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The Health of the Ugandan Coffee Business Ecosystem

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Preface

First of all, we would like to thank SIDA who made it possible for us to conduct our data collection in Uganda. This study would not have been possible if it was not for the Minor Field Study (MFS) scholarship that we received. We would also like to give a massive thank you to the Swedish companies who helped us get in contact with coffee organizations in Uganda.

Thank you to Café Africa Uganda, Uganda Coffee Federation, Hans R. Neumann Stiftung-Coffee Kids, Kyagalanyi Coffee LTD (who also got us in touch with Agri Evolve) and National Union of Coffee Agribusiness and Farm Enterprises all of whom helped us by agreeing to be interviewed for our master thesis.

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Abstract

Aim - The aim of this thesis is to understand the challenges of the Ugandan coffee industry by having a business ecosystem perspective. By using a broader perspective like the BE, one can see relations and connections that may not have been visible before. Furthermore, when using a BE perspective more actors are included in the systemic work, and important platforms and tools are included in the work of moving the BE forward as one entity.

Methodology - A qualitative study was conducted to examine and understand the Ugandan coffee industry from a business ecosystem perspective. 18 semi-structured interviews were performed with coffee farmers and coffee organizations in Uganda. The data was divided into five different themes; Knowledge Sharing in the Business Ecosystem, Platforms and Interactions in the Business Ecosystem, Roles in the Business Ecosystem, Challenges in the Business Ecosystem and Youth in the Business Ecosystem.

Conclusions - The findings of the thesis are that some parts of the business ecosystem are missing or lacking. Effective platforms for knowledge sharing are an issue, due to lack of access to a technological platform, monetary resources and low level of education. It was difficult to place some of the actors in different roles that exist in the business ecosystem, because sometimes an actor could fit the description of multiple roles. The interactions and the knowledge sharing also need improvement.

Research limitations - Due to the sheer size of any business ecosystem, it is a daunting task to map one out. To make it more manageable, a particular part of the business ecosystem was examined. This might have resulted in the exclusion of important actors. Many of the interviews required an interpreter which meant that some interpretations may have been lost in translation. Furthermore, all the interviews with coffee farmers were arranged by a third party. Which could affect the results.

Research contribution – In this thesis a business ecosystem perspective was applied on the Ugandan coffee industry, which has never been done before. Furthermore, it discusses what an unhealthy or lacking business ecosystem is or looks like, since there is little or no previous literature discussing this.

Keywords - Business Ecosystem, Uganda, Coffee industry, Coffee business ecosystem, coffee farmers, Minor field study
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1. Introduction

In this introductory part of the study, the background and problem discussion are provided. Further, the aim and research questions of the study are presented.

1.1. Background

In a world that is increasingly interconnected through technology, firms work with other firms across the globe and information has never been as easily accessible (Kelly, 2015). While the consumers are essential, more focus should be put towards other actors in the business ecosystem instead (Kramer & Pfizter, 2016; Ihrig & Macmillan, 2017; Iansiti & Levien, 2004b). Kelly (2015, p.19) describes a business ecosystem (BE) as “dynamic and co-evolving communities of diverse actors who create new value through increasingly productive and sophisticated models of both collaboration and competition”. Through this change in focus and by strengthening the relationship with the other actors in the BE a firm will be able to increase the quality of their work (Iansiti & Levien, 2004b). A BE, just like a biological ecosystem, shares the fate with all actors included both in success and failure (Iansiti & Levien, 2004a).

In the next section a short introduction of the coffee industry is presented, in order for the reader to grasp the magnitude of the industry and how many people are dependent on this crop for their livelihood.

Coffee is one of the most exported global crops from developing countries (TCI, 2016). In 2015 the industry was worth around US$19 billion. It is estimated that around 2.25 billion cups of coffee are consumed every day. It is predicted that by the year 2050 coffee production will be halved in size. About 120 million people in 70 countries rely upon this crop to feed their families. The coffee market keeps on growing, and there are many challenges ahead for the farmers growing the crop. Global coffee companies are aware of the uncertain future with rising coffee prices due to lower coffee yields and impacts on flavor and aroma, as well as youth not seeing a future in this
challenging profession (Technoserve, 2013). In this thesis youth is defined as people between the age of 18-35 (Awiti, 2016). New farmers are needed in the industry, which means that there is a need for inclusion of youth. Actions is needed or else a distressed future awaits. Many global coffee companies are engaging in voluntary activities to secure the future of coffee (TCI, 2016; Samper & Quiñones-Ruiz, 2017).

1.2. Previous Research

Within the previous research in the coffee industry the problem with the involvement of young farmers has been highlighted in reports but no further explanation has been offered why it is essential to retain them or why they are not involved (ICO, 2015). There is also a limited amount of information on the consequences of this situation. Most previous research regarding coffee concerns how different coffee certifications impact the livelihood of coffee farmers (Giovannucci & Koekoek, 2003; Chiputwa, Spielman & Qaim, 2015). Further research regarding durability in coffee production exists although it is all within a technical angle (van der Vossen, Bertrand & Charrier, 2015; Várzea, Marques, Pereira & Silva, 2008; Unni, George, Bhange, Devi & Kurungot, 2016).

Concerning research made on the BE, most work in the early days stems from Moore (1993), he defines the BE as “an economic community supported by a foundation of interacting organizations and individuals- the organisms of the business world” (Moore, 1996, p. 9). According to him the term “industry” should be replaced with BE. We follow Moore in this reasoning. In the years that followed, Gossain and Kandiah (1998) and Power and Jerijan (2001) expand on Moore’s theory on the BE accentuating more technological aspects. Graça and Camarinha-Matos (2015) explain that the concept of BE has in the last two decades been redefined due to information communication technology (ICT). A strong focus has been put on collaboration platforms for organizations to deliver integrated products and services. In this thesis, however, the theories on business ecosystem mostly stems from Iansiti and Levien (2004a, 2004b). Based on the existing literature of Iansiti and Levien (2004a; 2004b), we define a healthy BE as a condition where the different species-actors can contribute to a better productivity in the BE. This relies on the quality of interactions like knowledge sharing, platforms, tools etc. Iansiti
and Levien (2004a, 2004b) use the concept of business ecosystem as a metaphor that should be used to understand certain problems. Primary the idea of comparing a network with a biological ecosystem provides deeper understanding of the business network. There is no previous research applying the BE perspective in the coffee industry, furthermore there is limited or little research regarding unhealthy or lacking BEs, nor is there any previous literature regarding the stages between the rise and the fall of a BE. The existing literature all focuses on working BEs. This thesis will be discussing a BE that exists between theses stages. Since there is no literature describing an unhealthy or lacking BE, this thesis will focus on the existing literature talking about the content and attributes that a healthy BE has and then these attributes and content will be compared to the case study BE.

1.3. Problem Discussion

In Uganda, approximately 20% of foreign revenues come from the coffee which therefore makes it the most eminent agricultural crop in the nation (MAAIF, 2013). Coffee is mostly produced on small farms. There are about 1,7 million coffee farmers in the country (Technoserve, 2013). In Uganda, the coffee industry is vital, but it is facing many challenges and is distinguished by restricted access to land and knowledge (MAAIF, 2013). Furthermore, there are few and low farm investments. These limitations have led to coffee farmers buying uncertified planting materials and input with bad quality (ICO, 2015; Technoserve, 2013). Other challenges faced is low post-harvest involvement, inadequate technical improvement, managerial issues and lack of youth entering the profession.

Because of the challenges within the industry, it is difficult to find young farmers who want to work in the coffee farming profession, instead they want to find jobs in the bigger cities (MAAIF, 2013). The average age of coffee farmers in Africa is 64 years old and younger farmers are needed (ICO, 2015). To change this tragic trend, coffee companies and other actors within the coffee industry need to understand that they are all part of a BE that could be diminishing if action is not taken. The BE needs to take action so that young farmers can see a more positive career in coffee farming.
The perspective of BE in the coffee industry has not so far been applied yet. The focus has instead been on supply chains (Borrella, Mataix & Carrasco-Gallego, 2015). There is little or no previous research regarding a healthy or unhealthy BE, nor about complete and incomplete BEs. Most research has focused on one specific actor or specific relationships between actors in the coffee value chain. It is about moving away from thinking of businesses as individual entities and looking at a significant and more complex picture where all the actors in the BE realize the dependence on one another and the strength in working towards common goals. Therefore, an assessment of the Ugandan BE will be made to be able to determine its health, by looking at the content and roles that are normally included and then comparing that to the current case.

1.4. Aim

The aim of this thesis is to understand the challenges of the Ugandan coffee industry through a business ecosystem perspective. By using a broader perspective like the BE, one can see relations and connections that may not have been visible before. Further, when using a BE perspective more actors are included in the systemic work, and important platforms and tools are included in the work of moving the BE forward as one entity. To examine this, the following research questions should be answered:

1. How does the attributes and content of the Ugandan coffee business ecosystem compare to the content and attributes of a complete and healthy business ecosystem?
2. How does the business ecosystem expand its boarders to include new actors and thereby contribute to a healthier business ecosystem?
2. Theoretical Framework

In this chapter, the theoretical framework and concepts of the study are presented. The central concept is the BE, and, in this chapter, the most vital parts of a healthy and complete BE is described. This will later help compare a complete and healthy BE with the characteristics of this thesis case study. This includes the interdependence of a BE, Roles and Platforms of a BE and Interactions and Knowledge Sharing of a BE.

2.1. Business Ecosystem

In the article Predators and prey: a new ecology of competition, Moore (1993) introduced a new concept called the business ecosystem. It was an attempt to explain why some firms were developing more rapidly and effectively than their competitors. Thus, highlighting the problems of firms competing for the same market shares within the same industry and not taking into account the events that were shaping the industry, such as technological development. In essence, the article was aimed to provide managers with an insight of the strategic logic of change. Tools needed to be developed for strategizing that would help make the tough choices when it comes to innovation, business alliances, and leadership of customers and suppliers.

Exactly like in a biological ecosystem a BE and the actors in it can be different degrees of health (Iansiti and Levien, 2004b; 2004a). Iansiti and Levien (2002) introduced “health” as an indicator on how well the BE is doing. According to them, three elements need to be considered, these are: productivity—how well is the BE turning input into output, robustness - is the BE strong enough to defeat turmoil and niche creation- how effective the BE is at creating opportunities, diversity, and efficiency. While identifying some indicators to health is a start, there is still a need of providing some operational measures of the BE which will need more detailed data (den Hartigh, Tol, and Visscher, 2006).

The BE consists of large loosely connected networks (Iansiti & Levien, 2004a). They are comprised of distributors, technology providers, suppliers, outsourcing firms, financial institutions and so forth. They are all connected through the creation and delivery of one firm’s product. Firms affect and are
affected by each other’s actions. This means that all firms that are a part of the same ecosystem regardless of position and strength share the same faith (Iansiti & Levien, 2004a; Peltoniemi & Vuori, 2008; Wulf & Butel, 2017). One firm can be a part of many different BEs, therefore, it is essential that the firm draw the lines of which partners are of most importance for their survival (Iansiti & Levien, 2004b). One can zoom out or zoom in to focus on any specific part of the ecosystem. If one were to look at the whole BE, which is practically impossible, one would realize that there can be thousands of actors in it which means that lines need to be drawn in order to handle it (Iansiti & Levien, 2004a). In this thesis focus will be on the coffee farmers and the actors closest to the coffee farmers, meaning NGO’s, exporters and roasters. Iansiti and Levien (2004a) explain that firms must look beyond their own business assets and start managing assets they do not own. The fate of companies everywhere is entwined with their performance as part of the BE (Kelly, 2015; Iansiti & Levien, 2004b). Which means that if this fails to be realized by the actors in the BE, there could be unforeseen consequences. The BE is a system that is complex, its complexity is founded on its ability to emerge, adapt, co-evolve and self-organize (Peltoniemi & Vuori, 2008). As suggested by Moore (1993), it is not possible to divide economic activities into specific industries. Therefore, BE is more suited and should replace the term “industry”. Further, the BE is made up of core capability which is used to produce a product and add-on services, so the customer gets a “total experience” (Moore, 1996).

In a complete and healthy ecosystem, all the actors need to be taken into account. It is a strategy that will allow and foster good relationships (Iansiti & Levien, 2004a). Like a biological ecosystem, the actors in the BE are dependent on each other to survive. There is, of course, some difference, human beings can make informed decisions that will allow one's survival (Peltoniemi & Vuori, 2008). In a working ecosystem, everyone knows the part that they have to play, and there is a working platform that can offer information and tools easily to everyone in the system (Iansiti & Levien, 2004a; 2004b). Most important though, is that all of the actors realize that they do not work alone, their actions affect others as well.
2.2. The interdependence of the Business Ecosystem

Events occurring on the other side of the world can affect the lives of people thousands of miles away (Iansiti & Levien, 2004a). Just as it is in the coffee industry where the western world consumes the most coffee and are dependent on the people who grow it, and the people who grow it are dependent on the people who drink the coffee to feed their families (TCI, 2016). While being interconnected is strengthening in many ways, it can also make firms vulnerable. When being involved in a BE, the firms are dependent on the other firms in that system as well, because their fate is the firms' fate. Wulf and Butel (2017) explain that networks can be found within BE and they are a structural entity that affects the relationships within the BE. The relationship can take on two different forms, informal and formal. It will decide how knowledge is exchanged between the different parties. Furthermore, no definite boundaries are setting the BE, and it does not need to be limited to traditional industry boundaries (Zott & Amit, 2013). What is valued here and what sets the limits is the firm's communication strength with parties involved (Iansiti & Levien, 2004a). Even though some companies do not appear to be related, the correlation between them can still be high, and a subtle change on one side can still have a substantial impact on the results as a whole because it affects the health of the BE.

Because of the sheer size of a BE, it is essential to cluster the different actors in the network to a manageable size, hubs (Iansiti & Levien, 2004a). These “hubs” even on a smaller scale are richly connected networks. No matter the size of the hub, they have the power to affect the BE. The hubs take on the role of a keystone whose interest is in line with the ecosystem. The hubs become the regulator of the ecosystem and are extremely important to keep the ecosystem healthy.

2.3. Roles and Platforms of a Business Ecosystem

There are three roles or species in a BE that are especially notable. These are Keystone, Dominators and Niche players (Iansiti & Levien, 2004a). There needs to be an understanding of how complex systems work and each firm needs to know what their role is and how they can operate to contribute to the health of the BE. Each of the different specific roles providing shape, adding health and opportunities for the BE.
Iansiti and Levien (2004a) identify keystones “as having specific characteristics that produce benefits for the ecosystem as a whole” (p.68). If one keystone is removed, it can have a fatal impact on the whole system (Iansiti & Levien, 2004a). Because of this, keystones naturally have a direct effect on the health of the system as a whole. The keystone affects mainly three categories: stability, diversity, and productivity. Keystones can strengthen the productivity in several ways; by eliminating or diminishing entities that might reduce productivity or by building a strong base on which others can rely (Iansiti & Levien, 2004a; den Hartigh et al., 2006). In other words, a keystone firm provides a common platform that shapes the BE. The keystone becomes an essential hub in the network, by connecting participants and improving the BE as a whole (den Hartigh et al., 2006). The keystone strategy is long term. It will allow the BE and itself to grow and flourish. The strategy is meant to enable the ecosystem to survive by self-renewal. This can be achieved by incorporating innovations from outside the system (den Hartigh et al., 2006; Iansiti and Levien, 2004a). Diversity and stability are often closely associated with these ecosystems because diversity provides the capacity to respond when environmental changes occur. For instance, like in a biological ecosystem genetic and behavioral variation are essential and strengthening. According to Boudreau and Hagu (2009), some authors, e.g., Iansiti and Levien (2004a), mean that keystones and platforms are identical. Platforms are services, tools, or technologies, created by the keystone firm (Iansiti & Levien, 2004b). The platform is open to all players in the BE and should be used to enhance their performance. Iansiti and Levien state that a keystone is often a firm, but this may not always be necessarily true. It can be “encoded in universally agreed protocols, rules, and goals that enhance stability, predictability and other measures of system health by regulating connections and creating stable and predictable platforms on which other network members can rely” (Iansiti & Levien, p. 9, 2004a). Actors in the BE share “platforms” that are used as tools, services and technologies that can benefit the actors in the BE (Bosch-Sijtsema & Bosch, 2015; Iansiti & Levien, 2004; Kelly, 2015; Lambert & Cooper, 2000).

The features most commonly associated with dominators is their will to dominate the whole ecosystem by excluding or conquering other species. Niche species are small players in size in the ecosystem and are weak to defend
themselves against dominators (Göttlich & Wenzek, 2004). Dominators are organizations that attract resources from the system but do not render anything back (Peltoniemi & Vuori, 2008). They do not work reciprocally. The behavior being presented by dominators is in stark contrast to the keystone species that works towards keeping the ecosystem in balance and allowing niche species ample space to exist (Göttlich & Wenzek, 2004). A dominator can shape the BE by embodying value created in the system (den Hartigh et al., 2006). Eventually, this leads to absorption of the network and destruction of the BE as a whole.

In the BE niche species are the largest players in mass (Peltoniemi & Vuori, 2008). The keystones frame what the BE does, and the niche players are the ones performing the task (Iansiti & Levien, 2004a). Niche players are specialized actors that develop or enhance capacities that are different from other firms in the network. They use resources from the network while not taking up much space in the network itself. Put in other words, niche players have limited expertise and are dependent on other players in the network to provide platforms. By effectively using the platforms, the niche players can increase the health of the entire ecosystem. If duplication labor can be avoided, niche players could implement a more effective division of labor (Iansiti & Levien, 2004a).

Companies in the same BE share a common “platform” that consist of services, tools, or technology. The BE members use the platform to strengthen their performance (Iansiti & Levien, 2004b). Even though the companies interact through the platform, the BE remains decentralized in self-organization and decision-making (Peltoniemi & Vuori, 2008). In a complete BE, there is a working platform. A platform is a place where the actors can find products, technologies, and services in the BE (Gawer & Cusumano, 2014; Tsujimoto, Kajikawa, Tomita & Matsumoto, 2017). It can help as a foundation for creating complementary products, services or technologies for the BE. It can also be used as a source of information and communication. Usually, these platforms are based on advanced technology, although in this thesis that may not be the case as the leading actor in the study (coffee farmers) are not as far along when it comes to technology.
2.4. Interactions and Knowledge sharing in a Business Ecosystem

Collaboration is a vital part of the BE since the fates are shared, and one is always working towards mutual health in the BE (Wulf & Butel, 2017). Healthy and giving interactions between the different actors of the BE, despite roles, is a vital part of a healthy and complete BE. The ability to create and develop innovative ideas is a core to gain a competitive advantage over competing BEs. The ability to take strategic decisions in the long term is of importance as a sustainable advantage and central to have a collaboration. The collaborative nature of the relationship is based on knowledge. The most critical resources are knowledge sharing because it allows the firms to develop new capabilities and innovative strategies (Wulf & Butel, 2017). For a relationship to be collaborative knowledge sharing is an important part and seen as a key capability for gaining a competitive advantage in the long run (Quintane et al., 2011).

System governance is needed of a keystone (den Hartigh et al., 2006). It is not about micromanaging the partner relationship. It is essential for managers in keystone firms to understand how governance is different from the traditional ways of handling partnerships. The traditional approach to partner management is too hands-on. It steers the individual partner towards a partnership that is based on conforming to specific standards or obtaining certain diplomas or skills. In a system governance approach, the keystone is not as hands-on but still provide directions with means that are already there on the platforms (Wulf & Butel, 2017). The directions provided by the keystone helps the system as a whole by improving partner health and network health.
3. Method

In this chapter, a description of the how the study was conducted is provided. Choice of respondents will be presented. The chapter will end with a critical discussion on how transparency and trustworthiness were achieved.

3.1. Research Approach

A qualitative research approach was used to conduct this study as it is targeting an in-depth view of a part of a BE. Qualitative research is deeply contextual (Gray, 2017). The epistemology stance of this research is constructivism, which means that interactions in the social world create truth and meaning. It seeks knowledge from our natural reality. How the world is understood by the schemas in our mind (Bryman & Bell, 2015; Gray, 2017). When conducting research, there are two main scientific approaches to follow, inductive and deductive reasoning (Gray, 2017). In this thesis inductive reasoning was used, meaning that the choice of theories came after deciding on a case and reading about it.

3.2. Research design

The research design is a case study. A case study is an empirical inspection which examines a current phenomenon in its original context (Gray, 2017). Trying to find a correlation between the phenomenon and the specific context. Meaning that case studies explore situations where the relationship between the issue and the context needs to be investigated.

A case study typically requires a lot of data collected from different sources and views, although it is important not to overwhelm oneself and try to limit oneself in some way (Gray, 2017). The method of a case study is optimal when there is a question of how or why regarding a specific situation. The case study in this thesis is instrumental, meaning that the objective is to contribute understanding or to build generalization of an issue.
3.2.1. Case study

One of several ways of doing social science research is through a case study approach. The method is used when there is a need to take into account the contextual condition of the phenomenon being researched (Yin, 2014).

Coffee Industry, Uganda

In Uganda, 90% of the coffee production is produced by 1.7 million smallholder farmers (UCDA, 2012), in constellations of cooperatives or a few large-scale plantations (Ssebunya et al. 2016). There are two types of coffee grown in Uganda. Robusta, that is a native coffee plant and most commonly produced 80%, and Arabica that is grown in high-altitudes areas accounts for 20% of the production (UCDA, 2012; Akoyi & Maertens, 2017). Coffee production in Uganda has increased during the last two decades from 3.2 million 60 Kg bags of green coffee 1995 to 4.8 million in 2015 (Akoyi & Maertens, 2017; ICO, 2015).

In the 1990s the coffee industry was liberalized which meant the entry of many new actors on the market (Akoyi & Maertens, 2017; Baffes, 2006). The coffee market went from being controlled by Coffee Marketing Board (CMB) where production was centrally planned and organized by cooperatives. The process of liberalization led to the collapse of many coffee cooperatives.

Further, the coffee industry in Uganda is typified by low farm investments, small acreage, low yields and restricted access to agricultural inputs and knowledge (MAAIF, 2013). Production costs are hard to assess as small-scale farmers often work their farms with labor provided by their family and occasional hired workers (Akoyi & Maertens, 2017; ICO, 2015). Because no records are kept it is hard to determine the cost of production for most farmers.

Because of the challenges within the agribusiness, there is a tendency for young people not to want to go into an agricultural future (ICO, 2015). This is also true for the coffee industry. The coffee farmers are getting older, but young people are not inclined to get into the coffee farming profession.
3.3. Data Collection

In this study, the primary data collection has been conducted through semi-structured interviews. Further secondary data from official websites has been included as a compliment.

3.3.1. Primary Data

Primary data is data that comes from first-hand experience (Bryman & Bell, 2015). There are different ways of collecting this data, from observations and questionnaires to interviews. In this thesis, the primary data was collected through semi-structured interviews. An interview is a communication between two parties where one person is questioning the other, trying to get information and knowledge from that specific person (Gray, 2017). In this thesis, the questions were based on the BE theory and semi-structured (see Appendix 1). Meaning that there was a base of prepared open questions then the interviewer did a follow-up of unscripted questions as well.

The primary data collection was conducted on location in Uganda. A total of 18 interviews were conducted and 11,4 hours of interview material was collected. The study was made possible by the Swedish International Development Agency (SIDA).

Selection of Respondents:

To select respondents for our study a lot of research was made online to find appropriate coffee organizations. The coffee organizations that were interviewed was found through the internet, and some were found through recommendations from other coffee organizations.

Emails were sent out to 13 different coffee organizations that are all active in the Ugandan coffee industry. Then representatives of five of these answered that they were willing to meet for an interview. These five organizations were: Ugandan Coffee Federation (UCF), Hans R. Neumann Stiftung (HRNS), Café Africa Uganda, Kyagalanyi Coffee LTD, National Union of Coffee Agribusiness and Farm Enterprises (NUCAFE). Further, three organizations
helped us get in contact with coffee farmers. These organizations were: Hans R. Neumann Stiftung and Kyagalanyi Coffee LTD/Agri Evolve.

**Interviews with organizations:**

Five interviews were made with different coffee organizations, in average the interviews lasted 45 min. The representatives have been made anonymous and replaced with Coffee organization and a number (CO#). Because the representatives in some of these organizations were the only ones in their position, the titles of the representatives from the organizations will not be revealed.

**Table 1: Interviews with organizations**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Representative</th>
<th>Date &amp; time:</th>
<th>Location:</th>
<th>Length of interview:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Uganda Coffee Federation (UCF)</td>
<td>CO1</td>
<td>26th of February 2018. 10.00 (GMT+3)</td>
<td>Coffee House, Kampala</td>
<td>29min</td>
</tr>
<tr>
<td>2. National Union of Coffee Agribusiness and Farm Enterprises (NUCAFE)</td>
<td>CO2</td>
<td>1st of March 2018. 07.00 (GMT+3)</td>
<td>Coffee House, Kampala</td>
<td>48 min</td>
</tr>
</tbody>
</table>
Interviews with farmers:

The representatives have been made anonymous and replaced with Farmer and a number (F#). A total of 13 interviews were conducted with the farmers, the average interview time was 36 min.

Mityana 6th-7th March: Trip arranged by HRNS. Three interviews were conducted and then there was a fourth one that unfortunately did not work out because of technical difficulties.

Masaka 12th-13th of March: Trip arranged by HRNS. Six interviews were conducted.

Kagando 20th-23rd of March: Trip arranged in cooperation with Kyagalanyi Coffee LTD and Agri Evolve. Four interviews were conducted.

<table>
<thead>
<tr>
<th>Interview took place in</th>
<th>Date</th>
<th>Name</th>
<th>Gender</th>
<th>Age</th>
<th>Land size</th>
<th>Type of coffee</th>
<th>Translator</th>
<th>Length of interview</th>
</tr>
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<td>Mityana</td>
<td>6\textsuperscript{th} of March 2018</td>
<td>F1</td>
<td>Male</td>
<td>35 years old</td>
<td>6 acres</td>
<td>Robusta</td>
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<td>40 min</td>
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<td>Date</td>
<td>ID</td>
<td>Gender</td>
<td>Age</td>
<td>Land</td>
<td>Variety</td>
<td>Land Ownership</td>
<td>Time</td>
</tr>
<tr>
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<td>7th March 2018</td>
<td>F2</td>
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<td>42 years old</td>
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<td>F3</td>
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<td>F4</td>
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<td>F5</td>
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<td>35 years old</td>
<td>2,5 acres</td>
<td>Arabica</td>
<td>Yes</td>
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</tbody>
</table>
3.3.2. Secondary Data

Secondary data is already existing data from other studies (Gray, 2017). This data can come from websites, company reports, magazines, books or even social media. In this thesis, there is secondary data from books and some reports produced by different actors in the coffee industry.

3.4. Analysis of data

In most qualitative research there is a challenge to find patterns in the collected data (Yin, 2016). The interview questions were divided into three different categories. For the farmers the categories were: facts about the farmer, production and organizations and future of coffee farming. For the coffee organizations the categories were: Overall about the company and representative/interviewee, work with coffee farmers and challenges and young coffee farmers. The questions in these sections were created in a way that would make the questions as similar as possible but appropriate to the different actors.

Then the answers were coded in a program called NVivo 12 which is software for qualitative analysis (qrinternational.com). After doing a content analysis that highlighted five themes: Knowledge Sharing in the Business Ecosystem, Platforms and Interactions in the Business Ecosystem, Roles in the Business
Ecosystem, Challenges in the Business Ecosystem and Youth in the Business Ecosystem. The first three themes are closely connected to theories and essential parts of a healthy BE. After this, there was material in each theme to compare coffee companies and farmers as well as with the theoretical framework to be able to draw conclusions.

3.5. Trustworthiness and Transparency of data

Ethical principles need to be taken into account when researching (Bryman & Bell, 2015). In qualitative research, this can be complicated to achieve, due to the amount of time spent between researcher and participant (Gray, 2017).

3.5.1. Trustworthiness

According to Gray (2017) a triangulation was made. In this thesis all of the interviews were recorded and transcribed, this was done to make it easier to decipher the results and also to be as transparent as possible in the process. The interviews with companies were also sent back to the interviewees after the transcribing so that they had an opportunity to look through it and make sure that everything had been interpreted right. Unfortunately, this was not possible to do with the farmers due to lack of technology and also the language barrier. The persons that help interpret the interview were staff members from the two different organizations, who helped us get in touch with the various farmers. They did a fantastic job, although it is hard to be sure that the persons were translating every word the exact way that they were meant or how the farmer answered the question.

This study is qualitative which means that the results are specific to the people and the areas that were part of the study, there is no aim of trying to pass off the result as a common truth. This study zooms in on a few specific actors within the BE, therefore, it is only a specific setting being examined and not the whole BE. Three different places were visited in Uganda to be able to see if there were any similarities and differences between the farmers. Two different coffee organizations organized the trips and the farmers did grow different types of coffee (Robusta and Arabica). The organizations that were interviewed did partake in multiple positions in the coffee value chain. This
was also to see how they looked at different issues from their specific position in the coffee value chain. Multiple views and various sources were used in the thesis to get the best overview of the case and to get the most accurate results.

3.5.2. Transparency and ethics

Four main areas of transgressions in business research concerning ethical principles have been identified (Diener & Crandall, 1978). Harm to participants concerns matter that is related to sabotaging their carriers, hurting them physically, damaging their self-esteem and so forth. Lack of informed consent, participants need to be provided with sufficient information about the study. By having this information available, they can make an informed decision if they wish to be part of the study. Invasion of privacy, how friendly can the researcher become with the participants of the study without trespassing of personal limits. Condoning to be part of the study is not the same as agreeing to be put under a microscope. Deception concerns how the research is presented to the participant, often as something that it is not. The researcher limits the participants understanding of what is being investigated to get a more natural reaction from the participant.
4. Empirical Findings

This chapter presents the research findings of the interviews held with the thirteen different coffee farmers and five coffee organizations in Uganda. The material will be presented in various themes/sections to make it easier for the reader to process the information. Firstly, the challenges of the Ugandan coffee industry will be described and then the themes connected to a healthy BE follows. The empirical findings will be compared with the theoretical framework in the discussion to see if the results match what has been described as a complete and healthy BE. Presented in this part are the findings of our study according to four themes, the interviews with the farmers and organizations are intertwined.

4.1. Challenges in the Business Ecosystem

Gathered from the interviews these were the main challenges.

4.1.1. Middlemen

Selling the coffee cherries to exporters always fetches a higher price than selling it to the middleman, but the problem arises when a small quantity of cherries needs to be sold. F12, explains that if she wants to sell a small amount of coffee it is more convenient to sell to the middleman because the middleman will come to her home and get the coffee. Selling it to the exporter means that she has to transport the coffee there and it can become expensive. Another issue was that it takes more time to receive money from the exporting company. F5 explains “A challenge many of us have is our dependency on coffee, that forces us at the time to sell it cheaper. Because now we take our coffee to IBERO or any exporter it will take time. The whole process of selling coffee to the exporter takes time, sometimes, because we have to collect the coffee, then the whole process of transporting the coffee, and after some time the money comes. When you have an emergency, you are forced to sell to a middleman at a lower price to get cash. Not having another source of income is a big problem”. “Crop finance is a tricky business, some of the farmers have been “forced” to take loans from the middleman to save the harvest. The loans are given with high interest” (F1).
4.1.2. Climate change and quality of product

Climate change was the one challenge all farmers mentioned during the interview. Prolonged drought has affected the quality of the coffee and it is not unusual that the whole season has been lost. They need assistance in putting an irrigation system in place. Having irrigation equipment will allow them to grow more coffee and therefore earn more money (F2). Some farmers mention innovations that they have heard can dig up water, but they feel like nobody is able to help them. Some farmers have been receiving fertilizers on loan. Climate is a major challenge that all organizations mention (CO4). Water is a big problem for small household farmers that cannot afford irrigation. The climate changes are looming over the coffee industry and in 25-30 years from now some places will not be suitable for coffee production (CO5). There is a pressing need to make the farmers more productive and at the same time have more integration of the coffee community to make the coffee production more attractive. But also help transition the farmers that will not be able to stay in coffee to do something else.

Changing the coffee variety is also a pressing matter. Many of the coffee trees are of the old type which is not as resistant as the new modified variety. One farmer said that “A coffee seedling of the new resistant variety is needed” (F9) she continued saying that the government should be handing those kinds of seedlings out. The quality of the coffee is not very good in specific areas (CO3). Uganda is not getting the quality it could be producing. When it comes to Robusta coffee, it is a bit harder because no roasters are interested in buying high-quality Robusta. It is not uncommon that the farmers that want quick cash purchase unapproved inputs (CO1), which affects the quality. CO2 mentioned how involving the farmer in more steps of the value chain is one way to increase the farmers' knowledge and revenues.

4.1.3. Aid

There has to be a change in how the farmers are helped (CO4). Before the farmer can be helped the government must focus on the extension workers and empower them because they are nearest the farmer. The government is sending out a strong message to the coffee community by wanting to export 20 million bags in the next ten years (CO3). The program is a bit optimistic if you consider that last year nearly five million bags were exported. The farmers
are not used to using fertilizers, they are in general hard to come by, and farmers lack knowledge in how to conduct right pest and disease controls. Coffee production is labor intensive and might be one reason that discourages people entering the profession (CO1). That is why it is important to keep introducing innovations and better technology to attract people to the profession. If the technology is used maybe the youth will accept it. Access to transportation is insufficient for many of the farmers. The infrastructure is terrible, and some places are hard to access without a suitable vehicle.

4.1.4. Price of coffee

A challenge is the price of coffee, according to F13, the cost of coffee keeps changing daily sometimes it's high and low the next day. Furthermore, some buyers want quantity over quality, and this also affects the price. This has made some farmers put little stones in their bags to get a higher price which in the end lowers the quality and also affects the price and causes inflation of price. The problems with the price was mentioned by a coffee organization as well (CO5) who explained that coffee prices have not gone up. The pricing is still based on the commodity pricing even if the cost of production has risen. Many of the farmers are not organized which makes it harder for them to access input, knowledge, and finance to improve their business (CO5; CO3). If the farmers are organized in associations and cooperatives, it will help them. It would create new structures that can provide assistance and access to the market, by selling more significant volume and gaining negotiating power when talking to other industry players.

Because of the price of coffee in Uganda it is very common that the coffee farmers have several businesses and grow 6-8 different commodities at the same time (CO3). None of the organizations would ever ask a farmer only to produce coffee, but it is a challenge in the division of time and labor, rendering them to become a jack of all trades and master of none. Another problem that the coffee industry is facing is competition from other businesses regarding other annual crops. Coffee takes time to grow before the farmers have made a profit from coffee it can take up to three to four years. Other crops can give the farmer immediate returns after six to twelve months. Other players are out there pushing those crops and giving them seedling to grow
maize or sugarcane “people are cutting down coffee trees in every region...it’s our fault as an industry assuming that coffee is the norm” (CO4).

4.1.5. Land

The cost of land has become a problem, many farmers want to expand their gardens, but due to rising cost of land and climate changes, it affects their ability to maximize revenues they get from coffee. According to F11, part of the challenges faced by the farmers are that they live on small plots of land and do not have the opportunity to give their children land to start coffee farming. F13 adds that people have a lot of children, which makes the land small when inheriting and will make it hard to make money through crops. There is a need to prepare the succession of land (CO2). The plot of land that the farmers own are small and when the head of the family passes they become even smaller, even more so, when divided between the children. The land can be safeguarded by avoiding selling the land outside the family. It is common to have many children in this part of the world. In the future, it will be important to consider reducing the size of the families.

4.1.6. Young professionals in the Business Ecosystem

There are many reasons, according to the farmers, why the youth in the community do not see a future in coffee farming or agriculture in general. Some of the recurrent issues concern the ability to “get” land. There are three ways of getting land, either the youth inherit, buy or rent land. The latter two of the alternatives require start-up capital. “I have been sensitizing youth to acquire land, for those that don't have land we must enlighten them on how to acquire land. You hire, after doing agriculture and getting the money you buy your own” (F1). Growing coffee takes three years, and the farmers recognize that youth involved in farming cannot wait three years before making any money off their labor. Youth are in general more open to growing faster crops like maize, beans or cassava. This problem has not gone unnoticed by the coffee organizations. One of whom said that before the youth are even able to concentrate on the coffee, they need to have inherited or bought it, which both don't come at a young age (CO3). To purchase land, you need to make money, so coffee is not a good entry crop. There are a lot of creative things that can be done within the community to include the children in coffee. But a
change in mindset is needed for people see the potential. Many of the youth have not worked that land with the parents and do not know where the money comes from (CO2).

Youth are in general not very keen on growing coffee because it's labor-intensive, they have seen their parents work hard. The general view is it's an old people profession. Youth are in need of quick cash, lack of jobs opportunities in rural areas and promises of job opportunities in the big towns have made many leave their communities. “Many youths have joined bodaboda (motorcycle-taxi)”. There is a preconception among youth that white-collar jobs are better than being a farmer and even when they are offered training many are not interested in attending. “It is hard to get the youth excited about coffee when they don't own land” (F12).

According to one of the coffee organizations the misconception about what the big city has to offer compared to the life in the village is very vivid among the youth (CO3). The youth usually overestimate what they can do with their lives in the big city and underestimate strongly what they can earn in a rural setting. You have to make them understand how they can set up their own business by offering different services. The young people need to learn that you can't just sit at home and wait for the farmer to come and ask for your services. They need to market themselves, show what they can do and offer things for free in the beginning, build client relations. The UCF is trying to engage youth in coffee farming by arranging an annual football tournament (CO1). It is an excellent way to bring youth from our member organizations to interact with exporters, to talk about coffee. By talking about coffee with youth early in their life we get an opportunity to demystify the coffee myths that are prevalent in Ugandan society (CO3; CO4), and they can later become an ambassador for coffee and a voice of reason in that regard. It is about widening the value chain for the youth not only focusing on production they are being trained to become baristas or traders (CO4). It is about creating a bridge between production and industry (CO2).

In coffee farming, there is a lack of role models. There has to be a change in mindset and what is portrayed out to the community. F1 explains “If you are
in coffee or agriculture and you live in a poor house do you think someone will be able to admire you? If a farmer can change their life, he drives, he takes his children to school, he puts on some clothing that is good. If he can go in front of the community and talk about many other things, many people can join agriculture”. Role models and mindsets is something that CO2 also discussed saying “In Uganda, most of the students always want to be doctor, doctor, doctor… But early enough I identified myself as a farmer and I am so passionate and proud to be a coffee farmer. I want to assure you that many doctors… look up to me. So many professors, look up to me. It is such a wonderful profession” meaning that there actually were some people who saw him as a role model.

Education about the benefits of coffee farming must start at home, many of the farmers mean that people in their communities have neglected to tell their children about the possibilities coffee farming offers. Farmers in the different locations have highlighted the problem of some farmers using “farming labor” as a tool to punish their children. This has created a bad attitude towards the profession. Another challenge that was mentioned during the interviews was some farmer’s attitudes in relation to what they teach their children about farming. “The parents of the youth have not done enough to show the youth what comes out of coffee, so they are not aware. The parents share the responsibility of showing the worth of coffee” (F5). “The youth have been told to farm the field to grow coffee just because their parents grow it” (CO4). Youth need immediate cash returns. Therefore, it is important to start them off somewhere in the coffee value chain where this is possible. Some of the organizations have launched initiatives where they instead offer services to the farmers such as pruning, weeding, stomping and so on (CO3; CO4). In this aspect, they are still in the coffee business learning about good agronomic practices, while being able to earn money so that in the future they can buy their land.

4.2. Knowledge Sharing in the Business Ecosystem

Most of the farmers started taking their coffee production seriously after a coffee organization came to the area. Some had trees before that but were not focusing too much on them as they did not know how to take care of them properly. They would harvest whatever cherries they would get. The knowledge that these farmers have in the coffee agricultural area almost solely
comes from the organizations that are in their districts at the moment. There were a few exceptions of people who had been in contact with agricultural officers or taken courses at the university, but mainly the education came from local coffee organizations.

The coffee organizations also explain that the staff on location does almost all of the communication between the coffee organization and the coffee farmers, this was something that all of the coffee organizations had in common. Knowledge is given by the coffee organizations to the coffee farmers through training, farmer field school and different projects such as youth groups, gender education, how to start a business and so forth. Tools and information on how to use them is also something that the coffee organizations provide. They can use demo-plots and “cupping” with the farmers as practical exercises to increase the understanding among the coffee farmers as they seem to respond best to trying and seeing. CO4 expressed that because farmers are usually not that educated, there is a need to be innovative in the way that you teach them to be able to hold their attention, he also explains that they have been using an animated video to teach farmers how they should be picking cherries off of their coffee trees.

Most of the farmers' formal education is limited, therefore it affects the learning process. One thing that the farmers agreed on was that production increased after they had their training from farmer field schools and got to borrow tools from coffee organizations. According to the farmers, there is a difference in production between the farmers that have taken coffee training and those who have not. Because of this, a lot of farmers pass their knowledge to their neighbors who are not part of the “projects”. They also get more farmers involved in the training and programs this way, by word of mouth. Even though the farmers who have had training have more knowledge than the ones who have not, CO5 describes that when it comes to the amount of knowledge that a farmer has and the information that the buyers have is not equal as the buyer usually has a lot more information. The lack of information makes it more difficult for farmers to make informed decisions. So, there is a need for more information generally. CO2 was also in agreement that more information is needed. He talked about educating the farmers from everything between the basic agricultural practices to packaging.
The farmer needs to be informed on all stages. Further, CO1 explained that UCF would like to add agricultural practices to the curriculum at an early age to make them aware and interested in coffee.

Most of the farmers expressed a request for more training and more information. They also emphasized that this is how they will be able to evolve and increase production and farm size. When asked about the ways that they were communicating with the farmers, the coffee organizations talked about the use of technology within the coffee industry which has been increasing and about using SMS and emails to communicate with the farmers. They also mentioned apps like WhatsApp where it is possible for people who have phones with internet access to call and text for free around the globe. CO2 explained that they use WhatsApp groups to communicate and that it is an empowering movement taking place at the moment. While CO4 was a bit more reserved when it came to new ways of communicating saying that “It's like saying you can find the whole of Kampala on GPS, that every single location is available, which is not true. You get lost in some areas, that sort of thing. But that is the direction we are going to” meaning that he does see it leading that way but do not think that the industry is quite there yet. CO5 explained how they have noticed farmers liking Coffee Kids pictures on Facebook, that they are using WhatsApp to communicate with some farmers and that they are even experimenting with getting youth in Honduras and Colombia talk to each other through WhatsApp as well. She also emphasized that it is difficult to know what a “good” way of communicating is, but that technology is there and that there are many ways to communicate better.

F1 talked about the need for financial training, saying that a lot of farmers need the training so that they do not go out and spend all of their money shortly after getting it, he also went on and explained that he sees visual teaching as the most effective way of teaching farmers. One of the organizations also explained that there is a need to educate the farmers about basic economics, CO5 say that “things like evaluating profit and loss, creating a budget, understanding how to establish a revolving fund and how to pay back on a loan. A lot of that kind of key financial pieces of running a business. Then also some key life skills” then she continues to explain that it will be
useful knowledge in evolving both communities and the businesses that they own.

4.3. Platforms and Interactions in the Business Ecosystem

One thing that the coffee organizations have in common is that they all work with international actors both in different projects and through donor relations. Both CO4 and CO2 point out that there is a significant international interest in coffee. CO3 described their dependence on donors saying that “You can't start a project without money”. Further, she explained that as an exporter/roaster there is an obligation towards stakeholders to have profit and social projects would not be possible without donors. CO5 also pressed the importance of donors, and she also explained that a lot of the donors that are emerging at the moment are newly started coffee shops or coffee roasters who want to get involved as they identify with the young farmers being entrepreneurs as that is what they are as well.

All farmers have formed some relationship with HRNS or Agri Evolve, and they supply them with training and the latter organization also buys their coffee. The relationship is built on trust, and many of the farmers feel that these organizations can even do more for them. “The relationship with the coffee organization is good because at least they communicate” (F9). Concerning the relationship with the coffee organizations some farmers said that it was a relationship based on sales. “the relationship is there, I offer them my coffee, and they buy it” (F6). F9 said “But there are times when their solutions cannot completely satisfy my problems, but they are there”. In Masaka, there seemed to be some confusion regarding who buys their coffee, when asked some farmers said HRNS instead of IBERO which is the actual coffee buyer. The farmers are a part of producer organizations (PO) that gives their coffee Depot Committee (DC) to sell to the exporter. In some cases, “Usually the DC manager comes and collects the coffee. If they do not get it, I sell to the middleman. So sometimes I get a middleman who helps me picking coffee and then gives me money” (F9). In Kagando the farmers feel a strong loyalty towards Agri Evolve, they have provided them with training, tools for the garden and buy their coffee. Many of the farmers used to deal with middlemen to a greater extent before Agri Evolve started.
Some farmers have been in contact with the government through a program that supplied coffee seedlings. “The quality on seedling was not good because it did not render a better yield. They could supply less but in good quality” (F9). The farmers are sceptic that the government can help them with other issues or improve their situation. “At first the government was here, and they saw me struggling, but they did not help, so I don't think they can” (F12). “I am not even sure who to cry for help to. The government is aware, but they do not care. I hear about technology that can dig up water, but no one is willing to help so I will struggle on my own and see what I can do” (F7). “The government needs to provide people that can teach us about agriculture. Coffee is our cash crop and brings money to Uganda” (F1).

### 4.4. Roles in the Business Ecosystem

When it comes to describing themselves and what it is that they do and where in the value chain the coffee organization is most active CO5 said that because Coffee Kids is a program focused on developing youth farmers, they are most active in the very early stages of the value chain. CO1 explained how they mainly worked with advocacy and did a lot of promotional work for Ugandan coffee, but that they are involved in every part of the value chain even at export level trying to get fair play in the industry. CO2 said that “We are Uganda's national coffee value chain leader and what I mean by that, we are the only organization that operates along the entire coffee value chain”. CO4 explains that they are not involved with farmers, that their main assignment is to train extension workers “We are not exporters, we are not involved in trade, we are not involved in production, we are not involved in research. We are just trying to create a space whereby we are able to provide people an enabling environment to get the best economies of scale out of the whole supply chain”. CO3 describes how Kyagalanyi’s main business is importing and exporting and as the biggest exporter in Uganda is integrated all over the chain but emphasizes that the only thing that they do not do is own farms.

According to the farmers they spend their days taking care of their farms and homes including other businesses that they might have on the side. For example, other crops, animals, if they have engagements in a coffee
organization or other businesses on the side. They perform different tasks on their farms depending on the need of the day or season.

There are different opinions regarding how the government could be of help. While everyone views the coffee organization on location as actors who could help make their jobs easier, their views regarding the government are more divided. Some had gotten seedlings from the government when they started. Some have never been in contact with the government. Some think that the government can help with better prices for coffee, help to make fertilizers available and help to increase the quality of seedlings. But a lot of people do not think that they can be of help at all. F11 says “Government cannot help because they cannot be everywhere”, seemingly doubtful of governments role when it comes to improving the industry. Among the organizations CO2 was saying that now the government is listening, they were not listening before. CO4 talks about the goals set by the government saying “We have a new target, as a result of our president (President Museveni) who made a presidential directive of producing 20 million bags by 2025. Which is a story for another day...”. Later he also said that changes need to be made by the government and that The Uganda Coffee Development Authority (UCDA) has to be the leader to defeat future challenges. CO3 was seemingly a bit skeptic about the 20 million bags goal, saying “here is a strong government program they want to have 20 million bags in the next 10 years, which is quite optimistic considering the last years export was extremely high (5 million bags). It is very optimistic but at the same time it really gives off a strong signal to society that the government is taking agriculture very seriously and that they see potential where they do put a lot of money in replanting campaigns and support in the sector”.

An actor that a lot of the farmers have been in contact with is the middlemen. The middlemen are described as people with no apparent connection to any coffee organization, who come to the locations to buy coffee from the farmers. Many farmers who have been in the business for many years explain how they used to sell their cherries to middlemen but now have turned to coffee organizations instead because they get more money and other benefits that way (training and tools etc.). But many also state that they still sell to middlemen when they need fast cash, for example in an emergency or when
unexpected expenses come up, because it is convenient. The middlemen come and pick up the cherries in your home and will give you cash immediately.

F1 expressed that everyone has a role to play in the involvement of the coffee industry “Even those who drink coffee can also assist you. You are consuming coffee, and somebody is growing coffee. You will also be affected. It is a teamwork were everybody should do some work”. Furthermore, this was something that CO5 mentioned as well when asked who should be the leaders of change “I think it is everyone. We cannot leave anybody out of having any responsibility in making this change”.
5. Discussion

In this chapter, a discussion of the research results is provided, as well as a discussion regarding academic contributions and managerial implications are presented. This will be achieved by comparing the theoretical framework with the collected data. This chapter will provide a discussion regarding the main challenges in the coffee industry and insight to interactions in the BE and its content, providing an overview of its health.

5.1. Challenges in the Business Ecosystem

Looking at the three determinants of health in a BE: productivity, robustness, and ability to create niches and opportunities for new actors (Iansiti & Levien, 2002). One can see that the first one and the second ones, productivity and robustness is being threatened since young people are not entering the coffee farming profession. Coffee farmers are the base of both productivity and the robustness of the system since everything else is built around the beans that they produce. No beans no BE. The third incitement regarding the ability to create niches and opportunities for new actors, we can see that there is no lack of opportunities or skills when it comes to the most parts of the BE. But when it comes to the ability to create niches within the coffee farming profession, we can assume that, because of the challenges they are facing, it can be quite difficult to do that if young people are against or unable to be involved. This is the case even though there are opportunities because of the rapid growth in coffee demand (TCI, 2016).

The farmers and coffee organizations presented many challenges that were present and challenges for the future. The literature does not mention how to handle challenges which creates vacuum between the rise and fall of the BE. By having all of the actors in the BE working together as one and including more actors in the BE (e.g. young professionals), one could work on preventing these challenges. One challenge that was recurrent in the interviews with both the coffee farmers and the coffee organizations is the climate change threat and the side effects from that. The drought can be devastating, especially with the lack of irrigation systems, sometimes a whole season gets lost. F2 says that big farms have pumps but for farmers like her it is difficult. She also adds that if she were to acquire an irrigation system, she would be the
wealthiest woman in her community. That emphasizes the importance of the issue.

To become a coffee farmer, you need to have a lot of patience. CO1 talked about how the business is too labor intensive, and that new tech is needed to improve that. It can take a long time to get a harvest from the trees and yet there are always the threats of drought, pests, and diseases that could ruin the trees along the way. F9 requested new and more resistant seedlings, saying that the government should be supplying it. F13 said that the coffee buyers are more interested in quantity over quality and that some farmers try to cheat the system by putting stones in the coffee bags which then leads to lower quality and changes in prices. Prices can change very often. But according to CO5, the coffee prices have still not increased with the price of production. Another problem mentioned is the time it takes to get money from the exporter (F5). The whole process is too long, and it has sometimes forced some of the farmers to get loans from middlemen (F1).

Regarding land, there is a problem with the access to it, the prices to buy it and the size of land. CO2 explained how families need to prepare for land-succession and how they should, as a rule, never sell land outside of the family. Another issue mentioned by farmers is transportation. The infrastructure in the coffee farming areas is often awful and difficult to access without a suitable vehicle. A lot of farmers walk around or drive motorbikes.

To be a successful coffee farmer, you need some basic knowledge. It happens that uninformed or broke farmers buy unapproved inputs (CO1), which then affects the quality of the product. CO3 mentioned how most farmers are not organized, most of the farmers who were interviewed received all of their training from local coffee companies and with that in mind, one can see that being disorganized can be a real disadvantage when it comes to knowledge. CO2 wants farmers to be involved and have knowledge about more steps in the coffee value chain, as there is more money in other steps. According to Iansiti and Levien (2004a) actors in a BE should consider not only their assets but they should also manage assets in the BE that they do not own. There should be one common strategy within the BE, and everyone
needs to think as a whole to achieve that (Kelly, 2015; Iansiti & Levien, 2004b). CO4 explained how the coffee BE is competing with other crops and other BEs that might take up the farmers time and attention. CO3 was in agreement with this and explained that “Farmers are often jacks of all trades but masters of none.”

The health of the BE is strongly related to all who are part of it, even though some of the actors/companies do not seem to have any apparent connection or relation, a small change on either side can have a substantial impact (Iansiti & Levien, 2004b). There are many challenges concerning coffee production and youth. The entry barriers are just too high, access to land, money and a three-year wait to be able to harvest (F1). The youth often believe that there is a better life in store for them in the big cities, where the possibilities to earn money is better than in their rural communities (CO3). Many organizations are aware of the problem and are trying to find other entryways into the coffee value chain for the youth, so they can earn money and later on buy their land (CO4).

Attitudes in the community must also change, that white collar jobs are better and the only way to make money. Planning and succession of land must start at an earlier stage than after the head of the family has passed (CO2). Good role models in the community is a must to be able to change the preconception of what a farmer is and how they live their life (F1; CO2). Children and youth must be introduced to the crop in a positive manner where they learn the advantages of growing coffee so when they in the future become landowners it will be a given to grow coffee and know how to apply good agricultural practices.

5.2. Knowledge Sharing in the Business Ecosystem

Many farmers explain that they started taking coffee farming seriously after a coffee organization came to their area and they began receiving training, before that some of them had other main crops. Collaboration is the base of a BE and knowledge sharing is the core of that (Iansiti & Levien, 2004a, 2004b), it is what helps the actors in the system evolve. The different coffee
organizations offer training and tools to coffee farmers who are organized in cooperatives or groups. The training received from the coffee organizations is often the only agricultural training that they have had, meaning that all of their agricultural knowledge regarding coffee stems from the local coffee organization. There is need for farmers to have more information and knowledge (CO5) especially as there is now a gap between the knowledge of the coffee farmer and the coffee buyer. The coffee farmer is generally less informed and is therefore at a disadvantage when it comes to negotiating and making informed decisions.

The farmers are in agreement that the training and access to tools have helped them increase their production and emphasized that compared to those who have not had any training they are doing better. Therefore, the knowledge that is learned is often passed on by the farmers to other farmers who are not involved with any coffee organizations. In a BE there are no traditional industry boundaries, and the actors involved get to affect the limits themselves (Zott & Amit, 2013). This is clearly shown when you hear about the farmers sharing their knowledge with other farmers that are not part of their farmer field school. One farmer pressed how it is essential to think of how you educate the farmers and says that he sees visual teaching as the most effective tool (F1). CO4 had the same idea. He said that because of the generally low education among the farmers there is a need to be innovative in the ways that you teach them.

Multiple farmers mention knowledge as a need to evolve and increase their production. This is something that the coffee companies are in agreement with. Since everyone in the BE is dependent on each other and share the same faith, one should look at knowledge sharing as an opportunity to develop as a whole BE and develop new capabilities and innovative strategies (Wulf & Butel, 2017). CO2 explained how the farmers' knowledge needs to be expanded to more steps in the value chain and CO1 talked about how UCF is trying to get agriculture to be part of the curriculum for kids in an early age to increase interest in coffee. Which could be a good idea, since knowledge sharing is also a key to being competitive in the future (Quintane et al., 2011). CO5 explained how she sees basic financial training as vital skills, not only as farmer entrepreneurs but also in life. This is something that F1 also
mentioned; he said that financial training is needed because otherwise the farmer might go out and spend all of the earned money shortly after receiving it.

CO5 said that at Coffee Kids they had been trying to get youth farmers from Colombia and Honduras to communicate and exchange knowledge. She said that there is no way of telling what a right way of giving information is but that there is a lot of technology in the world that could be of help. At the moment the farmers receive information regarding coffee prices through SMS (CO4), communication can also take place through email or WhatsApp (CO2). Maybe this will be the ways of the future, farmers around the world not only exchanging knowledge with their neighbors and friends but also sharing knowledge and experience with other farmers all over the world. Also, this might be a way to give the farmers more information and knowledge through another forum than through the local organization only.

5.3. Platforms and Interaction in the Business Ecosystem

Most articles about platforms and tools in the BE are focused on technological systems (Kelly, 2015), but it can also be applied on the coffee industry and more specifically the farmers. The farmers don’t have the same access to technology as the rest of its value chain and the tools they have access to are more basic. Keystones and platforms can fill the same function in the BE and are therefore alike (Boudreau & Hagiu, 2009). A keystone or a platform is often a firm, but it can also be a universally encoded agreed protocol that among other things enhances stability, predictability which other members in the network can rely on (Iansiti & Levien, 2004a). There is no seemingly working platform in this BE, some organizations could be working as platforms at the moment although it is difficult to know how effective that is since multiple farmers have been asking for more and better communication. A platform is meant to provide information, technology, services and tools to actors in the system (Iansiti & Levien, 2004a; 2004b). Platforms are a vital source of knowledge and are essential for the health of the BE (Iansiti & Levien 2004a). The platform is used to strengthen the BE members’ own performances (Iansiti & Levien, 2004b). This can be seen in this BE where the farmers’ productivity has increased after coffee organizations located themselves in their area. The interaction between actors in the BE takes place
through the platform. The BE is decentralized in self-organization and decision-making (Peltoniemi & Vuori, 2008). The farmers are their own businesses, which means that the organizations can come to the area and teach them different agricultural skills. But in the end, it is up to every farmer if they want to apply that knowledge to their garden. Whenever the BE is complete, there is usually a working platform, which is seemingly not the case here.

All of the actors in a BE are dependent on each other (Wulf and Butel, 2017). Within that BE there are different types of networks and relationships, that can be both formal and informal. The nature of the relationship will decide how the communication works and what is directly shared between the actors. In Kagando, all farmers know who buys their coffee. There is trust and even expectations on the relationship from the farmers, wanting the organization to do more in the area so they can increase production. In Masaka, some of the farmers were under the impression that HRNS bought their coffee and not the exporter IBERO, the latter being the one that buys the coffee from the farmers and gives the farmers fertilizers on loans. So, it is unclear if their loyalty is towards HRNS or the exporter IBERO.

As far as defining what type of relationship is in place between the farmer and exporter it is much harder to characterize. F9 thinks the relationship is good because they communicate, while F6 based the relationship on the exchange of money. The exporters pay more than middlemen; therefore, it is in the farmers best interest to sell to the highest bidder. But when unforeseen expenses come up, and the farmers are in need to get cash quickly the middlemen are the people that the farmers contact. Selling coffee to the exporter is a process that takes time. The middlemen come to the farm, get the bags of coffee and pay cash.

The relationship with the government, who are pushing coffee as a crop, is limited and does not supply the help the farmers want or need. At farmer level, the efforts of the government are lacking (CO4; CO3). This is one of the reasons that NGOs, roasters, and exporters are getting involved in training the farmers to become more productive. The government is not strong enough to push the crop forward by themselves. The efforts provided by the NGOs and
exporters are also limited, F9 explained how HRNS is always there but that she has problems that they cannot solve. Donor funding dictates what projects are in place and performed (CO3). For the private actors who have projects with the farmers, profitability is an indicator if the project can continue or not. Which became clear when there was no interest from roasters in buying high-quality Robusta coffee, and the project was closed down. In other words, the market also decides what projects should be invested in.

5.4. Roles in the Business Ecosystem

In a healthy ecosystem, all the actors need to be taken into account (Iansiti & Levien, 2004a; 2004b). It is a strategy that will allow and foster good relationships. Like a biological ecosystem, we are dependent on each other to survive. F1 and CO5 pressed this saying that everyone is essential actors when it comes to change, from farmers to consumers. In a BE there are three main roles all of which play their own parts to create opportunities, health and shape the BE: keystone, dominators and niche players (Iansiti & Levien, 2004a). In a working ecosystem, everyone knows the part they have to play, and there is an excellent platform that can offer information and tools easily to everyone in the system. Most importantly though is that all of the actors realize that they do not work alone, their actions affect others as well. There is some confusion regarding the roles of the actors in this BE. While the farmers could be acting as keystones due to their importance in the ecosystem, since without them everything would fall apart, they still do not possess the tools or knowledge to be “the spider in the web”. In the description of a keystone, it is said that the keystone has a lot of responsibility in the BE as the facilitator. It is emphasized that they are the ones who are responsible for making sure everyone else is doing their part and that everyone else has access to a working platform and tools (Iansiti & Levien, 2004a). When in reality the farmers said that they spend their days taking care of their farm, home, and side businesses. They also have very little or no contact with coffee organizations apart from those who are located in their area. Meaning that the keystone role does not add up, parts are lacking. This instead falls upon the coffee organizations, especially NGO’s, who are usually the ones in contact with all of the actors and involved in every step of the value chain. The only one to say that they were not part of the entire value chain was CO5 who explained that their focus and their work usually is in the earliest stages of coffee farming and
therefore in the first step of the value chain. Further, CO4 expressed that he was unsure of where to put himself in a value chain but explained that “We are just trying to create a space whereby we can enable people an enabling environment to get the best economies of scale out of the whole supply chain.”

Another thought regarding the farmers is that they could be niche players, the biggest species in mass included in the BE (Peltoniemi & Vuori, 2008). The niche players have their areas of expertise but otherwise limited knowledge on other parts. The task is always performed by the niche player while the keystone is responsible for the setting of how the task should be performed. The limited expertise of the niche player makes him dependent on other actors to create a platform where the niche player can access knowledge (Iansiti & Levien 2004a). This could be a description of the coffee farmer although the coffee farmers could be seen as too important to be considered a niche player as the entire industry is built around them. The coffee farmers are the foundation of the bridge, and without them, the bridge would be of no use.

When it comes to the role of government, there are divided opinions on their role in the coffee industry. The government, UCDA, could be the fundamental keystone as they are the ones in charge and write the policies for everyone else to follow. But at the moment they are neither providing a common platform nor are they the people whom the majority of farmers and organizations put their faith in. Both CO4 and CO3 are skeptic about the government's goal of producing 20 million bags by 2025. They are in agreement that there need to be changes to make that happen. CO4 expressed how the UCDA needs to be the leaders of change. CO3 was optimistic about the signals that the government was sending the coffee industry. CO2 was also positive regarding the government's role in the coffee industry at the moment, saying that they were listening. The farmers had divided thoughts regarding the government, and they were overall not quite sure what role government should play in the industry. Some were doubtful that they would be able to help at all since reaching 1,7 million unorganized farmers is hard.
Another actor that kept on being mentioned were the middlemen. These people were mentioned by some organizations but mostly by the farmers. They are people who the farmers sell coffee to when they need quick cash. It is quite tricky to place them in a role in the BE. But they are part of the system even though they might not really be wanted there by the coffee buyers. They could be a sort of dominator, organizations/actors that use resources in the system without giving something back are known to be dominators (Peltoniemi & Vuori, 2008). Dominators are known in the BE for trying to exclude or dominate other species. Niche player is the weakest species in the BE and is often too weak to defend themselves (Göttlich & Wenzek, 2004). When the farmers contact the middlemen, it is because they are desperate. This is another weakness in the system, and dominators are there because the other parts of the system are not able to sustain or support the coffee farmers.
6. Conclusion

With the empirical and theoretical discussion as a base, we will in this chapter be presenting the outcome as well as limitations, and suggestions for further research. This paper aims to understand the overall health of the Ugandan coffee industry from the perspective of a BE.

When beginning the work with this thesis, there was an idea that because there were significant challenges with youth involvement within the coffee industry, which is an industry with increasing demand, then there must be some problems with the BE. After being in Uganda and collecting data, there was some doubt that some parts were there at all. Furthermore, it is difficult to divide the different actors in BE roles.

Iansiti and Levien (2004a) explain that the firms in the BE need to know their roles, however in this BE the roles are not apparent or clear to define. Having clearly defined roles is a contributor to a complete and healthy BE, which was not the case here. There is a relationship of knowledge sharing between different actors in the BE, but it is not enough, more knowledge is needed. This is something that both farmers and most organizations could agree upon. Knowledge sharing is a foundation of collaboration which is the base of a functioning BE. Right now, the gap between the information and knowledge that the coffee farmer has and what the coffee buyers know is especially too big. This puts the farmers at a disadvantage when it comes to negotiations, which could lead to them being a weak link in the BE. More and easier ways of communicating are needed to increase the knowledge shared between actors in the system. One of the essential parts of a BE is working and commonly shared platform, one which all of the actors in the system can access. This does not have to be an IT-platform even though it usually is. It can also be a company or a document, etc. Further, there is a need for a common strategy to overcome some of the most threatening challenges, for example, irrigation, youth participants and the cost of production. But to do that the roles need to be clear and a platform needs to be established.

Considering all of the lacking pieces found, this is not a complete BE. There is little or no previous research regarding lacking or unhealthy BE. But
considering that there were many flaws found in this one, despite the fact that
the Ugandan coffee industry is doing good, maybe an ecosystem can very
much be functional without all of the “mandatory parts.” But filling in the
gaps could most likely make the BE and the actors in it better and healthier,
especially improving the conditions for the coffee farmers.

For the coffee industry to be able to export more coffee, the smallholder
farmers need to become more productive. For the farmers to grow more
productive, they need knowledge. The farmers involved in the “farmer field
schools” have been able to improve their yields. It is essential to start building
platforms that are available to all the farmers. The low-tech industry that is
coffee farming does present a challenge in how this platform should be built.
Many factors need to be considered, such as what tools the farmers have
available to access a platform, how and what is communicated to the farmer, if
the level of education is going to present a problem and, if so, how can it be
overcome. The farmers want more information, and therefore it is crucial to
open up and find new ways of communicating with one another that are
effective. The flow of information goes one way and as some of the farmers
pointed out, taking part in the information usually means a time-consuming
affair for them.

The coffee industry is not nearly as productive as it could be (Technoserve,
2013). Productivity can improve, but the cost of land makes it hard for
smallholders to invest and expand their land and therefore cripples the growth.
Consequently, new solutions need to be created. The introduction of more
technology, whether it is ICT or innovations to make the workload more
manageable can be the push youth need to find coffee farming more attractive.
As mentioned before there are several factors keeping youth out of the coffee
industry the most challenging one being the availability of land and access to
finance. It is essential that the actors in the BE keep finding new entries to the
industry in other parts of the value chain, so that they in the future already
possess the expertise to manage their land with good agricultural practices.
How the land is passed on between the different generations is also an
important topic to address. Changing the mindset in the community regarding
this issue can help youth get an early introduction to coffee farming.
6.1. Academic contribution and Managerial implications

In this thesis there was a number of theoretical academic contributions. Firstly, the BE perspective has never been applied to a coffee industry before. An industry where resources and knowledge distribution between the actors is uneven, this is unique as the existing literature almost exclusively exists within richer and technological areas.

Secondly, there is little or no research regarding incomplete or unhealthy BEs. In the literature it is stated that in a BE all the actors rise and fall together, we have seen that there is a stage before this. In this stage the actors/species with most resources tries to develop the BE for their own survival and prosperity, and therefore become something that resembles a keystone in their BE. By looking at the content and roles in the BE and thereafter comparing that with what was found in the case, there has been a contribution on what an unhealthy or lacking BE is. Another finding is that even though this BE was lacking some of the parts of a complete and healthy BE it still exists within a successful and growing industry. Meaning that a lacking or unhealthy BE can be successful if the demand of the product is high enough and there is a lack of competing actors on the market. However, if the BE was complete it would most likely be even more productive and it would provide a better environment for all of the actors in it.

This study can give managers a greater understanding of the interconnectedness that they are part of in their businesses. It might also give managers a suggestion on where to begin evolving the BE within coffee in Uganda. By comparing the existing literature on a healthy and complete BE and comparing that to the Ugandan coffee BE, it was concluded that to make the BE complete there is a need to develop a common platform for all of the actors in the system, interaction and the way knowledge is shared needs to be developed and expanded. The roles in the work forward need to be more defined.

6.2. Limitations and Further Research

Because of the size of a BE, there was a need to zoom in on an area that felt manageable and of most importance for the result. There was also some language barrier during the interviews with farmers. A lot of the farmers did
not speak any English (they spoke Luganda and Congolese) which meant that there was a need to use interpreters. Therefore, all the interactions with all their depth and nuances might have not been understood. Another limitation was that, there was no way of choosing the farmers that were interviewed. They all had connections to some coffee organization. Which might affect the interview results. But because of the situation regarding where and how coffee farmers live, it was proved too difficult to try and find people to interview without going through a coffee organization. This meant that the data collection was almost exclusively dependent on others. One actor who would have been interesting to interview but did not respond to emails, was the UCDA which is the Ugandan Coffee Development Authority. They are the government's branch into the Ugandan coffee industry. One further research suggestion would be to get the view of the UCDA.

Further research could also be conducted concerning the introduction of platforms in a low-tech industry, this could be useful not only in the case of the Ugandan coffee BE but also in other industries around the world, especially in developing countries where some of the actors do not share the same means. Further, a deep dive needs to be made into what effect an exclusion of a common platform has on coffee industry in terms of knowledge, interactions and productivity.

Another suggestion for further research would be to expand the existing literature on what a healthy BE is, and whether there are different degrees? Does a BE look the same regardless of the industry? After seeing that there is plenty of room for improvement in a BE as successful as the Ugandan coffee industry, one thought is that a BE can exist in other forms than the one that is currently described in literature.
References


www.climateinstitute.org.au/verve/ resources/TCI_A_Brewing_Storm_FINAL_ WE B270916.pdf [2017-12-22]


UCDA (2012). Coffee’s contribution to Uganda’s economic development since independence.


Appendix 1

Questions to coffee organizations

Overall about company and representative/Interviewee
- Name of organization?
- Name and position?
- Could you please tell us about the organization/company? e.g.
  - Size and locations
  - What do you do?
  - Partnerships?

Work with coffee farmers
- Where could you be part of the production/supply chain?
- How do you get involved with the different farmers?
- What were some of your last initiatives with the farmers?
- How many coffee farmers do you work with? Approximately.
- What do you do for the young farmers? Did you assist them to settle?

Challenges and young coffee farmers
- How is the coffee industry doing in Uganda?
- What do you see as the main challenges within coffee farming today?
- What is the average age of the coffee farmers that you work with?
- How can the situation regarding young people evading the coffee farming profession evolve?
  - Who are the best actors to make the situation evolve?
  - Do you think that it will be enough to overcome the challenges?
Questions to coffee farmers

Facts about the farmer:
- First name?
- Age?
- Land Size?
- Where is your coffee farm located? (name of village, part of Kampala etc.)
- What kind of coffee do you grow?
- How long have you been growing coffee?
- How did you become a coffee farmer?
  - How did you start?
  - Why did you start?
  - Family business?
  - Is it your full-time job?
- Do you have any formal education?
- How much do you produce in a year?
- Is your situation representative from the farmers in the area?

Production and organizations:
- Could you describe your normal day as a coffee farmer?
  - What activities, tools, people etc. does it include?
- Who buys your coffee? Propose a multiple choice. Direct selling to customers, direct selling to brand.
  - How is your relationship with the coffee companies (if they sell to brands)?
- Can you tell us about your experience of being a coffee farmer in the last 10 years?
  - How has coffee farming changed in the past 10 years?
  - How did your job evolve?
- Do you think it is easy to become a coffee farmer?
  - What are the obstacles to overcome?
  - What are the expected benefits?
- What do you like about in your work?
- What do you see as the main challenges as a coffee farmer today?
- What will be the most important challengers for the future?
- How could someone make your job easier? If so, who could help you first?

Future of coffee farming:
- Would you want your children to be coffee farmers?
- What do young people think about coffee framing as a profession?
- Why are young people resistant to work as coffee farmers?
  - Do you know why some people are leaving the profession?
- What will happen with your farm in 10 years?