ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

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Sustainably Scaling up Innovative Agricultural Projects: The case of the E-voucher project of the ATA.

ADDIS ABABA

By: Bemnet Gossaye

MA Thesis as impartial fulfillment of the requirements for the award of the degree of Masters of Project Management

Advisor: Teklegiorgis Assefa (Asst. Professor)

June, 2017

Addis Ababa, Ethiopia

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A project work submitted to the School of Graduate studies at Addis Ababa University College of Business and Economics in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Project Management

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Statement of Declaration

I, Bemnet Gossaye have carried out independently a research work on the topic entitled "Sustainably Scaling up Innovative Agricultural Projects, The case of the E-voucher project of the ATA." in partial fulfillment of the requirement for the Degree of Masters of art in Project Management with the guidance and support of the research advisor Teklegiorgis Assefa (Assist. Professor)

This study is my own work that has not been submitted for any degree or Master program in this or any other institutions.

Bemnet Gossaye

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Signature

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Date

Addis Ababa, Ethiopia

Statement of Certification

This is to certify that Bemnet Gossaye has carried out this research work on the topic entitled "Sustainably Scaling up Innovative Agricultural Projects, The case of the E-voucher project of the ATA" under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of Degree of Masters of Art in Project and Management.

Teklegiorgis Assefa (Assist. Professor)

Signature

Date

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

GRADUATE PROGRAM

Thesis for MA in Project Management

By

Bemnet Gossaye

Approved by Board Examiners

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Teklegiorgis Assefa (Asst. Professor)

Advisor **Signature** **Date**

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Examiner **Signature** **Date**

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Examiner **Signature** **Date**

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Abstract

Scaling up has been defined by different authors in various ways. Scaling up is any form of expansion of an intervention or approach, not as an end in itself, but as a means to achieve greater and more widespread benefits for the population of concern(UNICEF, 2013). But before scaling we have to make sure that the pilot is successful and can be considered as a good practice. The road to sustainably scaling up is often rocky for many organizations and successfully implementing a scaled up intervention is difficult failures are not uncommon. This study raised on the issue of how to sustainably scale up a pilot project. Different studies show that for the achievement of the development goals of a country scaling up good practices is essential, but it has different challenges of implementation. So the study had an objective to study the implementation of a scaling up practice on a selected pilot project. The selected pilot was the E-voucher project of the ATA. Abundant literatures show that success of a pilot is not the end of an intervention but a platform for the opportunities that could be achieved if it is scaled, so a pilot that is not scaled has limited usefulness. . the pilot is ready for scale up through the transfer of the project to a new partner raising the questions who is that partner, what should be the scaling strategy, is the pilot scalable on a large scale, to what extent should the originating organization (ATA) be involved in the scaling of the pilot, and what actions should be taken to sustainably scale up the pilot project The data was collected from a group of participants who had direct involvement on the management of the pilot project, using census and purposive sampling. Questionnaire was prepared both on open ended and close ended type. Unstructured interview was also employed for high level managers. The data was analyzed qualitatively through description and quantitatively with the use of SPSS software. It has been revealed that the E-voucher pilot was a successful project and that it could be considered as a good practice. The study also showed that scaling up should be implemented by technology companies in collaboration with financial institutions (MFIs and CBE), cooperatives and regional governments with ATA playing the linking role among these stakeholders. The study made it possible to identify factors that might challenge the success of the scaled up intervention. some of the challenges may be buy in from internal groups has not been achieved yet, there are no action plans and budgets for the scaling up intervention and also since a specific partner has not been selected yet financial resources needed for the scale up have not been mobilized yet. it is recommended that the ATA and other stakeholders to work on the problems stated above and try to identify the success factors of the pilot and replicate them in the scaling up process.

Key words: scaling up, good practice, pilot project, E-voucher

Acronyms

- ATA …… Agricultural Transformation Agency.
- RFS …….. Rural Financial Services.
- IVS ……... Input voucher system.
- NFC……... Near Field Communication.
- SNNP ……... Southern nations, nationalities and people.
- E-voucher ……. Electronic voucher.
- CBE ……...Commercial Bank of Ethiopia.
- ACSI ……..Amhara Credit and Savings Institution.
- MFI…… Micro finance institutions.
- NGO……... Non-governmental organization.
- ETB…….....Ethiopian birr
- FI…… financial institutions
- EPAU ……. Economic Policy Analysis Unit

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Chapter One

1.1 Background of the Study

Agriculture and rural development are essential components of economic growth and the battle against poverty, hunger, and malnutrition worldwide (Linn, 2012). There is clear evidence that where agriculture contributes a significant portion of gross domestic product, rapid agricultural growth is an effective tool for generating overall economic growth and reducing poverty. Public investment programs, supported by aid, in large scale agricultural programs focused on what works can generate very high agricultural growth rates, in turn contributing to poverty reduction. Scaling up successful projects and policies is effective in generating growth and poverty reduction, but more readily in countries with good policy environments and under reasonably good governance regimes. Brazil, China, Laos, Morocco, and Vietnam, and more recently Burkina Faso, Ethiopia, Mali, and Peru provide good models (Cleaver, 2012).

Of the more than 1 billion people in the world who survive on less than $1.25 per day, 75 percent depend on agriculture for their livelihood. In regions such as sub-Saharan Africa, smallholder farmers who farm less than two acres produce 70 percent of the total food consumed. An improvement in smallholder productivity at scale is likely to have dramatic effects on food security and poverty reduction, not to mention benefits for the rural economy (Hanson, 2016).

After decades of neglect, volatile food prices and the persistence of hunger and malnutrition have brought agriculture and nutrition to the forefront of the international development agenda. As governments, donors, and other key actors deepen their commitments, they are also increasing their focus on how successful development interventions can be “scaled up”, meaning how they can be expanded, replicated, and adapted to new and different contexts, for greater and sustained impact (Linn, 2012).

Concerns about insufficient progress toward the Millennium Development Goals have prompted a renewed interest in agriculture as a source of growth and as an effective tool for poverty reduction and environmental stewardship (Sourang, 2012). Linn (2012) also supported this by suggesting that, taking successful development interventions to scale is critical if the world is to achieve the Millennium Development Goals and make essential gains in the fight for improved

agricultural productivity, rural incomes, and nutrition. How to support scaling up in agriculture, rural development, and nutrition, however, is a major challenge.

Achieving greater agricultural development demands the innovative use of existing technologies and the adoption of new technologies, both inputs and practices that increase land and labor productivity, use natural resources more efficiently, or enable farmers to tap markets that generate greater value and income, thus increasing the economic resilience of rural household(GLEE, 2014).According to UNICEF guidelinesinnovation is described as a practice that has not been substantiated with a formal evaluation, nor scaled up beyond its initial scope. This practice will likely be in the pilot project stage but is seen as successful with a strong potential for impact.

Providing smallholder farmers with access to credit is essential to unlocking long-term, sustainable gains in farmer productivity and incomes. Without financing, smallholder farmers cannot afford the relatively high upfront costs of quality seed and fertilizer, relying instead on poor quality seed and little to no fertilizer. Without access to credit, they may be unable to purchase or rent tools that increase efficiency and reduce labor costs. Additionally, they may not be able to afford the training services needed to maximize seed and fertilizer application and general farm management. Finally, without access to credit, a farmer might be compelled to sell any crop surplus immediately after harvest, when prices are typically at a seasonal low (Hong and Hanson 2016).

Despite the lack of adequate supply of smallholder financing, several organizations are using innovative tools to reach rural farmers. The models these organizations pursue are tailored to meet the unique financial challenges smallholder farmers face (Hong and Hanson 2016). This is why the Ethiopian Agricultural Transformation Agency (ATA) established the Rural Financial Services (RFS) program in 2014 to improve access to finance in Ethiopia's rural areas. The RFS tried to address these issues by developing a comprehensive Rural Financial Services strategy. The strategy addresses both structural challenges (low outreach, insufficient liquidity) as well as service-adoption challenges (credit and savings products not designed for rural households, lack of risk mitigation tools, inefficient delivery systems and low financial literacy). To scale up the system sustainably, the ATA has automated the IVS (input voucher system) system by using low

cost smartphones and Near Field Communication (NFC) tags. It is now being piloted successfully in Amhara and Tigray regions of Ethiopia.

The E-voucher system is planned to scale up in the four regions(Amhara, Tigray, Ormia and SNNP) covering 287 woredas and reaching up to 6.4 million smallholder farmers by 2019.

Scaling up is any form of expansion of an intervention or approach, not as an end in itself, but as a means to achieve greater and more widespread benefits for the population of concern(UNICEF, 2013).Amjad et al (2015) also defined Scaling up as expanding, replicating, adapting and sustaining successful policies, programs or projects in geographic space and over time to reach a greater number of people.In addition Linn(2014)said thatscaling up refers to increasing the number of units such as people, households, and communities served by a specific project

UNICEF (2013)defines other concepts that need clarification as follows;

A good practice is an intervention or approach that has been tried and tested and that can be built upon and/or adapted. The intervention may be new for the local and national stakeholders involved.

Piloting is testing an approach on a limited scale for a pre-defined period of time to assess and document the results of an intervention and its potential for future replication on a larger scale.

Scaling up is replicating and expanding pilot approaches, while at the same time transferring longer-term ownership to government counterparts, to ultimately bring positive results for a greater number of people.

Scaling-up leads to more quality benefits to more people over a wider geographic area more quickly, more equitably and more lastingly. Scaling up can occur both vertically and horizontally. Vertical processes involve expansion from the level of grass roots organizations to national institutions and policies .Horizontal processes refer to geographical spread or replication on a larger human scale, fromhundreds to thousands or millions of people(SARD, 2017).

The concept of “scaling up” has become increasingly popular as concerned donors note the relati vely poor record of innovative pilot projects in extending their reach to large populations

(MSI,2012). It is now becoming clear that both innovation and scaling up “what works” are critical there is an increasing commitment to it among concerned actors. It is not enough to merely replicate interventions; what matters is to scale up impact sustainably(Linn, 2012).

We focus on sustainability of the E-voucher project not on the broader term of “sustainable development”, which is beyond the scope of this paper. Sustainable development isdevelopment that meets the needs of current generations without compromising the ability of future generations to meet their own needs. Sustainability to which we refer is the continued delivery of services that the project renders.

Project sustainability is defined as the capacity of a project to continue to deliver its intended benefits over a long period of time(Amjad et al 2015). Long term sustainable change is more complicated than simply the provision of supply but is also about addressing issues of demand, the economic context, political considerations, and institutional support (Daniels, 2016).

1.2. Statement of the Problem

The Ethiopian Agricultural Transformation Agency (ATA) is an initiative of the Government of Ethiopia (GoE), established by federal regulation. The primary aim of the Agency is to promote agricultural sector transformation by supporting existing structures of government, private sector and other non-governmental partners to address systemic bottlenecks in delivering on a priority national agenda for achieving growth and food security.

The Ethiopian Agricultural Transformation Agency (ATA) established the Rural Financial Services (RFS) program in 2014 to improve access to finance in Ethiopia's rural areas. The RFS tried to address these issues by developing a comprehensive Rural Financial Services strategy. The strategy addresses both structural challenges (low outreach, insufficient liquidity) as well as service-adoption challenges (credit and savings products not designed for rural households, lack of risk mitigation tools, inefficient delivery systems and low financial literacy).

A key element of the RFS project is the implementation of a new input distribution system that uses vouchers, the Input Voucher System (IVS). The new system addresses critical problems including lack of access to input credit for farmers, and financial mismanagement by the cooperative system which has led to regional governments paying significant amounts of money out of the regular budget to honour a 100 per cent guarantee on the Commercial Bank of Ethiopia (CBE) loan used to import fertilizer and other inputs.

The Input Voucher Sales System introduces a financial institution as the point of sale for inputs, whether for cash or on credit. The financial institution issues a voucher which is then redeemed for inputs at the primary cooperative. In this way, payments are handled by the financial institution, meaning creditworthy farmers can purchase inputs on credit provided by the financial institution, and the repayment rate on the CBE loan is significantly higher.

In 2014 the new system was successfully piloted in five woredas in Amhara through the Amhara Credit and Savings Institution (ACSI) using 54 purpose-built satellite branches. Around 157,000 farmers accessed inputs through the voucher sales system including almost 25 per cent who were able to purchase inputs on credit provided by the MFI. Currently the system is being used by more than 3.5 million smallholder farmer households in four regions of Ethiopia.

The system uses paper-based, triplicate vouchers which have to be aggregated and reconciled by Cooperative Unions and MFIs. The reconciliation of the accounts maintained by each user and preparation of reports is done manually which is open to both human error and fraud. Moreover, in the manual system, transactions could not be tracked easily and the data is not real-time: the number and value of vouchers issued and redeemed can only be known after a significant lapse in time (which usually takes more than two weeks).

Problems identified on the paper based system through monitoring and evaluation conducted in 2015 were

- Delay in service delivery
- Reconciliation process unclear, complicated and time taking
- Delay in loan approval and collection
- Failure to get timely reports on input distribution and sales
- Difficult to track price changes and calculations

To scale up the system sustainably, the ATA has automated the IVS system by using low cost smartphones and Near Field Communication (NFC) tags. It is now being piloted successfully in Amhara and Tigray regions of Ethiopia.

In Amhara two pilot woredas were selected, Mecha and S/Achefer. In these woredas 64 smartphones and fifty thousand NFC tags were distributed to twenty five ACSI satellite offices and twenty eight primary cooperatives.

In Tigray three pilot woredas were selected, LaylayMaychew, Adwa and Endamehoni. In these woredas fifty smartphones and thirty five thousand NFC tags were given to twenty five RuSACCos and twenty five primary cooperatives.

The pilot is successfully operational with total number of transaction reaching more than 64,000 in Tigray and Amhara, in which close to 166,000 quintals of inputs worth 233 million birr was transacted in the pilot areas. The pilot will soon be operational Oromia and SNNP.

The lack of attention to scaling-up and the proliferation of pilot projects are due to an interrelated set of factors, including the short term horizon of international donors and the lack of commitment or capacity by governments (UNESCO 2014).The E-voucher pilot project was

undertaken through donor funding in collaboration with the Agricultural Transformation Agency (ATA). But this is not the way to successfully scale up good practices because donors only have limited capacity. The E-voucher system should be able to sustain itself, through collecting fees on services rendered. But the question is who is going to be the investment and scaling up partner that is going to accomplish this task. In identifying whether scaling-up is feasible for the E-voucher project the enabling environment (factors that affect scalability) must also be studied. Before discussing scaling up, the results and benefits of the E-voucher pilot project must be investigated and the critical success factors that make the E-voucher project superior from other alternatives must be thoroughly discussed.

The E-voucher system is planned to scale up in the four regions covering 287 woredas and reaching up to 6.4 million smallholder farmers by 2019. This scale up will not be funded or undertaken by the previous donors, since a new third party involvement is mandatory,this initiates the question; what is the sustainable way of scaling up this project.

1.3. Research Question

- What can or should be done to sustainably scale up the E-voucher project?
- How has the E-voucher project performed?
- What aspects of the E-voucher project made it to be considered as a good practice?
- What does the Enabling environment to scale up the E-voucher project look like?
- What is the best investment and scaling up strategy for the E-voucher project?

1.4. Research Objective

Major objective

- To identify the ways to sustainably scale up the E-voucher project.

Specific objectives

- To assess how the E-voucher project has performed.
- Toidentify the good practices in the E-voucher project.
- To assess the enabling environment in which the E-voucher project is scaled up in.
- To identify the best investment and scaling up strategy for theE-voucher project?

1.5. Significance of the Study

The study contributes to the adding to literature and the outcome of the study will help the ATA tackle the issues it faces while scaling up agricultural projects. In addition the result of this study can be used as a background and foundation for others who want to conduct further empirical researches on this area. The recommendation that will be delivered at the end of this study can also be used by other organizations which are facing similar problems.

1.6. Scope of the Study

The study will focus on only the Agricultural Transformation Agency and the projects they have, which is mainly related to agriculture. In addition the study will focus on only on one project which is the E-voucher and analysis will be done for only that project.

1.7. Limitation of the Study

Time is one of the resources that limit this study as there is no ample time to conduct deep and detailed study by going around all the farmers and conducting detailed interview with all the people involved in the project. In addition the distributed questionnaires might not be returned on time and with all the required information which might affect the reliability the study.

1.8 organization of the study

This research report is organized under five chapters. Chapter 1 has presented the introduction. Chapter 2 presents the review of related literature and research related to the problem being investigated. The methodology and procedures used to gather information for the study are presented in Chapter 3. The results of analyses and findings that emerged from the study and discussion are presented in Chapter 4. Chapter 5 presents conclusion and recommendation.

Chapter two

Literature review

2.1 What are Pilot Projects?

Piloting is testing an approach on a limited scale for a pre-defined period of time to assess and document the results of an intervention and its potential for future replication on a larger scale. Scaling up is replicating and expanding pilot approaches, while at the same time transferring longer-term ownership to Government counterparts, to ultimately bring positive results for a greater number of people (Lattimer, 2013).

Pilot projects have as their primary purpose finding and testing new solutions to a particular problem. They include, by definition, one or more technical, process or organizational innovations. Examples of each would be, respectively: a new medical or agricultural technology (technical innovation); using a novel participatory, grass roots process for service design and delivery (process innovation); or applying a public/private/NGO partnership in an innovative way (organizational innovation). A pilot project may also take a proven model that has worked in one context or been successfully applied to a different problem, and see if it is equally successful with respect to a new context or problem (Kohl and Cooley 2009).

If a methodology is effective andis clearly and systematically shared with a wide audience, it is likely that at least a few organizations will try it out and continue to use it if they are successful. To help other organizations replicate or adapt promising methodologies, careful documentation and step-by-step descriptions of what has been done, how it has been done and why it has been done this way are invaluable. Technical assistance and training that are sensitive to organizational strengths, weaknesses, structure and philosophy, in addition to being technically sound, are also strongly recommended (Gonzales, Arteaga, Howard, 1998).

Experience also demonstrates that the easiest pilot efforts to scale up are those that involve a clear and replicable technology and that self-generate the financial resources needed for expansion. That is why many of the most common examples of scaling up are economic products or production processes such as the internal combustion engine; in the area of human development, it has likewise generally been easier to scale up technical innovations such as new

seeds than models where process and organizational context are critical. For the latter, the challenges of clearly identifying and documenting the model, demonstrating its effectiveness, and ultimately going to scale are greater. One area often overlooked because it is particularly difficult to identify is the values that the model embodies, and that may be essential for its success(Kohl and Cooley 2009).

Although the process of piloting an intervention on a smaller scale is a critical component of any scaling up strategy, pilot projects with no scale-up strategy have limited usefulness (UNESCO, 2014). This argument strongly validates the scaling up of the E-voucher pilot project undertaken in Mecha and S/Acheferwoedas of Amhara region, and three pilot woredas were selected, LaylayMaychew, Adwa and Endamehoni In Tigray. The scaling up will cover the operational Oromia and SNNP regions. The E-voucher system is planned to scale up in the four regions covering 287 woredas and reaching up to 6.4 million smallholder farmers by 2019.

Achieving greater agricultural development demands the innovative use of existing technologies and the adoption of new technologies – both inputs and practices – that increase land and labor productivity, use natural resources more efficiently, or enable farmers to tap markets that generate greater value and income, thus increasing the economic resilience of rural household(GLEE, 2014).

Pilot projects should recognize that there is not a linear progression from pilot to organizational practice, and prepare their implementation plans to accommodate the iterative processes needed. Pilot projects must start by deliberately intending to scale and institutionalize successful parts of the intervention, and by also explicitly planning for activities to support scale up when the project is being conceived and designed. Pilot projects must invest in continuous, collaborative engagement with health system stakeholders from the outset, along with proving the benefits of the intervention. Pilot projects must adjust responsively to increase the potential scalability of the intervention; they should not fear adjusting the interventions before evaluations are conducted and project effects estimated. Stakeholders should recognize that there is no endpoint to the journey from pilot to sustained organizational practice; a continuous improvement process, continued political commitment, and reliable financing are all necessary ongoing investments for the process to produce sustained benefits (SC4CCM, 2014).

While the majority of models proposed for scaling up are described by their proponents as "best practices", few would meet this standard.Kohl and Cooley (2009)introduced a useful set of categories originally developed by the U.S. Center for Drug Abuse Prevention and drawn from scientific discourse when it distinguishes between "an innovation (minimal objective evidence), a promising practice (anecdotal reports and testimonials); a model(positive evidence in a few cases); a good practice (clear evidence from several settings/evaluations); best practices (evidence of impact from multiple settings, meta-analyses, expert reviews); or a policy principle (proven in multiple settings; considered widely applicable 'truism' essential for success)." It is also noteworthy that many of models described as pilot projects in the literature seem to lack a clear product, process or organizational innovation, suggesting that many of these projects are actually demonstration projects or stand-alone efforts to deliver services to needy groups.

A good practice is an intervention or approach that has been tried and tested elsewhere and that can be built upon and/or adapted. The intervention may be new for the local and national stakeholders involved, but is not necessarily a new approach for organizations globally (UNICEF,2013).

The terms "good practice" and "best practice" stand for "the formal and structured process of searching for those practices which lead to superior or excellent performance, the observation and exchange of information about those practices, and the adaptation and implementation of those practices into one's own organization" (Gaul, Lehns, Meyer, Mohaupt, Schröder, 2004).

2.2 Scalability of pilot projects

Scaling up pathway varies across types of activities, business lines, and country conditions, but some common features stand out. Successful scaling up takes time, even decades; long-term engagement with a vision of scale is essential; systematic planning, management, learning, and readiness to grasp opportunities are key success factors; among the drivers, leadership and incentives are critical; and among the enabling spaces, failure to address institutional and fiscal/financial constraints are the most common factors seriously endangering the scaling up process (Cooley and Linn 2014).

Wigboldus and Leeuwis (2013) presented their view on scalability as follows; intrinsic scalability is about whether the object of scaling can scale at all, and/or whether it still makes

sense when it scales. A drill can be huge and still fulfill its essential function. Extrinsic scalability is about whether it is feasible to scale a particular object (can we make it happen?). Making a drill beyond a certain size is something we just cannot do. Therefore, an object can be intrinsically scalable (it would still make sense), but we just can't make it happen due to particular constraints in e.g. our capabilities. Scalability also relates to proportionality. At a certain scale, proportions of an organism may be just right, but if we proportionately scale all parts of the organism, we get into trouble. This is why people rarely become taller than 2.2 metres. There would need to be a disproportionate scaling of e.g. the skeletal frame to sustain the rest of the body in order to grow bigger and still thrive. An example in terms of extrinsic scaling would be that a small car may be very useful in a city, but making it significantly bigger will not make it more useful.

Cooley and Kohl (2009) identified the following variables in relation to scalability of innovations. They must be:

1. Credible, based on sound evidence or espoused by respected persons or institutions

2. Observable, to ensure that potential users can see the result in practice

3. Relevant, for addressing persistent or sharply felt problems

4. Having a relative advantage over existing practices

5. Easy to transfer and adopt

6. Compatible with existing users' established values, norms and facilities

7. Able to be tested or tried without committing to potential user the complete adoption when results have not yet been seen. This still leaves open the question of when we consider an innovation to be credible, relevant or compatible.

Cooley and Linn (2014) suggested that for successful scaling up, potential obstacles need to be removed and enabling conditions, otherwise known as "spaces," have to be created for interventions to grow. They identified eight spaces that most commonly have to open up when pursuing a scaling up pathway:

- Fiscal/financial space: Fiscal and financial resources need to be mobilized to support the scaled up intervention, and/or the costs of the intervention need to be adapted to fit into the available fiscal/financial space.
- Natural resource/environmental space: The impact of the intervention on natural resources and the environment must be considered. Harmful effects of scaling up on natural resources and the environment must be mitigated, and the benefits of scaling up for natural resources and the environment should be promoted.
- Policy space: The policy (and legal) framework has to allow for, or be adapted to support, scaling up.
- Institutional/organizational/staff capacity space: The capacity for institutional and organizational resources has to be created in order to carry the scaling-up process forward.
- Political space: Important stakeholders, both those in support and those against the intervention, need to be attended to through outreach and suitable safeguards to ensure political support for a scaled up intervention
- Cultural space: Possible cultural obstacles or support mechanisms need to be identified, and the intervention needs to be suitably adapted in order to permit scaling up in a culturally diverse environment.
- Partnership space: Partners need to be mobilized to join in the effort of scaling up.
- Learning space. Knowledge about what does and doesn't work in scaling up must be harnessed through M&E, knowledge sharing, and training.

2.3 Sustainability of projects

Sustainability is an issue that should ideally be answered before the start of scale-up. It is how a program can be sustained in the medium to long term, with regards to at least four dimensions. First, the fiscal space: how to ensure that the country can commit to continuously spending. Second, from an operational perspective Third, from an institutional perspective: how to strengthen institutional arrangements, in particular when considerable implementation is based on local arrangements and communities? Finally, how can political and policy support for the programbe sustained?(Costa, Gyoeri, Soares, 2016).

Scale up and institutionalization of successful practices is the goal of every pilot project. Once scaled, the goal is to sustain the intervention so that benefits proven at small scale can generate measurable impact. Successfully navigating this pilot-to-practice journey to meet scale up and sustainability goals has been a challenge for many global interventions. There is need for more evidence on what works to increase the likelihood of scale up and sustainability(SC4CCM, 2014).

Organizational practice is established through a process of institutionalization that begins during the design stage, and aligns the organization's policies, systems, structures and complementary processes to support the desired practice. This process continues through each stage of intervention development and implementation. The degree of institutionalization gradually increases as the intervention is integrated into different aspects of the organization, as policies and procedures are aligned, and as adaptations are made to the intervention for good fit within existing structures and systems. Because organizational practice requires individuals working together as a unit to achieve common objectives by using the established routine practices, the continuous improvement culture is a key element to achieving both organizational practice and sustainability of the intervention (SC4CCM, 2014).

Sustainability involves time, such as sustainability is whether or not something continues to work over time. However, time as a characteristic of sustainability leads to practical challenges in its measurement and conceptual confusion in its definition. When assessing the flow of benefits of a project over time, two questions emerge one is has the project been sustained up to the time it is studied and the other one is whether the project likely to be sustainable over its intended lifetime? To answer the first question, the benefits such as outcomes, success criteria, or dependent variables need to be measured (Amjad et al 2015).

There is no single, standardized approach that can be adopted across projects and programs. The process of sustainable development is inherently a process in which interventions and activities change and improve rather than remain static at an achieved state. Long term sustainable change is more complicated than simply the provision of supply but is also about addressing issues of demand, the economic context, political considerations, and institutional support. This requires thinking of sustainable education development as a dynamic process of change (Daniels, 2016). IFAD (International Fund for Agricultural Development)(2009) adds to this by acknowledging

that assessment of sustainability entails determining "whether the results of the project will be sustained in the medium or even longer term without continued external assistance". It further expands on the concept of program sustainability by distinguishing among several factors that either contribute to or detract from the long-term impact of IFAD interventions.

• Political sustainability – government commitment, an enabling policy environment, stakeholder interests, strong lobby groups and political influence/pressure;

• Social sustainability – social support and acceptability, community commitment, social cohesion;

• Ownership – whether or not communities, local government and households accept and own the outcomes of the project in ways that are sustainable;

• Institutional sustainability – institutional support, policy implementation, staffing, recurrent budgets;

• Economic and financial sustainability – resilience to economic shocks, financial viability, reduced household vulnerability and increased capacity to cope with risk/shocks;

• Technical sustainability – technical soundness, appropriate solutions, technical training for operations and maintenance, access to and cost of spare parts and repairs;

• Environmental sustainability – projects' positive/negative contributions to soil and water preservation and management, resilience to external environmental shocks

Wigboldus and Leeuwis (2013) recommended to check the extent to which a good practice generally fulfills sustainability criteria:

• Environmental friendliness means that the practice has a positive – at least a non- degrading – impact on the environment, thus contributing to the improvement of soils, water, and flora and fauna (biodiversity).

• Economic viability means that the practice has lasting benefits for the family and village / community economy, and is financially advantageous – or at least bearable – for the adopting farmers.

• Social and cultural acceptance means that the practice respects local traditions and belief systems, is positively received by the various local social groups, is sensitive to the needs of people affected by health problems, and that it has positive effects on the organisation of labour within the families and the community.

• Building viable institutions means that local institutions created and/or strengthened by the project have clear and shared objectives with a focus on sustainable agriculture, represent various social groups (including the marginalised), that they are respected and firmly linked to private and public service providers, and that they have sufficient managerial capacities.

SC4CCM recognized early on that scale up alone was not sufficient to ensure sustainability; the pilot interventions needed to be institutionalized into routine organizational practice in order to be sustained. SC4CCM defined organizational practice as "a set of procedures carried out routinely by an identified set of individuals in an organization, who act as a unit working to accomplish a common purpose or task." It is distinguished from "standard practice", which is done routinely by individuals without regard to their connection with the larger organization or in connection with a set of individuals with a common purpose (SC4CCM, 2014).

2.4 Scaling up

Scaling up is replicating and expanding pilot approaches, while at the same time transferring longer-term ownership to Government counterparts, to ultimately bring positive results for a greater number of people (UNICEF,2013).

Wigboldus and Leeuwis (2013) described their generic view on scaling as follows; in nature, scaling is a core phenomenon which happens without human interference. It is manifested in e.g. biological processes such as growth, multiplication, and mutation, and in physics processes such as gravity (when an object falls, its speed will scale according to a certain formula – a scaling law), etc. But we can also distinguish 'natural' scaling processes in social life such as in group formation, traffic, etc. We will later return to the importance of making this distinction, when we argue that scaling up and out happens (intransitive) all the time with and without human interference, and those conscious efforts to scale up and out (transitive) need to be understood in such context. An equivalent of intransitive scaling is what some have called 'see-it-happen scaling', while the equivalent of transitive scaling would be 'make-it-happen' scaling. Strategies

related to scaling up and out are not just about dealing with planned/controlled scaling processes, but also about connecting to emergent (not planned/controlled) scaling processes.

The concept of "scaling up," i.e., using successful small-scale projects as a basis for effecting large-scale changes, has become increasingly popular in both international development work and in the delivery of social services. The persistence of poverty in low- income countries has made it evident to donors and foundations that while small scale projects are necessary, they are not sufficient to achieve the larger changes required. the need to improve social outcomes faces increased pressures to operate with limited resources and to demonstrate cost effectiveness. Accordingly, there is a need to be able to identify projects that can be dependably expanded or replicated, and the means and methods to do so(Kohl and Cooley 2009).

Scaling is interpreted as ensuring the quality of a development impact, reaching out to those 'left behind' and ensuring the sustainability and adaptability of results. It is not about just replicating successes to cover larger groups or populations and he maintains that "scaling up depends on successfully designed and implemented pilots, as well as political and fiscal space that is available for wider institutionalization of results (Wigboldus, Leeuwis, 2013).

The first step in scaling up is to clarify exactly what is to be scaled up. In the discussion that follows, we refer to this as the "model". We also begin with the notion that a "model" is normally embedded, at least initially, in a project. The model can include technical, process, and organizational components, which may or may not be explicit in the minds of those actually implementing the project. If models or individual components of models are new, i.e. untested, we refer to them as innovations (Kohl and Cooley 2009).

Scaling up is presented as part of a broader process of innovation, learning and scaling up. A new idea, model or approach is typically embodied in a pilot project with limited impact. By learning from this experience with monitoring and evaluation, organization-internal knowledge is created and organization-external knowledge is disseminated. Internal and external knowledge in turn can be used to scale up the model through expansion, replication and adaptation with multiple impacts. The experience from scaling up feeds back into new ideas and learning.

Outside knowledge can also feed scaling-up efforts, if an organization picks up on the pilot experience and learning of another organization (Linn 2014).

Systematizing successful experiences is one useful way of discovering and identifying potential good practices. Good practices often emerge when multiple stakeholders agree on a practice's cost- benefit ratio, ecological, economic and social sustainability, and poverty reduction impact. Cost-benefit assessments need to consider both planned and unintended changes in income, social disparities, labor, and other direct and indirect benefits and costs for the target group and the larger community. To have any potential for scaling-up, stakeholders must screen and select practices, based on whether they address a need shared widely by the rural poor, whether they yield rapid and easily recognizable results, and whether they have already been thoroughly tested and evaluated. Practices that are flexible enough to be adapted to arrange of conditions tend to be easier to scale up (SARD, 2017).

Scaling-up has almost become a new paradigm in the discussion on the impact of development activities. Generally speaking, scaling-up means "increasing impact". Although in no way new to the field, the goal of scaling up has nevertheless become a recent mainstream issue, since the dissemination of good practices is seen as a fundamental means of preventing successful practices remaining "island" solutions. If good practices are implemented by different organizations in different regions, they run the risk of remaining isolated solutions to local situations. A number of potential good practices are thereby lost as an example to others. What is missing are activities that increase the impact of good practices by, for instance, passing on their benefits to more people. This can be achieved by strengthening the sustainability of the implementing organization, increasing activities and geographical coverage, and broadening indirect project impact by influencing other actors working in the same field (Gaul etal 2004).

In assessing the potential to replicate small-scale successes, policy-makers need to consider the balance among the social, economic and environmental impacts, the number of beneficiaries and the cost effectiveness. Other prerequisites that determine whether scaling-up is feasible, include whether there are adequate financial resources, human capacities, extension services and infrastructure present in the area to support scaling-up processes; whether policy-makers are sufficiently aware of the development problems that a good practice can resolve; and whether

beneficiaries and implementing actors have already shown some commitment to supporting the good practice and its scaling-up (SARD, 2017).

According toKohl and Cooley (2009) there are at least two different organizational roles in scaling up: the originating organization that develops and pilots the model and the adopting organization that takes up the model. Adopting organizations may be newly created for the purpose, or pre-existing. In the case of collaborative strategies, the role of the adopting organization is sometimes shared between the originating organization and one or more partners. In the case of where scaling up takes place through expansion, there are no originating or adopting organizations since these organizations are one and the same. Nevertheless, the conceptual distinction is useful since significant expansion will almost certainly require the originating organization to undergo major change. This means that when considering potential adopting organizations, it is important to look at how similar the organizational contexts and capacities are, how much adaptation and capacity building will be needed, and what resources that will require.

In the IFAD (2013) report it is stated that Agriculture still constitutes the most important economic sector, uses the most labor and contains the majority of the poor, who are also the majority of the hungry. Government action to stimulate agriculture at scale pays off by increasing food production and rural incomes. Donors that contribute to government programs at scale and for the long term thus contribute more to this success than donors that do not operate at scale, and that have short-term objectives or invest in small-scale projects. The large variation in performance among countries in terms of agriculture, poverty reduction and hunger reduction, combined with large differences in the treatment of agriculture sectors by governments, enables analysis of the relationship between agricultural performance, hunger and poverty reduction, and government efforts to support agriculture at scale.

Scaling up is especially important for agriculture, rural development, and nutrition because of the global challenges of food security and rural poverty. Although the diffusion of agricultural innovations can be spontaneous and rapid, often the path from research to widespread application requires systematic support from public, private, and not-for-profit agencies. Moreover, if the obstacles to reducing rural poverty and malnutrition are to be overcome, and if extensive, deep and productive value chains for specific commodities are to be created, then appropriate

institutional, policy, and investment strategies are required. Their goals must be to help successful interventions take hold, expand, and be sustained (Pingali, 2012).

Too often, approaches to scaling up in the context of international development and agricultural development for that matter, are still rooted in linear ideas about modernization and transfer of technology. This puts efforts to scale up and out in a dubious corner of merely being preoccupied with problem solving from a narrow perspective. Scaling strategies can do better than that. 'Scaling up' impact in smallholder agriculture does not mean simply multiplying the number of projects or investing in bigger projects. Rather, it is about doing things in different ways, for example by forming alliances with other actors to leverage greater overall investment. In fact, reliance primarily on donor or INGO resources is likely to lead to 'unsustainable' interventions (Wigboldus andLeeuwis, 2013).

"Scaling-up" is an evolutionary process. While an organization cannot guarantee that every successful demonstration project will go to scale, there are many things that an organization can do to enhance the likelihood that a successful demonstration or pilot project will be replicated or adapted to reach more people in need. Nevertheless, there are always positive and negative conditions which are beyond an organization's control. An insightful analysis and understanding of the external environment (health problems, government and donor priorities, etc.) and good timing to take advantage of potential support are critical to success. The willingness and ability to be flexible, negotiate and be patient are essential (Gonzales etal, 1998)

Scaling up new technologies and better practices is not something that should be an add-on, but a significant part of the project concept and structure from the beginning. Scaling takes time and adaptability. This may require much longer time horizons. It requires a systems approach that has its own framework and terminology that include the concepts of implementing spaces, drivers and pathways. One gains insight by looking at the scaling up pathway with the drivers and space to achieve goals. Scaling up is a multi-stakeholder process and therefore, getting multi-stakeholder buy-in from the beginning is crucial for scale-up success. This buy-in includes adapters, private sector, public sector and civil society (GLEE, 2014).

Because of the variety of conceptual understanding regarding scaling (up), confusion may arise in discussions and debates over what scaling and scaling of innovations in particular actually involves. Taking a deeper look at what scaling involves, leads to the realization that many well-

known concepts in the context of agricultural development were actually all about the very same idea without using the word as such. Diffusion of technology, dissemination of knowledge, mainstreaming of practices, institutionalization of change: they are all sides of the same cube. Even capacity development can be seen as a process of scaling up knowledge or skills. In other words, the idea of scaling is not new at all and relates to processes that have often been labeled differently. The very fact that so many different concepts are used for the same or similar idea is reason enough for spending some effort on creating conceptual clarity about what scaling up innovations involves. As regards taking stock of documented ideas on and practice of scaling processes in the context of international development, much groundwork has already been done (Wigboldus and Leeuwis, 2013).

2.5 Methods of scaling up

The idea of scaling up appears to be clear when we see how much it is used these days in proposals and plans. However, when we unpack the idea, we find many dimensions, questions and implications that often seem to be left unaddressed. We need to be able to distinguish between different types of scaling processes, we need to understand the kind of scaling processes that apply in particular case, and we need to be aware of the implications of choices we make in terms of approaches and strategies in scaling up and out(Wigboldus and Leeuwis, 2013).

In analyzing possible strategies for scaling up any model, it is helpful to begin with an understanding of the purpose of project in which the model is initially embedded and the linkages between project goals and potential scaling up strategies.

A scaling-up pathway is the sequence of steps that need to be taken to ensure that a successful pilot or practice is taken from its experimental stage through subsequent stages to the scale ultimately judged to be appropriate.

Kohl and Cooley (2009) used a typology of three types of scaling up: Expansion, Replication, and Collaboration. What distinguishes these three types of scaling up from one another is the degree to which the originating organization (i.e., the organization that managed the initial project) continues to control implementation as the model goes to scale.

Expansion refers to taking a model to scale by increasing the scale of operations of the organization that originally developed and piloted the model. Often expansion occurs in cases of

pilot or demonstration projects where a project is filling a vacuum in terms of delivering products or services, and where the model and the organization in which it is embedded are either inextricably linked or the organization is not willing to relinquish control. Expansion most often occurs by branching out into new locations and is often accompanied by decentralization or restructuring.

Replication is primarily oriented towards increasing the use of a particular process, technology or model of service delivery by getting other organizations, including the public sector, to take up and implement the model. In these cases, the relationship between what we call the originating and adopting organizations is at arms-length. Replication can occur between organizations of the same type (e.g., NGO to NGO) or between organizations of different types. One of the most common types of replication is policy adoption, when a model is scaled up from a pilot run by an NGO to a program or practice mandated and often run by the public sector. Another common form of replication is grafting, where a model -- or one component of a model -- is incorporated into another organization's array of services or methods of service delivery. Policy adoption and grafting can occur together, as when a public sector agency incorporates a technique innovated by NGOs into its services, such as a participatory, community-development, or spillover, is yet another method of replication. It tends to be spontaneous in nature and occurs when a model spreads by informal networking with new or existing organizations.

Finally, scaling up can take place through collaboration, a method falling somewhere in between the expansion and replication approaches. Mechanisms for collaboration run the gamut from formal partnerships to informal networks, and include a number of innovative structures and governance arrangements. Formal networks and coalitions are increasingly common methods for organizing collaborative efforts, as are alliances based on memoranda of understanding, and public-private partnerships. Typically, these arrangements include some division of responsibility among the collaborating organizations. Some of these arrangements include the public sector as a key partner; many others are agreements among civil society groups and/or partnerships with private firms, such as an NGO involved in education and awareness that partners with media organizations to co-create new methods of delivering products and services to an expanded audience. Recognition by private firms of commercial opportunities among the poor18 and a growing emphasis on corporate social responsibility have greatly expanded the opportunities for these types of partnership.

Kohl and Cooley (2009) finally suggested thatCollaboration has greatest potential where various organizations have different and complementary skills or resources, have shared or overlapping objectives, and have a high level of mutual trust. The pros and cons of collaboration depend on the nature of the organizations, governance structures and partnership model that is used. For example, networks between similar institutions, such as between NGOs or among public sector agencies, can be a powerful form of scaling up. Because they tend to be demand driven, buy-in, adoption and adaptation are relatively easy. However, because networks are voluntary and frequently lack external resources, the rate of adoption and coverage of the program may be slower and less widespread, respectively, than with other strategies.

Gaul etal (2004) identified four categories for the assessment of scaling-up strategies; Organizational growth is probably the most natural scaling-up strategy to achieve greater outreach and thus bringing more benefits to more people over a wider geographical area. Organizations may increase their staff, resources, and project area. However, it is not a prerequisite for scaling up; some organizations may even decide to reduce their staff, but are still in a position to increase their impact. Organizations can also increase their activities in order to bring more quality benefit to a greater number of people, more equitably and to more lasting effect. This can happen either on the horizontal level, when an organization extends activities to new sectors, or on the vertical level, when activities are added to those already existent within one sector. However, for good practices of sustainable agriculture the potential for scaling up is higher when activities are increased vertically rather than horizontally. Another category of scaling-up strategies consists of activities that enhance organizational sustainability to ensure long-term availability of human and financial resources and thus provide more quality benefits to more lasting effect. This strategy can include activities such as capacity-building of staff, organizational learning and knowledge management, and the mobilization of resources. Finally, an organization can pursue the strategy of broadening its indirect impact by affecting the behavior of other actors who work with the poor; hereby, the target group is reached indirectly through the actions and decisions of others. The most prominent example is networking, which organizations use in order to cooperate (temporarily) with other organizations for a common goal. Other activities to achieve indirect impact are public relations, influencing policies (e.g., lobbying and advocacy), mobilizing and campaigning, giving support to other organizations and individuals, decentralizing and outsourcing, and creating federal structures. In addition to these

four strategies, we consider having a cost-effective approach and an exit strategy fundamental to the assessment of scaling-up strategies (both aspects are covered in the assessment of the project approach and instruments). Having a cost- effective approach is important to its rapid spreading over a larger area, thus increasing the organization's outreach. Having an exit strategy for the project will ensure that an organization withdraws as early as possible from a project area, and is able to spend its resources on new projects. It should be kept in mind that the impact of all scaling-up activities mentioned above can be limited by external factors beyond the organizations' sphere of influence (e.g., government policies and global conventions).

Scaling-up pathways can follow different dimensions. They may simply expand services to more clients in a given geographical area, for example, or they could also involve "horizontal" replication, from one geographical area to another; "functional" expansion, by adding additional programmatic areas of engagement; and "vertical" scaling, moving from a local or provincial engagement to a nationwide engagement. The latter typically involves policy reform and institution building to help achieve the policy and institutional conditions needed for successful national scaling up (Pingali 2012). Scaling-up leads to "more quality benefits to more people over a wider geographic area more quickly, more equitably and more lastingly". Scaling-up can occur both vertically and horizontally. Vertical processes involve expansion from the level of grass roots organizations to national institutions and policies .Horizontal processes refer to geographical spread or replication on a larger human scale, from hundreds to thousands or millions of people (SARD, 2017).

Scaling strategies will need to connect such broader approaches to on-the-ground realities and there cannot be a standard 'best practice' defined for that. Responsible scaling up involves a tailoring of scaling processes to the relevant complex features and dynamics of a situation. General guidelines on good practice in scaling up and out will need to be complemented with the strengthening of appropriate individual and collective competences needed for making such match with context specifics. Such competences relate to e.g. the use of appropriate models, emergent strategies, generative learning, strategic foresight and precautionary decision-making. Documenting cases of such responsible scaling over the coming years will provide inspiration for ways in which to apply theory to practice and for ideas on how to think and act strategically in on-the-ground realities of scaling up and out(Wigboldus and Leeuwis, 2013).

In the suggested ways forward we are not looking for a silver bullet or 'best approach', but rather for expanding views to support sense-making regarding what to take into account when developing or adopting an approach or strategy on scaling up to clarify what are the 'points of choice' where different preferences or goals will lead to different approaches scaling up. This may inform policy and decision-makers in choosing appropriate approach and strategy in specific settings.

2.6 Scaling up in practice

There are many examples of successful scaling up. The Green Revolution dramatically raised the productivity of farmers in many parts of the world; the microcredit schemes of Grameen Bank and (Bangladesh Rural Advancement Committee) BRAC in Bangladesh helped millions of poor improve their livelihoods; the multi donor River Blindness Eradication Program controlled a debilitating disease affecting millions of people in Western Africa; and the conditional cash transfer program Progresa-Oportunidades improved the lives of millions of poor households in Mexico by offering them cash payments in exchange for sending their children to school and health clinics a success story that has been replicated in many other developing countries (Linn, 2012).

The lack of attention to scaling-up and the proliferation of pilot projects are due to an interrelated set of factors, including the short term horizon of international donors and the lack of commitment or capacity by governments (UNESCO 2014). Though donors are generally not as critical to scaling up as are developing country governments, they can be helpful, or harmful, to this agenda. One possible source of harm is that there are so many donors.An example given for Africa is that of Ethiopia, where the World Bank documented 20 donors supporting 100 agricultural projects in 2005. Donors are operating agricultural projects in all developing countries, and for those developing countries with poor agricultural performance, this aid fragmented as it is and placed in a poor policy environment often has little to show in terms of impact on significant numbers of people or higher agricultural growth rates for the country. Combining aid financed projects in support of larger government programs, or convincing governments and other donors to scale up successful projects, would appear to be the direction to take. on average, aid agencies are not contributing to the scaling-up agenda. Donors can help by co-financing scaled up projects and programs that support national programs. Brazil, China, the Lao People's Democratic Republic and Morocco, and more recently Burkina Faso, Ethiopia,

Mali and Peru provide good models. On the other hand, it seems that scaling up with large donor and public expenditures in poor policy environments will lead to little growth and little poverty reduction. In these latter situations, it seems more reasonable to maintain low levels of expenditure on manageable projects and pilots, while working to improve the policy and governance environment, laying the groundwork for later scaling up (IFAD 2013).

Operating on a large scale, with substantial resources, is no magic potion. If policies are not enabling, or governance very bad, big programs at scale are much less likely to work. Scaling up successful projects and policies is effective in generating growth and poverty reduction, but it will be successful only in countries with good policy environments under reasonably good governance regimes, and where government is committed to the programs (IFAD 2013).

Chapter Three

Research Methodology

3.1 Introduction

This chapter basically describes how the study will be carried out, the data collection methods that will be used, its analysis and presentation. It is a very important chapter as it provides reasons to why a particular method of research, sampling, data collection and data analysis will be chosen; it also gives the design of the study, population and its area of which the research will be based. In short this chapter is concerned with research design, which is the master plan specifying methods and procedures for collecting and analyzing collected data.

3.2. Research Design

Because of the topical scope, the research design adopted for this study is a case study approach. A case study design is a plan of intensive exploring and analyzing the life of a single social unit be that of an individual, a family, an institution, culture, group or even an entire community. This design is appropriate because of the nature of the study and the research questions were designed in such a way that they address key issues on scaling up agricultural projects at ATA.

3.2.1 Areas of the Study

The study is on sustainably scaling up innovative agricultural projects; in the case of the E-voucher project of ATA. The choice of this area of the study was based on the fact that this project has undergone its piloting phase and is about to be scaled up, with the involvement of a new third party that will takeover of the scaling up process.

3.2.2 Population of the Study

The Ethiopian Agricultural Transformation Agency (ATA) established the Rural Financial Services (RFS) program in 2014 which has a team of eight members and other stakeholders from the woredas where the pilot was undertaken are included. Members of a steeringcommittee are also part of the population of the study.

3.2.3 Sampling Techniques and Sample Size

The researcher is going to focus on the factors that are essential for the sustainable scaling up of the E-voucher project. Thus, in order to address the issue raised above the researcher needs to communicate with the people that are directly or indirectly related to the project; therefore the sampling technique that's going to be employed is purposive sampling. Covering the entire organization and determining a sample size using another technique will be inappropriate because the outcome of the study might become irrelevant. Thus using a non-probability sampling method that conforms to this particular criterion will be wise.

Thus the sample for this study will be limited to the project (RFS) team which is comprised of eightpersonnel from ATA, ten people from the woreda level (tow from each woreda). In addition the steering committee of two members will be included in the study. Different department heads, supervisors, team leaders and project managers will also be included in the study.

3.2.4 Data Collection Techniques

Most of the information will be obtainedthroughreports, interviews and questionnaires. Since it will be difficult to rely on one method of data collection; the researcher will employ qualitative and quantitative data collection techniques in order to counterbalance shortcomings of each technique.

3.2.5 Types of Data

Both primary and secondary data will be used to answer the research questions.

3.2.5.1 Secondary Data

The researcher will use different dissertations, reports from ATA as a secondary source of data. These sources will be used as a supplement to the primary data that will be collected by the researcher.

3.2.5.2 Primary Data

Primary data will be collected by using questionnaires and interviews. The questionnaire will be designed based on related literatures and from the researchers own sources. The literatures are Cooley and Linn (2014) and Linn (2012) .The questionnaires will be distributed to those who are included in the sample. The questionnaire will be accompanied by unstructured interviews to

selected managerial staffs that are involved in the project. The questionnaire will be designed based on the likert scale method. Interview method entails face to face conversation between interviewer and interviewee, which aimed at gathering certain information. Interview questions were prepared as guideline. To check the accuracy of the collected data the researcher will compare the correctness of the answers which will be given on questionnaires and those answers given through unstructured interviews.

3.2.6 Data Analysis Techniques

Data will be collected, analyzed and presented in such a way that helps the researcher answer the research questions and meet the objective of the study from which conclusions and recommendations will be drawn.

The analysis will be based on the statement of the problem, research objective and research questions. This study will be qualitative in nature; therefore the collected quantitative and qualitative data will be coded, analyzed and interpreted. Then SPSS will be used to analyze and summarize the data which will finally be presented for the reader. After which conclusion will be made about the particular case and recommendation will be delivered by the researcher.

3.2.7 Validity and Reliability

The validity was given a due consideration for the study. Different instrument was employed in order to take the best out of data collection techniques. Open ended, Close-ended questions, semi structured interviews were developed and literature review was used as a benchmark in order to generate a valid and comparable response.

Pretest on the questionnaire was also conducted in order to check the questions were understandable and clear enough for the context of respondents. And some arrangements have been taken as per the result of the pretest in order to make the instrument more reliable.

3.3 ethical issues

All information that was collected will be treated with confidentiality without disclosure of the respondents' identity. Moreover, no information was modified or changed, hence the information was presented as collected and all the literatures collected for the purpose of this study was acknowledged in the reference list.

In order to keep the confidentiality of the information given by respondents, it was not required to write their name and assured that their responses were treated in strict confidentiality. The purpose of the study was disclosed in the introductory part of the questionnaire. Furthermore, the researcher tried to avoid misleading or deceptive statements in the questionnaire. Lastly, the questionnaires were distributed only to voluntary participants.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This chapter is about the presentation, analysis and interpretation of data collected using interview, questionnaire and document review regarding the "sustainably scaling up innovative agricultural projects: the case of the E-voucher project of (ATA)". This is done by categorizing the data in different parts to analyze their implication. 20 questionnaires were distributed and a total of 20 questionnaires were returned, which means a response rate of 100%.

Characteristics of Respondents

Table 1.Characteristics of Respondents

		Count	Column N %
Name of organization you're part of	ATA	10	50.00%
	COOPERATIVE	10	50.00%
Gender	Male	15	75.00%
	Female	5	25.00%
Level of education	1st degree	5	25.00%
	2nd degree	2	10.00%
	Masters	6	30.00%
	PhD	0	0.00%
	others Diploma	7	35.00%
Job title	project officer i	10	50.00%
	project officer ii	7	35.00%
	project manager	1	5.00%
	Senior management	2	10.00%
Relevant working experience	1-3 Yrs	10	50.00%
	3-5 Yrs	5	25.00%
	5-10 Yrs	4	20.00%
	>10Yrs	1	5.00%

Source: own study 2017

The table showed characteristics of respondents in terms of sex, educational qualification, and number of years working in their respective fields. With regard to sex 75% of the participants are male and the rest 25% are female. The next category is about educational qualification. Respondents with a bachelor degree are of 35% the total participants. They are followed by respondents with masters degree with 30%. The rest 35% respondents got a college diploma. From these information one can understand that majority of them are young and have a good level of education. The next variable is about job title. Half of the respondents are project officer I and 35% have the title of project officer II, the respondents also include two people from senior management and one project manager.The last characteristics category is relevant working experience of respondents. Majority of the respondents i.e. 50% of them have 1-3 years of experience in the organization, 25% have 3-5 years of experience,and 20% of them have 5-10years of experience while the rest 5% of therespondents have an experience of 10 years and above.

Performance of the E-voucher project

Before discussing the scaling of any project the performance of the pilot project should be studied. In order to do that the researcher included the following questions in the questionnaire that are based on the goals that the project set out to accomplish.

The goals of the E-voucher pilot project were to resolve the:

- Delay in service delivery
- Reconciliation process unclear, complicated and time taking
- Delay in loan approval and collection
- Failure to get timely reports on input distribution and sales
- Difficult to track price changes and calculations

Table 2.Performance of the E-voucher project.

		Count	Column N %
There is evidence that the model is more cost-effective than other approaches.	Strongly Agree	10	50.00%
	Agree	8	40.00%
	Neutral	1	5.00%
	Disagree	1	5.00%
	Strongly Disagree	0	0.00%
The pilot project has resolved the delay in service delivery	Strongly Agree	9	45.00%
	Agree	7	35.00%
	Neutral	3	15.00%
	Disagree	1	5.00%
	Strongly Disagree	0	0.00%
Reconciliation process is clear, uncomplicated and time saving.	Strongly Agree	9	45.00%
	Agree	4	20.00%
	Neutral	3	15.00%
	Disagree	3	15.00%
	Strongly Disagree	1	5.00%
There is no delay in loan approval and collection	Strongly Agree	6	30.00%
	Agree	8	40.00%
	Neutral	0	0.00%
	Disagree	4	20.00%
	Strongly Disagree	2	10.00%
It is possible to get timely reports on input distribution and sales	Strongly Agree	8	40.00%
	Agree	6	30.00%
	Neutral	4	20.00%
	Disagree	1	5.00%
	Strongly Disagree	1	5.00%
It is simple to track price changes and calculations	Strongly Agree	7	35.00%
	Agree	7	35.00%
	Neutral	1	5.00%
	Disagree	2	10.00%
	Strongly Disagree	3	15.00%

Source: own study 2017

To the issue of the pilot project's cost effectiveness than other approaches, 50% and 40% of the respondents strongly agreed and agreed that the pilot project proved that the E-voucher system is more cost effective than the paper based voucher system. On the other hand 5% of the respondents disagree that the pilot was more cost effective while 5% of them were neutral.

Report from the ATA shows that after the project has been implemented, the cost to the famer will be less than ETB 4.00 per transaction. It is cheaper than the cost the MFI or cooperatives are incurring in the manual system (ETB 6.73) for handling the financial transaction. Therefore, it is advantageous to the farmer, MFIs and cooperatives which will make the scale up sustainable.

One of the major goals of the project was to resolve the delay in service delivery. With this regard45% of the respondents strongly agreed that the E-voucher system has madeservice delivery faster in the pilot weredas, adding to this fact 35% of the respondents also agreed that service delivery has become faster. 15% of therespondents were neutral in this case while 5% dis agreed that the pilot has resolved the delay in service delivery.

During reconciliation process 45% of the respondents highly agreed that reconciliation was clear uncomplicated and time saving, adding to this 20% of the respondents also agreed that reconciliation was uncomplicated and time saving. However 15% disagree and 5% strongly dis agreed that reconciliation was clear uncomplicated and time saving while 15% chose to be neutral.

The fourth question item is about the process of loan approval and collection, majority (70%) of the respondents agreed that it went smoothly without or little delay. The rest 20% and 10% respectively are those that are in disagreement and strongly disagree with the statement that says there is no delay in loan approval and collection.

The next item was the issue about getting timely report on input distribution and sales, 40% of the respondents strongly agreed that the project was successful in this regard and also 30% agreed that timely report on input distribution and sale was available. On the other hand 5%strongly disagree and 5% disagree, While 20% of the respondents had a neutral attitude towards this issue.

Was it simple to track price changes and calculations? Is a question that was asked, the respondents 35% of them strongly agreed that the system made it easy to track price changes and calculations, supporting this finding 35% also agreed that it was simple to track price changes and calculations. On the contrary 25% disagreed while 5% were impartial.

Report from the ATA shows that compared to the manual IVS system the E-voucher has proven to be a time and cost saving system. The time to serve a single farmer has reduced from 15

minutes to 5 and 3 minutes for previously unregistered and registered farmers, respectively. The system also replaced paper receipts used for processing input sales. This has reduced costs for cooperatives as farmers are transacting more than two times per season which the E-voucher enables the use of a single NFC tag for all transaction. The management reporting portal of the system is proven to give accurate data, made reconciliation and settlement easier for all stakeholders.

This findings show that the E-voucher pilot project has performed as expected.

A good practice is an intervention or approach that has been tried and tested and that can be built upon and/or adapted. The intervention may be new for the local and national stakeholders involved (UNICEF 2013). can the E-voucher project be considered as a good practice? To assess this we have to study the key issues that the project resolved, and the goals it set out to accomplish which are the following:

- Reduce transaction costs for Financial Institutions (FI) and multipurpose cooperatives;
- Facilitate complex reconciliation for FIs and cooperatives;
- Reduce interest payments to CBE;
- Prevent fraud and ensure integrity; and
- Provide real-time information on input sales helping to make informed decisions.

With the objective of studying the accomplishment of these goals the researcher has included the above in the questionnaire as follows.

Table 3, good practices of the E-voucher pilot project

		Count	Column N %
Reduce transaction costs for Financial Institutions (FI) and multipurpose cooperatives	Strongly Agree	6	30.00%
	Agree	10	50.00%
	Neutral	0	0.00%
	Disagree	2	10.00%
	Strongly Disagree	2	10.00%
Facilitate complex reconciliation for FIs and cooperatives	Strongly Agree	8	40.00%
	Agree	7	35.00%
	Neutral	3	15.00%
	Disagree	2	10.00%
	Strongly Disagree	0	0.00%
Reduced interest payments to CBE	Strongly Agree	9	45.00%
	Agree	6	30.00%
	Neutral	4	20.00%
	Disagree	1	5.00%
	Strongly Disagree	0	0.00%
The pilot has Prevented fraud and ensured integrity	Strongly Agree	9	45.00%
	Agree	10	50.00%
	Neutral	1	5.00%
	Disagree	0	0.00%
	Strongly Disagree	0	0.00%
Provide real-time information on input sales helping to make informed decisions	Strongly Agree	8	40.00%
	Agree	7	35.00%
	Neutral	3	15.00%
	Disagree	2	10.00%
	Strongly Disagree	0	0.00%

Source: own study 2017

one of the goals of the project was reducing transaction costs to financial institutions and multipurpose cooperatives, and 30% of the respondents strongly agreed that it was found to have been cost effective likewise half (50%) of them agreed that transaction cost has decreased. On

the contrary 20% disagreed that the pilot has reduced transaction costs to financial institutions and multipurpose cooperatives.

In facilitating complex reconciliation for financial institutions and cooperatives 75% agreed it had performed well. On the other hand 10% of the respondents said it had no significance in that cause by disagreeing to the question forwarded by the researcher, and 15% were impartial.

The project's performance in reducing interest payments to the commercial bank of Ethiopia (to whom the state government is 100% liable to) was rated good by 75% of the respondents, 20% were neutral but 5% did not agree that the pilot project has contributed to the reduction in interest payments to the commercial bank of Ethiopia.

To prevent fraud and ensure integrity 45% strongly agreed and 50% agreed that the system was found to be effective in avoiding fraud and ensuring integrity in input sales and cash transfer, while 5% remained impartial about the issue.

The last but not least goal of the project was to provide real-time information on input sales helping to make informed decisions, in this regard 75% of the respondents judged the pilot to be successful. 15% of them were neutral in this case while 10% of the respondents disagreed that the pilot project was successful in providing real-time information on input sales.

The above findings show that the pilot project has more or less resolved the key issues that the project was planned to accomplish. Based on this the E-voucher project can be considered as a good practice that is recommended to be scaled up.

Scalability of the E-voucher project

In assessing the potential to replicate small-scale successes, policy-makers need to consider the balance among the social, economic and environmental impacts, the number of beneficiaries and the cost effectiveness. Other prerequisites that determine whether scaling-up is feasible, include whether there are adequate financial resources, human capacities, extension services and infrastructure present in the area to support scaling-up processes; whether policy-makers are sufficiently aware of the development problems that a good practice can resolve; and whether beneficiaries and implementing actors have already shown some commitment to supporting the good practice and its scaling-up (SARD, 2017).

Cooley and Linn (2014) suggested that for successful scaling up, potential obstacles need to be removed and enabling conditions, otherwise known as "spaces," have to be created for interventions to grow. They identified eight spaces that most commonly have to open up when pursuing a scaling up pathway:

- **Fiscal/financial space:** Fiscal and financial resources need to be mobilized to support the scaled up intervention, and/or the costs of the intervention need to be adapted to fit into the available fiscal/financial space.
- **Natural resource/environmental space:** The impact of the intervention on natural resources and the environment must be considered. Harmful effects of scaling up on natural resources and the environment must be mitigated, and the benefits of scaling up for natural resources and the environment should be promoted.
- **Policy space:** The policy (and legal) framework has to allow for, or be adapted to support, scaling up.
- **Institutional/organizational/staff capacity space:** The capacity for institutional and organizational resources has to be created in order to carry the scaling-up process forward.
- **Political space:** Important stakeholders, both those in support and those against the intervention, need to be attended to through outreach and suitable safeguards to ensure political support for a scaled up intervention
- **Cultural space:** Possible cultural obstacles or support mechanisms need to be identified, and the intervention needs to be suitably adapted in order to permit scaling up in a culturally diverse environment.
- **Partnership space:** Partners need to be mobilized to join in the effort of scaling up.
- **Learning space:** Knowledge about what does and doesn't work in scaling up must be harnessed through M&E, knowledge sharing, and training.

Table 4, Enabling spaces for scaling up

		Count	Column N %
financial resources are mobilized to support the scale-up intervention	Strongly Agree	1	5.00%
	Agree	4	20.00%
	Neutral	1	5.00%
	Disagree	9	45.00%
	Strongly Disagree	5	25.00%
The policy and legal framework is adapted to support scaling up	Strongly Agree	7	35.00%
	Agree	8	40.00%
	Neutral	0	0.00%
	Disagree	3	15.00%
	Strongly Disagree	2	10.00%
Potential market constraints are considered	Strongly Agree	7	35.00%
	Agree	7	35.00%
	Neutral	1	5.00%
	Disagree	4	20.00%
	Strongly Disagree	1	5.00%
Institutional, organizational, and staff capacity is available	Strongly Agree	7	35.00%
	Agree	9	45.00%
	Neutral	1	5.00%
	Disagree	3	15.00%
	Strongly Disagree	1	5.00%
Important stakeholders are motivated through outreach and suitable safeguards to ensure the political support for a scaled-up intervention	Strongly Agree	6	30.00%
	Agree	8	40.00%
	Neutral	4	20.00%
	Disagree	0	0.00%
	Strongly Disagree	2	10.00%
the impact of scaling up on natural resources	Strongly Agree	5	25.00%

and the environment is considered, harmful effects are mitigated, and beneficial impacts promoted	Agree	8	40.00%
	Neutral	4	20.00%
	Disagree	0	0.00%
	Strongly Disagree	1	5.00%
Possible cultural obstacles or support mechanisms are identified	Strongly Agree	8	40.00%
	Agree	8	40.00%
	Neutral	2	10.00%
	Disagree	2	10.00%
	Strongly Disagree	0	0.00%
Partners are mobilized to join in the effort of scaling up.	Strongly Agree	4	20.00%
	Agree	6	30.00%
	Neutral	4	20.00%
	Disagree	4	20.00%
	Strongly Disagree	2	10.00%
Knowledge about what does and doesn't work in scaling up is harnessed through M&E, knowledge sharing, and training.	Strongly Agree	5	25.00%
	Agree	9	45.00%
	Neutral	2	10.00%
	Disagree	3	15.00%
	Strongly Disagree	1	5.00%

Source: own study 2017

Most of the respondents indicated that there are shortcomings in mobilizing financial resources for the scaling up intervention which was showed by 45% of the respondents disagreed that the project has mobilized the financial resources and 20% of them also disagreed on this issue. But 10% strongly agree and 20% agree that there already exists a sufficient amount of resources necessary for scaling up. This indicates that the financial resources needed for scaling the pilot has not been mobilized yet so the financial space to scale the E-voucher project is not yet suitable for scaling.

Regarding the policy and legal framework that the E-voucher project is to be scaled up in 35% of the respondents strongly agree and 40% of them agree that the existing policy and legal framework supports scaling up. On the other hand 15% of the respondents disagree and 10% of them strongly disagree that thepolicy and legal framework of the country will support scaling up the E-voucher pilot project.

The development of a strategy to strengthen rural financial services was initiated by the government's Economic Policy Analysis Unit (EPAU) in 2013. Under the Prime Minister's instruction the responsibility for finalizing and implementing the strategy was transferred to ATA, resulting in the establishment of the Rural Financial Services (RFS) project in early 2014.(DFID 2015). With this regard it is possible to conclude that the policy space is suitable for scaling as it has authorization from the highest office in the country.

The third question item is regarding the issue of considering potential market constraints. Regarding this issue 35% strongly agree and 35% agree that potential market constraints have been considered in the decision to scale up the E-voucher pilot project. On the contrary 20% and 5% disagree and strongly disagree that this issue has been taken into account, while the remaining 5% were impartial. .

The next question in this category is about the availability of Institutional, organizational, and staff capacity to scale up E-voucher pilot project. The participant response was as follows 35% and 45% of the participants strongly agreeand agree that Institutional, organizational, and staff capacity is obtainable. However 15% and 5%disagreeand strongly disagree with the availability of the resources mentioned above while the remaining 5% were neutral. This findings show that the Institutional, organizational, and staff space is suitable to scale up.

Another key issue in assessing scalability is that wereimportant stakeholders motivated through outreach and suitable safeguards to ensure the political support for a scaled-up intervention. To this issue majorities (70%) of the participants were satisfied with what has been in this regard and 20% were neutral but that few respondents (10%) were not satisfied. this shows that there is a fertile political space.

One of the factors that strongly influence scaling a pilot is the consideration the impact of the intervention on natural resources and the environment. Harmful effects of scaling up on natural

resources and the environment must be mitigated, and the benefits of scaling up for natural resources and the environment should be promoted. Concerning this issue 25% and 40% of the respondents strongly agree and agree that these environmental issues were in balance during the application of the pilot project. Even though 65% of them agreed to the statement few respondents (5%) strongly disagreed that this environmental issues were achieved, while 20% were impartial. after this result it is possible to suggest that the scaling intervention is going to be successful in addressing these environmental issues.

Possible cultural obstacles or support mechanisms need to be identified, and the intervention needs to be suitably adapted in order to permit scaling up in a culturally diverse environment.tn tis regard the pilot project was considered to be a success by80% of the participants, 10% were neutral while 10% disagreed. This means the cultural space contributes to the enabling environment that the pilot is about to be scaled up in.

Partners need to be mobilized to join in the effort of scaling up, so the next question item is about thefulfillment of this criterion. A significant number of respondents 20%, 20% and 10% were neutral disagreed andstrongly disagreed to the statement" partners are mobilized to join the scaling effort." on the other hand 20% strongly agreed and 30% agreed that partners are mobilized. There exists to be an inconsistency in the response to the mobilization of partners.

For a successful scaling knowledge must be harnessed about what does and does not work through monitoring and evaluation, knowledge sharing and training, in this aspect 70% of the respondents found it to be done properly. Which means the existing knowledge space is appropriate for scaling.

In assessing the potential to replicate small-scale successes, policy-makers need to consider the balance among the social, economic and environmental impacts, the number of beneficiaries and the cost effectiveness. Other prerequisites that determine whether scaling-up is feasible, include whether there are adequate financial resources, human capacities, extension services and infrastructure present in the area to support scaling-up processes; whether policy-makers are sufficiently aware of the development problems that a good practice can resolve; and whether beneficiaries and implementing actors have already shown some commitment to supporting the good practice and its scaling-up (SARD, 2017). The above result reveals that six of the eight

enabling factors for the scaling a pilot are present in the case of the E-voucher project. The financial and partnership spaces are ones that lack full confirmation.

Investment and scaling up strategy for the E-voucher project

The E-voucher system is planned to scale up in the four regions covering 287 woredas and reaching up to 6.4 million smallholder farmers by 2019. For the scale up, the system requires 8,700 smart phones and 6.4 million NFC tags to be acquired and distributed to users. The budget needed to purchase simple Android phones and NFC tags for, MFIs and primary cooperatives in the four regions is 100 million birr.

Kohl and Cooley (2009) used a typology of three types of scaling up: Expansion, Replication, and Collaboration. What distinguishes these three types of scaling up from one another is the degree to which the originating organization (i.e., the organization that managed the initial project) continues to control implementation as the model goes to scale.

Table 5, scaling up pathway

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Expansion	3	15	15	15
	Replication	1	5	5	20
	Collaboration	16	80	80	100
	Total	20	100	100	

Source: own study 2017

Expansion refers to taking a model to scale by increasing the scale of operations of the organization that originally developed and piloted the model. Often expansion occurs in cases of pilot or demonstration projects where a project is filling a vacuum in terms of delivering products or services, and where the model and the organization in which it is embedded are either inextricably linked or the organization is not willing to relinquish control. Expansion most often occurs by branching out into new locations and is often accompanied by decentralization or restructuring.

The participants were asked to rank the scaling technique that they think is best for the E-voucher pilot project. Few respondents which are 15% of the total participants choose the expansion method of scaling. In an interview with the RFS Project Lead the researcher asked the question**,** does the originating organization (ATA) have the desire and organizational capacity to expand its operations and deliver services on a substantially larger scale? The response ofwas: No, ATA doesn't have the capacity to scale up the project nor have the desire as the main goal is for the relevant stakeholders to scale up the pilot on their own after realizing a business case.it is also well known that NGO have limited capacity so a nationwide scale up by the ATA is not feasible.

Replication is primarily oriented towards increasing the use of a particular process, technology or model of service delivery by getting other organizations, including the public sector, to take up and implement the model. In these cases, the relationship between what we call the originating and adopting organizations is at arms-length. Replication can occur between organizations of the same type (e.g., NGO to NGO) or between organizations of different types. One of the most common types of replication is policy adoption, when a model is scaled up from a pilot run by an NGO to a program or practice mandated and often run by the public sector. Another common form of replication is grafting, where a model -- or one component of a model -- is incorporated into another organization's array of services or methods of service delivery. Policy adoption and grafting can occur together, as when a public sector agency incorporates a technique innovated by NGOs into its services, such as a participatory, community-development, or spillover, is yet another method of replication. It tends to be spontaneous in nature and occurs when a model spreads by informal networking with new or existing organizations.

Only one participant recommended that replication is the best method to scale the pilot. This means majority of the participants do not think that the ATA should totally refrain from the scaling of the E-voucher. To support this finding the Project manager said that ATA can handle the linking strategy

Finally, scaling up can take place through collaboration, a method falling somewhere in between the expansion and replication approaches. Mechanisms for collaboration run the gamut from formal partnerships to informal networks, and include a number of innovative structures and governance arrangements. Formal networks and coalitions are increasingly common methods

for organizing collaborative efforts, as are alliances based on memoranda of understanding, and public-private partnerships.

Regarding the choice of scaling technique majority (80%) of the participants strongly prefer the collaboration of ATA with selected investment and scaling partner. the finding shows that the participants expect the ATA to play a major role in scaling up the E-voucher project.

Kohl and Cooley (2009) suggested thatCollaboration has greatest potential where various organizations have different and complementary skills or resources, have shared or overlapping objectives, and have a high level of mutual trust. The pros and cons of collaboration depend on the nature of the organizations, governance structures and partnership model that is used

The originating organization (ATA) is prepared to relinquish control and make the other changes necessary for successful transfer and scaling up of the project, at the same time it needs to play the linking role it also needs to work in collaboration with public and private stakeholders to successfully scale the project

Subsequently agreeing that the project should be scaled in a collaborative method, the next question to answer will be who is the partner that will implement the scaling? The researcher asked interviewees to suggest the potential investment and scaling strategy, and they stated the following potential pathways for scaling the pilot.

- Ethiopian Agricultural Transformation Agency to invest in the project
- Technology companies to take over the project.
- Regional government to invest in the project.
- Cooperatives to invest in the project.
- Financial institutions to invest in the project.

These five options were stated as possible options to scale the E-voucher project, to distinguish which option is the best the researcher interviewed respondents and to further prioritize among the alternatives the researcher added questions that make it possible to further scrutinize the periodization process. The questions are as follows

- Do potential partners perceive a need for this kind of project?
- Is the project consistent with the central mission and vision of the proposed adopting institution?
- Does the proposed adopting institution have the necessary implementation capacity?
- Are the organizational culture and values of the proposed adopting institution sufficiently compatible with those necessary to successfully adopt and implement the model?

The findings from the interview will analyzed later but now the results from the questionnaire are examined as follows.

Table 6, Investment and scaling strategy

		Count	Column N %
Investment by Ethiopian Agricultural Transformation Agency is the best suitable strategy.	Strongly Agree	1	5.00%
	Agree	2	10.00%
	Neutral	5	25.00%
	Disagree	5	25.00%
	Strongly Disagree	7	35.00%
Investment by technology companies is the best suitable strategy.	Strongly Agree	8	40.00%
	Agree	7	35.00%
	Neutral	1	5.00%
	Disagree	3	15.00%
	Strongly Disagree	1	5.00%
Investment by regional government is the best suitable strategy.	Strongly Agree	0	0.00%
	Agree	2	10.00%
	Neutral	5	25.00%
	Disagree	7	35.00%
	Strongly Disagree	6	30.00%
Investment by cooperatives is the best suitable strategy.	Strongly Agree	2	10.00%
	Agree	2	10.00%
	Neutral	6	30.00%
	Disagree	8	40.00%
	Strongly Disagree	2	10.00%
Investment by Financial institutions is the best	Strongly Agree	2	10.00%

suitable strategy	Agree	2	10.00%
	Neutral	5	25.00%
	Disagree	9	45.00%
	Strongly Disagree	2	10.00%

Source: own study 2017

The first option of scaling up pathway is through Investment by Ethiopian Agricultural Transformation Agency. Which means the ATA is to cover all the investment cost that is required to scale just as it did cover the cost of the pilot project through the contribution of donors. Does the originating organization (ATA) have the desire and organizational capacity to expand its operations and deliver services on a substantially larger scale? The RFS project lead responded that ATA doesn't have the capacity to scale up the project nor have the desire. The main goal is for the relevant stakeholders to scale up the pilot on their own after realizing a business case.The main reason is that ATA may not have the manpower to take the lead in a nationwide scale up. But this does not mean that the ATA should not partake in the scale up but rather it needs a partner.

The result from the questionnaire indicate that only 5% and10% of the respondents strongly agreed and agreed that Investment by Ethiopian Agricultural Transformation Agency is the best suitable strategy, while 25% of them remained impartial 60% of them disagree that Investment by Ethiopian Agricultural Transformation Agency is the best strategy. This finding strongly supports the result obtained from the interview.

The second option of scaling up pathway is through Investment by technology companies. Transaction fee introduced on services given can sustain the provision of services by technology companies. During the interview the Project manager mentioned thatAs long as there is a business case and benefit to all stakeholders the pilot practice can be easily replicated. the Project manager thinks that this scaling pathway is recommendable, he also mentioned the basis for his recommendation which are technology companiescan deliver other services using phones in cooperatives, efficiently train agents with full supervision, give support and maintenance on software and hardware plus replacement, Cover all telecom costs including purchase of SIM cards and monthly data charges and Cover all costs necessary for the integration of the E-voucher system with other systems . Private technology companies can best realize the business

case that the Project manager was referring to through the provision of services the companies can collect transaction fees. However the major challenge regarding this scaling pathway is that Private technology companies may face resource shortage to fully scale up using their own capital.

The finding from the questionnaire strongly support the project manager's recommendation, that out of the total respondents 40% strongly agree and 35% agree that Investment by technology companies is the best suitable strategy. On the other hand 15% and 5% of them disagreed and strongly disagreed with the statement, while 5% were neutral.

The third option of scaling up pathway is Investment by regional governments. This option has its own merit demerit as the interviewee describes it. The merits are bulk purchase of smart phones and NFC tags will push down prices and government can deliver its own services using phones in cooperatives. While the Challenges are lack of budget within government, no option to replace and maintain equipment, difficult to administer monthly data cost payments, difficult to efficiently train agents without full supervision of software developers, difficult to give support and maintenance without full supervision of software developers.

The result from the questionnaire shows that 35% and 30% of the respondents disagree and strongly disagree that Investment by regional government is the best suitable strategy. Nevertheless 10% of the respondents agree with the statement while 25% were neutral. Based on the result from the interview and the questionnaire it is also possible to suggest that scaling through Investment by regional government is very problematic shown by the fact that the challenges outweigh the benefits.

The fourthoption of scaling up pathway is Investment by cooperatives. This can be realized in a way that primary cooperatives allocate budget to buy equipment and monthly data cost. According to the interviewee this kind of scaling can create a Sense of ownership and also the devices can be used for other services. But cooperatives Lack budget from the start not to mention that cooperatives lack the expertise of equipment maintenance and Difficult to efficiently train agents without full supervision of software developers.

Concerning the issue of scaling up pathway through investment by cooperatives 20% of the respondents agree that Investment by cooperatives is the best suitable strategy, yet 50% of the

participants disagree that Investment by cooperatives is the best suitable strategy to scale the E-voucher system whereas the remaining 30% were impartial. On the basis of the above results it is clear that scaling through investment by cooperatives is not advisable.

The last item that was suggested as an option of scaling up pathway is Investment by Financial institutions. MFIs in collaboration with the CBE can cover the cost of the scaled intervention. However financial institutions will also face the challenges that the previous alternatives had which is lack expertise, even if they overcome this challenge their existing organizational structure will not allow them to implement the scaling up process, which means even though these institutions have the financial capabilities they do not have the organizational and staff capacity to implement the scaling up process. Findings from the questionnaire show that 20% of the participants agree that Investment by Financial institutions is the best suitable strategy whereas 45% disagree and 10% strongly disagree with the statement above and the remaining 25% were impartial. These findings also show that scaling up through investment by financial institutions is less likely.

In conclusion the best suitable scaling pathway among the stated options is for technology companies to take over the scaling. But this does not mean that the other parties mentioned above should not take part in the scaling up intervention, in fact an interviewee suggested that Technology companies working with regional MFIs and cooperatives with the assistance of regional governments is the best pathway to scale the E-voucher pilot project.

Kohl and Cooley (2009) said that in scaling there are arrangements that include some division of responsibility among the collaborating organizations. Some of these arrangements include the public sector as a key partner; many others are agreements among civil society groups and/or partnerships with private firms, such as an NGO involved in education and awareness that partners with media organizations to co-create new methods of delivering products and services to an expanded audience. Recognition by private firms of commercial opportunities among the poor and a growing emphasis on corporate social responsibility has greatly expanded the opportunities for these types of partnership.

The finding from the interview shows that this potential partner perceives a need for this kind of project; the project is also consistent with the central mission and vision of the proposed adopting organization because the project aims to scale up using an appropriate business case

which the adopting organizations can rely on. The findings from the interview also show that as long as there is a cost recovery strategy the proposed adopting organization has the necessary implementation capacity. Are the organizational culture and values of the proposed adopting organization sufficiently compatible with those necessary to successfully adopt and implement the model? Was the last question that was asked regarding this issue and the response was; Yes, this kind of companies are built to thrive in such type of businesses or environment.

Actions to be taken to sustainably scale up the E-voucher project.

Looking back at the literature of the process of scaling up requires sub sequential actions to be taken for a successful scaling. Linn(2012) recommended six specific actions to take for a successful scaling, and these are;

- Make sure that there is sufficient agreement among relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible.
- Buy-in from internal groups must be achieved.
- Human, institutional and financial resources must be available for scaling up
- The originating organization must be prepared to relinquish control and make the other changes necessary for successful transfer and scaling up of the project.
- Action plans and budgets must be in place for implementing the scaling up.
- Responsibilities should be clearly allocated and efficient mechanisms must be established for coordinating the scaling up

The researcher has included the above actions in the questionnaire to assess their implementation.

Table 7, Actions to be taken for a sustainable scale up.

		Count	Column N %
There Is sufficient agreement among relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible	Strongly agree	7	35.00%
	Agree	7	35.00%
	Neutral	3	15.00%
	Disagree	2	10.00%
	strongly disagree	1	5.00%
Buy-in from internal groups can be achieved	Strongly Agree	1	5.00%
	Agree	2	10.00%
	Neutral	3	15.00%
	Disagree	8	40.00%
	Strongly Disagree	6	30.00%
Human, institutional and financial resources are available for scaling up	Strongly Agree	0	0.00%
	Agree	2	10.00%
	Neutral	9	45.00%
	Disagree	9	45.00%
	Strongly Disagree	0	0.00%
The originating organization (ATA) is prepared to relinquish control and make the other changes necessary for successful transfer and scaling up of the project.	Strongly Agree	10	50.00%
	Agree	5	25.00%
	Neutral	3	15.00%
	Disagree	2	10.00%
	Strongly Disagree	0	0.00%
There are action plans and budgets in place for implementing the scaling up.	Strongly Agree	0	0.00%
	Agree	2	10.00%
	Neutral	8	40.00%
	Disagree	7	35.00%
	Strongly Disagree	3	15.00%
Responsibilities have been clearly allocated and efficient mechanisms are established for coordinating the scaling up.	Strongly Agree	6	30.00%
	Agree	9	45.00%
	Neutral	2	10.00%
	Disagree	3	15.00%
	Strongly Disagree	0	0.00%

Source: own study 2017

Six items regarding this issue was given for respondents. The first action to take is to make sure that there issufficient agreement among relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible. Regarding this issue 70% of the participants agree that there is this kind of agreement among the stakeholders stated above but 10% and 5% of the participants disagree and strongly disagree while 15% were impartial.

Buy-in from internal groups should be the next thing to achieve for asustainable scaling up intervention. Concerning this issue only 15% of the respondents agree that Buy-in from internal groups has been achieved, whereas 40% and 30% of the respondents disagree and strongly disagree with the statement and the remaining 15% were neutral concerning this issue.

The third step that is necessary for a sustainable scale up is that Human, institutional and financial resources must be available. the availability of Human, institutional and financial resources for scaling up was found to be poor by 45% of the respondents while only 10% said there is sufficient resource whereas the majority(45%) were neutral.

The other key factor is that the originating organization (ATA) must be prepared to relinquish control and make other changes necessary for successful transfer and scaling up of the project. This was forwarded to participants in a question form as: is the (ATA) prepared to relinquish control and make other changes necessary for successful transfer and scaling up of the project? Majority (75%) of the respondents agreed upon while 10% disagreed and the rest 15% were impartial.

The fifth item that is essential in the scaling of a pilot project is that action plans and budgets must be in place for implementing the scaling up.Only 10% of the respondents agree that there are sufficient plans and budgets, the other 40% were neutral while 35% disagreedthat the above requirements exist.

The last item that was mentioned as an essential factor in sustainable scaling is the clear allocation of responsibilities and the establishment of efficient mechanisms for coordinating the scaling up. Allocation of responsibilities and coordinating mechanisms are done well according to 75% of the respondents while 15% disagreed the rest 10% were neutral.

Concerning the actions that need to be taken it is possible to conclude that the respondents are in agreement with the conclusion that most this actions have already been taken. Except some that their accomplishment is doubted by the respondents one of which was the absence of action plans and budgets only few agree that this task is accomplished. Another task that was judged to have shortcomings was the mobilization of Human, institutional and financial resources.

Chapter Five

Finding, Conclusion and Recommendation

5.1. Summary of findings

The E-voucher pilot project has resolved many problems that the manual paper based system encountered. The first problem that the system solved was delay in service delivery to which majority of the participants suggested that the pilot was successful in, also the Report from the ATA shows that compared to the manual IVS system the E-voucher has proven to be a time and cost saving system. The time to serve a single farmer has reduced from 15 minutes to 5 and 3 minutes for previously unregistered and registered farmers, respectively.The other objective of the pilot was to demonstrate that Reconciliation process could be clear, uncomplicated and time saving, the pilot was believed to be successful in this regard as well. The next thing that the pilot resolved was the delay in loan approval and collection which was one of the down sides of the manual system. The respondents also agreed that the application of the E-voucher pilot projecthas made It is possible to get timely reports on input distribution and sales. The findings also indicate that the pilot made it simple to track price changes and calculations which were very hard to do through the manual system.

The issue of the pilot project's cost effectiveness is a major issue in studying the performance of the E-voucher pilot project, Report from the ATA shows that after the project has been implemented, the cost to the famer will be less than ETB 4.00 per transaction. It is cheaper than the cost the MFI or cooperatives are incurring in the manual system (ETB 6.73) for handling the financial transaction. Therefore, it is advantageous to the farmer, MFIs and cooperatives which will make the scale up sustainable.

Compared to the manual IVS system the E-voucher has proven to be a time and cost saving system. The time to serve a single farmer has reduced from 15 minutes to 5 and 3 minutes for previously unregistered and registered farmers, respectively. The system also replaced paper receipts used for processing input sales. This has reduced costs for cooperatives as farmers are transacting more than two times per season which the E-voucher enables the use of a single NFC tag for all transaction. The management reporting portal of the system is proven to give accurate data, made reconciliation and settlement easier for all stakeholders.

After witnessing all these compelling facts it is possible to conclude that the E-voucher pilot project has performed as expected.

The next research objective was to assess if the E-voucher pilot project can be considered as a good practice. To answer this question the researcher compared the performance of the pilot project with the alternative which is the manual voucher system. What makes the E-voucher pilot superior than the manual voucher system? The E-voucher pilot had succeeded in achieving the following that the manual voucher system had short comings on. The first achievement is transaction costs for Financial Institutions (FI) and multipurpose cooperatives has Reduced, the findings also indicates that it has also reduced interest payments to the (commercial bank of Ethiopia) CBE. The participants agreed that the system has resolved the complex reconciliation process for FIs and cooperatives. But most of all the major successes of the E-voucher pilot project is that the new system has prevented fraud and ensured integrity and last but not least the system provides real-time information on input sales helping to make informed decisions.

The above findings show that the pilot project has more or less resolved the key issues that it was planned to accomplish. Based on this the E-voucher project can be considered as a good practice that is recommended to be scaled up.

Although the process of piloting an intervention on a smaller scale is a critical component of any scaling up strategy, pilot projects with no scale-up strategy have limited usefulness (UNESCO, 2014). So the next objective of the researcher was to assess the scalability of the E-voucher pilot project. Cooley and Linn (2014) suggested that for successful scaling up, potential obstacles need to be removed and enabling conditions, otherwise known as “spaces,” have to be created for interventions to grow. They identified eight spaces which are Fiscal/financial space, Natural resource/environmental space, Policy space, Institutional/organizational/staff capacity space, political space, cultural space, partnership space, and learning space. Based on these eight factors the researcher tried to assess the environment in which the pilot is going to be scaled.

The first enabling factor to scale is the financial space which means in order to scale a pilot financial resources need to be mobilized but the findings indicated that there are shortcomings in mobilizing financial resources. The next space that should be filled is the Natural resource/environmental space; in this regard most of the respondents said that in the scaling processharmful effects of scaling up on natural resources and the environment can be mitigated,

and the benefits of scaling up for natural resources and the environment will be promoted. The development of a strategy to strengthen rural financial services was initiated by the government's Economic Policy Analysis Unit (EPAU) in 2013. Under the Prime Minister's instruction the responsibility for finalizing and implementing the strategy was transferred to ATA, resulting in the establishment of the Rural Financial Services (RFS) project in early 2014 (DFID 2015). With this regard it is possible to conclude that the policy space is suitable for scaling as it has authorization from the highest office in the country. The next space that needs to be considered is the existence of Institutional/organizational/staff capacity to scale the project; concerning this the participants confirmed the existence of these requirements. The fifth space that was mentioned on the literature was the political space; majority of the respondents agreed that important stakeholders are motivated through outreach and suitable safeguards are present to ensure the political support for a scaled-up intervention since agriculture is a very sensitive issue. The other space is the cultural space and majority of the respondents said thatpossible cultural obstacles or support mechanisms are identified and based on this action will be taken upon. Regarding the learning space the participants said Knowledge about what does and doesn't work in scaling up is harnessed through M&E, knowledge sharing, and training during the piloting phase. Partnership space is one of the major issues of this thesis which is concerned with the mobilization of Partners to join in the effort of scaling up, on this subjectthe finding shows that there exists to be an inconsistency in the response to the mobilization of partners.

Investment and scaling up strategy for the E-voucher project need to be thoroughly investigated, so the next step was to distinguish the strategy for scaling up. What distinguishes these three types of scaling up from one another is the degree to which the originating organization (i.e., the organization that managed the initial project) continues to control implementation as the model goes to scale. the findings from the interview and questionnaires show that majority (80%) of the participants strongly prefer the collaboration of ATA with selected investment and scaling partner. the findings show that the participants expect the ATA to play a major role in scaling up the E-voucher project.

After establishing that the E-voucher pilot project needs to be scaled in collaboration what comes up next is that who will be the investment and scaling up partner. The potential partners that are suitable were identified and they stated the following potential pathways for scaling the pilot.

- Ethiopian Agricultural Transformation Agency to invest in the project
- Technology companies to take over the project.
- Regional government to invest in the project.
- Cooperatives to invest in the project.
- Financial institutions to invest in the project.

These options were included in the questionnaire. The results show that most of the respondents gave the highest priority for the second option. The result from the questionnaire supports the result from the questionnaire but with some additions, meaning the best suitable scaling pathway among the stated options is for technology companies to take over the scaling. The finding shows that this potential partner perceives a need for this kind of project; the project is also consistent with the central mission and vision of the proposed adopting organization because the project aims to scale up using an appropriate business case which the adopting organizations can rely on. The findings from the interview also show that as long as there is a cost recovery strategy the proposed adopting organization has the necessary implementation capacity. Are the organizational culture and values of the proposed adopting organization sufficiently compatible with those necessary to successfully adopt and implement the model? Was the last question that was asked regarding this issue and the response was; Yes, this kind of companies are built to thrive in such type of businesses or environment.

But this does not mean that the other parties mentioned above should not take part in the scaling up intervention, in fact an interviewee suggested that Technology companies working with regional MFIs and cooperatives with the assistance of regional governments is the best pathway to scale the E-voucher pilot project also the ATA playing the linking role among the stated stake holders.

The final objective of the research was to assess what actions should be taken in on order to sustainably scale the E-voucher pilot project. Linn(2012) recommended six specific actions to take for a successful scaling, and these are;

- Make sure that there is sufficient agreement among relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible.
- Buy-in from internal groups must be achieved.
- Human, institutional and financial resources must be available for scaling up
- The originating organization must be prepared to relinquish control and make the other changes necessary for successful transfer and scaling up of the project.
- Action plans and budgets must be in place for implementing the scaling up.
- Responsibilities should be clearly allocated and efficient mechanisms must be established for coordinating the scaling up

The findings indicate that most of the actions have been applied except for the second and the fifth ones.

Conclusion of the study

Agriculture still constitutes the most important economic sector, uses the most labor and contains the majority of the poor, who are also the majority of the hungry(IFAD, 2013).Providing smallholder farmers with access to credit is essential to unlocking long-term, sustainable gains in farmer productivity and incomes. Without financing, smallholder farmers cannot afford the relatively high upfront costs of quality seed and fertilizer, relying instead on poor quality seed and little to no fertilizer. Without access to credit, they may be unable to purchase or rent tools that increase efficiency and reduce labor costs. Additionally, they may not be able to afford the training services needed to maximize seed and fertilizer application and general farm management. Finally, without access to credit, a farmer might be compelled to sell any crop surplus immediately after harvest, when prices are typically at a seasonal low.(Costa, Gyoeri, Soares, 2016). In this aspect the findings of the study justify that the E-voucher pilot project was successful in resolving these problems.

Generally speaking, scaling-up means "increasing impact"(Gaul etal 2004). But before scaling up there should be sufficient agreement among relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible(Linn, 2012) based on this the study has proved that the E-voucher pilot project was successful, cost-effective by measuring its performance.

The study has confirmed that the E-voucher pilot project can be considered as a good practice because it has proven to be a better system than the alternative manual voucher system. E-voucher pilot has reduced transaction costs for Financial Institutions (FI) and multipurpose cooperatives, it has also reduced interest payments to the (commercial bank of Ethiopia) CBE. The system has resolved the complex reconciliation process for FIs and cooperatives. But most of all the major successes of the E-voucher pilot project is that the new system has prevented fraud and ensured integrity and last but not least the system provides real-time information on input sales helping to make informed decisions.

The purpose of a pilot is to demonstrate findings and ultimately be scaled up, since E-voucher pilot project has been prove to be a good practice the next thing to as to study the scalability of the pilot. in the literature Cooley and Linn (2014) suggested that for successful scaling up, potential obstacles need to be removed and enabling conditions, otherwise known as "spaces," have to be created for interventions to grow. Among the spaces they identified the study indicated that the financial and partnership spaces have shortcomings. While six of the eight spaces are enablers but the financial and partnership spaces still need to be worked upon. Since the ATA does not have the desire or the capacity to scale the pilot the two problems are causes of one another meaning the partner is the source of finance. This is a major issue because without the availability of financial resources scaling up is impossible in support of this argumentKohl and Cooley (2009) said that among the enabling spaces, failure to address institutional and fiscal/financial constraints are the most common factors seriously endangering the scaling up process.

Among the three typologies of scaling upused by Kohl and Cooley (2009) (Expansion, Replication, and Collaboration) the finding showed that the pilot should be scaled in a collaborative manner through technology companies taking the lead and the ATA playing a linking role between the technology companies, financial institutions(MFIs and CBE), cooperatives, regional governments and other stake holders.

regarding the actions that need be taken to sustainably scale a pilot the study uncovered that action plans and budgets that must be in place for implementing the scaling up have not been prepared yet and the other short coming is that Buy-in from internal groups has not been achieved. While the other tasks such as; making sure that there is sufficient agreement among

relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible, making sure human, institutional and financial resources are available for scaling up, readiness of the originating organization to relinquish control and make the other changes necessary for successful transfer and scaling up of the project, Responsibilities clearly allocated and efficient mechanisms established for coordinating the scaling up are accomplished.

5.3. Recommendation of the study

In order to reap the best out of the implementation of scaling up of the E-voucher pilot project, the following recommendation is given in light with the finding of the study

- The ATA should select a specific technology company to scale the E-voucher pilot project after deeply assessing the financial, organizational and staff capacity.
- The ATA and other stakeholders should be fully committed for the scaling of the pilot.
- The scaling partner should utilize the enabling factors (spaces) for a successful scale up and try its best to mitigate the shortcomings on financial and partnership spaces.
- The ATA should try its best achieve Buy-in from internal groups.
- Action plans and budgets must be in place for implementing the scaling up.
- The ATA should facilitate the scaling of the pilot in a way that includes other products and services.
- The ATA should utilize the experience of the RFS team to guide the adopting organization.
- Since agricultural growth is a sensitive issue regional governments should give their full-fledged support in the scaling up effort.

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Appendix 1

Addis Ababa University

College Of Business and Economics

School of Commerce

MA in Project Management

Questionnaire for Research Thesis

Dear Sir/Madam I humbly would like to ask you fill this questionnaire. Your response is highly valuable to the outcome of the research titled "sustainably scaling up innovative agricultural projects; the case of the E-voucher project of (ATA)". The information that you give will be used only for academic purpose and it will be kept confidential. I would like to thank you in advance for sparing your time and filling the questionnaire.

Instructions:

- Do not write your name.
- Please read the questions carefully and provide an appropriate response.
- Please tick (√) your answers and fill spaces provided where necessary.

Contact of researcher:

Bemnet Gossaye

E-mail: bemnetgossaye51@gmail.com

Phone Number: +251923794722

Section A: General Organization Information

1. Name of organization you're part of _____
2. Gender

   Male □ Female □
3. Level of education

   1st degree □ Masters□ others please specify_____
   2nd degree □ PhD □
4. Job title_____
5. Relevant working experience **(**Years**)**:

   1-3 Yrs □ 5-10 Yrs □
   3-5 Yrs □ >10Yrs □
6. Which of the scaling up technique do you is most suitable for scaling the E-voucher project?

   Expansion □ ATA will be the sole operator in the scaling up of the E-voucher project.
   Replication□ Other organizations, including the public sector, to take up and implement the scaling

Collaboration □ The ATA in Collaboration with other organizations.

Others please specify_____

Please use a tick (√) mark to answer the following statements as SA= (Strongly Agree). A= (Agree), N= (Neutral), D= (Disagree) and SD= (Strongly Disagree) to rate the factors

What can or should be done to sustainably scale up the E-voucher project?		SA	A	N	D	SD
1	There Is sufficient agreement among relevant decision makers, funders and opinion leaders that the proposed pilot project is successful, cost-effective, and feasible					
2	Buy-in from internal groups can be achieved					
3	Human, institutional and financial resources are available for scaling up					
4	The originating organization (ATA) is prepared to relinquish control and make the other changes necessary for successful transfer and scaling up of the project.					
5	There are action plans and budgets in place for implementing the scaling up.					
6	Responsibilities have been clearly allocated and efficient mechanisms are established for coordinating the scaling up.					

E-voucher project performance		SA	A	N	D	SD
1	There is evidence that the model is more cost-effective than other approaches.					
2	The pilot project has resolved the delay in service delivery					
3	Reconciliation process is clear, uncomplicated and time saving.					
4	There is no delay in loan approval and collection					
5	It is possible to get timely reports on input distribution and sales					
6	It is simple to track price changes and calculations					

Enabling environment to scale up the E-voucher project		SA	A	N	D	SD
1	Fiscal and financial resources are mobilized to support the scaled-up intervention					
2	The policy and legal framework is adapted to support scaling up					
3	Potential market constraints are considered					
4	Institutional, organizational, and staff capacity is available					
5	Important stakeholders are motivated through outreach and suitable safeguards to ensure the political support for a scaled-up intervention					
6	The impact of scaling up on natural resources and the environment is considered, harmful effects are mitigated, and beneficial impacts promoted.					
7	Possible cultural obstacles or support mechanisms are identified					
8	Partners are mobilized to join in the effort of scaling up.					
9	Knowledge about what does and doesn't work in scaling up is harnessed through M&E, knowledge sharing, and training.					

What aspects of the E-voucher project can be considered as a good practice		SA	A	N	D	SD
1	Reduce transaction costs for Financial Institutions (FI) and multipurpose cooperatives					
2	Facilitate complex reconciliation for FIs and cooperatives					
3	Reduce interest payments to CBE;					
4	Prevent fraud and ensure integrity; and					
5	Provide real-time information on input sales helping to make informed decisions					

What is the best investment and scaling up strategy for theE-voucher project?		SA	A	N	D	SD
1	Investment by Ethiopian Agricultural Transformation Agency is the best suitable strategy.					
2	Investment by technology companies is the best suitable strategy.					
3	Investment by regional governmentis the best suitable strategy.					
4	Investment by cooperativesis the best suitable strategy.					

Any other factor that may have contributed to the success of the pilot project please specify, and can they be replicated at a larger scale?

_____
_____
_____

Is there any challenge that was encountered during the piloting phase that should be addressed in the scaling up stage?

_____
_____
_____

Last comments, suggestions regarding the scaling up of the E- voucher pilot project.

_____
_____
_____

Appendix 2

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MA in Project Management

Interview Guide for Research Thesis

Dear respondent,

This interview questions is prepared to undertake a research paper titled: "sustainably scaling up innovative agricultural projects; the case of the E-voucher project of (ATA)". The purpose of the paper is to gather data for partial fulfillment of a masters degree in Project Management. Therefore, the information you provide will only be used for academic purpose and it will be kept confidential.

1. What is the goal of the pilot project?
2. Do you consider the E-voucher project as successful pilot.if yes what are the key factors that make it so.
3. Along what dimension(s) should scaling up take place?

4. What elements – organizational, process, technical, values – were critical to success on a pilot scale? Is it absolutely necessary to replicate all of these elements on a large scale in order for the scaled up effort to be successful?
5. How easily can the institutional characteristics that were key to the outcomes achieved be replicated or enlarged upon?
6. Is the internal and external environment suitable for the scale up of the project.
7. Is there anything special or unique about the social context, political context or general circumstances of the pilot project that has affected the project's success (e.g., cultural, ethnic, or religious values/characteristics; distribution of power; homogeneity; economic conditions) and that would need to be present in any environment for the project to be replicated successfully?

8. Is there any evidence that the project is more cost-effective than other approaches?
9. Are there obvious economies or diseconomies of scale?
10. Does the originating organization (ATA) have the desire and organizational capacity to expand its operations and deliver services on a substantially larger scale?
11. What organization(s) are best suited to implement the project on a scaled up basis or to serve as partners in implementing the scale up.
12. Is there need for one or more other organizations to help implement the linking strategy? If so, what help is needed and which organizations are best suited to performing these roles?
13. Do potential partners perceive a need for this kind of project?
14. Is the project congruent with the central mission and vision of the proposed adopting organization?
15. Does the proposed adopting organization have the necessary implementation capacity?
16. Are the organizational culture and values of the proposed adopting organization sufficiently compatible with those necessary to successfully adopt and implement the model?

ADDIS ABABA UNIVERSITY

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SCHOOL OF COMMERCE

MA IN PROJECT MANAGEMENT

SUSTAINABLY SCALING UP INNOVATIVE AGRICULTURAL PROJECTS, THE CASE OF THE E-VOUCHER PROJECT OF THE ATA.

SUBMITTED BY- BEMNET GOSSAYE

GSR/2081/08

IN PARTIAL FULFILLMENT OF MA DEGREE IN PROJECT MANAGEMENT

SUBMITTED TO- TEKLEGIORGIS ASSEFA (ASSNT PROF.)

JUNE, 2017

ADDIS ABABA, ETHIOPIA

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Acknowledgement

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Abstract

Scaling up has been defined by different authors in various ways. Scaling up is any form of expansion of an intervention or approach, not as an end in itself, but as a means to achieve greater and more widespread benefits for the population of concern. But before scaling we have to make sure that the pilot is successful and can be considered as a good practice. The road to sustainably scaling up is often rocky for many organizations and successfully implementing a scaled up intervention is difficult failures are not uncommon. This study raised on the issue of how to sustainably scale up a pilot project. Different studies show that for the achievement of the development goals of a country scaling up good practices is essential, but it has different challenges of implementation. So the study had an objective to study the implementation of a scaling up practice on a selected pilot project. The selected pilot was the E-voucher project of the ATA. Abundant literatures show that success of a pilot is not the end of an intervention but a platform for the opportunities that could be achieved if it is scaled, so a pilot that is not scaled has limited usefulness. The pilot is ready for scale up through the transfer of the project to a new partner raising the questions who is that partner, what should be the scaling strategy, is the pilot scalable on a large scale, to what extent should the originating organization (ATA) be involved in the scaling of the pilot, and what actions should be taken to sustainably scale up the pilot project. The data was collected from a group of participants who had direct involvement on the management of the pilot project, using census and purposive sampling. Questionnaire was prepared both on open ended and close ended type. Unstructured interview was also employed for high level managers. The data was analyzed qualitatively through description and quantitatively with the use of SPSS software. It has been revealed that the E-voucher pilot was a successful project and that it could be considered as a good practice. The study also showed that scaling up should be implemented by technology companies in collaboration with financial institutions (MFIs and CBE), cooperatives and regional governments with ATA playing the linking role among these stakeholders. The study made it possible to identify factors that might challenge the success of the scaled up intervention. some of the challenges may be buy in from internal groups has not been achieved yet, there are no action plans and budgets for the scaling up intervention and also since a specific partner has not been selected yet financial resources needed for the scale up have not been mobilized yet. It is recommended that the ATA and other stakeholders to work on the problems stated above and try to identify the success factors of the pilot and replicate them in the scaling up process.

Key words: scaling up, good practice, pilot project, E-voucher

Acronym

- ATA ……Agricultural Transformation Agency.
- RFS …….. Rural Financial Services.
- IVS ……... Input voucher system.
- NFC……... Near Field Communication.
- SNNP……... Southern nations, nationalities and people.
- E-voucher ……. Electronic voucher.
- CBE……...Commercial Bank of Ethiopia.
- ACSI……..Amhara Credit and Savings Institution.
- MFI…… Micro finance institutions.
- NGO……... Non-governmental organization.
- ETB…….....Ethiopian birr
- FI…… financial institutions
- EPAU ……. Economic Policy Analysis Unit