scaling process that was not technology-driven. Appropriate guidance is essential, and the idea of rolling out an innovation after successful piloting was – at least in this case – inappropriate. The regional coordination's role can also be called into question. The required capacities within STCP Cameroon and among its national scaling partners for managing the scaling process were not properly assessed and consequently not catered to as needed (Schut et al., 2016). We therefore conclude that a successful pilot is not an automatic assurance of successful scaling. The financial picture as presented in Table 3.5 further undermined readiness for scaling because of the high costs associated with FFS. MINADER/PNVRA and cooperatives, who were meant to co-invest, confirmed the cost concern that other



authors reported earlier (e.g. Braun & Duveskog, 2008; Davis, 2010). The issue of readiness for scaling can also be considered from a wider perspective on the intended role of FFS. FFS can be an extension approach to convey particular knowledge packages to farmers (which can be useful for the private sector if they connect to particular products and services), but it can also be an approach to empower farmers, enabling farmers to make their own decisions on the basis of increased access to knowledge, a capacity to innovate, and a capacity to cooperate (van de Fliert, Dilts & Pontius, 2002). We argue that, in the case of cocoa FFS in Cameroon, the model focus was stronger than the means focus. This has led STCP in Cameroon to adopt a model-replicating mode and the associated rigidity and lack of flexible navigation of institutional realities. This was further exacerbated by the external pressures to perform along the lines of the model. This is in line with learning from the case of farmer livestock schools in Vietnam, which led Minh et al. (2010) to emphasise the need to assess the existing innovation system and then gradually and systematically introduce matching institutional innovations.

### *3.6.1.3 Scaling Strategy*

The scaling strategy was chosen on the basis of personal judgement rather than a systematic assessment of all potential options. The choice to spend significant resources on building up a small number of emerging cooperatives appears to have been inappropriate. The data on the three other STCP countries show that these involved national extension through master trainers, right from the start. This confirms the essential role played by skilled facilitators and trainers in FFS and the associated difficulty of extending benefits from FFS beyond the initial groups of farmers and initial pilots, such as discussed by e.g. Braun and Duveskog (2008) and Waddington et al. (2014).

MINADER/PNVRA did not have the necessary political and budgetary backing to adopt FFS, and no other entity could realistically take FFS to scale. It would have been conceivable to put scaling on hold and invest in a lobbying exercise with the government of Cameroon (a member of STCP's regional Executive Committee). STCP's private sector partners were possibly in a stronger position to put pressure on government, being part of the same PPP. More management foresight might have led rather to a no-go decision on scaling, paying more attention to lobbying and other pressing STCP themes such as 'planting materials' and 'pests and diseases'. This underscores the emphasis placed on understanding and engaging with processes of FFS institutionalisation (e.g. by Chuluunbaatar & Yoo, 2015).

An important condition for sustainable scaling success – sustainable national financing mechanisms – did not materialise (at least not fast enough) in Cameroon. STCP's core partners all put pressure on the programme in diverse ways: SOCODEVI was key to

the decision to focus exclusively on cooperatives; IITA researchers insisted on intensive data collection; the main donor, the United States Department of Agriculture, dictated ideal type FFS implementation through a rigid log frame approach; and indirectly the private sector put disproportionate pressure on the cooperatives to train beyond their membership base. These dynamics created strong path dependence for STCP's country management who seemingly attempted to meet all the above expectations, conceivably against their better judgement regarding scaling and institutionalisation. This again raises the issue of the way in which FFS is perceived: as a model or as a means (van de Fliert et al., 2002).

#### *3.6.1.4 Scaling Approach*

The MLP suggests that the objectives of management and donors need to converge, become aligned somehow, with the objectives of all prospective scaling partners (Geels & Schot, 2007). The international (and particularly private) donors' objective to achieve quantifiable impact – training numbers – prevailed however. This should not have come at the expense of paying attention to the complex dynamics involved in processes related to institutionalisation, scalability, and sustainability in the long term (this relates closely to the discussion in section 3.6.1.1 on FFS as a model to be replicated). The process became paternalistic rather than participatory for the cooperatives (which van de Fliert (2012) already identified as key factor), and STCP did not purposefully engage with the other stakeholders in the cocoa extension arena. STCP's claim that a partnership with MINADER/PNVRA was emerging was not substantiated by the data, even though the related wider institutional buy-in was important information for donors and regional management.

Several underlying core principles of the approach were not satisfied, nor accepted at the regime level. The understanding of MINADER/PNVRA about cocoa FFS was in fact close to business as usual. STCP could have insisted in developing broad regime support for more than the technical curriculum and the label. Instead, in the eyes of the regime actors, it adhered to the promotion of its 'brand' type of the FFS approach and the technical cocoa curriculum as a dogmatic package. Working with a high-quality single crop curriculum was in principle quite compatible with MINADER/PNVRA, who expressed appreciation of the curriculum while at the same time making it abundantly clear that it could not adopt FFS. Failing to link up and capitalise on this institutional reality may have been a missed opportunity. This situation points to the importance of (i) flexibility of approach, (ii) the search for alignment, and (iii) the development of joint national ownership for both the piloting and a potential scaling process.

### **3.6.2 The Need for Multidimensional Understanding of Scaling Initiatives**

Scaling and institutionalising FFS involves a double layer of complexity (Chuluunbaatar & Yoo, 2015). First, there is the approach as such with its core principles (as outline in Table 1) and the intricacies of what in this approach connects to prevalent conditions in the agricultural sector in general and to prevalent approaches to extension specifically. Also, FFS institutionalisation involves both institutionalisation of principles underpinning FFS and institutionalisation of FFS as an approach (Braun & Duveskog, 2008). Second, scaling processes introduce additional dynamics to be taken into account as discussed in the previous section. The findings from this research help to clarify this double layer of multifaceted change dimensions and dynamics (Wigboldus et al., 2016) and illustrate how the scaling of a well-defined model involves anything but a model roll-out process. This supports findings by van de Fliert et al. (2010) who emphasised the importance of a participatory approach, appropriate capacity of researchers and facilitators, and ownership by relevant stakeholders. It also demonstrates the important role of a comprehensive analysis, illustrating how – in the midst of many positive conditions (as was the case for cocoa FFS in Cameroon) – other complicating factors may still outplay their effects. A sufficiently broad-ranging analysis is not just useful for doing a retrospective assessment as we did in this paper, but, as argued in section 3.5.1, would be even more important as part of preparations for the design and management of scaling initiatives.

### **3.6.3 Wider Application of Findings**

The findings from this study may be relevant for initiatives worldwide focused on the wider use of FFS or similar participatory learning approaches, but also more broadly in relation to taking agricultural innovations to scale. For instance, the same conditions for, and impediments to, change may apply to the setting up and organisation of innovation platforms (e.g. Kabamba et al., 2014; van Paassen, Klerkx, Adu-Acheampong, Adjei-Nsiah, & Zannoue, 2014). More widely, the findings underscore the need to take scaling processes in agricultural innovation seriously; this involves appropriate critical analysis, strategic competencies, collaboration, and creative management capacity (Westley, Antadze, Riddell, Robinson, & Geobey, 2014; Wigboldus & Leeuwis, 2013; Wigboldus et al., 2016). Many studies on scaling agricultural innovations focus on the achievements of the scaling process (e.g. in terms of adoption or dissemination) and the scaling mechanisms involved (e.g. farmer-to-farmer extension). The approach used here further broadens the scope of analytic dimensions and dynamics that affect, or are affected by, scaling processes such as socio-cultural and socio-political conditions. It can help decision makers to consider what needs to be taken into account in the design, management, and monitoring and evaluation of scaling initiatives, all of which continue to be key challenges in agricultural research and innovation.

The findings support suggestions from recent literature pointing to the need to translate and adapt pilots to specific context conditions and ‘best-fit’ options, rather than approaching scaling-up as a mere rolling-out process (Garb & Friedlander, 2014; Giller et al., 2011; Shiferaw, Okello, & Reddy, 2009). Consideration must be given to the implications of future scaling from a stage as early as innovation design and piloting (Ghiron et al., 2014). The need for specific competencies for guiding scaling initiatives – competencies that go beyond those involved in implementing pilots – has also been noted by others (Hermans, Stuiver, Beers, & Kok, 2013; Spruijt et al., 2014; Wigboldus & Leeuwis, 2013; Wittmayer & Schöpke, 2014).

### **3.6.4 Conclusions**

The case of STCP and cocoa FFSs in Cameroon demonstrates that, when an innovation (in this case FFS) has been selected because of its attractive attributes, the scaling-up process involves more than the mere implementation of an organisational roll-out plan. A structured analysis of the institutional landscape, including scenario planning, is needed to identify opportunities and elucidate what a successful scaling process might involve. This would need to include an assessment of regime and context characteristics, including past, present, and anticipated (future) aspects and dynamics; how an initiative would need to engage (adaptively) with identified constraints and opportunities; and the capacities and competencies that would need to be in place to support organisational and relational processes. Guidance on FFS preparation and implementation processes along these lines would enhance the situational effectiveness of FFS. In this, the primary goal would not be to scale FFS as a model to be replicated or as a curriculum to be rolled out, but rather to scale it for the benefit of farmers as (one of the possible) means to empower them.

This paper discussed some dynamics that could be studied more generally, such as the extent to which choosing a particular initial entry mechanism (e.g. small-farmer organisations) to pilot an innovation creates path dependence from which it is hard to escape during the process of scaling and institutionalisation, and how funding mechanisms may create perverse incentives that undermine adaptive management capacity and partnership processes. This also relates to the tension between FFS as a flexible approach (e.g. FAO, 2016) and the high expectations of its instrumentality for achieving impact at scale, which funders of development efforts hold and communicate to programmes. The resulting drive for speed and short-term results may jeopardise one or more of the principles upon which the approach is based, and similar tensions may occur in relation to similar participatory approaches such as innovation platforms.

# 4

## Scaling service delivery in a failed state: cocoa smallholders, farmer field schools, persistent bureaucrats and institutional work in Côte d'Ivoire



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### **Abstract**

The increased use of sustainability standards in the international trade in cocoa challenges companies to find effective modes of service delivery to large numbers of small-scale farmers. A case study of the Sustainable Tree Crops Program targeting the small-scale cocoa producers in Côte d'Ivoire supplying international commodity markets shifts attention from mechanisms of private governance to the embedding of service delivery in the institutional dynamics of the state. It demonstrates that, despite a recent history of violent conflict and civil unrest, the introduced Farmer Field Schools programme achieved a surprising scale in terms of numbers and geographical spread. The analysis of this outcome combines political science and anthropological studies of effective and developmental elements in the state with the interest in institutional work found in organization science. The scaling of a new form of service delivery is explained by the skilful practices of institutional work by managers of a public-private partnership. They have been professionally associated with the sector for a long time and had the capacity to embed new forms of service delivery in persistent pockets of bureaucratic effectiveness in a failed state.

**Keywords:** Africa, Côte d'Ivoire, Farmer Field Schools, cocoa sector, governance, agricultural extension, bureaucracy

## 4.1 Introduction

At the beginning of the new millennium, the cocoa sector in Côte d'Ivoire, its cocoa organizations and the country itself, could not have had a worse reputation. In 2001, reports of a 'child slave ship' in trouble off Africa's west coast (Lamb, 2001) sparked allegations of child slavery on cocoa plantations, causing an international outcry. By 2002, the country had entered another period of violent conflict and economic crisis, and in the following years, funds destined for cocoa farmers were used to fuel the fighting (Klaas, 2008). In 2005, the country ranked highest on the 'Failed States Index' (FFP, 2014) and political elites maintained their status quo in the cocoa sector (Woods, 2007). Côte d'Ivoire was generally considered, under the rule of President Gbagbo, to be a failed state with clearly predatory traits.

This context seems not very conducive for endeavours to implement sustainability standards for cocoa and the related new forms of service delivery to large numbers of small-scale cocoa farmers. Nevertheless, a public-private partnership (PPP) programme targeting cocoa farmers was able to organise a growing number of Farmer Field Schools (FFS), and consequentially reach a substantial number of smallholder cocoa farmers and even transform a top-down extension approach into a participatory discovery learning approach. Alignment of the PPP with the Ivorian extension system and the mobilization of unprecedented national and international private sector support appear as crucial preconditions for this outcome. This reflects a puzzling outcome when seen in the light of the discussion on failed states: what generated this scalable form of service delivery in a context that appears unconducive?

For explaining the observed transformation and scaling of service delivery to small-scale cocoa farmers in Côte d'Ivoire, this paper investigates the sequence of activities set in motion by the career professionals managing the Sustainable Tree Crops Programme (STCP), a regional public-private partnership programme in West Africa (2001-2011). STCP introduced the FFS method and connected it with the on-going reform process of the public agricultural extension infrastructure in the country. The analysis of the specific case of scaling FFS in Côte d'Ivoire aims at tracing pathways through which project or company-based sustainability initiatives merge with the continuously reproduced and gradually transformed modes of operation of specialized groups of career professionals within the state bureaucracy.

The case study central to this paper addresses the question of how the practices and strategies of career professionals, both within and close to the bureaucracy, generated the scaling of a novel form of delivering extension services. Instead of looking at the



state as an unwieldy vehicle, the paper focuses on functional units within the state. Analysing this connection made between the practices of PPP management and the institutions in the cocoa sector may offer clues to how effective and scalable transition strategies towards agricultural and rural sustainability are brought about.

Understanding how FFS, a new bottom-up form of service delivery and knowledge exchange, reaches large numbers of smallholder cocoa farmers is relevant for various sustainability initiatives. Today the private sector has a leading role in these initiatives, often in partnerships with NGOs and international development agencies. Apart from addressing the issue of child labour in cocoa farming, such partnerships usually concentrate on training producers and ensuring compliance with sustainability standards (Bitzer, Glasbergen, & Leroy, 2012). However, in strategic sectors such as the cocoa economy in Côte d'Ivoire or Ghana, the public sector will be part of these sustainability initiatives, anchored in the private sector and civil society (Vellema, Laven, Ton, & Muilerman, 2016). Hence, it is important to explore in what ways the public sector accommodates or adjusts to these private initiatives and what this implies for the embedding of global standards in locally established modes of partnering (Vellema & van Wijk, 2015).

The FFS approach promoted by STCP in Côte d'Ivoire was not new, but it was innovative for cocoa in West Africa, offering a 9-month-long training not on a food crop but on a perennial crop. A successful small-scale initial experience in Indonesia led to the co-designing and piloting of the cocoa FFS approach in Central and West Africa in collaboration with the national research and extension institutions. In contrast to the classic transfer-of-technology approaches, cocoa FFS showed measurable impact on farmers' productive capacity (Gockowski, Asamoah, David, Gyamfi, & Kumi, 2010). FFS entails a shift from abstract, academic, specialized and slow-to-change knowledge production to more localized multidisciplinary knowledge production in a context of application (Gibbons et al., 1994; Nowotny, Scott, & Gibbons, 2001, 2003). FFS is focused on locally adapted participatory, flexible knowledge production by groups of smallholder farmers, and can be translated differently by actors manoeuvring in the context of institutional change (Sherwood, Schut, & Leeuwis, 2012).

The paper starts by explaining the design of the case study and our conceptual lens. Next, it describes the context of the introduction of STCP FFS and presents the outcomes in terms of achieved scale of novel modes of service delivery (e.g. Nowotny, et al., 2003; Wigboldus & Leeuwis, 2013). The analysis detects four plausible processes generating the scaling of FFS in the specific context of Côte d'Ivoire. By offering a more contextual assessment of the outcomes of induced modes of service delivery to small-scale farmers,

the paper adds to the emerging area of research on the African state and the dynamics of its bureaucracies. The discussion builds on Booth et al. (2015) who argue that not compliance with ‘good governance’ principles, but rather a deep understanding of the functioning of regimes explains differences in development performance. A combination of the concepts of ‘institutional work’ found in organization science (Lawrence, Hardy, & Phillips, 2002; Lawrence, Suddaby, & Leca, 2009) and ‘pockets of effectiveness’ used in political science as well as anthropological studies of effective and developmental elements in the state (Bierschenk, 2010; Bierschenk & de Sardan, 2014; Roll, 2011, 2014) is proposed to unravel the situated processes of diffusion and scaling.

## 4.2 Methods

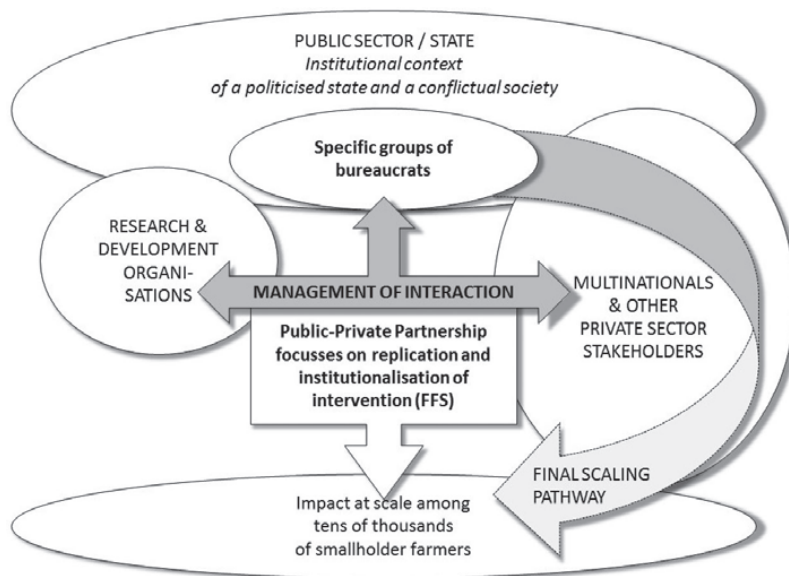
### 4.2.1 Data collection

The case study central to this paper documents and analyses the sequence of events and organizational actions contributing to the scaling of FFS in Côte d’Ivoire. The STCP partnership was considered to have pioneered the cocoa FFS approach in West Africa. The implementing partners themselves, including the International Institute of Tropical Agriculture (IITA), recognized the need to learn from the experience (STCP, 2009, p. 23).

Main data sources were project documents, internal discussion papers, Memoranda of Understanding and contracts between STCP and partner organizations, compiled from the archives. From this broad set, twenty-four key documents (mainly annual reports, newsletters, program overview papers, pilot and transition reports and progress reports) were selected for in-depth analysis of the scaling process. Key statistics came from the partnership’s M&E and training databases, and from financial administration.

For further insight, additional qualitative data were collected through in-depth, semi-structured (group) interviews in June 2010, one year before STCP became defunct. Interviews purposely targeted specific high-level officials in government institutions ANADER and FIRCA; the ANADER staff operating within STCP; partner cooperative and NGO staff; STCP management staff at the national and regional level; and a local FFS project expert. Field research at the cooperative level in Côte d’Ivoire was limited to the Abengourou area owing to the continued socio-political crisis, unrest and insecurity.

Short follow-up interviews were held with partnership staff over the course of 2010 and 2011. Interviews were recorded and transcribed and an initial synthesis was shared with the STCP’s country manager for validation and for guidance on additional sources to corroborate data.



**Figure 4.1** - Conceptual framework for analysing the management of interactions within and across the boundaries of the PPP

#### 4.2.2 Data analysis

The data were analysed through inductive content and discourse analysis focussing on interactions, courses of events and the evolving interactions among partners. This was done after STCP ended and all of its IITA-affiliated management moved on in their careers. Figure 4.1 presents the conceptual framework used for analysing the management interactions within the PPP, and interactions of the proposed strategic intervention (FFS) with specific groups of state bureaucrats, functioning in an unconducive institutional and socio-political context, aiming to achieve effective public service delivery.

#### 4.2.3 Limitations of the study

The principal researcher was externally recruited, but undeniably linked with STCP's key partner IITA. This may have affected the perceptions and expectations of interviewees. Also, due to the retrospective nature of the study and – for the interviews – a dependence on informants' memory, some details and interpretations related to decision-making are likely to be missing or skewed by hindsight. At the same time this is inevitable when the study aims to look through the eyes of the key actors to understand its outcome. The research documented on specific practices of career professional managing interactions within the partnership and the state bureaucracy, reported in reviewed documents and observed by respondents, in order to understand a specific outcome: the number and

spread of FFS. The research did not assess key respondents' backgrounds or their actual practiced norms and values (including levels of personal and fiscal integrity).

### 4.3 Results – A case study of scaling extension models and service delivery in Côte d'Ivoire

#### 4.3.1 Public programmes on service delivery in cocoa

From around 1999, governments in West Africa, their partners in development and the global chocolate industry committed to developing a healthier and more responsible cocoa value chain (Shapiro & Rosenquist, 2004). The realization that increases in yields could play a significant role in the fight against poverty was reinforced by international consumer, media (Hawksley, 2001) and political pressure especially on the eradication of (the worst forms of) child labour and by upcoming certification schemes focused on social and environmental sustainability. A key constraint to achieving success in this area was the near absence of agricultural extension and the ineffectiveness of service delivery. An STCP baseline (Kouadjo, Keho, Mosso, & Toutou, 2002), showed that in 2001 only 19% of Ivorian cocoa farmers had been in contact with a government extension agent within a period of three months.

In an attempt to address the weak cocoa extension infrastructure in West Africa, STCP was launched in 2000. Conceived as a public-private partnership (PPP), STCP was predominantly funded by the global chocolate industry, represented by the World Cocoa Foundation (WCF) and the United States Agency for International Development (USAID); it was hosted by IITA and operationally supported by the national governments of Cameroon, Côte d'Ivoire, Ghana, Nigeria and Liberia. Over the course of a couple of years the programme adapted, tested and validated the FFS method for training cocoa farmers on integrated crop and pest management (Asare & David, 2011; David & Cobbah, 2008).

A country manager and technical field staff were responsible for the programme's direction and embedding in each country. Bitzer, et al. (2012) describe how, by 2010, STCP had turned into a regional hub coordinating many of the partnerships active in West Africa. It served as a platform for technology dissemination and research and concentrated resources and expertise on farmers' training. Through access to its country-level infrastructure and institutional network, STCP took up a broker's function among researchers, local communities, donors and companies. The expectation was that the programme's brokerage would sustain the mode of service provision and create leverage resulting in more partnerships being established and more resources invested (STCP, 2010a, pp. 10-13).

The case study of the scaling of STCP FFS in Côte d'Ivoire first describes the context wherein this took place. It then presents the outreach and scale of the STCP programme and later of the service provision by the public agricultural extension agency, *Agence Nationale d'Appui au Développement Rural (ANADER)*, and introduces the different groups within the cocoa bureaucracy. Next, it maps the connections between the intervention programme and the particular context in Côte d'Ivoire.

### 4.3.2 Context: state reform and conflict

After independence, Côte d'Ivoire experienced a period of stability and economic success aided by an extensive bureaucracy based on a network of political patronage (Bonjean & Chambas, 2001), the increasingly important export of cash crops, mainly cocoa, and foreign investments (Boone, 2007; Romani, 2003). After the 1960s, for nearly 30 years, cocoa production developed with a central role for the *Caisse de Stabilisation et de Soutien des Produits Primaires Agricoles (CAISTAB)*, with roles including external commercialization and the assurance of price stability for cocoa producers.

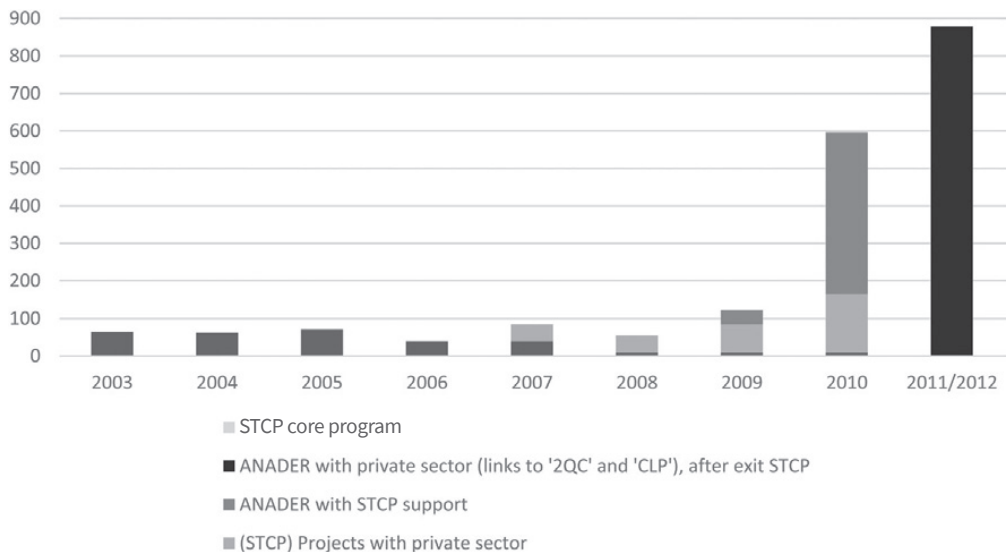
In the 1980s and 1990s, this 'Ivorian miracle' was affected by fluctuations in the international commodity markets and the imposed structural adjustment programmes deregulating the cocoa sector (Gilbert, 2009; Grossman-Greene & Bayer, 2009; François Ruf, 2009). Boone (2007) shows that the breakup of state control over the cocoa export circuit created spatially dispersed points of corruption, private accumulation and even political mobilization all along the coffee-cocoa marketing network across southern Côte d'Ivoire. Towards the end of the 1990s, the political situation became unstable. This had already started in 1993 after the death of Houphouët Boigny, the long-reigning President, and culminated in protracted political turmoil with an ethno-nationalistic character. Finally a coup d'état in 1999 created deep ethno-political divisions in society (Daddieh, 2001; Mitchell, 2012). A series of manipulated elections, widespread protests and a failed attempt at a coup in 2002 resulted in a civil war with ties to conflicts in Guinea, Liberia and Sierra Leone and split the country along ethno-regional lines in 2003 (Chauveau & Richards, 2008; ICG, 2010). When in 2007 a peace was brokered, the agreement did not address the root causes of the conflict (Ayangafac, 2007). These tensions resurfaced during the tumultuous 2011 presidential elections, in which Laurent Gbagbo refused to admit defeat and finally was arrested and sent to the International Criminal Court in The Hague.

In 1999, the World Bank withdrew its funding for the national agricultural research and extension institutions *Centre National de Recherche Agronomique (CNRA)* and *ANADER* (Stads & Doumbia, 2010). A myriad of newly emerging or provisional regulatory agencies and service delivery organizations in the cocoa sector created

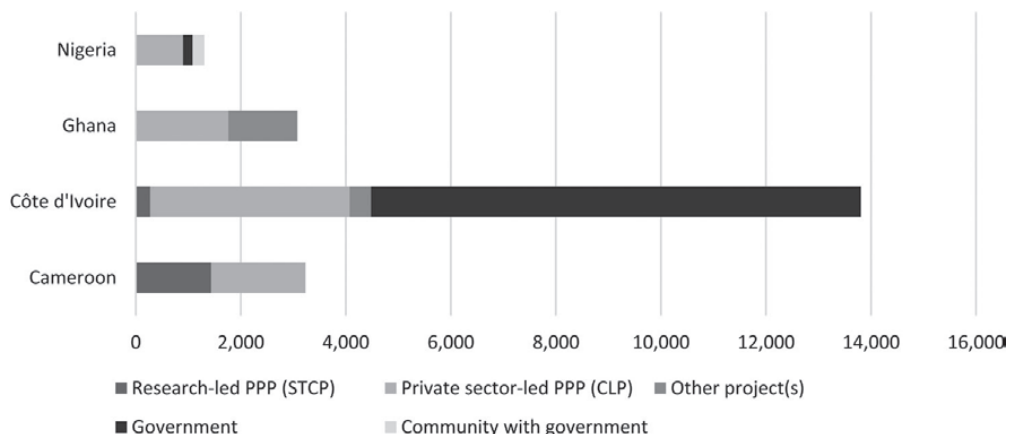
competition distortions and added administrative charges (Bonjean & Chambas, 2001; Gilbert, 2009). Transnational companies, supported by fiscal incentives, increasingly influenced the dynamics in the sector at the expense of national exporters. The sector was ill-equipped to deal with hard-bargaining commodity buyers; cocoa farmers were additionally levied through the system installed by the central Ivorian government to collect taxes (Gilbert, 2009; Grossman-Greene & Bayer, 2009; François Ruf, 2009). The public sector and politicians were notorious for their lack of transparency and for misappropriation (Dévérin, 2006; GlobalWitness, 2007; ICG, 2009). Ayangafac (2007) emphasizes that the crisis needs to be understood as a struggle for control over the institutions that distribute resources, most notably cocoa. These political developments shaped the conditions for service delivery and thus for the STCP programme.

### 4.3.3 Outreach and scale of service delivery

In this context of Côte d'Ivoire, with political turmoil, violent conflict and a failed state with clearly predatory traits, it seemed unlikely that STCP would achieve its targeted outcomes in terms of the numbers of FFS organized and farmers reached and simultaneously achieve an exit strategy that would materialize in public and private actors taking over the new mode of service delivery. Ten years later, contrary to this initial expectation, ANADER, Côte d'Ivoire's public agricultural extension organization, reported that 879 FFS had been organized in the 2011/2012 cocoa season (ANADER,



**Figure 4.2 - Reported number of cocoa FFS involving ANADER**  
 Data source: STCP annual reports 2003-2011 & ANADER annual report (2013)



**Figure 4.3** - Number of direct cocoa FFS graduates, per STCP project country, in 2010  
Source: STCP (2010)

2013) directly after STCP stepped back, using national and international private sector support (Fig. 4.2). By 2010, the programme reached more smallholders in Côte d'Ivoire with Farmer Field Schools (FFS) than in three other West African countries combined (Fig. 4.3). If we take a realistic average number of about 30 participants for a cocoa FFS in Côte d'Ivoire (Muilerman & David, 2011) this reported figure would mean that approximately 26,000 people graduated from cocoa FFS in 2011/2012, or roughly 3-4% of the estimated 600-900,000 cocoa smallholders (Ingram et al., 2014).

STCP temporarily halted activities on the ground after another episode of socio-political instability and violence in early 2011, though work continued into 2012 (STCP, 2011a). However, during this time, ANADER led the organization of FFS, which took off in a great flight under the national '*Quantity, Quality and Growth Programme*' (2QC) (STCP, 2011c). The private sector and international donors increasingly aligned with 2QC in collaboration with the fully overhauled national cocoa institutions now managed by the CGFCC's successor, the *Comité Café Cacao (CCC)* in which the former STCP country manager today fills a key position (STCP, 2011b).

Besides ANADER, the public agency for extension, the private sector contributed significantly to the diffusion of FFS. According to the PPP's annual reports, initially the private sector's initiatives under the PPP focused on the training of FFS facilitators coming from cocoa cooperatives (63%) or communities (33%) and did not focus on those from ANADER (2%) or NGOs (2%) (STCP, 2010b). Eventually it was mainly through independent national funding awarded to the PPP that the number of ANADER



agents trained on cocoa FFS tripled to around 200, thus allowing for collaboration at scale (STCP, 2010b).

From the interviews emerges that especially towards the end of the PPP program ANADER increasingly moved into the driver's seat, despite the fact that these semi-privatised bureaucrats were part of what can be called a dysfunctional state apparatus. By 2010, the FFS had taken off on a large scale and also continued to grow after 2011 when STCP became defunct in Côte d'Ivoire. The private sector kept up its collaboration with ANADER and built on new initiatives such as the WCF's Cocoa Livelihoods Program (CLP) (Fig. 4.2). This outcome for FFS in Côte d'Ivoire is even more striking if we consider the challenging socio-political and institutional context under the reign of President Laurent Gbagbo (2000-2011). During the electoral crisis of 2011, even ANADER's headquarters in Abidjan were pillaged, reported ANADER-seconded STCP staff. The work in 2012, 'happened in an appeased socio-political context which favoured a good working climate' (ANADER, 2013, p. 4, author's translation) although Ruf et al. (2014) point to a lack of capacity within ANADER and CLP after the departure of IITA in 2011.

Since the end of the STCP programme in 2011, Côte d'Ivoire's regulatory cocoa organizations have become more pro-active. In 2014, the Ivorian government and the WCF announced an unprecedented strategy to accelerate public-private collaboration. According to Barry Parkin, WCF Chairman and Chief Sustainability Officer at Mars Inc.:

This agreement represents one of the most significant steps the sector is taking to make cocoa sustainable (WCF, 2014).

Below, the paper first introduces the central elements of the cocoa bureaucracy that still existed despite the context of conflict and state reform. Subsequently it traces the different processes that defined the interactions of groups of bureaucrats within the STCP programme, in order to better understand service delivery and the scaling of FFS.

#### **4.3.4 Persistent elements of the cocoa bureaucracy**

Four cocoa-related bureaucratic organizations played a principal role in the process through which the PPP firmly fixed its approach to service delivery in the organizational infrastructure in Côte d'Ivoire until 2011: ANADER and CNRA, *Fond Interprofessionnel pour la Recherche et le Conseil Agricoles* (FIRCA) and *Comité de Gestion de la Filière Café Cacao* (CGFCC).

#### 4.3.4.1 ANADER & CNRA

Cocoa extension (training, advice, and research) in Côte d'Ivoire has been the mandate of ANADER and the CNRA. Both were launched in the 1990s during the reform processes controlled by the IMF and World Bank. ANADER is the coordinating agency for agricultural extension and functions as an intermediary between the national agricultural research centres (mainly CNRA) and the farmers. Throughout the country, a large network of agents and agronomists stayed in villages and provided professional services to farmers, including the introduction of innovations and formation of farmers' groups. (Romani, 2003) showed how, around 2000, ANADER's extension focus and impact was mainly on food crops and less on coffee and cocoa.

ANADER and CNRA could not work in large parts of the country in the first decade of the new millennium. CNRA was heavily affected by the crisis, and today its capacity is greatly reduced in comparison to when it benefitted from World Bank-funded programmes, or with the research budget of its largest competitor, Ghana. Today CNRA is funded directly by the private sector, through the producer organizations of the different agricultural value chains, managed by FIRCA (Stads & Doumbia, 2010).

#### 4.3.4.2 FIRCA

The *Fond Interprofessionnel pour la Recherche et le Conseil Agricoles* (FIRCA), established in 2002 (Stads, 2011) but operational only by 2007/2008, was a milestone in the restructuring of the research and extension services. It is essentially a federation of over a dozen associations from industry including producers and processors (Byerlee, 2011) and a financing body for agricultural research, extension provision, and capacity building of agricultural producers and their professional organizations. Not only the state but all producers participate financially through professional savings schemes per agricultural value chain.

This system is not fully in place for all commodities and most notably not for cocoa where funds are provided through levies on exports (Byerlee, 2011). From the interviews it becomes clear that the cocoa operators and associations are represented in the advisory body *Comité National des Sages* (CNS) and in FIRCA's General Assembly with representation according to the importance of the agricultural product and the funds contributed by that particular value chain. The associations have a majority vote (73%) in both the General Assembly and the Executive Board. The other members are representatives from agro-industry and academia, with a remaining 5% made up of government officials. At least 75% of the professional savings mobilized by a specific value chain will be used to that particular value chain. The rest is principally dedicated to solidarity with other underdeveloped and difficult to auto-fund value chains (mainly

of food crops). A percentage is reserved for FIRCA's administration (Stads, 2011; Stads & Doumbia, 2010).

Despite its tendency to under-invest in agricultural research, largely due to its non-exclusive and non-rival nature (Byerlee, 2011), the private sector has taken over the role of funding agricultural capacity building, extension provision, and research. It should be noted that involvement by the private sector has always been more 'intimate' in Côte d'Ivoire than in other cocoa economies (Vellema, et al., 2016). FIRCA's professional savings schemes and innovative funding of commercial research are unique in Africa (Byerlee, 2011; Ragasa & Byerlee, 2013; Stads, 2011; Stads & Doumbia, 2010).

#### 4.3.4.3 CGFCC

In September 2008, President Gbagbo announced another overhaul of the management of the cocoa sector with the formation of the provisional *Comité de Gestion de la Filière Café Cacao* (CGFCC) (Grossman-Greene & Bayer, 2009). This move, perhaps surprisingly, lessened direct political control over the cocoa sector (Gbagbo, 2008b). By the end of 2011, all the cocoa institutions established since 1999 were united under the permanent CCC, the successor to the CGFCC.

### 4.3.5 Embedding FFS and service delivery in the cocoa bureaucracy

This study primarily focuses on the embedding of new forms of service delivery for an explanation of the observed scaling, rather than explaining the achieved scale from the nature of the FFS approach itself. The scaling of the service delivery introduced by the PPP co-evolved with institutional reforms in the cocoa sector in a troubled socio-political context (Table 4.2). Deliberately making connections with the bureaucratic career professionals in the state appeared to be an important characteristic of the work of those managing the PPP. Our conceptual lens and method of inductive analysis and discourse analysis of the documents and interviews helped to identify four emerging purposive actions, which elucidate how STCP management aligned interventions with the remaining bureaucratic autonomy in the cocoa sector. The section below traces these actions. It starts at the farmers' level and then looks for linkages between the PPP and bureaucrats at the levels above that of the farmers. These examples of purposive and situational actions by the PPP unpack the observed scaling 'against the odds' amidst a turbulent stream of dramatic socio-political developments within the Ivorian institutional cocoa landscape.

#### 4.3.5.1 Flexibly modifying extension modalities

The first action reveals flexibility and the willingness on the part of the PPP to step away from dogmatic thinking about how higher and lower-level extension staff could link with

**Table 4.1** - A timeline of key instructive events showing the co-evolution of cocoa FFS and events of national importance

Year	Period	Cocoa sector-related event	National politics
1994	Before scaling FFS	ANADER formed out of a number of previous extension bodies.	Devaluation of FCFA Bédié re-elected while opposition boycotts in protest against exclusion of their candidates which are not 100% of Ivorian descent.
1999		Total liberalization of cocoa sector, release cocoa price, liquidation of CAISTAB. World Bank pulls out of long term programmes, drastically reducing funds ANADER, CNRA. Transnational companies enter Ivorian markets and strengthen positions over the next 5 years.	Military coup against Bédié led by Robert Guei. President Bédié flees to France.
2000		Nouveau CAISTAB restructured and dissolved into ARCC, BCC, FRC, FDPCC and GFGCCC	Guei proclaims himself president, but flees the country after popular uprising against perceived election rigging. Gbagbo proclaimed winner and president. Ouattara, excluded, calls for new election. Fighting erupts between Gbagbo in (Christian) South and Ouattara in (Muslim) North. Gbagbo wins parliamentary elections.
2001		Harkin-Engel protocol on eradication of child labour rocks cocoa sector. Private sector declares no trust in bureaucracy but STCP decides to work with them anyway.	Attempted coup fails Reports of child slave ship off Africa's west coast. Allegations of child slavery in cocoa cause international outcry and force the government to take action.
2002		FIRCA 'created' (operational in 2007), final step in the restructuring of extension and research.	Mutiny among demobilized military degenerates into rebellion, leads to civil war. Côte d'Ivoire Patriotic Movement rebels take control in the North.
2003		FIRCA 'established' (operational in 2007)	Country virtually split North-South. Military and rebels declare that war is over.
2004		STCP organizes extensive field visit for FIRCA, ANADER and World Bank. First private sector partner demands support from STCP to collaborate with extension service	Opposition rally against Gbagbo in Abidjan leads to over 100 deaths after violent crackdown, suspected to be part of planned action by security forces. UN peacekeeping force deployed.
2005		STCP partners with FIRCA STCP receives funding from 'old' FDPCC	Elections postponed after new law allows Gbagbo to stay in office.

*Table 4.1 - Continued*

<b>Year</b>	<b>Period</b>	<b>Cocoa sector-related event</b>	<b>National politics</b>
2007	During scaling FFS	FIRCA decides to award funding to 'Service Provider' STCP. FIRCA operational, 'old' funds disappeared, World Bank and government call pace and result of reform 'disappointing'. Former cocoa executives jailed for stealing.	Political Accord of Ouagadougou President Gbagbo declares war between the North and South is over. Violence continues.
2008		Gbagbo announces overhaul of cocoa sector management with formation of CGFCC (and CNS) Some reduction cocoa taxation. Start 2QC programme, also based on achievements / design of STCP.	UN renews mandate of 8,000 troops. Presidential elections postponed.
2010	Scaling FFS	Private partner in STCP expresses appreciation for working with national institutions.	Opposition manifestations leave several dead. Long awaited presidential elections. First round in October won by Gbagbo (38%), second is Ouattara (32%). Run-off vote in November. Election Commission declares Ouattara winner, Gbagbo refuses to accept. Dispute escalates in renewed violence.
2011		STCP closes MARS moves into RCI with large programme 'Vision 4 Change' (V4C)	Alassane Ouattara's forces capture Laurent Gbagbo.

farmers and their organizations. The PPP, with its aim of scaling and institutionalizing a specific approach (FFS) to extension, had to navigate cautiously between its technical partnership with the national public extension services and the private sector-driven demand to reach as many cocoa producers as fast as possible.

The first entry point in 2003 was working with cooperatives through an initial partnership with the NGO Canadian Cooperation for International Development (SOCODEVI), which evacuated that same year. Unorganized groups of farmers were also targeted but only within private sector collaborations. At any rate, according to the PPP's country manager, the original idea was certainly not to introduce separate cooperative extension services.

We are lucky to have a fund that is funded by the farmers' organizations, so why should I give another burden to a farmer to fund extension? (INT04, Abidjan, 07-06-2010)

Although the PPP primarily focused on ANADER agents it also experimented with an approach, innovative for Côte d'Ivoire, of engaging farmer-facilitators or 'cocoa relay farmers' (*Paysan Relais* or PR). Within FFS the competent PR functioned as a linchpin between the ANADER agents and the cooperative farmers and assured a constant presence and the continued training of peers. While the incorporation of the PR in itself was perceived as a success by STCP management, it proved a formidable hurdle in the relationship with the bureaucratic partners and in going to scale.

On the one hand, ANADER initially respected the idea of the PR in the pilot. It observed that the farmers' response to FFS was positive and participation markedly higher than under traditional approaches. The PPP's management firmly believed that ANADER's rural development agents, or *Agents de Développement Rural* (ADR), could never reach enough producers without village-level support, also during the scale-up. At the cooperative level, judging from the interviews, appreciation and social recompense were high for the PR but these quickly felt overburdened and under-remunerated.

On the other hand, ANADER opposed the 'innovative' PR system from the start, arguing in the interview that there would be no sustainable funding available for it. The PPP's stance that FIRCA might be approached only confirmed ANADER's fears that national extension funding could be reallocated, reported ANADER/STCP staff. The PR, better integrated, connected and less hindered by bureaucratic ego, did have a number of benefits as compared with the generalist ADR, and their good performance did indeed undermine the ADR's position. A good proportion of ADR were less trusted and less participatory; they often refused or were unable to speak anything other than French, thus increasing dependence on the PR. Some cooperative members stated:

They are comical. [...] Even our linguistic brothers, who are agents with ANADER, are not willing to speak the local language. (INT07, Abengourou, 09-06-2010)

This leads to a peculiar situation, confirmed by a regional ANADER director:

The ADR and PR work side by side because ANADER can never reach all the farmers. The national discourse is different from the regional and local. (INT09, Abengourou, 09-06-2010)

FIRCA supported the PR system only for a short while, which led to these comments by FIRCA management:

[The PR] start to look more and more like our agents. Especially since we give them work and means, we are deviating a little. They start to show the same behaviour as the technician. [...] We have found the weaknesses. Now in the second contract [with STCP] we are correcting them. (INT06, Abidjan, 08/06/2010)

By doing so, FIRCA effectively reoriented the PPP's role to backstopping ANADER. The PPP could have held on to its beliefs but decided to agree to take a backseat in the process. In the last two years of its existence, the PPP focused on quality control by its seconded ANADER staff, increasingly getting less support for research- driven modes of data collection, or as FIRCA representative stated:

We don't need useless theoretical calculations. (INT06, Abidjan, 08/06/2010)

The country manager of the PPP disagreed:

We need to let the cocoa industry understand that, so that there will not be any conflict any more. That means [the industry partners] go directly to ANADER and make sure that ANADER accepts that we ensure the quality control. It is the best way for us, it is the best way also that our efforts are going to be sustainable and institutionalized. (INT04, Abidjan (07/06/2010)

Eventually the PPP, at the expense of seeking full compliance with the 'ideal type' FFS, chose to be accommodating, not dogmatic, in order to allow the bureaucratic cocoa career professional to effectively align their strategy and mode of working, thereby, to some extent, retrogressing to classic top-down approaches (F. Ruf, et al., 2014).

#### *4.3.5.2 Resisting short-termism and engaging with national bureaucracy*

Secondly, the actions and strategies of the PPP management showed resistance to a private sector reflex to concentrate on immediate results and short-term concerns. Although this created some initial tensions in the partnership, it opened opportunities for engaging with groups of bureaucratic career professionals.

The PPP programme selected the STCP's country manager from the ranks of a national think-tank on public expenditure. He was deeply embedded in and knowledgeable about bureaucratic architecture and procedures. Several respondents point to his previous



involvement in the analysis of the World Bank and IMF-led reforms of the agricultural sector in the 1990s (STCP, 2003a). This appears to have been a decisive reason for his opposition to the belief that the failing government institutions should be discounted as implementing partners. He argued that a long-term perspective was absolutely necessary and was in favour of intimate collaboration with the professionals within the national bureaucracy. This course was eventually agreed upon with the private sector partners. Moreover, in a somewhat desolate NGO landscape due to the crisis, no operator other than the semi-privatised ANADER and its 6,000 agents could potentially reach substantial numbers of cocoa producers – a key objective for the private sector partners. The national organizations co-invested in the partnership (STCP, 2006a, p. 11). ANADER seconded some senior specialized cocoa agents, or *Techniciens Spécialisés* (TS), at no cost even before the start of STCP, and with CNRA contributing resource persons. One of the TS took up the role of Participatory Extension Specialist (PES) and became integrated into the PPP management team, acting as a linchpin by being active, diplomatic and communicative. This helped the PPP to connect proactively with other agencies. All of this was considered to be a major task, as explained by the country manager:

It is not the ANADER facilitators who facilitated the adoption [of FFS] by [ANADER] Headquarters, it was the STCP management; meetings, workshops we invited them to see. We did our job. (INT04, Abidjan, 07/06/2010)

An additional approach, reports the country manager, was the cautious but firm refusal to involve regular extension agents during the first phase. With the full integration of high-level subject matter specialists (TS), instead of the rural development agents (ADR), the management of the PPP had two key objectives: (i) to ensure the proper testing, fine-tuning and validation of the FFS approach, and (ii) to create a group of high-level extension workers ready to go back to ANADER to train other extension workers. The initial group grew into eleven ‘master trainers’; half of them returned to ANADER after the pilot, explained the PES, after which ADR were also trained. This conscious focus on high-level technical agents in the agricultural extension bureaucracy was linked to a deep belief in the career professionals and their capacity to construct new practices and rules, rather than in the capacity of the organization per se, according to the country manager:

Because in this country we have – the public institutions are very heavy – very competent human resources but sometimes the administrative procedures can prevent them from having the expected impact. (INT01, Abidjan, 07/06/2010)

ANADER reports that it embraced the FFS programme because it matched their objective to move away from the superseded 'Training & Visit' approach. The success of this move was demonstrated by increasingly louder criticism from the ANADER directorate that STCP was getting all the credit for work performed by ANADER agents.

#### 4.3.5.3 *Anticipating the direction of institutional reform*

A third feature of the work and strategy of the PPP is an accurate anticipation of the direction of the institutional reform set in motion during the liberalization processes. The programme manager was determined to link programmatically to a new but not yet functional national cocoa sector-led funding mechanism. Large multinational agro-dealers, donors, as well as the government of Côte d'Ivoire were integrated into the PPP right from the start. However, management of the PPP focused mainly on interfacing with a nascent configuration for the national funding of agricultural professional service delivery to rural operators. In particular, the country manager and the ANADER-seconded PES gave their support to the not yet functional FIRCA, effectively taking a gamble on developments, years down the line:

[FIRCA] did not 'come from heaven'. I was aware. It was already a process since 1999. I was part of the team that... If it was not at the back of my head I would have [adopted a different strategy]. (INT04, Abidjan, 07/06/2010)

Central to the forward-looking strategy of the PPP was FIRCA's mandate to organize the funding of extension services. Constituted in 2003, FIRCA became functional only in 2007 with limited funds. An ANADER director explained:

FIRCA exists since 2007/2008. But it should have been very old already. It should have been put in place together with ANADER. [...] But because everything drags on because of the war it has cost 10 years to be put in place. It is a political story. (INT05, Abidjan, 08/06/2010)

The FIRCA director clarifies:

This will also mean that ANADER will no longer get money automatically for cocoa; they will have to respond to a tender just like anyone else. (INT06, ANADER, 08/06/2010)

FIRCA evolved in the middle of a political storm, especially until 2008. During this period the cocoa sector was provisionally managed by CGFCC, an interim cocoa and coffee marketing board dethroning duplicitous older institutions (Gbagbo, 2008b; Yapo,

2010), and CNS, an interim consultative body to ensure proper representation of the agricultural sector operators and guarantee the moral and stability of the coffee and cocoa sector (Gbagbo, 2008a). The government had limited influence over technical decisions made in CGFCC and CNS. However CGFCC still allocated some government funds directly to FIRCA – contrary to the situation with other crops where sector-led saving mechanisms emerged.

The management of PPP made an effort to get the sector's buy-in, particularly of FIRCA. It set up a PPP steering committee and national forum with representatives from all key actors. This committee advised the PPP and had considerable influence over the programme's direction. Close relations with the Ivorian government were cultivated, also with President Gbagbo. The President was introduced to the PPP as early as 2003, and the management of STCP appeared in joint television interviews with ANADER and CNRA in 2005 (STCP, 2003b, 2005). The tight partnership with ANADER's strategic direction and the non-salaried affiliation of its agents were played out during an organized high-level field visit with officials from FIRCA, World Bank and ANADER to showcase the FFS approach.

This political alignment encouraged FIRCA to embrace the FFS approach, which opened the opportunity for STCP to be funded as a service provider, not only by the old funding mechanism, e.g., Fund for the Development and Promotion of activities of Coffee and Cocoa Producers (FDPCC) (STCP, 2004, 2006b), but also by the new funding mechanisms that involved support from the sector operators. These were early signs of the high potential for scaling that encouraged the (international) private sector in 2005 to support another phase of the regional PPP (STCP, 2006b). The experience also materialized in a new national CGFCC cocoa programme in 2008. The new role for the PPP became to backstop FFS programmes involving ANADER agents. In 2009, a World Bank team wrote that any cocoa programme in Côte d'Ivoire should include the STCP's approach and achievements (STCP, 2010b). In 2010, FIRCA staff, confident of the sustainability of the mechanism, suggested that STCP had become increasingly superfluous.

*4.3.5.4 Keeping the private sector on board and connecting them with the bureaucracy*  
Finally, STCP management made considerate efforts to keep the private sector on board. Participation in the PPP offered the private sector guidance and opportunity for experimentation on how to connect with groups in the bureaucracy explained the STCP manager. Specific projects in collaboration with the private sector were set up, and much work focused on integrating bureaucratic career professionals from different institutions into FFS activities. Working with a functional merit-based cell of

bureaucratic professionals did much to ‘teach’ the private sector how to successfully engage with the cocoa bureaucracy, especially after the reform.

The PPP particularly included multinational agro-dealers that entered the national market around 2000. In 1999, the World Bank and IMF induced liberalization and institutional reform of the entire cocoa sector. This policy gave more influence to private operators at the expense of government bodies and the political elites.

Initially not much confidence existed between the private and public sectors. Within the PPP this was exemplified – according to the country manager – by a high-level MARS Inc. representative in 2003 plainly pointing out that, to their knowledge, no organization existed in Côte d’Ivoire to properly implement any extension activity at a large scale. There was a strong call to work instead with NGOs. The PPP’s management resisted this pressure and continued to focus on ANADER and a national scaling mechanism as the best outcome of the reform process. Even though political resistance caused long delays, the PPP increasingly adopted a focus on building effective alliances between private sector operators and the bureaucratic career professionals.

The work of the partnership altered relationships between the private and public sectors. By 2010, for example, MARS Inc. had changed its beliefs, as can be read on its corporate blog (Morgan, 2010):

[we have] been determined to work in collaboration with the leadership of the Ivorian cocoa sector, because meaningful change in the sector [...] requires the support of the cocoa institutions that are already in place – especially the research structure CNRA and the extension programme ANADER.

In this blog, the company also announced its intensified and ground-breaking collaboration with government:

While we have been engaged in a number of industry efforts in West Africa involving the training of cocoa farmers [STCP and CLP] – I think the signing of the MOU between Mars and the Côte d’Ivoire Ministry of Agriculture sets the stage for a new and different kind of collaboration.

Companies were linked with the pilot programme of cocoa FFS that the PPP implemented in collaboration with ANADER. The PPP half-heartedly employed the services of two reputable national NGOs in private sector-funded sister projects but the reports show limited scaling impact. Companies requested support for similar FFS programmes. Archer Daniels Midland (ADM) was first (STCP, 2005) and soon other

companies followed, all incorporating ANADER agents. This movement was amplified by the ‘Harkin-Engel Protocol’ (CMA, 2001) on the eradication of the worst forms of child labour in 2001, which raised pressure from consumers and caused the industry to focus on farmers’ training. A representative of ANADER understood the shift in the private sector as follows:

They feel the outside pressure to do something in return for the farmers. That is why they contact us. (INT05, Abidjan, 08/06/2010)

FIRCA guided government agencies such as ANADER to develop their own agenda outlining priorities for the sector. In 2008 the Ivorian national cocoa programme ‘2QC’ started, which took inspiration from the PPP’s achievements. The CGFCC actively invited multinationals to discuss the alignment of programmes. Without relinquishing any control over funds and thereby effectively still bypassing the national funding mechanism, multinationals increased collaboration with ANADER, CNRA and CGFCC (later CCC); this led to the much desired opportunities for substantial scaling of impact and cost reduction opportunities for FFS (Muilerman & David, 2011). By 2011, the PPP was increasingly left out of these negotiations and agreements. The country manager explains this as success:

If they keep on coming to you, then your project is not sustainable. (INT04, Abidjan, 07/06/2010)

## 4.4 Discussion

As a public-private partnership (PPP), the Sustainable Tree Crops Program (STCP), developed a substantial regional cocoa Farmer Field School (FFS) programme in four West African countries. The case study of the functioning of the partnership in Côte d’Ivoire and the resulting scaling of FFS opens a discussion on how to explain this remarkable achievement, especially because of the difficult and unpredictable circumstances in the country and the cocoa sector. FFS is generally considered to be an effective and attractive mode of service delivery, although it is resource-intensive and therefore difficult to scale (David, 2007). Hence, the quality of the intervention cannot be credited for the scaling outcome observed in Côte d’Ivoire. Explaining the achieved scale by the design properties of the FFS programme itself seems to contradict the substantially smaller scale realized by sister cocoa FFS programmes in neighbouring countries in West Africa with a similar design (Muilerman, Vellema, Schut, & Leeuwis, 2016).

The analysis in this paper shifts attention from the nature of FFS to the nature of managed interactions of the programme with the cocoa bureaucracy within a particular institutional context. These interactions stimulated and even catalysed the shift to a new form of extension services. The interactions between the pockets in the cocoa bureaucracy, the partnership and the intervention programme were purposefully constructed and managed. The country manager, with a long history in the cocoa sector, combined technical and political skills while navigating through a reality of corruption, patronage, inflexibility and unresponsiveness, resembling the work of the ‘tecnico’ described by Grindle (1977).

The situated action and the constant efforts of the country manager to embed the PPP in specific groups in the cocoa bureaucracy can be understood as ‘institutional work’, as conceptualized by Lawrence, et al. (2009). They understand institutional work as the purposeful practices of professionals (in organisations) aimed at creating, maintaining and disrupting institutions. The insight gained from this case study is that institutional work of this kind is a pre-condition for scaling an intervention or, more specifically, a new form of service delivery.

The PPP’s management succeeded to embed the FFS approach into a bureaucratic ‘pocket of effectiveness’ (Bierschenk, 2010; Bierschenk & de Sardan, 2014; Roll, 2011). Roll (2014) describes the concept of a pocket of effectiveness as relatively effective public service delivery within a context and environment in which this is the exception rather than the norm. This of course does not necessarily mean these bureaucratic professionals are model citizens. Also, the term ‘bureaucratic’ needs to be understood inclusively, as anyone professionally engaged in delivering public services based on certain competencies, regardless of the contractual arrangement. Hence, also STCP’s management and particularly the country manager are part and parcel of the pockets of effectiveness.

Analysis of the scaling of FFS in Côte d’Ivoire shows how an intervention programme consistently aligned with a pocket of career professionals. This pocket, with a long track record in the cocoa sector, teamed up with the PPP and the private sector to make service delivery work. Crook (2010) relates the high levels of delivery of public services in Côte d’Ivoire until the late 1990s to both the existence of a clear mandate by the political elite and to the performance of bureaucratic career professionals in organizational ‘islands of effectiveness’, similar to Roll’s concept of ‘pockets’. This ‘guild’ of career professionals - as we could call it - seems to have survived the turbulent period during which the partnership implemented the FFS programme (2001-2011).

The evolving presence of the PPP in Côte d'Ivoire includes a selection of intentional and serendipitous generative and enabling practices through which the PPP management embedded the FFS intervention in the work and procedures of these persistent groups of bureaucrats. Following Roll (2014), alignments with these groups create the institutional conditions that explain the difference in performance and scaling among the countries where the STCP programme was active. Though this interaction did not emerge in Cameroon and Ghana (Muilerman, Vellema, Schut, et al., 2016), Nigeria showed similar productive interactions with 'pockets', but here the federal governance system meant a slower State by State scaling outcome (Muilerman, Vellema, & Dietz, 2016). The deliberate making of connections with persistent cocoa bureaucrats enabled the partnership to actively navigate the violent Ivorian torrent of socio-political events and anchor its service delivery model in an on-going process of institutional reform.

Studies of African states stress the dysfunctional nature of the post-colonial state and propose an almost deterministic political view on the functioning or failure of the state (e.g. Anders, 2010; Chirot, 2006). The discussion in this paper makes it relevant to relate the obvious symptoms of state failure and predatory behaviour to exploring what elements or groups in the state have a more developmental agenda. Following Evans (1995), these groups are essential for understanding emerging functional interactions between public and private sectors. The case study describes how the partnership generated conditions under which the private sector was able to engage with specific groups within the bureaucracy. The intervention programme brokered connections to persistent bureaucrats with a long-standing career and professional network in the cocoa sector. The approach attempted to use formal competence and problem-solving capacities, rather than clientelistic ties or traditional loyalties, as a requirement for entry into the network (cf. Evans, 1995).

The case study accentuates the analysis of Crook (2010) of the state in Côte d'Ivoire. He argues that public services are not overstaffed or lavishly over-resourced. Instead, the public services will be able to do a good job if, in this case a public-private partnership constructs and legitimizes a public funding mechanism (FIRCA), builds collaborative organizational cultures, and encourages staff with the capacity to make a difference at local and even regional levels.

## 4.5 Conclusions

The scaling of induced and novel modes of service delivery needs to be understood as an emergent outcome of the interaction between an intervention programme and the



institutional realities in public and private realms. The reported scale of service delivery via FFS realized by a public partnership in the turbulent cocoa sector in Côte d'Ivoire can be explained by the institutional work done by the PPP's management connecting an intervention programme to specific groups of career professionals within the state's bureaucracy. These purposeful actions silenced, to some extent, those mechanisms obstructing effective service delivery which were also present in the violent and conflictual cocoa sector and society in Côte d'Ivoire.

These insights propose to strengthen the growing interest in research tracing the precise processes of embedding interventions in both the public and private sectors, without perceiving the state and business as communicating vessels. Analyses and assessments of endeavours aimed to enhance the sustainability of international commodity chains, such as the introduction of standards and the accompanying training and service delivery models, need to look beyond the intrinsic qualities of these interventions for explaining under what conditions scale is achieved. The paper proposes further development of the interest in the competences and capacities of partnership managers, bureaucrats and business leaders to construct effective spaces for problem-solving. This agenda implies the support of natural experiments and evolving collaborations that target the making of institutions situated in uncondusive contexts.



# 5

## The politics of scaling cocoa farmer field schools: A cross-state analysis of pockets of effectiveness in Nigeria



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**Abstract**

The global cocoa sector has committed to a sustainability transition, for instance through the adoption of international standards. Public–private partnership initiatives have provided cocoa smallholder farmers with training and other service delivery for nearly two decades. This study examines the introduction and scaling of cocoa farmer field schools (FFSs) in the challenging context of the Federal State of Nigeria. As federal initiatives do not automatically translate into action at state level, this study focuses on finding pockets of effectiveness (PoEs), spaces that demonstrate effectiveness in fulfilling their official mandate by providing public goods and services, despite adverse circumstances, thereby differentiating them from similar public organisations. The study, based on desk research, literature review, and original qualitative field research, uses a case study approach to compare five cocoa-producing states. Clear criteria were applied to find PoEs, and a limited number were found at federal and state level. Their functioning was conditional on their having sufficient autonomy and political development intent. The FFS intervention programme particularly enabled scaling of service delivery through a convener and broker role. The study calls for ex-ante institutional diagnostic analysis to help guide and tailor locally appropriate interventions to go to scale.

**Key words:** Cocoa, Nigeria, Governance, Agricultural Extension, Pockets of Effectiveness

## 5.1 Introduction

Enhancing the sustainability of cocoa production entails the challenge of reaching large numbers of smallholder producers scattered across vast areas (Shapiro & Rosenquist, 2004). The introduction of sustainability standards, one of the dominant instruments used in global commodity chains (Manning, Boons, von Hagen, & Reinecke, 2012), is usually accompanied by training and delivery of technical and financial services to cocoa farmers (Ingram et al., 2014; Paschall & Seville, 2012). Today, the farmer field school (FFS) is a predominant organisational form through which these farmers are reached and connected to actors downstream in the chain (Braun & Duveskog, 2008). Although the reach and scalability of FFS depend on the content and quality of the services provided and farmers' appreciation thereof (Gockowski, Asamoah, David, Gyamfi, & Kumi, 2010), interaction and alignment between the FFS pilot and the dominant agricultural extension regime is of more crucial importance (S. Muilerman, Vellema, & Schut, 2018).

According to Okeoghene (2013a), Nigeria has tried virtually all existing extension systems. Linear models of technology and knowledge transfer, like the Training & Visit (T&V) approach, have failed to deliver on their promise (Akinagbe & Ajayi, 2010; Chikwendu, 2004). However, in addition to the form of service delivery, the institutional conditions under which farmers are linked to private and public actors are equally important for explaining the scalability of training and service delivery (Muilerman & Vellema, 2016). This study examines the different scaling patterns observed in the Nigerian cocoa sector and compares the connectivity between federal state agencies, state governments, and farmers to explain different patterns observed (if any) in five Nigerian states. The analysis relates the initial spread of FFSs to bureaucratic effectiveness at different layers in a federal state.

Nigeria's historic development and politically troubled nature as a federal state is the context of this study. After pilot introduction, the federal level ministry considered that FFS would be the most appropriate approach to organising service delivery in the Nigerian cocoa sector. It was presented to them by a public-private partnership (PPP) programme, the Sustainable Tree Crop Programme (STCP). At federal level, this orientation towards service delivery to smallholder farmers, backed by presidential mandate, reflected developmental intent (Henley, 2015). However, the policy consensus reached at federal level did not automatically result in strong initiatives at state level and particularly at smallholder farmer level. Remarkably, in Nigeria's Cross River State, communities of cocoa producing smallholders actively demanded and even co-funded FFS organisation in collaboration with state extension agents. These bureaucratic agents

responded to the call under the umbrella of a state–federal initiative but generally without proper operational state funding. Because of this collective action response, cocoa FFSs in Cross River State spread significantly, but their adoption and scaling varied in other cocoa producing states in the period 2006 to 2010. This makes it relevant to understand the politics of scaling FFSs: in what ways do state level agencies enable or constrain the spread and scaling of an alternate mode of service delivery anchored in the FFS model?

To address this question, this study builds on literature on the formation and performance of pockets of effectiveness (PoEs) (e.g. Leonard, 2010). The different patterns of FFS scaling in cocoa producing states in Nigeria serves as an empirical case for understanding how the practices and procedures espoused in state bureaucracies (e.g. Bierschenk & de Sardan, 2014; Leonard, 2010; Roll, 2014) affect access to service delivery at farmer level.

In line with Porter and Watts (2017) analysis of the emergence of a reformist governor in Edo State, Nigeria, in 2009, this study explores institutional modalities and political ‘pacting’, as the types of mechanisms that can enable the diffusion of a novel mode of delivering services and public goods for cocoa production. Porter and Watts’s analysis reveals a political landscape in Nigeria in which federally governed state action co-existed with pockets of capability and institutional capacity at subnational state level. In the case of FFS in Cross River State, farmer communities decided to engage directly with what they perceived as capable bureaucratic agents. Therefore, attention should be redirected from state deficits to institutional arenas or PoEs (Bierschenk & de Sardan, 2014; Leonard, 2010; Porter & Watts, 2017; Roll, 2014).

The aim of this study is to detect such spaces in which different actors can achieve political settlements and craft a problem-focused and site-specific mode of action that is likely to facilitate sustainable solutions in cocoa farmers’ daily lives.

The research concentrates primarily on the role of state officials in scaling FFS and the supporting community funding in Cross River State, as a counter-intuitive example of effective service delivery. It traces processes triggered during the implementation of the STCP in Nigeria, which ran simultaneously in Cameroon, Côte d’Ivoire, and Ghana (S. Muilerman et al., 2018). The need to learn from efforts to take FFS to scale had been identified by STCP’s main partners, International Institute of Tropical Agriculture (IITA), the chocolate industry represented by the World Cocoa Foundation, a number of large international donors, and the four governments of the above-mentioned countries (STCP, 2009b). By focusing on PoEs, the study generates descriptive accounts of how some professionals in the bureaucracy find better solutions to problems or align more

effectively with local initiatives compared to peers in other states (Andrews, 2015). Our discussion on the nature of PoEs and the conditions under which they are more likely to emerge is informed by the contrasting FFS experiences in Cross River State with four other Nigerian states (Edo, Ondo, Osun, and Oyo).

Agricultural development and cocoa are first contextualised specifically in Nigeria as a federal state, importantly influenced by the oil-based economy. The next section briefly introduces the literature on PoEs and explains how the study uses this conceptualisation of bureaucratic performance to analyse the politics of scaling FFS in Nigeria. Subsequently, the Cross River State case is presented, followed by a comparison with the introduction of FFS in Edo, Ondo, Osun, and Oyo. The article ends with a discussion and conclusions about why a careful and contextual understanding of state agricultural extension delivery systems is relevant for PPPs targeting large numbers of small-scale cocoa farmers.

### **5.1.1 Context**

This section sets the scene for analysing how a PPP initiated at federal level was received by, and spread through, communities of cocoa farmers. The state level bureaucracy is an essential link between these two levels, and this is where the space for bureaucrats to operate is defined.

#### *5.1.1.1 Federal state powers*

This study searches for PoEs, creating space for bureaucrats and farmers to implement and spread a novel mode for delivering extension services. The overall context is the Federal State of Nigeria, often portrayed as highly politicised with high levels of corruption, misuse of administrative discretion at all governmental levels, and a lack of sufficient accountability mechanisms (Badamasiuy & Bello, 2013; Suberu, 2009). Adebani and Obadare (2010) show how, even before independence in 1960, contentious politics defined the colonial project Nigeria. They and others label the current state as a crippled giant and a failed or fallen state (Adebani & Obadare, 2010; Iyoha, 2010, p. 189; Suberu, 2009). The Nigerian federal state was primarily invented as a practical solution (Nwaorgu, 2013, p. 117). According to Odubajo (2011), a federation provided the most logical platform for the political survival of this massive country. Smith (2005) speaks of a unique hyper-federalism; Nigeria's 36 states have more power than any other subnational body in Africa. Litwack (2013) emphasises that this high degree of subnational autonomy, with hard state budget allocations, are defining elements in Nigerian federal–state relations.



### *5.1.1.2 Governance of agricultural development in a petrostate*

The role of the agricultural sector in an oil-based economy is another important context for the analysis of extension service delivery. Nigeria is estimated to have the tenth largest reserves on the planet (NAPIMS, 2014), accounting for 95 per cent of the country's foreign exchange earnings and 80 per cent of budgetary revenues (MSU, 2014). Yet, agriculture is still the largest employer with no less than two-thirds of Nigerians active in agriculture (AfDB, OECD, & UNDP, 2014; Fuller, 2011). According to Iyoha (2010), the growth of the non-oil sector since the end of the twentieth century has been largely driven by growth in agriculture and the global commodity boom. Iwuchukwu and Igbokwe (2012) report how, since 1999, after the democratic election of Olesogun Obasanjo as president, federal Nigeria embarked on ambitious economic reform programmes, yielding strong results in budget discipline and implementation that also had a strong focus on agriculture and poverty alleviation. Obasanjo pursued a strategy of dialogue, but also force, while at the same time setting up ambitious agriculture revitalisation programmes (Bergstresser, 2004) like the National Economic Empowerment and Development Strategy, the National Special Programme on Food Security, and the Root and Tuber Expansion Programme as a means of raising rural populations' income (Iyoha, 2010). Although these federal programmes suffered from varying degrees of buy-in at state and local government level and other shortcomings (Adogamhe, 2010), they did reflect a more consistent long-term policy.

### *5.1.1.3 Decentralised agricultural extension for cocoa*

Agricultural extension in Nigeria today is decentralised. Agriculture features on what is called the concurrent list of the Nigerian constitution, which makes it both a federal and a state government responsibility. The federal government plays mainly a coordinating role.

In the 1960s and early 1970s, before oil took over, tree crops including cocoa, groundnut, oil palm products, and rubber were the principal export crops and experienced little government control (Adjao, 2007; Oguntade, 2013). In the 1970s and 1980s, agricultural development programmes (ADPs) were designed, piloted, and rolled out, initially with tripartite funding from the World Bank, federal government, and state governments. Income from oil provided part of the funding, and by 1989 all states had ADPs (Iwuchukwu & Igbokwe, 2012). In 1995, the World Bank withdrew its funding, mainly for political reasons at national level (Fuller, 2011; Saliu & Age, 2009; WB, 2012). The ADPs (and often dedicated tree crop units) continue to be the major agricultural and rural development programme at state level. However, since 1995, state ADP financing has become chronically inadequate (Farinde & Atteh, 2009; N. Ozor, Agwu, Chukwuone, Madukwe, & Garforth, 2007; Nicholas Ozor, Garforth, & Madukwe, 2013; Saliu & Age, 2009).

Cocoa extension policy in Nigeria has historically been characterised by instability and is “wrought with inconsistencies due to a narrow-based policy formulation process and poor institutional frameworks for implementation” (Okafor, 2006). Most state extension officials have already spent 10 to 30 years in the system (Akintonde, Akinboye, Farayola, & Akintola, 2012). At federal level, the Cocoa Research Institute of Nigeria (CRIN) performs cocoa research to support farmers and cocoa extension delivery by the state services. In an STCP baseline study (IITA, 2003), it was found that, on average, 6.5 per cent of cocoa farmers had had contact with government extension workers.

To counter declining cocoa production, Obasanjo set up the presidential National Cocoa Development Committee (NCDC), a national PPP initiative. The NCDC was tasked with the development of a cocoa rehabilitation programme for Nigeria, with the aim of producing 1 million metric tonnes by 2010 (Cadoni, 2013), through joint leadership by the federal and 14 cocoa producing state governments. In each state, the deputy governor headed an NCDC subcommittee. Other members included cocoa farmers, opinion leaders, government officials, and local government chairmen (Adjao, 2007).

Regarding technical approaches, Nigeria had been attempting to switch to more participatory extension approaches than the World Bank-promoted (1975–1998) T&V approach (Ganguly, Feder, & Anderson, 2006; Okeoghene, 2013b). FFS, developed in Asia in the 1980s, was still new to Nigeria, especially for cocoa. FFS is a participatory training approach that can be considered both an extension tool and a form of group adult education at community level. It is organised and guided by a trained facilitator during one cropping cycle. The curriculum builds capacity to make well-informed management decisions based on observation, experimentation, and discovery learning (David et al., 2006). From 2003, the STCP piloted the cocoa FFS approach in Ondo State, the main cocoa producing state (Cadoni, 2013).

#### *5.1.1.4 Effects of a federal change of power on cocoa extension*

Towards the end of Obasanjo’s second and last term in 2007, during the STCP’s scaling phase, the political situation deteriorated and the positions of many state governors were at stake. When Yar’Adua, battling with legitimacy and authority issues, took over as a president, Obasanjo tried to maintain influence. Obasanjo’s view had been more pro-agriculture, more pro-rural, and more consistent than Yar’Adua’s. This may partly explain Nigerian growth figures in key agricultural commodities between 1999 and 2007 (Akinyoade, Dietz, & Leliveld, 2014). Several reports (FAO, 2015; Iyoha, 2010, p. 188; WB, 2015) suggest that attention on agriculture, and specifically cocoa, dropped before and after Obasanjo’s terms, and Nigerian agriculture in general had seen strong growth during the first decade after the millennium, both in production and

productivity in maize, cassava, and rice (Akinyoade et al., 2014). Figure 5.1 shows that cocoa productivity followed the general agricultural growth trends. Between 2003 and 2007, the cocoa area harvested increased from 1 million to 1.35 million hectares (FAO, 2015). After 2007, both cocoa productivity and area harvested started to decrease significantly, as did general agricultural growth figures.

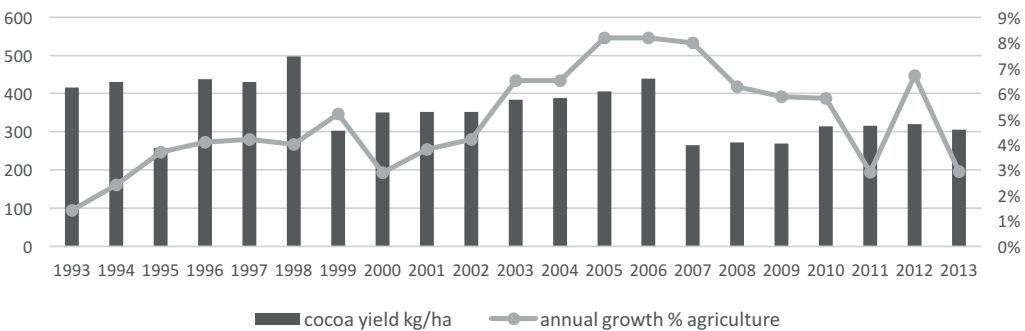
In 2013, former President Obasanjo commented on his two terms:

I was sceptical if we could ever make it in the area of agriculture. But the progress we made between 2003 and 2007 when Nigeria grew its agricultural production by an average of seven percent per annum enhanced my optimism and enthusiasm. For instance, cocoa production increased from 150,000 metric tonnes to 400,000 metric tonnes; cassava production from 30 million metric tonnes to 50 million metric tonnes. (Essiet, 2013)

Obasanjo also identified the lack of continuity of agricultural policies and programmes by successive governments as a major factor responsible for agricultural productivity issues (PremiumTimes, 2012) and stressed the need for consistent and predictable policies.

The successor administration put things in reverse gear. A start-stop policy does not help agribusiness. (NigerianVoice, 2013).

At the same time, Obasanjo lamented the corrupt practices of certain government officials undermining efforts to develop the country’s agricultural sector (Essiet, 2013).



**Figure 5.1 - Cocoa productivity (kg/ha) and annual agricultural growth (%) before, during, and after President Obasanjo’s time in office (1999–2007), based on (FAO, 2015) and (WB, 2015)**

Bergstresser (2008, p. 1) summarises, “Against the background of this silent struggle, some long overdue socioeconomic projects and programmes [...] lost momentum, thereby putting the economy almost on hold”. At state level, newly elected state governors in key cocoa states (Cross River, Edo, Ondo, Osun, and Oyo) faced annulled or appealed election results, thereby adding to the political lethargy (Bergstresser, 2008).

#### *5.1.1.5 Setting the scene for the case study and analysis*

By the turn of the millennium, public sector support for agriculture in general, and cocoa specifically, had declined considerably (Farinde & Atteh, 2009), and the private sector had not been able to fill the gap (Adjao, 2007; Okafor, 2006). This was true for the entire West African region, creating a gap that the STCP attempted to fill.

Litwack (2013) contends that Nigeria possesses weaker institutions than most federations to ensure multilevel cooperation and that the powerful Nigerian states had become weary of federal government initiatives, often backed by inadequate budgets. Legislation that affected simultaneously different levels of government could therefore be difficult to enforce in practice. Also, the extensive damage done to the fabric and structures of civil services at state level during military rule had led, among other things, to “patronage driven expansion and the erosion of skills and standards” (Barkan, Gboyega, & Stevens, 2001, p. 25). In this context, agricultural extension tends to become decentralised, pluralistic, multi-institutional, demand-driven, as found in many developed countries (Farinde & Atteh, 2009; Nicholas Ozor et al., 2013; Rivera & Alex, 2004). This includes the promotion of PPPs and financial participation by beneficiaries (Quizon, Feder, & Murgai, 2001), as seen under the STCP. A key characteristic of our case study on extension service delivery in Cross River State is the increased willingness of cocoa farmers to pay for extension (Farinde & Atteh, 2009; Nicholas Ozor et al., 2013).

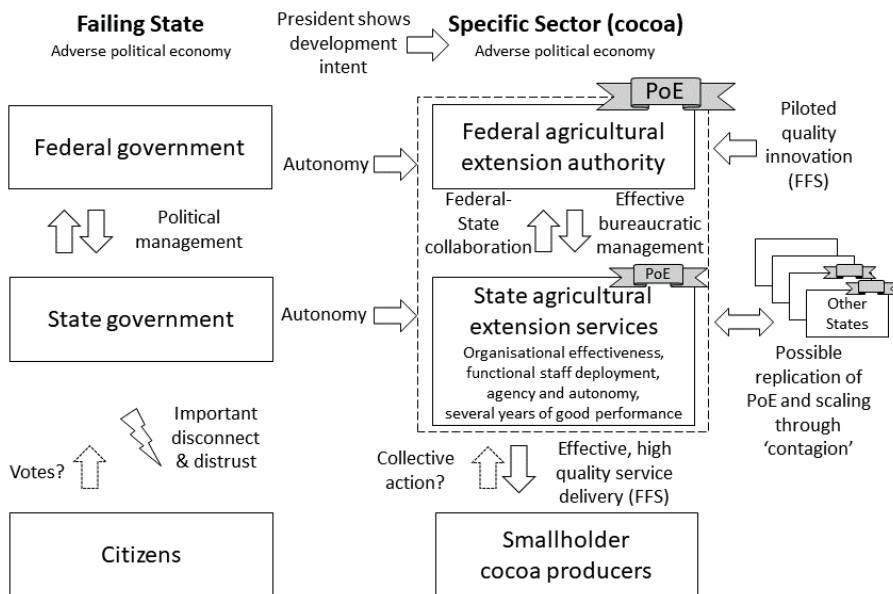
## **5.2 Conceptual framework**

### **5.2.1 Pockets of effectiveness**

From the context, it emerges that Nigeria can be called a dysfunctional or failed state. That said, Evans (1995) points out that even the worst run states today go beyond making war and ensuring internal order, by aiming to foster economic transformation. World leaders cite failing states as a global threat (Ezrow & Frantz, 2013), and some experts focus attention on how to ‘fix’ them (Wade, 2014). When basic public goods provision fails, this is often linked to another indeterminate term, *good governance*, first used by the World Bank (1992).

We argue that zooming in on specific impactful initiatives may be more informative than a broader study of governance (or the lack thereof) to explain success and failure with regard to the delivery of services to rural populations. Despite Barkan et al. (2001) pointing to a new political generation in Nigeria, we agree with (Lehloenya & Palollo, 2012) and (Booth & Cammack, 2013) that the good governance concept is inadequate. Booth et al. (2015, p. iv) argue that compliance with good governance criteria does not explain the marked differences in development outcomes between Southeast Asia and Sub-Sahara Africa over the last half-century; rather, policy priorities with respect to agriculture and rural development are what matters. Henley (2012) and Van Donge, Henley, and Lewis (2012) persuasively show that the Asian success is based on consistent pro-poor, pro-rural public spending in agriculture. We agree with (Booth et al., 2015) that we need to step away from the political idea and academic model (Routley, 2014) of the development state and from simplistic comparisons with Asia (Henley, 2012). We need case-by-case diagnostics to attain a good fit with the country context (Berendsen, Dietz, Nordholt, & van der Veen, 2013; Booth, 2012; Henley, 2015).

With this in mind, and after observing unexpectedly concrete public service delivery and developmental impact within a hostile political and economic context, we developed an interest in the concept of bureaucratic PoEs. The PoE concept refers to



**Figure 5.2 - Conceptual framework**

“public organisations that are relatively effective in carrying out their functions and in serving some conception of the public good, despite operating in an environment in which most agencies are ineffective and subject to serious predation by corruption, patronage, etc.” (Leonard, 2010) and features in other recent work by Bierschenk and de Sardan (2014); Crook (2010); (Roll, 2014). These pockets may not always be delineated straightforwardly and may be hybrid in nature because of private sector linkages.

This study constructs a conceptual framework for the emergence and persistence of PoEs for cocoa extension service delivery in Nigeria (Figure 5.2). The first premise is that Nigeria is a failing state, with an adverse political economy, especially in relation to nurturing politico-administrative effectiveness. However, President Obasanjo’s 1999 creation of the NCDC with a clear mandate, the necessary resources, and therefore strong autonomy can be considered as a show of “development intent” (Henley, 2015, p. 174) towards a thriving cocoa sector. The NCDC was consequently potentially a PoE.

From a selection of publications (Lehloenya & Palollo, 2012; Leonard, 2010, p. 93; Poulton, 2012; Roll, 2011, p. 367; 2014, p. 25; Routley, 2014; Whitfield & Therkildsen, 2011), we understand that a bureaucratic PoE in Nigeria can be identified analytically by:

- Relatively high organisational effectiveness in the provision of public services that the organisation is mandated to provide, despite an adverse politico-administrative context.
- Significant staff deployment, driven by functionality and guided by sufficiently depoliticised leadership, with appropriate incentives and autonomy.
- An adapted, responsive, and high-quality mode of service delivery, raising productivity.
- Persistence for several years, preferably more than one political term.

An important distinction to make here is that, although Akinyoade et al. (2014) also pointed to the emergence of PoEs in Nigerian agriculture, these rather pertained to increases in national agricultural productivity in several agricultural value chains. In this article, we focus on pockets of effective public service delivery.

Political management between the federal and state government levels is highly complex and strongly dependent on electoral politics. It is outside of the scope of this research. We focus on how each cocoa producing state has agricultural extension services with varying extents of autonomy from the political economy. Through multilevel bureaucratic management, a PoE may appear at the individual state level, nested under what may be a

federal PoE. Bureaucratic extension professionals are functionally deployed to provide professional services to smallholder cocoa producers. In a PoE, this means the extension agents constructively engage with cocoa producers, who were otherwise disengaged from the state, through unexpected high levels of professional service delivery and potentially through collective action mechanisms.

How specific groups of bureaucratic career professionals (cf. Evans, 1995) capture space to reform and re-organise service delivery targeting a specific constituency may explain how FFSs are scaled in an uncondusive multi-layered institutional and political context. This study shares the concern of Pritchett, Woolcock, and Andrews (2013) about enhancing professional skills, functional for context-specific developmental activity, and the institutional forms fit for this. It therefore looks at what bureaucrats actually do and incrementally achieve, obviously in interaction with other stakeholders, rather than concentrating on what institutions (should) look like. The analysis of service delivery and bureaucratic performance indicates that the politics of scaling FFSs is not only an electoral matter, including various forms of clientelism. It also entails the actions of knowledgeable bureaucrats operating on the frontline (Lipsky, 1980) and embedding service delivery in collaborative endeavours with public and private partners with a certain degree of agency and autonomy (Evans, 1995; Pepinsky, Pierskalla, & Sacks, 2017).

The conceptual framework also examines whether the existence of a PoE can further shape the politico-administrative environment for scaling cocoa extension in Nigeria, through bureaucratic management and through a process that Roll (2014, p. 38) calls “contagion”. In the case of contagion, politicians and civil servants in other cocoa states, through the federal initiative, will witness another state cocoa extension authority performing well, under similar circumstances. This may lead to similar organisational performance improvements. Contagion, however, assumes sufficient organisational autonomy and agency, including in other cocoa states, combined with necessary levels of state development intent (Roll (2014, pp. 38-39).






## **5.2.2 Methods**

### *5.2.2.1 Research area*

The field research in Nigeria took place in 2010 and 2011. The research covers the developments in the intervention programme in the period 2003 to 2011. The STCP started a pilot in Ondo State in 2003 and, from 2005 to 2011, the STCP expanded to the other 13 cocoa producing states in Nigeria, after which the programme became defunct. An in-depth case study of FFS service delivery in Cross River State traces



*Table 5.1 - Summary profile of the five cocoa states in this study*

STATE	Ondo	Cross River	Edo	Osun	Oyo
Location on map					
Staff training	2003	2005	2006	2008	2010
Years of FFS run by 2010	8	6	5	2	0
Characterisation based on the STCP management's perception of the state	Heavily quality-controlled cocoa FFS pilot state, then strong state implementation	First scaling of cocoa FFS and unexpected rise of community co-funded cocoa FFS	Steadily performing state with constant programme of state-funded cocoa FFS	Late adopter, second state to show appearance of community co-funded cocoa FFS	Poorly performing state with regard to cocoa FFS; ready for training of staff only by 2010

*Table 5.2 - Overview of interviewees*

Institution	Sessions	People	Position held (names omitted)
CRIN	1	2	Cocoa specialists
Cross River State Min Agri	1	1	High official
Cross River State ADP/TCU	3	5	TCU director, ADP master trainer, supervisor, and facilitators
CRACCU Cooperative Union	1	2	Director and secretary
FFS community Abo Mkpang	2	9	8 participants of a community co-funded FFS and a farmer facilitator
FFS community Ubong	2	9	8 participants of a community co-funded FFS and a farmer facilitator
Edo State ADP/TCU	1	5	FFS coordinator, supervisors, extension facilitators
NCDC Abuja	2	1	High official
FUTA	1	1	Cocoa specialist
Ondo State ADP	1	1	ADP director
Osun State TCU	2	7	TCU director, FFS activity coordinators, supervisors, facilitators
Osun State NCDC	1	2	Farmer members of NCDC, also FFS facilitators
Oyo State TCU	1	4	Master trainer, supervisors, farmer facilitator/ CAN official
STCP Nigeria	6	2	Manager and extension specialist
STCP Regional	several	3	Manager and two scientists

ADP: Agricultural development programme; TCU: Tree crop unit; CAN: Cocoa Association of Nigeria

the process leading to the emergence of independent or community co-funded FFSs. This case study unravels the linkages between farmer groups and state officials at state and federal level (STCP, 2009a). Further analysis briefly compares the presence and divergent performance of extension services in the other four states studied (Table 5.1).

#### *5.2.2.2 Data collection*

The principal data collection methodology consisted of semi-structured interviews with key informants, using interview guides. All five states visited, and all respondents interviewed, were purposefully selected in order to obtain sufficient variation and to include experts from all major partners and key staff (Table 5.2). In Cross River State, interviews were conducted down to community level, supported by an interpreter. Here, respondents were selected through a process of guided self-selection, to ensure equal representation (for example of age and sex). Archive research completed the exercise to verify as much as possible of the interview data. Project files, reports, newsletters, and other data sources were reviewed, particularly 24 key background documents central to the programme.

#### *5.2.2.3 Data analysis*

In this article, we attempt to look through the eyes of the key actors within and close to the STCP programme, in order to understand and trace back the process (George & Bennett, 2005), the roles and agency of federal and state bureaucrats, and the specific outcomes and effects. The analysis consists of two layers. First, a within case analysis is performed of one state (Cross River) to gain a better understanding of what a PoE looks like and how it functions. Secondly, a between case analysis (several states) is performed to gain insight into the conditions that may cause a PoE to emerge.

All in-depth interviews were recorded and transcribed. This dataset was coded and analysed through inductive content and discourse analysis, focusing on the evolution of processes and interactions between partners and the analytical characteristics of PoE criteria, contextualised by a literature review.

The retro-active nature of the study means a heavy reliance informants' memory. Some level of detail relating to decision making may be missing, and interpretations may be skewed by hindsight. To validate the documented processes, archives were studied and a first interview synthesis was shared with the STCP country manager at the time. This allowed for checking for inconsistencies and offered guidance as to the whereabouts of additional data sources.

### 5.3 Results: The case of community-funded cocoa extension in Cross River State and comparison with four other states

The Cross River State case is presented in more detail as it offered the best opportunity for tracing back how a group – or a pocket – of bureaucratic career professionals captured a space to reform and re-organise service delivery targeting a specific constituency. Combined with a better understanding of how this triggered collective action in the shape of community co-funded FFSs, this case may best explain scaling FFS in an unconducive multi-layered institutional and political context.

#### 5.3.1 Federal and state level support for FFS in Cross River State

Directly after the initial pilot in Ondo State, a first opportunity to scale out cocoa FFS came through a link with a project called Sustainable Practices in Agriculture for Critical Environments (SPACE) in Cross River State, Nigeria's second largest cocoa producing state (Cadoni, 2013). With USAID as the common donor, SPACE connected easily with the STCP. The project was already linked to the bureaucratic agricultural extension services in Cross River State. A dedicated tree crops unit (TCU) focused mainly on input distribution. The execution of all state extension training was handled by the agricultural development programme (ADP). ADP staff report that they went through a training of trainers and a first cycle of eight FFSs in 2005, and they were then teamed up with a community facilitator. SPACE ran from March 2004 and, although the FFSs were relatively successful (Turner, 2007), the project did not get second phase funding and closed in early 2007.

The country manager reports that, at one of the workshops in Cross River, an officer of the Cocoa Association of Nigeria (CAN) participated. He happened to be the secretary of the subcommittee on training at the NCDC. In 2005, this encounter led to a high NCDC official joining the STCP's international executive committee and to the opportunity to submit an FFS scaling proposal to NCDC.

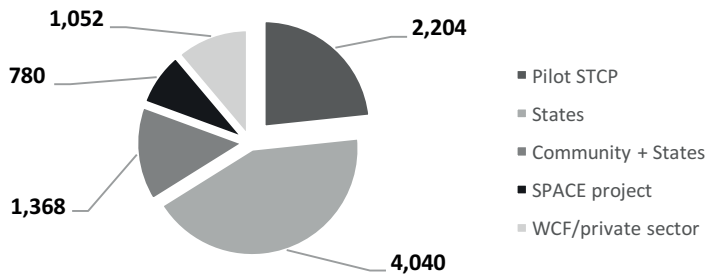
The STCP's FFS proposal was initially met with resistance, not from the federal or state governments, but from CRIN. CRIN objected on the grounds that the STCP was infringing on CRIN's mandate. When one of CRIN's directors complained about insufficient funding, according to the STCP manager, the minister replied; *"If you feel you do not get the money you need, you should submit a proposal. Make your case! Do not kill the other person's case"*, and the Minister enjoined CRIN to collaborate with the IITA/STCP. After the NCDC verified the effectiveness of cocoa FFSs, it adopted FFS as its extension delivery strategy and the proposal was approved. The relationship with CRIN soon normalised. A memorandum of understanding was signed between IITA/

STCP and the Federal Government of Nigeria, representing the 14 cocoa producing states, for capacity building and backstopping tasks.

Through this NCDC cocoa FFS programme, the federal and state levels promised to work together. The federal NCDC, however, could not force the state levels to invest in cocoa FFSs. The NCDC executive committee in the interview claimed that serious efforts had been made to ensure the project's success. A first example was facilitation of a more efficient flow of funds. This was linked to severe trust issues between governments. A high NCDC official explained that the release of federal funds for capacity building in the states did not automatically lead to the release of state counterpart funds for the actual organisation of FFSs in the communities. This was cumbersome, especially after every election: *"...when governments change, the new players may not be as interested as the old players."* An added issue appeared to be that the *"the [former Minister of Agriculture] was not so clean."* This meant that states hesitated to send funds through the ministry, which served as a conduit. The NCDC therefore decided to bypass the ministry and allow states to pay IITA/STCP directly. *"Look, take your money straight to IITA, do not bring your money here."* The STCP's manager added that state bureaucrats wanted FFS to happen, but only *"some smart ones have been able to convince their government to release money."* In the state's ADP and TCU, managers pointed to how this weak association between the STCP and state politicians was the Achilles' heel for scaling. The STCP manager added that, in this effort to secure state funding, the timing was very important, because farmers do vote.

In a further effort to support the state FFS movement, the NCDC asking the states no longer to distribute heavily subsidised fertiliser (using federal and state funds) through political representatives of farmer associations, but directly and exclusively to FFS participants. The NCDC official explained: *"They are not political farmers, they are real farmers,"* pointing to experience in the past whereby *"we gave inputs directly to the farmer associations, but then we found that they were selling them!"* In Edo State for example, the TCU received this positively: *"When things like this come into the state, the politicians hijack it. With the politicians, it does not get to the correct farmers."*

A cocoa specialist from the Federal University of Technology Akure (FUTA) pointed out that FFS is expensive even compared to T&V, with FFS requiring more recurrent expenditures than just the staff salaries and carrying on for a whole production season (see also S. Muilerman and David (2011)). The NCDC official disagreed: *"It is cost-effective. If you invest in it for some time, it will give you value for money. What we were doing before was just putting in millions and nobody was learning anything. That was the expensive one."* Whether farmers can and should co-fund agricultural extension



**Figure 5.3** - Distribution of 9,444 FFS trainees in Nigeria, by 2011, by type of intervention. Source: STCP annual reports

provision in Nigeria seems less controversial at the federal level. CRIN experts stated that, in Nigeria, state extension staff are generally willing to function on an equal footing with farmers, and the FUTA expert pointed out that many livestock farmers already pay for extension, dealing directly with private sector operators.

Regarding training numbers, although all 14 states had developed the capacity to implement FFS, by 2010 few had already implemented significant numbers of schools. A modest 4,000 farmers had been trained using state funding (see Figure 5.3).

### 5.3.2 Community co-funded cocoa FFSs in Cross River State

In an unexpected development, in Cross River State and later in Osun State, individual communities that failed to get access to state-funded FFSs decided to enter into social contracts with state cocoa agents and raised the necessary FFS funds themselves, leading to an additional 1,368 farmers trained. According to the STCP manager, the SPACE project coordinator soon became a strong advocate of the cocoa FFS approach in Cross River State. Once the first eight project communities were running FFSs, he actively helped to convince the Cross River State government to take the approach on board, to invest resources, and to participate in specific events. The “participants’ enthusiasm in describing the range of benefits they had gained through their participation in the FFS sparked the interest of the Commissioner of Agriculture who pledged to complement SPACE efforts with financial support for additional schools, and the Governor ordered the return of the SPACE-trained facilitators to ADP, reversing the reassignment of these agents” (Turner, 2007, p. 49). The NCDC’s decision to implement the cocoa FFS model in all Nigeria’s cocoa producing states was announced in Cross River State at the Second National Cocoa Day early in 2006 (STCP, 2006). According to a Cross River State ADP Director, agents were used to working with the T&V approach but happy to adopt FFS. ADP realised that important cost reductions and increased reach were achieved by working

with farmer groups instead of individual farmers. The ADP master trainer: *“Farmers were not too happy.”* An ADP agent added: *“We discovered that T&V was imposing technology; farmers were not so much interested.”* Under the FFS approach: *“There is a cordial relationship, even with the farmer. [Before] it wasn’t like that, at all, at all!”* Also, when the state government and NCDC jointly decided to give agents a monthly mobility allowance, it showed that *“government realised that the real farmers are located in the remote areas.”* Another agent added: *“Now I can stand up anywhere. You make friends wherever you are.”* The president of the Cross River Advance Cocoa Cooperative Union (CRACCU) explained: *“[the ADP agents] were air. We never saw them.”* Since FFS, *“the gap that existed between the farmers and the extension agencies is gone.”*

#### 5.3.2.1 State officials and politicians support FFS in Cross River State

After 2005, SPACE announced that it could only fully fund another 14 FFSs in 2006 and that USAID would not fund a new phase. Other cocoa communities had heard about FFS, or had visited participants’ fields, had appreciated the farm level impact of FFS, and/or also wished to save costs on agrochemicals and labour. Nearly 50 communities came forward and formally indicated interest in FFS. In 2006, the STCP could continue to backstop the ADP with NCDC support. The STCP also proposed a stakeholder meeting, in collaboration with the SPACE project and the ADP, to which the government and all interested communities were invited.

At the meeting held in the state capital Calabar, the government was represented among others by the state commissioner of agriculture, and a dialogue developed on how to continue organising FFS outside the project. Ultimately, agreement was reached. The ADP/TCU pledged the availability of their salaried staff, including monthly transport allowances (~60 US\$). SPACE promised to cover the FFS demonstration materials (~50 US\$), and the STCP would continue to technically backstop FFS facilitators and supervisors. Sixteen communities agreed to cover their own costs for ongoing operations in independent FFSs or community co-funded FFSs. No official agreement was concluded or signed. Payments for the community facilitators in two communities, Abo Mkpang and Ubong, amounted to ~1.25 US\$ and ~1.85 US\$, respectively, per participant per month. These initial 16 community FFSs turned into 16 cooperatives and subsequently into a union, the CRACCU, which managed to reduce the price differential with world market prices from 742 US\$ to 334 US\$ per metric tonne (Turner, 2007, p. x). The Cross River State government invested in 60 motorcycles and a pickup vehicle for its ADP agents, for cocoa and non-cocoa, to increase their mobility.

ADP/TCU felt the need to continue with FFS, even without SPACE, and invited communities to write letters of interest. By 2007, it had received formal letters from

over 40 communities (Turner, 2007, p. 23). ADP proposed the organisation of another stakeholder meeting, and the STCP agreed to facilitate it. In March 2007, a planning meeting was held that included three top government officials, the director of agricultural services, the head of the state cocoa development project, and the director of extension services. In May, delegates from 28 communities, the ADP representative, 10 ADP extension officers, and the STCP country manager, were present at another stakeholder meeting. The agenda read (Ekok, 2007, p. 1):

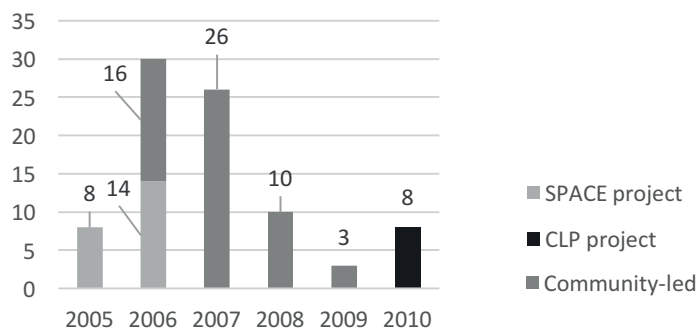
- Sharing ideas and experiences to move FFS forward
- Consolidation of actions on how to run 2007 cocoa agro forest FFS in Cross River State
- To decide who to handle what? Amongst FFS stakeholders.

After much deliberation and a collective vote, it was concluded that the communities would pay the allowances of community facilitators and for all materials; the ADP would make its extension staff available, pay facilitation allowances for extension staff, and pay transport allowances for both the extension and the community facilitators to attend monthly review meetings; and the STCP would continue to offer technical assistance and support. Again, no official agreement was signed; rather, a gentlemen's agreement based on trust and mutual interest was brokered. In 2007, 30 community co-funded FFSs started and 26 completed the cycle. Community-borne cost increased by an estimated 45–55 US\$ per FFS for the training materials, and other (soft) payments like local transport, food and drinks, and labour contributions were also recorded. One ADP agent estimated that the on-time payment rates to community FFS facilitators lay at something like 70 per cent. A master trainer reported good quality high attendance and strong motivation. However, a community facilitator noted: *“Because all our people lack money, they cry. It can drive the [ADP] agents away if we complain. I am also rewarded in a different way. Last year they fixed a day to work on my farm.”*

#### 5.3.2.2 *The demise of community co-funded FFSs in Cross River State*

In 2008, the number of community co-funded FFSs dropped to 10, in 2009 to three, and in 2010 to none, as shown in Figure 5.4. The interview data suggest several reasons for the demise. In May 2007, the sitting governor of Cross River State, Donald Duke, lost the elections to Liyel Imoke, but this result was annulled in July 2008. Coming up to the new elections, politicians reportedly aired messages that the state would organise and fully fund more FFSs, acting as a disincentive for communities to fund their own. Imoke was re-elected, but according to TCU officials the insecurity in governance and policy direction led to non-disbursal of funds. Also, since 2007, the Cross River State Ministry of Agriculture could no longer get the much-coveted course certificate signed officially.





**Figure 5.4** - Number of FFSs per year in Cross River State, by type, 2005–2010. Source: STCP annual reports

FFS farmer facilitators reported this as a strong discouraging factor. Extension staff and communities reported that, from mid-2009, the government stopped paying transport allowances and other stipends to the ADPs. This was confirmed by an ADP director. As one agent put it: *“Because of the distress in us and the plight of the farmers, we were able to continue the programme until the end of 2009.”* And, *“For two whole years we are using our meagre salaries to run the FFS for the state.”*

Although FFS was kept in the ADP/TCU budget, the new government did not disburse the funds. An ADP director: *“[Farmers] are hoping the government will not fail them. I know, I believe the government will not fail them. [...] I am not supposed to engage in politics.”* The Cross River State government was equally late in disbursing its NCDC counterpart funds for the training of additional FFS facilitators by 2009. The NCDC’s attempt to support the FFS movement and to circumvent what they called political farmers, by exclusively delivering subsidised fertiliser to FFS graduates, was delayed until 2010 in Cross River State. A cooperative leader: *“It was the first time this year, it had never happened before. This led to a lot of farmer response.”* State government services reported that, in 2009 and 2010, they continued to receive written requests from farmer groups for FFSs in their communities. These had to be forwarded to the agriculture commissioner until further political decisions were made. An ADP director: *“There is over-pressure on me. I don’t even have an FFS in my own village. So [farmers] say ‘you don’t like us’.”*

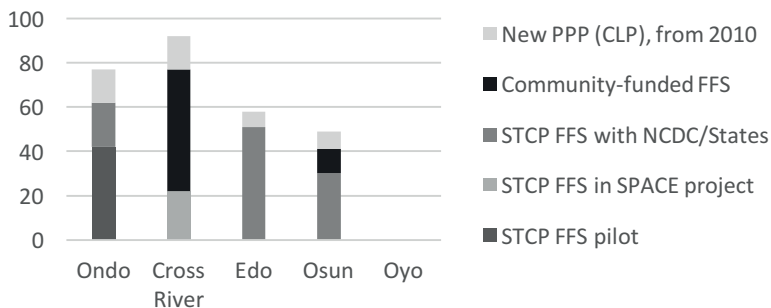
Finally, in 2010, the World Cocoa Foundation-led PPP the Cocoa Livelihoods Programme, in collaboration IITA, started up a new ‘classic approach’ of organising fully funded FFSs that enveloped the available ADP/TCU capacity, severing the gentlemen’s agreement. A director: *“It is a project that becomes available and we can profit from. It’s like when somebody is offering you a free lunch, wouldn’t you take it?”*

**Table 5.3 - State services (ADP and TCU) and the organisation of cocoa FFSs**

STATE	Ondo	Cross River	Edo	Osun	Oyo
Start year	2003	2005	2006	2008	2010
Role ADP	Lead	Extension staff	Extension staff	Extension staff	Extension staff
Role tree crop unit	n/a	Management	Management + extension staff	Management + extension staff	Management + extension staff
FFS capacity according to STCP	Strong	Strong	Medium	Medium	Weak
Origin main FFS funds	STCP pilot and state	Project, state, and communities	State	State and communities	n/a
State governor elections held	2009	2007 and 2008	2008	2010	2006 and 2007
State funding for FFS blocked	Yes, in 2009/10	Yes, in 2010	Yes, in 2011	Yes, in 2010	Yes, persistently
Farmer contributes funds	No	Yes	No	Yes	No

### 5.3.3 Cocoa FFSs in four other Nigerian cocoa states

Fourteen cocoa producing states are represented in the NCDC. All states committed to setting up FFS programmes with counterpart funding in collaboration with the STCP. To put the Cross River State case into perspective, four other states were also visited for interviews with the state services and training facilitators. Table 5.3 outlines some key comparative characteristics of the five states. This section continues with a brief description of the FFS service delivery mechanisms and experiences per state, ahead of our analysis of potential PoEs and variation in mechanisms at each of the state levels in section 5.4.



**Figure 5.5 - Achieved number of FFSs per state by funding type (2003–2010).** Source: STCP annual reports

Figure 5.5 shows the achieved number of FFSs per state. It is noteworthy that Ondo State ran FFSs under the STCP pilot phase, that Osun State equally had community-funded FFSs, and that Oyo State – the home state of IITA – had zero FFSs.

#### 5.3.3.1 Ondo State (FFS in 2003–2005, 2007–2008, and 2010)

In 2003, Ondo State was selected as the pilot state for the STCP, as the largest cocoa-producing state and also because of the ADP's readiness to collaborate. In 2005, when the curriculum was fully developed, tested, and validated and the quality-controlled research pilot ended, the governor took over this 'island of excellence' from the STCP during an official handing-over ceremony. Subsequently, Ondo nearly consistently ran fully funded FFSs (using NCDC and state funding) from 2007. STCP management showed a lot of confidence in the ADP's capacity and quality standards. The director of extension specifically praised the improved working relations, as compared with T&V, both within the organisation and between the extension staff and farmers. FFS communities created cooperatives and formed a union. The Ondo State ADP, however, never liked the idea of community co-funded FFSs, despite some interest from communities (STCP, 2004). Having benefitted from this high-quality pilot, Ondo State ADP services clearly subscribed to a project mentality. According to an ADP director, a change of government caused a rupture in funding in 2009 and 2010, but after that fully project-funded FFSs continued under a new World Cocoa Foundation programme.

#### 5.3.3.2 Edo State (FSSs in 2006–2010)

Edo State immediately participated in the NCDC FFS project in 2006 and consistently organised state-funded, state-led FFSs thereafter. The ADP staff report that their director was already convinced about FFSs before 2006. It is noteworthy that, compared with other states, Edo State paid the farmer facilitators a stipend and transport allowance. However, because of staff and resource limitations, FFSs were run on a two-year instead of a one-year cycle, with large groups of 'followers'. TCU staff claimed that, in this way, quality would prevail. The contested 2008 state elections and upcoming new elections caused frustration of the programme. "*They are putting off everything,*" says the supervisor, "*What is troubling us is ... politics. The elections.*" The ADP/TCU staff were not impressed with the level of support provided and priority given by the state government to cocoa farmers: "*At times we have to use our salaries to ensure these schools are going. So, we'll put a bit of sacrifice so that the programme will not fail.*" Despite these challenges, FFS visibly institutionalised into the state's service delivery package and mentality.

### 5.3.3.3 Osun State (FFSs in 2009–2010)

Osun State joined the NCDC initiative late, with state counterpart funding in 2008. According to the ADP/TCU, it took until then for the state governor to become convinced of the value of the methodology. After organising an impressive 30 FFSs in the first year, a link was made with the state ministry of commerce to help FFSs turn into cooperatives and a union. A considerable number of communities had shown interest, and both extension staff and farmer facilitators reported that the government was willing to support schools if the communities would contribute significantly. The STCP, during a stakeholder meeting, helped broker a gentlemen's agreement on roles and responsibilities, like the one in Cross River State. In 2010, eventually 11 communities ran their independent FFSs. The state funded the extension staff's salaries and transportation costs. However, the state government's FFS budget was cut back in 2010 and 2011, leading TCU to use the reduced budget allocation for the support of independent FFSs only. In those communities, FFS payments to the farmer facilitators were sometimes problematic: *"So we sacrifice our self for the development of our community,"* says one farmer facilitator, *"Because if we want our children to be an educated fellow we must try to spend, to surrender ourselves."* A TCU extension facilitator: *"Government cannot do it alone. It is even good that farmers are taking up the challenge."* Osun State is particularly noteworthy, as its collective action model was evidently inspired by Cross River's initial example.

### 5.3.3.4 Oyo State (no FFSs organised)

Oyo State was among the last to take the NCDC project forward. The ADP agents point to the political process as the culprit, although the extensive use of 'His Excellency' in the agents' discourse equally indicated a particularly loyal attitude to state political actors. When the last governor approved FFS funding, he was impeached soon after. The deputy governor, part of NCDC, became the new governor. This meant that the procedure had to start over again. Once FFS was re-approved, the STCP did come in and trained the extension staff and farmer facilitators in 2010. When TCU presented the budget for actual FFSs it was approved however: *"[Another] thing is for you to have the people in finance to back up the approval of His Excellence."* ADP had already received state funds for its World Bank-supported arable crops programme. This prompted the councillor of finance to declare that money had already been disbursed for FFS. TCU then saw no option but to write *"a long memo"* on the differences between both types of FFS, pointing to NCDC activities in neighbouring states. An official in Oyo: *"That is another political thing that is working against us. [... Farmers] are agitating. [We need] the politicians to relax a bit. Farmers are voters. [...] You cannot believe the kind of pressure we are receiving from the farmers. You know, they interact with people from other states."* At the time of the research, five years after the start of the NCDC FFS

project, Oyo was yet to run FFSs. Oyo, IITA's home state, could not overcome a lack of will or development intent.

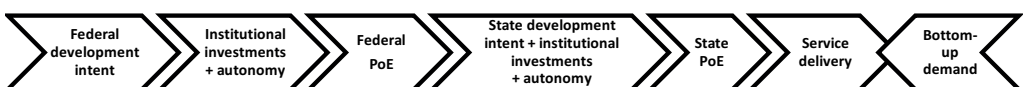
## 5.4 Analysis and Discussion

In this section, we first discuss how PoEs were observed in the federal state in general, then zoom in on the Cross River State case and look at the situation between states. The section ends with a discussion of the PoE role in development and the conditions under which PoEs have such a role to play.

### 5.4.1 A bottom-up response activated by service delivery in a PoE

The data suggest that states with successful FFS scaling – even if only for a couple of years – benefitted not merely from a PoE, but from an active configuration of reinforcing mechanisms between the federal and state bureaucratic management levels and the farmer communities and farmer-based organisations.

In the case of cocoa FFSs, an added dimension to the under-resourced PoE was that they were also activated by bottom-up action. In the states where resources for cocoa extension were restricted but the state's extension agents were willing to 'make it happen' (that is, Cross River, but also Osun), strong bottom-up demand for effective service delivery helped to activate the PoE. Smallholder farmer communities in Cross River State clearly recognised that something unusual was happening surrounding a joint federal–state initiative on cocoa FFSs. Once this opportunity was identified, farmer enthusiasm rapidly led to political pressure on state actors and to collective action. The fact that communities were agreeing to co-fund significantly more FFSs than the state's politicians budgeted for also enabled the state extension services to turn into a PoE. Our analysis suggests that joint federal and state agricultural policies in Nigeria may not be effective or developmental until both levels become embedded within a joint and politically supported policy framework that connects to citizens' real needs. In that case, the federal and state PoEs fit each other almost as Matryoshka nested dolls. This in turns allows collective action initiatives to emerge from below and help catalyse service delivery.



*Figure 5.6 - A bottom-up demand activated by federal-state service delivery*

#### **5.4.2 The importance of collective action for the emergence of effective PoEs**

The Cross River State case demonstrates remarkable resolve and investments at community level, from the bottom-up. This connects to the academic discussion on how development in Africa is about finding ways to overcome collective action and coordination problems (Booth & Cammack, 2013, p. 147; Whitfield & Therkildsen, 2011, p. 7). The premise is that, in the African context, regularly neither politicians nor ordinary citizens can be counted on as the driving force for development. Actors at both levels have found more reliable and effective ways to access goods and services than waiting for the state to provide them (Booth & Cammack, 2013, pp. 135-136). This disconnect and distrust between politicians and their electorates prevent communities from acting collectively in their best interests.

From the interview data, it becomes clear that farmers feel that politicians are not responsive to their needs. Booth et al. (2015) state that African leaders in distinct historical contexts, “have tended to conceive development as [...] a quantum leap from rural backwardness to urban modernity.” Henley (2015) mentions how Nigerian elites, uncertain about political survival, rather tend to adopt short-term elitist policies with visible outputs than focus on smallholder agriculture. Farmers are also voters, say some of the bureaucrats in our study. However, due to a lack of mass political mobilisation, politicians’ “perceived political imperative to reduce rural poverty” is limited (Henley, 2015, p. 188). This links to the call by Iyoha (2010) for more consistent policy, to the call by Poulton (2012) for stronger political incentives, and to the statement by Booth et al. (2015) on the importance of challenging African policymakers’ assumptions. Interestingly, Routley (2014) argues that assessing a development state’s commitment to a specific ambition is more important than assessing policy outcomes.

Given this disconnect from rural citizens, the case of collective action around self-funded FFSs in Cross River is a positive deviance example. We support Bierschenk and de Sardan (2014) call for a better understanding of such processes within the state and more empirical studies of the state. The STCP had neither the project funds nor the manpower to behave as a classic development partner. The hands-on supporting role that the STCP was able to play, which Booth and Cammack (2013, p. 142) call “convening and brokering”, was in fact essential for allowing collective action to emerge around FFS scaling in circumstances where there was a lack of classic project funds to roll out FFS. It was also this farmer enthusiasm and pressure on the extension services and local politicians that led to contagion-type scaling to late(r) adopter states. Osun State’s civil servants followed Cross River State’s example. They saw cocoa extension “performing well, under the same restrictions and with similar resources” (Roll, 2014, p. 38). Osun’s professional bureaucrats used

their organisational autonomy and drive to contribute to agricultural development to improve its performance using cocoa FFSs.

### 5.4.3 Pockets of effectiveness in the Nigerian cocoa sector

For the remainder of this section we zoom out, back to the federal level and to the other cocoa states under study.

The obvious federal bureaucratic PoE in the Nigerian cocoa sector, at the time of the STCP, was the NCDC. It possessed a presidential mandate to develop the sector and showed independent agency and the embedded authority to actively influence state programmes from the federal level. Our data clearly show development intent, the corresponding institutional investments in the NCDC, and NCDC's active engagement with the individual states, and this in an otherwise adverse political economy. Management was also sufficiently depoliticised (for example, by discontinuing input distribution along political lines).

Regarding the state level, further exploration is necessary, using the PoE characteristics. First of all, the use of an adapted, responsive, and high-quality mode of service delivery

**Table 5.4** - State characterisation for PoE criteria: relative organisational effectiveness in the provision of public services and functional staff deployment guided by sufficiently depoliticised leadership

<b>Ondo</b>	The data show clear goals for FFSs, a strong capacity, and good quality service delivery for this former pilot state's extension service. The project mentality persisted, but FFS was professionally executed as mandated by the state government. ADP management was not strongly linked to the state politicians.
<b>Cross River</b>	The extension service demonstrated an unexpectedly rapid build-up of strong FFS capacity. Active pacting with local communities and other stakeholders made it possible to run dozens of schools, co-funded by cocoa communities. The ADP displayed high organisational pro-activity, a service delivery mentality, and functional deployment of staff in responding to demand.
<b>Edo</b>	The extension service displayed a good capacity to persistently run state-funded FFSs and a strong organisational culture around civil service delivery, with good management support and goals. This is the only state where the government consistently supported FFS and farmer facilitators were paid.
<b>Osun</b>	Although slow to start, this second state in which community co-funded FFSs emerged creatively replicated the inclusive pacting process used earlier in Cross River to build consensus. The extension services proved to be dynamic and to have clear goals and sufficient flexibility to work directly with cocoa communities on FFSs.
<b>Oyo</b>	Although this is STCP's lead organisation's (IITA) home state, Oyo did not manage to deliver on its FFS promise. Counterpart funding for training-of-trainers came only in 2010, STCP's final year. The extension staff displayed resignation and loyalty towards unwilling state political actors.



is understood to be effective FFS service delivery, as witnessed in all five states under study except Oyo State. Table 5.4 looks at two further PoE criteria. Finally, with regard to persistence, Ondo, Cross River, and Edo organised FFSs for periods of five years or longer. That said, FFS programmes in all five states were negatively affected by new elections.

We conclude that the cocoa institutions in three states – Ondo, Cross River, and Edo – can be characterised as PoEs, all of which are nested under (and contingent on) the federal PoE (NCDC). Most states had challenges in relation to stability and the value of staff incentives.

#### **5.4.4 PoE in development – Organising the intent for service delivery**

In terms of our conceptual framework, the data indeed suggest that federal development intent was essential for putting in motion processes that eventually led to increased service delivery to smallholder cocoa farmers. Henley (2015, p. 174), who introduced the notion of development intent, points out that Nigerian policymakers and decision makers have frequently not backed up their promises with action. When development intent is backed up by the correct institutional investment and sufficient autonomy, discretionary space is created for bureaucratic public service providers to function effectively. This is exactly what we observed. Federal governance initiatives in Nigeria, even with all the right intentions, do not automatically lead to a state level reaction. However, in this case, the NCDC received sufficient federal autonomy (mandate, resources, discretion) and showed sufficient agency to inspire several state governments to provide an equal extent of autonomy to run FFSs in a previously unseen effective manner. Likewise, a lack of (continued) political development intent has strong explanatory power for declining numbers of FFSs in Cross River State and other states during and after elections.

Roll (2014), among others, has called for more case studies on relevant PP institutional arrangements in this regard. Booth et al. (2015, pp. 5-6), because of this shortage of examples, still question the “feasibility in current political contexts of such PoE of direct interest to smallholder farmers.” This relates to the observation that such pockets of effective service delivery in Africa today are “rare or short-lived” and exist “without heavy government involvement” (Booth et al., 2015, p. v). This was indeed the case also in Cross River State.

#### **5.4.5 Development intent alone does not explain pockets of effectiveness**

This article emphasises that achieving effective public service delivery in agriculture is not merely an issue of politics and governance. It stresses that, although development intent was observed in a decidedly adverse environment, this was not sufficient. PoEs

were able to emerge only because this intent translated into the necessary institutional investments to allow bureaucrats to work. PoEs are valuable but still symptomatic of a failing state. PoEs provide effective solutions only for a specific sector challenge. Our analysis of the history and context of agricultural policy, although specifically focused on cocoa, shows how innovation in agricultural extension delivery is dependent on politically enabled federal and state institutions. The data show that, when enabled, specific services and influential bureaucrats at federal and state level may focus on making things happen at the cocoa community level, in the spirit of a specific federal pro-poor, pro-rural policy. These bureaucratic actors' *management* of development intent and of subsequent institutional investments, especially at state level, is pivotal, not the politics. Under specific circumstances, bureaucratic effectiveness can become the main determinant in achieving improvements in public service delivery. Making things happen is then translated into concrete configurations of public service delivery, in classic or alternative manners.

#### 5.4.6 Further research

Further investigation is necessary of the conditionality of the greater persistency of bureaucratic PoEs in extension service provision. Further research into the emergence of collective action at community level would also be welcome, as well as into whether and how this might carry through over time if public and private sector donors desisted from classic fully project-funded farmer training initiatives.

### 5.5 Conclusion

Today, global commodity sectors, including cocoa, demonstrate determination to make a transition to sustainability, for instance through the introduction of standards. Providing professional services to vast numbers of rural smallholders, professionalising the sector, and producing a stable supply of environmentally sustainable and socially just cocoa beans remain a formidable challenge, especially in the context of troubled states like federal Nigeria. Success also depends on a careful balancing act between public and private interests. This article reports on how an influential public–private programme in West Africa engaged with a challenging political economy for agriculture in its attempts to scale up FFS in cocoa-producing states.

The theoretical entry point chosen for this study, PoEs, helped to detect spaces in which actors did achieve political settlement and managed to craft context-specific practical solutions to deliver services to smallholder farmers. A show of federal presidential development intent created and enabled a first federal PoE. Federal bureaucratic

management of cocoa extension in turn provided sufficient autonomy to several state cocoa extension services to effectively deploy a type of nested PoE under the joint state–federal cocoa initiative. In at least two states, the convener and broker role of the PPP programme was essential for the emergence of these state PoEs.

The conceptual framework helped determine the contextualised conditions which co-determined the scaling of an innovation through the inclusion of previously underserved rural populations. The four identifiers of the potential emergence of PoE within bureaucratic extension services, described in section 5.2.1, provided valuable entry points to assess, ex-post, how certain contexts enabled the introduction and scaling of new approaches to service delivery. In addition, the analysis showed that the quality and nature of the intervention on its own was not sufficient to determine desirable scaling outcomes, even after a successful pilot. Attention needs to be given to how it will perform under specific circumstances. As also argued in (Schouten, Vink, & Vellema, 2018), it would be better to engage in localised ex-ante institutional diagnostics even before setting up interventions. Guiding and tailoring the design of locally appropriate interventions, such as cocoa FFSs, will clarify what specific contexts (state services in this case) are good at and can deliver on. Intervention programmes should not roll out complex innovations like FFS as classic externally funded projects. Interventions should *convene and broker* to support models whereby – on the condition of clear political commitment – extension services, the private sector, and communities would co-design, co-fund, and co-lead the process. Then sustainability and innovation initiatives may become truly developmental.

Using the positive example of one state PoE to inspire the emergence of a PoE in another state (PoE scaling through contagion) indeed seems a valid approach to achieve further scaling of service delivery. This study has highlighted interesting cases of highly context-specific PoE emergence and persistence, but all were relatively short lived, not surviving political changes in the long run. The realisation that, as (Leonard, 2010, p. 93) puts it, “the underlying political economy in which an organisation is placed ultimately will overcome and shape all the other causal factors” still holds. This underlines the complexity of scaling service delivery and, in the long run, of rebuilding of state–society relations, state legitimacy, and democracy (Roll, 2014, p. 39).



# 6

## Conclusion





## 6.1 Introduction

This thesis examines the efforts of a first-of-its-kind public–private partnership (PPP) to scale up agricultural training delivery to hundreds of thousands of smallholder cocoa farmers in Africa, using the farmer field school (FFS) training approach. This specific PPP, called the Sustainable Tree Crops Program (STCP), sought to actively persuade the existing national systems for cocoa extension provision in Cameroon, Côte d’Ivoire, Ghana, and Nigeria to adopt and scale FFS, a more participatory and innovative knowledge development approach. This intervention was of proven technical quality (Tsiboe et al. 2016; Waddington et al. 2014), with tried and tested practical modules validated by regional experts (Asare and David 2011). FFS challenged the existing dominant agricultural extension provision regimes in Africa at the time, regimes that had depended on top-down transfer of technology (ToT) approaches for decades. This meant that the adoption and scaling of FFS first needed to achieve sector transformation, permanent changes in the way the cocoa value chain operates and becomes more effective, moving from a top-down mode extension delivery to an alternative learning-based mode of participatory extension delivery. The prime objective of adopting the more participative FFS approach is to make the cocoa sector more sustainable. In addition to that, there is scientific evidence to support the effect of cocoa FFS on cocoa productivity, including a study by the STCP itself (Gockowski et al. 2010) showing a net production increase of 14% for the average farmer field school participant. Tsiboe et al. (2016) shows yield enhancements through cocoa FFS attributable to the ensuing industry-supported Cocoa Livelihoods Program (CLP) of 32% (Ghana), 34% (Côte d’Ivoire), 50% (Nigeria), and 62% (Cameroon).

The ambition of this thesis is to contribute to the debate on scaling and institutionalisation processes of agricultural innovations, especially within multi-stakeholder settings in Africa. The initial setup for piloting the FFS approach in each of the four countries was similar. It was only after pilots within a niche, that the country management received considerable freedom to decide on potential strategic directions for attempts to scale and institutionalise cocoa FFS within their specific extension regime and context. It is important to note once more that within the scope of this thesis, and based on the analytical framework, the concept of ‘regime’ refers to an ordered and stable socio-technical system of providing agricultural extension for the cocoa value chain, in multi-level contexts. It does not refer to its more general dictionary meaning of an (authoritarian) government. Interestingly, despite these comparable organisational setups, the observed practices and outcomes of scaling cocoa FFS in these four countries diverged strongly. The focus of this thesis is on the process: the actual practices of scaling and outcome pathways of scaling. This intertwines conceptually with an interest in processes of



adoption, niche–regime alignment, institutionalisation, and sector harmonisation (see Figure 1.3 in Chapter 1).

This thesis places the spotlight on contextually determined variations in agricultural extension actors' tinkering, manoeuvring, and changes of tack when they are hard at work to achieve the scaling of a niche innovation. It is not at the original niche level, but rather at the extension regime level that key actors align, de-align, and re-align on potential realistic scaling pathways that fit an existing context. The thesis demonstrates that, within the African State, comprehension of contextualised scaling pathways of emerging niche innovations needs to go beyond merely pointing out technical qualities of an innovation.

The thesis has been guided by two research questions:

1. *What explains the divergence of the scaling pathways for innovative cocoa Farmer Fields Schools (FFS) in four African cocoa-producing countries?*
2. *Which alignment mechanisms shape the interaction on FFS scaling pathways between the original niche intervention and the existing national cocoa extension regimes?*

In this concluding chapter, section 6.2 summarises the main findings and formulates answers to the research questions. Section 6.3 focuses on the main theoretical implications. Section 6.4 examines implications for methodology and future research, and section 6.5 discusses implications for policy and practice. Section 6.6 presents the final conclusions.

## 6.2 Scaling service delivery within the African State: main findings

In this section, I discuss answers to the research questions as they emerge from the preceding research Chapters 2 to 5. The first research question required a comparative typology of scaling pathways in the various country cases:

*What explains the divergence of the scaling pathways for innovative cocoa Farmer Fields Schools (FFS) in four African cocoa-producing countries?*

### 6.2.1 A typology of scaling pathways

To answer this question, the first research chapter of this thesis was based directly on the introductory chapter but formulated an analytical focus that would allow for

cross-country analysis. Consequently, Chapter 2 presented a comparative outlook on the scalability and transformational capacity of cocoa FFSs, as bounded niche interventions in four very diverse contexts. The chapter aimed to unravel determinants of the observed divergence. It specifically zoomed in on interaction patterns between the entrenched regime and the innovative niche that affected the scaling of co-learning and the transformation of service delivery systems. By focusing on comparing four country cases, the global landscape discussions and pressures (e.g. cocoa industry direction, cocoa certification, child labour accusations, and so on) were largely black-boxed.

The first stage was a situational analysis that focused on demarcating the landscape, regime, and niche levels within the country contexts. This was complemented with qualitative case studies of the specific country-level niche–regime interaction patterns for scaling FFS. As a second stage, major landscape–regime shocks that put the system under pressure were included in the assessment. In the case of Côte d’Ivoire and of Nigeria, favourable combinations of multilevel interactions for transformation towards a participatory mode of agricultural extension delivery were found. In addition to favourable timing, in these two country contexts disruptive landscape–regime relations were combined with competitive niche–regime relations. At the time, this favoured FFS as the only acceptable alternative. As a third stage, a qualitative assessment of the observed multilevel alignment on a shared cognitive frame (Geels and Schot 2007: 405)

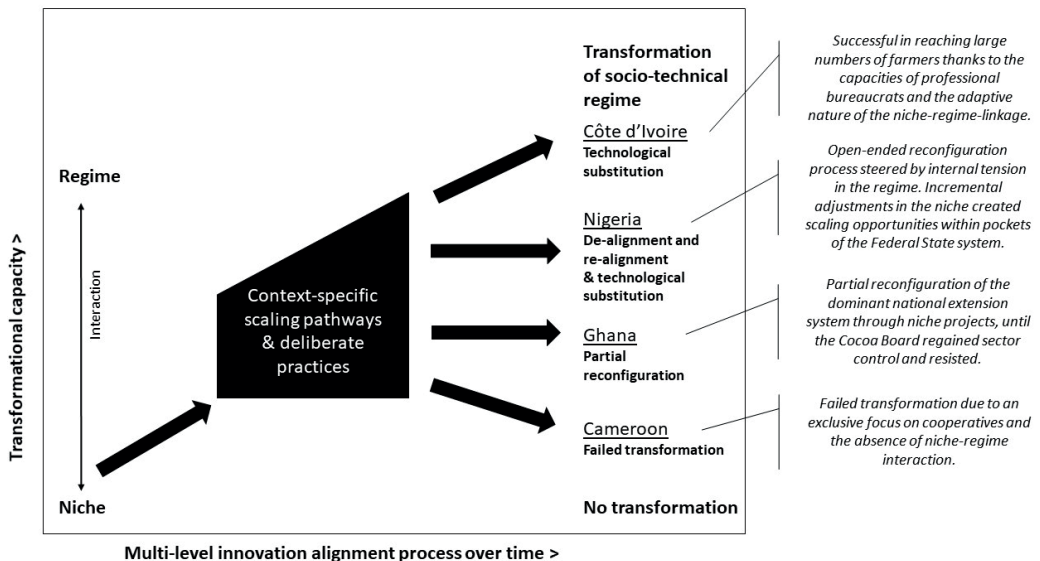


Figure 6.1 - Summary of transformation typologies in this thesis

showed that it is possible to typologise FFS scaling outcome patterns. These findings are summarised in Figure 6.1.

### 6.2.2 Comparing scaling pathway typologies

The analysis in Chapter 2 led to the assignment of a scaling and institutionalisation outcome pattern type to each of the country case studies (i.e. transformation, reconfiguration, technological substitution, de-alignment, and re-alignment), based on Geels and Schot (2007), Geels (2011), and Geels et al. (2016). This type of comparison of innovation scaling pathways between countries has rarely been undertaken between comparable niche initiatives, and Geels et al. (2016) actively invite country-comparative multilevel research. Nevertheless, these findings could not fully answer the first research question.

The comparison in Chapter 2 shows that more favourable multilevel interactions between the niche and regime strengthened the transformational capacity for achieving sustainability outcome pathways for the cocoa PPPs under study. This underlines the fact that the dominant extension regime is not a passive entity, not an impact domain, but a co-creator of the scaling process that directly impacts on the scaling pathway, within bounded contexts. Chapter 2 also shows that a deeper understanding of scaling dynamics does not come from concentrating on novelty. Unfortunately the typology of scaling pathways that was used, mostly based on the multilevel perspective (MLP), is not designed to explain why innovations do or do not reach scale within a certain context and a specific constellation of partners. As described in chapter 2, the MLP provides a typology, and on top of that Geels and Schot (2007) propose various factors that determine scaling pathways. These factors (shocks, timing, nature, multi-level alignment) help to understand whether transformation might have occurred after a shock or rather under gradual pressure; whether at a time of ‘crisis’ ready-made alternative technologies are available; and whether niche and regime actor exhibit a symbiotic or rather a disruptive relation. All of this put together can classify a context-specific attempt at aligning on scaling as ‘favourable’ or ‘unfavourable’. However, this does not provide detailed insight, into *what actually happened*; which context-specific mechanisms of alignment building between the niche and regime level were activated or employed in an attempt to go to scale, pointing to the second research question.

As such, chapter 2 could not provide sufficient insight into the deeper reasons and agency behind the observed variation in each of the country cases. It could not satisfactorily interpret the divergence in practices and mechanisms employed by regime actors that determined the observed scaling outcome pathways and patterns. The qualitative analysis of the individual country cases pointed to important other institutional drivers and processes within African State extension regimes. This begged for further

investigation. The analysis of the country case studies on FFS scaling in Cameroon, Côte d'Ivoire, and Nigeria, in Chapters 3 to 5, created connections to additional bodies of literature that could help bring out the specific niche–regime interaction mechanisms. This additional layer of literature provided more answers to both the first and the second research question, emphasising the pivotal influence of context on scaling practices. Chapters 3 to 5 showed various mechanism by which a socio-technical regime (for agricultural service delivery) can behave as a communicative and creative partner. These chapters also put the spotlight on what I call ‘bureaucratic judgement calls’ against adoption, scaling, and institutionalisation. Whatever its technical quality and merit, if an innovation does not fit or land properly with the existing regime, such a judgement call by career professionals can eliminate or marginalise the niche intervention.

### **6.2.3 Context-specific scaling pathways**

From Chapter 2, and from exploring answers to the first research question in the previous section, it emerges that a deeper dive into these concrete and context-specific niche–regime interactions and scaling practices is needed for further theorisation. More insight is needed into how the various scaling outcome patterns developed. Chapters 3 to 5 focus on the second research question:

*Which alignment mechanisms shape the interaction on FFS scaling pathways between the original niche intervention and the existing national cocoa extension regimes?*

To answer this question, this thesis sought to iteratively interpret the case study data for interaction mechanisms that led to emerging outcome patterns of scaling. Additional theoretical perspectives from additional literature were used to unearth the contextual dynamics and concrete mechanisms that in each case determined the conducive or unconducive nature of interactions between the innovative niche and the dominant cocoa extension regime.

### **6.2.4 The regime is a co-creator of emerging scaling outcomes**

An overarching finding of this thesis is that the more linear analytical frameworks for understanding innovation and scaling pathways of sustainability initiatives cannot fully satisfy the analytical need to dive deeper into context-specific niche–regime interactions, at various societal levels. This includes using the MLP, despite its improved sensitivity to the societal dimensions of the regime.

This thesis demonstrates that the agricultural extension regimes actively co-created scaling pathways. A typology of innovation and scaling pathways, despite investigating several driving factors in chapter 2, cannot provide the required levels of insight to

answer both research questions. Additional methodological and theoretical perspectives are needed to appreciate how relevant analytical dimensions of scaling can explain how alignment is forged in context, and how emergent scaling outcomes may be divergent for the same innovation. Each of the three chapters shows how the public cocoa extension regimes at national and sub-national levels either ‘talked back’ to the FFS niche and became a constructive co-creator or actively or passively put up roadblocks. This thesis owes a debt of gratitude to the work of authors including Bierschenk, Olivier de Sardan, Lawrence, and Roll, who are cited throughout this thesis. Their qualitative work on inner workings of the State enabled me to add a layer of specific additional theory to appropriately analyse and consider the co-creation role of the regime.

### 6.2.5 Mechanisms of niche–regime interaction on institutionalisation and scaling

In several country cases, conducive interaction between the niche and the regime was observed through specific mechanisms. In this thesis, through detailed analysis, several significant niche–regime interaction mechanisms were identified that helped transform and renew otherwise rigid institutional patterns within the socio-technical regime for agricultural extension service delivery. See Table 6.1.

These mechanisms are very important for understanding institutionalisation and scaling as emergent outcomes in this thesis. The set is certainly not complete, as it is based merely on the four countries under study, but it may provide an impulse for further theorisation and generalisation by other scholars.

*Table 6.1 - Observed niche–regime interaction mechanisms defined*

Observed niche–regime interaction mechanisms	Definition for the purpose of this thesis
Bureaucratic judgement call	African bureaucratic career professionals evaluate a niche intervention featuring a promising innovation, not on the basis of technical merit, but by assessing the context and the transformational capacity of the dominant socio-technical regime to adopt and institutionalise it, and to deliver service at scale.
Institutional work	The purposeful practices of professionals (in organisations) aimed at creating, maintaining, and disrupting institutions (Lawrence et al. 2009b).
Pockets of Effectiveness	Public organisations that are relatively effective in carrying out their functions and in serving some conception of the public good, despite operating in an environment in which most agencies are ineffective and subject to serious predation by corruption, patronage, etc. (Leonard 2010). Pockets of effectiveness in agricultural extension may not always be delineated straightforwardly and may be hybrid in nature because of private sector linkages and collective action at the grassroots level.

#### 6.2.5.1 *Bureaucratic judgement calls*

It would not have been useful in this thesis to subscribe to broad discussions on failed States or good governance (see also Olivier de Sardan 2014: 404). Going beyond the initial analytical focus proposed in Chapter 1, it was much more helpful to zoom in on specific instances and mechanisms of effective or failed delivery of specific public services. This was demonstrated in all three research chapters. State agents delivering services in agriculture in Africa often have a negative image, associated with ineffectiveness (Ganguly et al. 2006), despite these officials often working under the most challenging of circumstances. Bureaucratic agents in more developed economies would equally struggle to be effective under such working conditions and would most likely refuse service.

This thesis suggests that African career professionals should get the benefit of the doubt, even if they seemingly block innovation. The Cameroon, Côte d'Ivoire, and Nigeria cases show that there was no shortage of bureaucratic capacity with which to engage, but rather a hesitation (e.g. by the private sector at the time) to engage with it. These experienced individuals are uniquely placed to evaluate an intervention, not by becoming convinced of its technical qualities, but by going deeper and assessing the transformational capacity of the dominant regime, and by considering the context and transformational issues of going to scale. This bureaucratic judgement call, if not favourable to scaling, is hard for niche intervention actors to overcome.

From this thesis, it also appears that States that are in flux (even violently) or otherwise under pressure may present a stronger opportunity for reforms and innovation. As the case of Côte d'Ivoire demonstrates, instability is more likely to create pathways for experimentation, institutionalisation, and eventually impact at scale. Instability creates the necessary operation and decision space for benign bureaucratic State actors to take what they consider to be wise(r) decisions.

The Cameroon case shows how vital it is to continue to engage seriously with extension regime bureaucrats, at both the political and the implementation level. Here, the country management did not trust in serious collaboration with the national cocoa institutions. Appreciation did exist for the technical quality of the FFS approach. However, the PPP soon realised that cocoa FFS would not easily be acceptable to the dominant public cocoa extension regime, because of a lack of capacity and resources. Meanwhile, Cameroon's bureaucratic cocoa extensionists did carefully consider the consequences of adopting a new resource-intensive approach like cocoa FFS, and then categorically decided against it, despite cocoa sector pressure. The PPP, however, did not desist from the ambitious scaling objectives, nor did it focus on attempting to otherwise align with

the dominant regime for cocoa extension. Instead, all the PPP's efforts were directed towards a dozen mostly emerging cooperatives which, although 'small and beautiful' (Schumacher 1973), predictably turned out to be a finite scaling strategy without signs of systemic transformation.

#### 6.2.5.2 *Institutional work*

A second interaction mechanism identified in this thesis is the concept of institutional work (T.B. Lawrence et al. 2009a). The Côte d'Ivoire case, in Chapter 4, presented a successful emergent outcome of relatively effective public service delivery at scale, with large numbers of cocoa FFSs being organised. This level of niche–regime alignment was unexpected, as it happened within a turbulent cocoa sector and during an intense and violent socio-political crisis.

In Côte d'Ivoire, the PPP's country management, based on a deep understanding of the State, forcefully shifted the attention away from private sector and development partner interventions, towards embedding service delivery in the State's cocoa governance and public extension institutions. Because of the strategic importance of cocoa, particularly during the crisis, the necessary space was created for dedicated professional bureaucrats to operationalise reform and to intensively engage with the PPP, and vice versa. The management did not dismiss the 'failed State' but used policy foresight to perform the necessary institutional work. The niche intervention programme became connected to a specific group of career professionals within the State's cocoa bureaucracy. These specific purposeful practices adequately silenced mechanisms that in a crisis would normally obstruct public service delivery.

Chapter 4 highlights how processes of alignment and enactment can be immensely powerful in achieving institutionalisation and eventually scale. I chose to use institutional work as an explanatory mechanism in this case instead of the more heroic 'institutional entrepreneurship' (DiMaggio 1988). It is rather the low-key non-heroic dimension of this professional bureaucratic guild that stands out through its determination to be effective in adverse circumstances and by quietly 'rescuing' innovations in operation. The practices, competences, and capacities of partnership managers, bureaucrats, and business leaders constructed effective spaces for problem-solving and socio-technical innovation on the fringes of niche and regime.

#### 6.2.5.3 *Pockets of effectiveness*

The third mechanism emanates from the Nigeria case study in Chapter 5, which first underlined the complexity of aiming for scale in the broader context of a Federal State system and pluralistic extension provision systems. However, also because of



the absence of realistic alternatives, it turned out to be relatively straightforward to embed the cocoa FFS intervention itself into a joint Federal and State policy. This thesis demonstrates that State cocoa bureaucrats implementing agricultural extension, at both Federal and State level, can prove to be unexpectedly effective and strategic in ‘the mundane practices of state-making’ (Bierschenk and Olivier de Sardan 2014a: 4), often organising themselves in smaller informal, or larger formal pockets of effectiveness (as discussed in Roll 2014: 366). This effectiveness in implementing and scaling service delivery of course needs to be understood as relative to the local norm. The FFS case showed that these effective pockets were (temporarily) backed by a strong political mandate from a superior, and in some cases involved the assignment of dedicated public funding. This thesis shows that the purposeful engagement of relatively small groups of well-integrated professional bureaucrats by partnership managers can create a strong capacity for transformational scaling processes.

Looking deeper, Booth and Cammack (2013) point to how Africa usually shows little incentive for collective action between the State and citizens. Political support and spending for agriculture in Nigeria is not generally pro-poor and pro-rural, leading to low expectations among rural citizens and low rural commitment among politicians (Henley 2015). This translates into few incentives for citizens to collectively act in their own best interest. The observed pockets of effectiveness in agricultural extension provision existed at the Federal level, but particularly also at the State level and from the bottom up. These pockets were based on local social contracts down to the community level (as observed in Nigeria’s Cross-River and Osun States). The Nigeria case shows that the very absence of interventions at the grassroots level, coupled with a sudden presence of enabled professional bureaucratic capacity, can lead to a boom in effective mechanisms of public or public–private service delivery. This unexpected level of development intent (Henley 2015), combined with a quality service proposition, as well as strong backing from a professionally led Federal initiative, was met with enthusiastic and invested cocoa community initiatives. These otherwise rare public–civic social contracts for service delivery emerged and led to community-led and co-funded cocoa FFSs. Chapter 5 therefore again highlights the vital importance of work at the interface of the niche and the regime, at the various societal levels, as the PPP convened the stakeholders and brokered gentlemen’s agreements that allowed for effective pockets of public service delivery, co-investment, and collective action.

### 6.3 Implications for theory

This thesis did not set out to make a grand contribution to theory. However, deepening our understanding of divergence in scaling pathways, first through a comparative analysis and then through individual country case studies, contributed not only to discussions on scaling, but also to socio-political innovation studies and to more socio-anthropological studies on the inner workings of socio-technical regimes and the African State. There are several implications for theory.

#### 6.3.1 Putting the context of scaling central to the analysis

The first implication for theory is to attach more importance to the nature of the context of innovation than to the nature of the niche innovation, when niche–regime interactions are being studied. Each of the case studies (as presented in Chapters 2 to 5 and discussed in section 6.2) shows a rather different outcome pattern regarding scaling and institutionalisation for what is essentially the exact same agricultural innovation. Cocoa FFS was introduced by the same configuration of partners and with similar funding levels, during the same timeframe, in African cocoa-producing countries. It was the context that was different. What emerges from this thesis, therefore, is that a significant part of the outcome is determined by factors of context (socio-political, managerial, institutional...). It is these contextual factors, and not the technical quality of the niche innovation, that guide purposeful actions that may lead to scaling by key actors, especially also by those close to, or inside, the public institutions central to the cocoa extension regimes.

Scholars and practitioners working on innovation systems should step away from merely using vague but prevalent concepts, such as the enabling environment or the institutional landscape, to characterise the context of innovation processes (see also Struik et al. 2014). Processes connected to socio-technical innovation, State institutions and political processes are particularly daunting to analyse. However, but if the objective is to try and positively set up or influence a scaling process, and to create conducive multilevel interactions, then these dynamics should not be black boxed under an enabling environment or institutional landscape. There is a need to closely follow the fabric of the institutional context, or ‘to move with the grain’ (Booth and Cammack 2013: 137). The design of new and improved theoretical frameworks needs to put centre stage the context of scaling dynamics, actor agency, and the different societal forces at play – more than is currently the case for instance in linear-inspired multilevel frameworks. This connects to Bierschenk and Olivier de Sardan (2014a: 14-15), who point out that ‘the state should not be seen as an entity, but as a bundle of practices and processes in a field of complex powers’. Both the State and the agricultural extension

regime existing in that context are products of a socio-technical quest for closure and compromise.

### **6.3.2 No existing generic theory for context-specific scaling pathways**

The available innovation literature was incapable of singling out the context-specific interaction mechanisms and practices that lead to divergence in scaling outcome pathways. The MLP-inspired analytical framework for this thesis, developed in Chapter 1, and the comparative typology based on that framework developed in Chapter 2, were nevertheless instructive for this thesis. The MLP is based on the idea that the diffusion of innovations follows a recognisable S-curve (e.g. Rogers 1962), but it is certainly not simplistic, nor insensitive to societal dimensions or the potential availability of alternative technologies. The selected literature and the problematisation of innovation curves did provide explanatory driving factors for each case study. It was possible to determine whether a transformation had been observed and to typologise breakthroughs or progressive scaling processes against ideal-typical innovation pathways (Geels and Schot 2007; Geels et al. 2016).

The literature, helped to interpret driving factors and typologise observed linear patterns. It was unable to fully bring out the underlying alignment mechanisms that explained the observed practices of scaling in context. Chapters 3 to 5 have shown that in-country processes operate under a unique set of shifting dynamics. No generic theory exists to analyse this divergence in scaling the same innovation.

Chapter 3 adopted the MLP-inspired PROMIS for a fuller retrospective understanding of how alignment is built in context, involving many scaling dimensions and aspects. Nevertheless, PROMIS also remains at the level of an analytical approach, rather than theory.

A deeper dive was necessary to fully appreciate the depth (or the superficiality) of the adoption, sector alignment, and scaling of cocoa FFS. As argued above, the co-creation of scaling needs to be explained from the nature of the context of niche–regime interactions. To explain an innovation scaling pathway within an African State, multiple connections need to be made with multiple bodies of theory for every unique case and context. This can only be done through an iterative approach. Such an iterative approach allows for more profound understanding of what enables and hinders transformational change, innovation, and scaling. The argument that our understanding of transformation processes can be enriched by iteratively studying practice and policy from multiple social theory perspectives has also been presented elsewhere (e.g. Vellema 2011).

### 6.3.3 Re-appreciating the State

The initial analytical focus proposed in Chapter 1 and adapted for comparative analysis in Chapter 2, was helpful to demarcate the socio-technical regime and typologise the scaling pathways in the case studies. At the same time it also asked for a more specific focus on observable dynamics and practices of effective or failed delivery of public services in specific contexts. The analysis in Chapters 3 to 5 therefore did not need to capture the full complexity of national (or federal) politics and governance. This thesis does not focus overly on official State functions, but looks at modes of governance, practices, and institutional mechanisms of effective or ineffective public service delivery (Olivier de Sardan 2014: 420), at multiple levels. This makes it possible to study scaling processes in socio-technical regimes that exist within complex States even if its institutions are engaged in large opaque processes of reform and socio-political flux, but without taking too much distance, and without disqualifying the State.

A contribution, therefore, is that the presented case studies show that, when sustainability innovations are being scaled with the aim of achieving long-term sustainable outcomes, the State cannot be circumvented, as was initially proposed by donors and the private sector in the PPP, particularly in the case of Côte d'Ivoire. Researchers, development partners, and companies in various niche contexts may think it easier to move around the State agents and institutions and run pilot projects, or work only with those implementing extension services directly. This thesis suggests that this is short-sighted when impact at scale is the ambition.

It is certainly true that bureaucratic career professionals often exhibit cautious behaviour towards interventions and policy that may affect the way they are used to work. This tendency permeates at all political and operational levels, down to those 'street-level bureaucrats' or 'interface bureaucrats' (Bierschenk and Olivier de Sardan 2014a: 23) that interact directly with farmers. However, in this thesis also, bureaucratic behaviour can deviate from the general norms, in both positive and negative ways. Olivier de Sardan (2014: 407-19) discusses this disparity between professional norms and professional culture. As demonstrated in the three research chapters, these bureaucratic judgement calls profoundly impacted the niche-regime interactions and created either an opportunity for alignment and transformation or a strong incompatibility in discourse and vision with that of the original niche intervention management. This implies that innovation at scale does not emerge simply from a successful pilot but emanates directly from the successful interaction of that niche innovation with forward-thinking State actors embedded within the dominant socio-technical regime. Often, the dominant agricultural extension regime – as well as the State – is regarded as merely an impact domain, not as something with which to interact and dialogue.

This thesis shows that the socio-technical regime actively chooses to be responsive to an innovation or not. A regime ‘talks back’ to innovation in a niche, if given the opportunity, and if it has been convinced of the need to do so. The core argument to convince a dominant regime must predominantly be contextual in nature, and less so technical. Côte d’Ivoire (Chapter 3) is the clearest example of how it may take an effective bureaucratic regime actor to recognise another one. The partnership manager and his seconded bureaucratic technical manager were extremely knowledgeable of the Ivorian cocoa bureaucracy. Their levels of foresight, strategic integration, and understanding of the direction of change and reform, especially also linked to future domestic funding for FFS, were acquired while they were part and parcel of this informal brotherhood of benign bureaucrats. Note that not all effective bureaucrats are internal to a dominant regime, nor do they have to be State-employed.

## 6.4 Implications for methodology and future research

The initial retrospective action research upon which this thesis is based consisted mainly of archive research and semi-structured key informant interviews. The analytical framework for this thesis, inspired by the field of socio-technical innovation studies, was constructed only after field data collection, while I was designing the PhD proposal.

### 6.4.1 More emphasis on qualitative research within scaling sustainability interventions

Qualitative research and iterative analysis therefore have been a cornerstone of the development of this thesis, and I argue that this emphasis has significantly deepened our insights on what happened between the niche and the regime. Already during data collection, albeit retrospectively, it became clear that this qualitative methodology allowed me to pick up on strong variations within what otherwise seemed like a straightforward regional technical intervention programme. During the subsequent multilevel analyses of the case studies, the niche–regime dynamics, negotiations, and actual practices of alignment turned out to be the key determining factors to understand scaling outcome pathways. The retrospective focus on favourable and unfavourable multilevel interactions (see Table 2.5, Chapter 2) then allowed for an identification of purposeful practices by partnership managers and professional bureaucrats in the rich qualitative data.

### 6.4.2 Studying multilevel interactions at a more granular level

This thesis emphasises that the embedding of innovations is not an isolated technical process, but a wider process of socio-cultural change. However, exactly how this

process is enacted by individual State and non-State actors in and around the dominant cocoa extension regime, who all have their own agency, is not fully addressed by the available theoretical frameworks, and the innovation literature also tends to focus on global transitions. What emerges from this thesis, however, is additional backing for the claim that the gist of these more linear perspectives and multilevel typologies of scaling patterns can inspire and kick-start mixed-methods analysis of transformation at more granular empirical levels (Geels et al. 2016: 898), as demonstrated in this thesis.

### **6.4.3 Use of anthropologically inspired approaches to study State innovation actors**

A key implication of this thesis is the need for more emphasis on anthropologically inspired research approaches and on linkages with literature on specific institutional mechanisms (e.g. institutional work and pockets of effectiveness) for the enactment of alignment on scaling pathways. There is significant value in taking an uninhibited, unprejudiced outsider's view, unrestricted by the need to immediately fit a case study to predefined analytical frameworks. Such an approach complements generalised typologies and connects the process to larger institutional, socio-political, and theoretical debates, also outside the field of socio-technical innovation studies. I therefore join Bierschenk and Olivier de Sardan (2014a: 17) in their call for more interest by political and sociological scholars in Africa in the application of the fieldwork practices routinely used by anthropologists. This specifically applies when scholars are studying specific scaling process practices and situated action by professional bureaucrats. More broadly, they call for more empirically grounded analysis of 'the making and unmaking of the state' (Bierschenk and Olivier de Sardan 2014b: 54-55), which can be extended to socio-technical regimes. However, this point certainly also needs to be reversed. Anthropologists and related scholars should equally take more interest in socio-technical and institutional processes at the core of citizen-State interactions surrounding the practices of public bureaucrats. Anthropologists especially have a tendency to study processes at the periphery of the State (ibid., 2014b: 52), focusing on the exceptions to the rule. This thesis shows that researchers need to overcome inhibitions and move in closer to State actors.

### **6.4.4 From retrospective to ex-ante analysis**

An implication thesis for practice of this thesis is that pilots on agricultural innovation in sub-Saharan Africa that seek to introduce complex new socio-technical approaches need to be continuously analysed, redesigned, and translated in light of the analysis of the multilevel context. This thesis unfortunately could not contribute to such a process within the PPP, because of the retrospective timing of data collection. If scaling agricultural innovation in an African context is the object, simply rolling it out is not an

option. A carefully nurtured process of niche–regime interactions is needed, constantly re-aligned and re-negotiated, based on the context in which the dominant regime operates. Pilot initiatives should perform a pre-analysis of the potential for regime transformation, institutionalisation, and scaling. This connects to ongoing debates on institutional diagnostics (e.g. Schouten et al. 2016). Rodrik (2010) in this respect points to the need to describe and analyse what institutional contexts are good at.

If in certain contexts, during the ex-ante scaling analysis, a minimal potential of transformational capacity within the dominant socio-technical regime is not found, widespread scaling should not be attempted. Potentially, any donor or private sector stakeholder can still go ahead and fund and organise ‘more of the same’ impact, as was largely the case in Ghana (see Chapter 2), but there should then not be the expectation of a sustained impact and system outcome beyond the impacted smallholder farmers or beyond the project’s lifespan. Whether such narrow scaling effort is worth it, in terms of return on investment, depends on the type of initiative, the partnership, and the urgency.

#### **6.4.5 Future research**

Multiple theoretical streams were combined to fit specific scaling contexts for the construction of the analytical focus of this thesis. This put the spotlight on how the current literature on the scaling of agricultural innovations in developing counties is largely unable to adequately interpret the highly contextualised processes of niche–regime alignment around the scaling of innovations.

##### *6.4.5.1 Mixed-methods research on the underlying configurational processes of scaling*

Further research should focus on a broader mixed-methods inventory of institutional scaling mechanisms that underlie the observed scaling pathways, for a variety of agricultural innovations, in a variety of contexts. Current methodological frameworks can typologise the pathways, and point at driving factors, but not so much the underlying configurational processes of scaling without black-boxing agency and context into the enigmatic ‘enabling environment’ or ‘landscape’. Outside this thesis, we have attempted to begin to contribute to filling this methodological gap through the development of the PROMIS approach in Wigboldus et al. (2016).

##### *6.4.5.2 Including the higher political layers and the private sector*

For this research, the level of access to the highest management levels of cocoa institutions was limited. The cocoa sector, and other value chains, would clearly benefit from more and deeper qualitative investigation of management practices and decision processes for scaling within the highest bureaucratic and political realms, although access to these levels will be difficult to acquire. For this thesis, given its retrospective



character, a conscious choice was made (see Chapter 1) not to focus on the role of national and international private sector and multinational corporations in scaling the FFS approach. After the Sustainable Tree Crop Programme became defunct, several large joint private initiatives have emerged in its wake (e.g. joint industry programmes through the World Cocoa Foundation or individual companies' own sustainability programmes). A connected gap in research exists on how effective scaling mechanisms, domestic funding, pockets of effectiveness, and instances of collective action may easily be disturbed by political change, or by being overtaken by external donor-funded initiatives. This becomes clear from the case of Nigeria's Cross River State in Chapter 5. There should be more research on the context-specific interactions between niche, regime, politicians, and multinationals. In this regard, it would be equally interesting to investigate scaling processes surrounding the international sustainability standards that appeared around the same time. Private sector experiences in cocoa can also be instructive in comparison to other less structured value chains, e.g. palm oil, rubber, and soy, notably if ex-ante analysis can be included.

#### *6.4.5.3 Linking the transformative power of pockets of effectiveness to innovation platforms*

More research attention should be given to the transformative power and qualities of bureaucratic pockets of effectiveness, and to the conditions under which these pockets emerge and persist (Roll 2014: 235). These pockets of benign bureaucrats are a valid object of research for increased learning on institutional change and alignment, agency, and scaling opportunities in interactions between niche and regime, as well as on the potential silencing of hindering mechanisms (e.g. Roll 2014: 234). The literature would further benefit from research on how bureaucratic pockets can be effectively connected to make multi-stakeholder innovation platforms more effective, especially as these are increasingly used as a vehicle for research, development planning, and partnership management, including in the cocoa sector (Bisseleua et al. 2018; Schut et al. 2015). This thesis also shows that well-versed actors in the African agricultural extension sector, including smallholder farmers, can recognise effective bureaucrats and act on that. Further research could support in developing the diagnostics that will allow external actors to find them more easily also.

#### *6.4.5.4 Towards a scaling theory of change*

Wigboldus (2018), co-author on Chapter 3, points to the need for practitioners to develop a theory of scaling on top of a theory of change. This line of thought fits with recommendations by the Canadian International Development Research Centre (IDRC), which recently issued a review of scaling (Gargani and McLean 2017) that concluded that researchers and practitioners need to adopt a scaling theory of change, intended to

enhance readiness to engage effectively and dynamically with scaling processes. This connects to my call for ex-ante analysis of potential scaling pathways as a precursor to scaling. This thesis clearly agrees that scaling *‘is a coordinated effort to achieve a collection of impacts at optimal scale that is only undertaken if it is both morally justified and warranted by the dynamic evaluation of evidence’* (Gargani and McLean 2017: 36). The four principles that Gargani and McLean (2017: 37-39) embed into this definition (i.e. moral justification, inclusive coordination, optimal scale, and dynamic evaluation) resonate strongly with the findings of this thesis. More research and experimentation are necessary, using methodologies with strong attention to context specificity, to demonstrate the applicability and success of such a scaling theory of change approach.

## 6.5 Implications for policy and practice

### 6.5.1 Being more serious about public and private sector career professionals

A first implication for policy and practice is that development practitioners need to be more serious about the capacities of career professionals in the public sector, especially those connected to domestic funding, based on our findings in section 6.3.3 and the same reasons given in section 6.4.3 for researchers. In most sub-Saharan countries, no outfit other than the government institution has the capacity to reach large numbers of farmers in a sustained manner. No project can compete with the State, nor is the private sector willing or able to take over public tasks like agricultural extension, even for key cash crops. All the same, today, private sector capacities also need to be taken more seriously. Private sector technical staff increasingly help shape socio-technical regimes in Africa. The private sector is not central in this thesis because of the chosen timeframe (2001–2011) in which they were still less prominent in the cocoa extension landscape. What this thesis shows, especially in the case of Côte d’Ivoire in Chapter 3, is that, through this first PPP experience, private sector companies did learn to appreciate, trust, and work directly with the African State – something they had not considered venturing into 10 years earlier.

### 6.5.2 Performing ex-ante analysis during the pilot, before scaling

A second implication for practice is that pilots on agricultural innovation in sub-Saharan Africa that seek to introduce complex new socio-technical approaches need to be continuously analysed, redesigned, and translated in light of the analysis of the multilevel context. If scaling is the object, this is not a simple question of rolling it out, but a carefully nurtured process of niche–regime interactions, constantly re-aligned and re-negotiated, based on the (institutional) context.

**Box 6.1** - *Recommended actions for a multilevel continuous analysis of transformational capacity for scaling an agricultural innovation within a context-specific socio-technical regime:*

- Fully understand the pros and cons of the niche intervention.
- Assess the necessity for transformation in the mode of public service delivery, to achieve impact at scale.
- Perform mixed-methods research, e.g. as performed in Chapter 2, on multilevel dynamics and potential niche–regime interactions.
- Attempt to foresee the in-country direction of short-, medium-, and long-term change and reform, also using bureaucratic experts.
- Associate professional bureaucratic experts to the niche intervention, close to or part of the dominant regime.
- Design a scaling theory of change (see Gargani and McLean 2017).
- Envision how best to embed the pilot in the context, and plan the human resources accordingly, carefully considering early inclusion of professional bureaucrats.
- Set up and run the highest possible quality pilot intervention with partners that have the capacity to go to scale sustainably in future.
- During the pilot, continuously keep researching entry points for an adaptive approach to scaling, increased alignment with the regime, and prevention of opposing mechanisms.
- Assess whether the nature of the multilevel interactions continues to be favourable to adoption, institutionalisation, and appropriation.
- Identify the context-specific practices and/or mechanisms by niche and regime actors that may support scaling.
- Consider sustainable domestic funding mechanisms. (Alternatively focus on external donor/private sector funding – if morally sound.)
- Continuously redesign the scaling theory of change.
- Focus on attaining the required human resources for scaling early on during the pilot, possibly at the expense of initial pilot management and preferably connected to (pockets of) effective professional bureaucrats (and if applicable the private sector).
- Make a go/no-go decision for scaling within the dominant regime, based on transformational capacity and potential for alignment.
- Dare to desist from scaling if no transformational capacity exists.
- Redesign the pilot intervention and the human resources rigorously towards an alignment and scaling process strategy that fits the context.
- Put the regime actors in the driving seat wherever possible, even if the necessary flexibility could impact quality in the short run.
- Constantly reassess the process and strategy against the context, the quality of the niche–regime interactions, and the targeted sustainability impact.
- Play a convening/broker role to create additional public–private scaling partnerships/collective action at different levels of society.
- Commission an external mixed-methods evaluation to collect lessons and share these, before closing a (niche) initiative.

Box 6.1 roughly sketches the steps of how a pre-analysis of the potential for regime transformation, institutionalisation, and scaling could be organised practically. If such an ex-ante analysis had been performed for cocoa FFS around the new millennium, this could possibly have pre-identified scaling pathways and/or needs for capacity

building to set transitions from T&V to FFS in motion even during the initial technical pilot.

Agricultural sustainability interventions need to pay sufficient attention to bottom-up processes of co-investment in extension provision, particularly now that African countries are showing much more pluralistic landscapes for agricultural services delivery (e.g. Bitzer et al. 2016; Nettle et al. 2017). This thesis shows that strategies should be avoided that aim to go to scale through farmer-based organisations that are not of sufficient maturity and do not themselves demonstrate the willingness to actively provide and (co)fund these services for their members. Donors and overseeing bodies should actively require ex-ante analysis and an in-depth justification for a proposed scaling strategy. Partnership managers need to go beyond short-sighted argumentations of ‘low hanging fruit’ and immediate training numbers in their justification. They need to provide an analysis of transitional capacity within that specific context. Using an appreciative lens to investigate context-specific regime orientations and practices, especially while ex-ante analytical capacity is being built up, prevents niche initiatives from taking root before achieving the necessary levels of niche–regime alignment on (future) scaling pathways. Such an early diagnosis and scaling lens can help a niche intervention to strategise and to identify necessary institutional investments, or to be brave enough not to attempt to go to scale if the scope for it simply does not exist.

### **6.5.3 Depth of scaling processes**

A final implication, which links back to the original analytical framework in Chapter 1, is that practitioners need to go beyond an interest in scaling and look at the depth of adoption of an innovation. The FAO (Chuluunbaatar and Yoo 2015) has provided in interesting categorisation, which is integrated into Figure 1.3 in Chapter 1. The first focus of a niche intervention is to achieve niche adoption in a specific target population. Failure generally means that adoption is insignificant, but if the target farmers take ownership and make decisions based on the innovation and it connects to multiple activities and the environment of the group, we can speak of ‘appropriation’. The PPP studied in this thesis did not accept that as sufficient impact. Adoption needed to scale through ‘institutionalisation’, whereby the niche and the regime need to create a common understanding of FFS and its underlying principles, and whereby FFS integrates into policy and practice. It is here that authors (e.g. Struik et al. 2014) speak about the creation of an enabling environment, or an enabling institutional context, in which platforms for smallholder innovation can succeed. This thesis argues against seeing the regime primarily as an impact domain, after achieving innovation in a niche. It is rather the contextually determined regime acting as a co-creator that helps drive alignment and finally institutionalisation and scaling.

One step higher up, sector ‘harmonisation’ speaks to what happened with cocoa FFS in the last decade, especially after the PPP was replaced by industry-wide initiatives in collaboration with national cocoa extension regimes. Yes, the PPP was at the base of creating synergy and shared learning on cocoa FFS, generating national regime transformation. However, subsequently it was the cocoa industry in collaboration with its donors, development partners, and most importantly the African States, that harmonised the cocoa FFS features and principles to maintain quality and standards in the cocoa sector across countries and regions. Scaling FFS beyond national contexts and into the dominant global socio-technical regime is an end game that practitioners in development organisations also need to put on their radar and make part of their ex-ante analysis, process tracing, and the continuous evolution of their scaling theory of change.

## 6.6 Conclusion

This thesis compared case studies on the scaling of agricultural extension service delivery in four African cocoa-producing countries. The analytical framework focused on reaching alignment through multilevel interactions, specifically between the innovative niche and the dominant socio-technological regime. The analysis shows that transformation within an extension regime (in this case from one mode of top-down extension delivery (T&V) to the more participative learning-based farmer field schools) could indeed be confirmed and typologised with the chosen multilevel approach. However, this multi-level perspective was not sufficient to truly understand what exactly happened between niche and regime and why. Literature from innovation studies could not bring out the context-specific mechanisms that led to divergence in scaling outcomes. If the focus is to understand the potential for sector transformation as well as to achieve widespread sustainability impacts, practitioners and scholars need to fully analyse and consider the specificity of the nature of the context. Within the African context of this thesis, the State in particular needs to be taken seriously, and even a failing State should never be written off in its entirety when aiming to impact a dominant socio-technical regime. For a better understanding of innovation in agricultural extension service delivery, more analytical focus is needed on specific bureaucratic processes and practices and the African State’s inner workings – particularly in adverse enabling environments.

Furthermore, the in-depth analysis needs to be qualitative and iterative. Ideally such an analysis should commence ex-ante, although in this thesis this was not possible because of the ex-post timing of the research. The aim of this deeper layer of analysis is to allow for additional connections to relevant theoretical debates and insights, as early as possible. Supplementary literature from sources other than innovation studies may have

better explanatory value for understanding the niche interventions' interaction with the context. It may make better or additional sense of the observed variations in context-specific practices, work, and mechanisms by key innovation actors. Such an approach allows better strategizing for scaling (or for desisting from scaling) ahead of time.

This thesis supports a wider call in the literature for a re-appreciation of the State in innovation studies. Although capricious and bureaucratic, regime career professionals persevere in the practice of their unique insight, despite politicians, also in the face of substantial pressure to go to scale. A dominant socio-technical regime cannot be regarded merely as an impact domain. A regime faced with a promising niche innovation will 'talk back' and make judgement calls, most likely by employing contextual arguments rather than technical arguments. If the intervention fits the context, or if it changes course to fit the context, the dominant regime actors become indispensable co-creators who will nevertheless continue to play by their own rules.

Finally, a unique component of the PPP under study in this thesis is that its experiences with scaling 'taught' the international private sector to no longer fear the State extension services as part of the dominant regime. The cocoa sector eventually embraced effective extension bureaucrats as active co-creators of much-needed harmonisation on how to achieve sustainability impact on the lives of hundreds of thousands of cocoa smallholder farmers all over Africa.





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## Summary







In this thesis, I look at how a public-private partnership (PPP) initiative attempted to innovate agricultural extension service provision and to achieve sector transformation to alternative training approaches, in order to tackle complex sustainability challenges among cocoa smallholder farmers. The purpose of this study is to fill a knowledge gap on why and how the processes of scaling and/or institutionalisation of FFS showed divergent outcomes in four different cocoa producing countries in Central and West Africa. The study provides deeper understanding of the interactions between organisational actors than is normally provided. The central phenomenon under study is a transformational process away from the ‘traditional’ top-down T&V approach and towards the ‘innovative’ co-learning FFS approach. The general objective of the thesis is to build a more complete understanding of the specific dynamics, dimensions, and interactions involved in going to scale. Deeper insight into four, relatively comparable country case studies (Cameroon, Côte d’Ivoire, Ghana, Nigeria), helps determine whether, how and why FFS may have been institutionalised and/or may have gone to scale or not.

**Chapter 1** first describes the background of smallholder cocoa farming in West Africa and the historical context of agricultural extension service delivery in the region. In Sub-Saharan Africa, most cocoa cultivating households have not (and still do not) benefit sufficiently from the global markets to structurally overcome poverty. Since colonial times, agricultural research, advise and support interventions aimed at smallholder farmers have implemented several extension approaches, mainly aimed at productivity increases. Around the start of the new millennium, cocoa producing countries and the global value chain players showed little success in raising productivity and sustainability in the sector, and this was coupled with social equality and social protection. The global private sector, international donors and the origin governments, then, for the first time, set out to jointly introduce innovative farmer training programmes focused on topics including good agricultural practices (GAP), occupational safety and health (OSH), and integrated crop and pest management (ICPM).

The focus of chapter one then shifts to the set-up and growth of this first of its kind PPP (between 2000-2011), and on the development of a pilot on the alternative training intervention it sought to introduce and scale. This PPP’s specific context is followed by the problem statement and research objectives. The theoretical approach outlines how the empirical chapters of this thesis contribute to current literature, and links this to the analytical focus and research questions. The thesis takes inspiration from literature on a shift in ‘mode’ of knowledge production and extension provision in agriculture; the practical process of knowledge generation, exchange and transfer, generally first within a niche setting. This connects to literature on the process of scaling (and increasingly on institutionalisation) of agricultural innovations like FFS. This generally focuses on



the interrelations between a niche and the dominant socio-technical regime. Thinking of sustainability transitions in niche, regime and the broader landscape, led to an interest in the multi-level perspective (MLP) on socio-technological transitions. Finally, since I am interested in a niche intervention that related to large-scale public service delivery, I aimed for increased depth in the analysis by looking at literature that qualitatively analyses change, governance and effectiveness at the level of the African State and practises of bureaucratic career professionals.

The research questions for this study read as follows:

1. What explains the divergence of the scaling pathways for innovative cocoa Farmer Fields Schools (FFS) in four African cocoa-producing countries?
2. Which alignment mechanisms shape the interaction on FFS scaling pathways between the original niche intervention and the existing national cocoa extension regimes?

Chapter 1 concludes with a discussion of the research design and a brief outline of the thesis.

**Chapter 2** focused on a major policy concern in the context of development countries; how to achieve scale with publicly funded intervention strategies. The chapter seeks to understand which scaling pathways have been observed in the four countries under study and how these pathways have been shaped by organisational and local actors. The process of progressing along FFS scaling pathways revealed diverse outcomes in each country, and this had diverse implications for the historically rooted and established system of public service delivery to smallholder cocoa farmers.

Chapter 2 offers a systematic way to assess scalability as an emergent outcome of the co-evolution of knowledge-intensive intervention strategies and the responsiveness of public policy. It provides a framework based on niche–regime interactions central to studies of sustainability transitions. The conceptual framework helped to investigate whether and – if so – how the existing regime showed a transformation towards a new mode of learning-based extension delivery (FFS). Whether or not alignment between niche and regime is achieved, largely depends on the context and particularly on the existence of favourable multi-level interactions.

The second chapter endeavours to explain significant differences in numbers of farmers reached by the PPP. Comparative analysis demonstrates that scale results from context-specific interactions between the architecture of public service delivery and the niche in which the partnership implemented the Farmer Field School approach. The

chapter emphasises to what extent systems shocks and landscape pressures can lead to a destabilization of a dominant regime causing the potential institutionalisation (and scaling) of – in this case – cocoa farmer field schools into cocoa extension service provision. Multi-level alignments between policy regime and niche condition the scalability of knowledge-intensive development pathways targeting large numbers of smallholder cocoa farmers. These alignments shape the transformative capacities of national states responding to sustainability challenges in global commodity chains.

**Chapter 3** is an investigation of whether a study of multi-level dimensions and dynamics can help diagnose the limited and ambiguous scaling and institutionalisation outcomes for FFS in Cameroon. A generally effective FFS pilot by the PPP in Cameroon did not lead to satisfactory widespread scaling or to effective collaboration with the public extension regime.

In chapter 3, a detailed understanding of the key dimensions and dynamics involved is built, as well as the wider lessons that might be learned regarding complex scaling processes in the context of agricultural innovation systems. The chapter assesses whether a purposefully developed analytical approach (inspired on the multi-level perspective) could further enrich understanding and could help structure a broad-based exploration of the qualitative dataset. The chapter argues that different scaling and institutionalisation outcomes might have been observed with a more persistent and adaptive approach to scaling of the technical curriculum, as compared to the approach. The chapter concludes that scaling and institutionalisation outcomes were impeded by the lack of an adaptive approach to scaling the FFS curriculum, limited investments and genuine buy-in by extension actors, a failure to adapt the management approach between the pilot and the scaling phase, and the lack of strategic competencies to guide the process. Findings support suggestions from recent literature that pilots need to be translated and adapted considering specific contextual and institutional conditions, rather than approached as a linear rolling-out process.

The increased use of sustainability standards in the international trade in cocoa challenges companies to find effective modes of service delivery to large numbers of small-scale farmers. A case study of the PPP in Côte d'Ivoire, targeting the small-scale cocoa producers supplying international commodity markets, shifts attention from mechanisms of private governance to the embedding of service delivery in the institutional dynamics of the state. **Chapter 4** explores how alignment between the intervention programme and the cocoa bureaucracy led to the PPP's most notable FFS scaling and institutionalisation outcome, in the 'Failed State' of Côte d'Ivoire during a time of deep sector reform and intense socio-political conflict.

The case study in chapter 4 demonstrates that, despite a recent history of violent conflict and civil unrest, the introduced FFS approach achieved a surprising scale in terms of numbers and geographical spread. The analysis of this outcome is focused on specific behaviour and purposeful action. It combines political science and social anthropological study of effective and developmental elements in the State with the interest in ‘institutional work’, as found in organizational science. The achievement of both the scaling and institutionalisation objectives of the PPP is explained by the skilful practice by the national PPP management. These actors showed a long-standing professional association with the sector and managed to align and had the capacity to embed a new type of service delivery in persistent ‘pockets of bureaucratic effectiveness’ within a failed State.

Public–private partnership initiatives have provided cocoa smallholder farmers with training and other service delivery for nearly two decades. **Chapter 5** examines the introduction and scaling of cocoa farmer field schools (FFSs) in the challenging context of the Federal State of Nigeria. As federal initiatives do not automatically translate into action at state level, the case study focuses on finding pockets of effectiveness (PoEs), spaces that demonstrate effectiveness in fulfilling their official mandate by providing public goods and services, despite adverse circumstances, thereby differentiating them from similar public organisations.

Chapter five demonstrates how the layered structure of the Nigerian Federal System and its 14 cocoa-producing States enabled and/or constrained the FFS scaling outcomes in each of these States. The specific case study seeks to interpret the emergence of effective public FFS service delivery. Soon after the pilot program in Ondo State, the PPP achieved federal support for FFS and full engagement from Nigeria’s federal cocoa institutions. However, after each of Nigeria’s individual cocoa producing States entered into a federally co-funded agreement with the PPP, it did not achieve comparable outcomes of scaling and institutionalisation. Due to the complexity of federalism it was necessary to use a more political analysis in this chapter and look at the Federal and State-level regimes for cocoa extension. The case of Cross River State, as compared to four more cocoa States, specifically demonstrates the importance of development intent at the individual State political levels, and the extent to which a clear mandate of bureaucratic agents can allow for pockets of effective public service delivery to emerge even in unlikely circumstances, and, in this case, also social contracts for community co-funded extension delivery. Clear criteria were applied to find PoEs, and a limited number were found at federal and state level. Their functioning was conditional on these demonstrating sufficient autonomy and political development intent. The FFS intervention programme particularly enabled scaling of service delivery through a

convener and broker role. The study calls for ex-ante institutional diagnostic analysis to help guide and tailor locally appropriate inventions to go to scale.

The final chapter, **Chapter 6**, synthesises and critically discusses the insights and findings, and finally present reflections on the implications of the study for theory, policy, and practice. The analysis in this thesis shows that transformation within an extension regime (in this case from one mode of top-down extension delivery (T&V) to the more participative learning-based farmer field schools) could indeed be confirmed and typologised with the chosen multilevel approach. However, this was not enough to truly understand what exactly happened between niche and regime and why. Literature from innovation studies could not bring out the context-specific mechanisms that led to divergence in scaling outcomes. Practitioners and scholars need to fully analyse and consider the specificity of the nature of the context. Within the African context of this thesis, the State in particular needs to be taken seriously when aiming to impact a dominant socio-technical regime. For a better understanding of innovation in agricultural extension service delivery, more analytical focus is needed on specific bureaucratic processes and practices and the African State's inner workings – particularly in adverse enabling environments.

Furthermore, the in-depth analysis needs to be qualitative and iterative. The aim of this deeper layer of analysis is to allow for additional connections to relevant theoretical debates and insights. Supplementary literature from sources other than innovation studies may have better explanatory value for understanding the niche interventions' interaction with the context. Such literature may make better or additional sense of the observed variations in context-specific practices, work, and mechanisms by key innovation actors.

This thesis supports a wider call in the literature for a re-appreciation of the State in innovation studies. Although capricious and bureaucratic, regime career professionals persevere in the practice of their unique insight, despite politicians, also in the face of substantial pressure to go to scale. A dominant socio-technical regime cannot be regarded merely as an impact domain. A regime faced with a promising niche innovation will 'talk back' and make judgement calls, often by employing contextual arguments rather than technical arguments. If the intervention fits the context, or if it changes course to fit the context, the dominant regime actors become indispensable co-creators, who will nevertheless continue to play by their own rules.



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## About the author





Sander Muilerman was born in Groningen, The Netherlands, on March 2<sup>nd</sup>, 1979. As a rural development and agricultural innovations expert, he has well over a dozen year of field experience in the Sub-Saharan tropical forest zone. Sander speaks Dutch, English, French, German and basic Portuguese. He currently lives in Abidjan, Côte d'Ivoire.

Sander has recently served as the Senior Regional Manager for the World Cocoa Foundation's Climate Smart Cocoa Program (CSC) and the Cocoa & Forests Initiative (CFI) in West-Africa, with the aim to increase private sector engagement and investments in strategies for more socio-economic and environmental sustainability in the cocoa sector, and to eliminate deforestation in the cocoa value chain, respectively. In the summer of 2019, he has started a new appointment for the GIZ's Green Innovation Centre Programme, focussed on supporting innovation in the cocoa value chain in Côte d'Ivoire, working with several ministries and the cocoa marketing board.

Previously, Mr. Muilerman performed international social science research and climate change project coordination in cocoa-based farming systems for the International Institute of Tropical Agriculture (IITA), of the CGIAR. Until 2010, he worked for the Belgian NGO Broederlijk Delen as a management coach for the local NGO 'Alternative Durables pour le Developpement' in Cameroon, and until 2008 as a press and communications coordinator for European cultural institute 'deBuren.eu' in Brussels. Earlier positions were held with the international tour operator TUI, at a ministerial development research council in The Hague (RAWOO/Nuffic), and with Dutch ICT provider Royal KPN. During his studies he volunteered with a gorilla conservation project in Congo Brazzaville (Aspinall Foundation), worked at the Dutch import promotion council (CBI), and performed an in-depth study of local natural resource management practices in rural Senegal.

Sander has a Doctorandus degree (equivalent to BA+MA) in Rural Sociology and Cultural Anthropology from Leiden University and an additional Bachelor's in Marketing and Management for Tourism from Hogeschool HBO Nederland in Arnhem. He is defending his PhD thesis at Wageningen University in the Netherlands in 2019.

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Cover photo: Stacks of cocoa policy documents at the offices of the Ghana Cocoa Board

Photo's chapters: Scenes from cocoa Farmer Fields School in Ghana

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