

Innovation for All Based on Free Information Access

“How to Facilitate Women Entrepreneurship in Developing Economies through Access to Internet ?”

Wisam Ahmed Mansour



Master Thesis

Center for Entrepreneurship

The Faculty of Mathematics and Natural Sciences

UNIVERSITY OF OSLO

May 22, 2018

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Wisam Ahmed Mansour

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Trykk: Representralen, Universitetet i Oslo

Abstract

Poverty eradication and realizing sustainability are the most important global issues, what made the United Nations implements the 2030 Agenda, the Sustainable Development Goals (SDGs)¹. Due to the UN's agenda creation, started both the national and the international communities and organizations to work on improving the living situation and fighting poverty. Norway plays an important role in realizing the Sustainable Development Goals.

The Norwegian government supports also the development of sustainable business models for free access to information for all through the DigI project². As a part of DigI activities, the Internet Light was implemented with the aim to improve education, health, and empower women businesses. Therefore, this thesis focuses on women entrepreneurship in developing economies, and points out the specific needs of these women to become part of an innovative society. The thesis aims to find out how to facilitate the women entrepreneurship within developing economies where Internet Light project is afforded.

The theoretical framework was built on the main aspects that the study focuses on the women entrepreneurship, access to information implications, business facilitation, and digital entrepreneurship and business facilitation.

The study results suggest an entrepreneurial platform that is composed of three main parts Skills, Entrepreneurship, and Business that offer business learning courses, entrepreneurship approaches, discussion zones, business advisory, and fund sources.

In brief, the thesis focuses on :

- The need of entrepreneurship in the digital age
- Specific need for women entrepreneurship in developing economies
- Components of the entrepreneurial platform, and exemplification for the user experience

Keywords - Innovation, entrepreneurship, InfoInternet, Internet Light, Women businesses, Business facilitation, Developing economies, Rural areas, Women entrepreneurship.

¹ <https://www.regjeringen.no/en/dokumenter/follow-up-sdg2/id2507259/>
Norway's follow-up of Agenda 2030 and the Sustainable Development Goals

² <http://its-wiki.no/wiki/DigI:Home>
Norway's DigI project (The Non-discriminating access for Digital Inclusion)

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Acknowledgements

In the name of God, the Merciful, and the Compassionate

First of all, I would like to thank my supervisor, Nicolai Løvdal at University of Oslo, who has supported me with his invaluable insights and assistance throughout the thesis period. His careful following, suggestions, and comments have improved significantly my study.

I would also like to give thanks to my external supervisor, Josef Noll, who worked as the door opener to the targeted experts and for his precious sessions feedback, and comments.

Special thanks to my husband, my parents, and my family for their continuous encouragement and unfailing support throughout my study years and specially the thesis writing process.

Wisam Ahmed Mansour

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Table of contents

Abstract	3
Acknowledgements	5
1. Introduction	11
2. Theoretical Framework	14
2.1. Access to Information Implications on Domestic Economy in developing countries	15
2.2. Woman Entrepreneurship in Developing Countries	17
2.3. Woman Business Facilitation in Technology Disadvantaged Regions	19
2.4. Digital Tools for Facilitating Entrepreneurship and Business	21
3. Research Question	23
4. The Case	23
4.1. The Collaboration	23
4.2. The Norwegian Digital Inclusion Foundation	24
4.2.1. BasicInternet (Internet Light)	24
4.2.2. The InfoInternet Standard	24
4.2.3. Digital Inclusion (DigI)	25
5. Thesis Structure	26
5.1. Methodology	27
5.2. Data Collection	27
5.2.1. Primary Data	28
5.2.2. Secondary Data	29
6. Analysis and Findings	30
6.1. Data Analysis and Coding	30
6.2. Reliability and Validity	33
6.3. Findings and Discussion	35
7. Entrepreneurial Platforms Investigation	38
7.1. Entrepreneurial Platforms	38
7.2. Platform Features	39
7.2.1. Theme	40
7.2.2. Learning Material	40
7.2.3. News	41
7.2.4. Feedback	41
7.2.5. Fund	41
7.2.6. Investor Access	41

7.2.7. Language	42
8. Women Entrepreneurship and Businesses in Developing Countries	43
8.1. Agriculture Products Selling	43
8.2. Food Production	43
8.3. Fishing	44
8.4. Handcraft/Handwork	44
8.5. Retail Shops	44
8.6. Hairdressing Salons	45
8.7. Husbandry	45
8.8. Mobile Shops	45
9. Entrepreneurial Platform (EntrepNet)	46
9.1. The Intended Users	46
9.2. Features and Functions	48
9.3. Prototype and Side Map	51
9.4. Entrepreneurial Stages and Incentives	58
9.5. User Experience Simulation	58
10. EntrepNet Assessment	61
10.1. Advantages	61
10.2. Topics to Be Considered	62
11. Research Evaluation	63
11.1. Limitations and Improvements	63
11.2. Future Direction	65
12. Conclusion	66
References	69
Appendixes	75
Appendix A - Interview Guide	75
Appendix B - Interviews Information	77
Appendix C - Interviews Results	78
Appendix D - Case Study Protocol / Proposal	92

List of Figures and Tables

Figure 1: The UN sustainable development goals	12
Figure 2: Illustration of the thesis focus	14
Figure 3: Partnership for digital inclusion	25
Figure 4: Visualizes DigI areas of work	26
Figure 5: Presents the codes	31
Figure 6a : Ndola interview coding (code percentage)	32
Figure 6b : Ndola interview coding (code frequency)	32
Table 1: Shows entrepreneurial platforms evaluation	40
Figure 7: EntrepNet side map	52
Figure 8a: Illustrates EntrepNet homepage for Izazi village	54
Figure 8b: Illustrates the Skills page for Izazi village	55
Figure 8c: Illustrates the Entrepreneurship page for Izazi village	56
Figure 8d: Illustrates the business page for Izazi village	57
Table 2: Shows EntrepNet strengths	61
Table 3: Shows EntrepNet limitations	62

List of Abbreviations

UiO : University of Oslo

UNIK : The University Graduate Centre - Kjeller

Dig1 : Digital Inclusion Project

USSD : Unstructured Supplementary Service Data

CEO : Chief Executive Officer

CTO : Chief Technology Officer

OVOP : One Village One Product

DRC : Democratic Republic of Congo

SDGs : The UN 2030 Agenda for Sustainable Development

EC : Electronic Commerce

ICT : Information and Communication Technologies

P2P : Peer to Peer

SNS : Social Network Sites

NorBAN : Norwegian Business Angel Network

SACCOS : Saving and Credit Cooperative Society

NCA : Norwegian Church Aid

TZS : Tanzanian Shilling

1.Introduction

This thesis focuses on the societal challenges related to Digital Inclusion. Though mobile networks have the potential of reaching everyone, the reality is that roughly 3.5 Billion people are not connected to the Internet. Being left-out from the Digital Society removes the capabilities for reaching higher levels of the Maslow's pyramid of needs³, e.g. meaningful work.

The thesis will focus on innovation for all, based on the concept of free access to information. The hypothesis is that access to information, being text, pictures and local video, and the connectivity to a local village server will foster digital inclusion. Special attention is drawn to content fostering innovation for all, and the relation to the Sustainable Development Goals of the Agenda 2030⁴ (SDGs). The main concentration is the women entrepreneurship in developing economies, and points out the specific needs of these women to become part of an innovative society.

For this study InfoInternet standard is used as an umbrella term for all the Basic Internet, Norwegian foundation focuses on the SDGs, activities⁵ where its general goal to supply free and affordable access to basic information in regions with scarcity or no internet infrastructure. By establishing pilots in rural areas in Tanzania and DRC (Democratic Republic of Congo), so a multi-tenant deployment plan is being executed⁶. InfoInternet, is planned to particularly help in three specific social fields : education, health, and small businesses for empowering women.

Akamai⁷ has provided the map of Internet speed which shows that the countries in the Global South (Diana M. and David S. 2013) have least coverage as well as lowest speed. These nations also have the largest growth of population, as well as the poorest. For women and children that live in poverty⁸ it is often strenuous to focus on education and innovation (even

³ <https://www.simplypsychology.org/maslow.html>

Maslow's Hierarchy of Needs, Simplypsychology

⁴ <https://sustainabledevelopment.un.org/post2015/transformingourworld>
Sustainable Development Knowledge Platform

⁵ <http://basicinternet.org>

Not to be confused by the Free Basics of Facebook.

⁶ <http://its-wiki.no/wiki/Digl:Home>

Non-discriminating Access for Digital Inclusion (DigI project)

⁷ <https://www.akamai.com/us/en/about/our-thinking/state-of-the-Internet-report>

⁸ https://data.unicef.org/wp-content/uploads/2017/09/Ending_Extreme_Poverty_A_Focus_on_Children_Oct_2016.pdf

when having access to facilities) due to multiple traumas those women have suffered. Traumas might include domestic violence, wars, poverty, parents under addictions or with mental illness, lack of home or living in refugee camps. In the 2030 Agenda for Sustainable Development (SDGs)⁹, the first goal is the elimination of poverty, while gaining decent work and economic growth is number eight¹⁰. InfoInternet addresses societies having both these problems, with the principle that innovation and entrepreneurship would help solve the other problems as well. The figure 1 below shows the seventeen goals of the Agenda 2030.



Figure 1: The UN sustainable development goals

To sum up, this thesis will focus on the women business aspect, in particular, on studying the implications of the free access to information. With that in mind, the purpose of this study is

⁹ <https://sustainabledevelopment.un.org/sdgs>
Sustainable Development

¹⁰ <https://data.unicef.org/children-sustainable-development-goals/>
UN Agenda 2030

to identify an optimal tool can be used to facilitate women entrepreneurship in regions with access to InfoInternet. In brief, this paper will answer the question:

“How to Facilitate Women Entrepreneurship in Developing Economies through Access to Internet ?”

Eventually, the thesis focuses on three main aspects surrounding the entrepreneurship in developing economies. These are :

- The need of entrepreneurship in the digital age
- Specific need for women entrepreneurship in developing economies
- Components of the entrepreneurial platform, and exemplification

Accomplishing this thesis will provide the Norwegian Digital Inclusion Foundation with a precious study and recommendations to expedite and accelerate the business domain on field. The final recommendations and results are going to be the catalyst for the entrepreneurial innovative activities. Not forget to mention that facilitating this concept in those communities is an essential element that could lead to the creation of more work opportunities, economic growth, equality distribution of decent life. All that attain the eighth goal of the United Nation Agenda for Sustainable development (SDGs) 2030 where the aim is to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

This chapter has presented an introduction on the field of interest of the thesis. I found it extremely interesting to study women entrepreneurship and the implications of access to information within the developing economies. So, I decided to investigate it more deeply. In the next chapter, theoretical framework, I’m going to investigate the literature on access to information implications on domestic economies in developing countries, women entrepreneurship in developing countries, women business facilitation in technology disadvantaged regions, and digital tools for facilitating entrepreneurship and business.

2. Theoretical Framework

I formed a specific plan to investigate the existing literature and initiatives relevant to my topic where I focused on the four most relevant fields of study 1) access to information implications on domestic economies in the Global South, 2) women entrepreneurship, 3) business facilitation in developing countries, and 4) digital tools for facilitating entrepreneurship. So, I could enlarge my understanding on how access to Internet-based content will impact the quality of entrepreneurship and local businesses. I identified the context and the needs of use specific to underserved communities, information technology, and Internet infrastructures. I concluded the takeaways from each section to be the foundation for following work and data collection.

The focus during data gathering and the theory reviewing was on women and their local entrepreneurial activities perceive the surrounding challenges and how I could recommend an instrument to both mitigate their challenges and develop their business skills. The figure 2 shows the primary field of focus for this case study, where the thesis dive in the Internet economic implications to study the women entrepreneurship and how it could be facilitated in a digital context, as part of the DigI project.

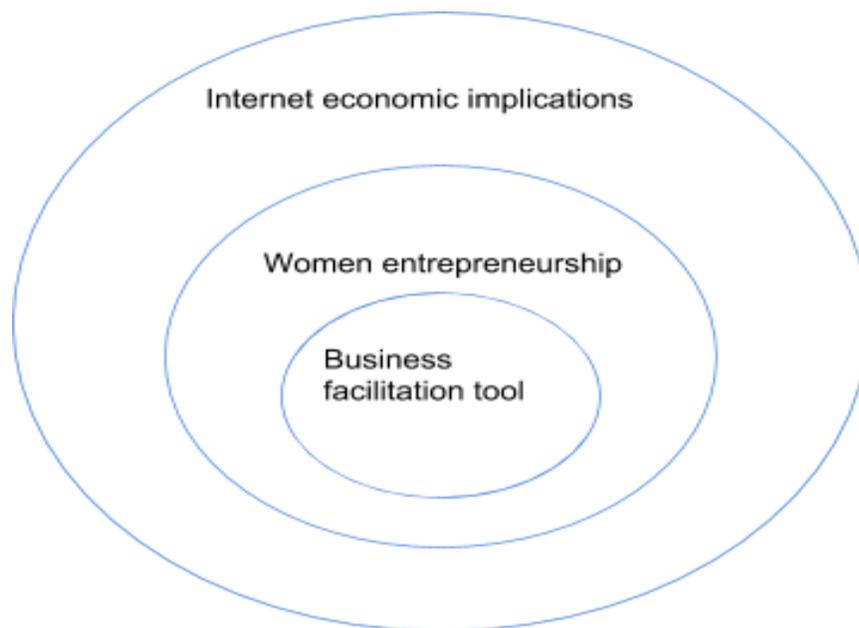


Figure 2: Illustration of the thesis focus

2.1. Access to Information Implications on Domestic Economy in developing countries

Considerable attention has been focused on the Internet and its commercial potential for domestic markets in developing countries. In this section, I would like to investigate how access to information/“Internet light” could motivate the development of entrepreneurial systems in those countries. The growth of internet has led governments in both developed and developing countries to recognize its potential for service delivery(Rekha Jain,2002). The diffusion and implication of technology has been studied extensively by scholars from different management fields, such as strategy, marketing, information technology and organizational theory (e.g., Guler, Guillén, & Macpherson, 2002; Perez- Aleman, 2011; Zhu, Kraemer, & Xu, 2006). The considerable focus accorded by the management sciences to this phenomenon should not be surprising, given how the ability of firms to rapidly absorb technological innovations from different sources has been highlighted as being among the key drivers of sustained competitive advantage (Greve, 2009). The literature has made considerable headway in explaining the transfer of innovations across firms (e.g., Fiss & Zajac, 2004; Greve, 1996; Sanders & Tuschke, 2007), pointing to numerous firm- and industry-specific characteristics - such as firm size and competition that affect this process(Gooderham et al. 1999; Roberto G., 2012).

However, two key areas of interest emerge for local businesses; first, what is it and what role can the Internet play in local marketing? Some academics assert that the Internet will provide a new retail format, usurping the traditional dominance of fixed location stores. Alternatively, the Internet performing a supporting role for existing marketing activity. Whichever role is adopted may ultimately determine consumer demand for online shopping and thus the development of "cyber retailing"(Cathy H. et al., 2000). Electronic commerce (EC) has the potential to improve efficiency and productivity in many areas and, therefore, has received significant attention in many countries. However, there has been some doubt about the relevance of ecommerce for developing countries. The absence of adequate basic infrastructural, socio-economic and the lack of government national Information and Communication Technologies (ICT) strategies have created a significant barrier in the adoption and growth of e-commerce in developing countries (Japhet and Usman 2010). However, recent studies by IIT

Bombay on the Gram Mark on building Internet in rural areas have demonstrated that the e-commerce impact is the main source of income for hot-spot operators, building the central hub in the ordering, payment and delivery sequence (Josef Noll and Sarbani Belur, 2018).

Recently, during broad adoption of Information and Communication Technologies (ICT), enormous changes are noted worldwide. These unique technologies – perceived often as economic development incentives – have a huge ability to spread at high pace and low cost in countries all over the world, bringing people opportunities to contribute to economic development and growth. New technology adoption and diffusion in developing countries has its specific patterns. The process of diffusion of ICT is associated with the spread of new ideas, knowledge and information. These technologies provide new ways of mass communication, process of storing and processing all knowledge and information. ICT are widely recognized as an effective tool for promoting economic growth and overall socio-economic development (Lechman, Ewa 2013). According to Humphrey 2003, e-commerce has been predicted to be a new driver of economic growth for developing countries. Where Odedra-Straub, 2003, mentioned that opportunities offered by Internet technologies, a necessity for ecommerce has led many to believe the e-commerce will grow rapidly and help developing countries to overcome their problem of exclusion from the world economy and improve the terms of their participation.

One of the Internet implications is the introduction of the bank cards/ credit cards, although its limited in use, but it provide to some extent a convenient payment means (wide availability of them for general public in developing countries). In spite of the fact that, it lacks of trustworthy online machinery, imperfect legal system, Internet security, large scale telecommunication transmission capability (broadband) (Japhet and Usman 2010). Another one could be the online reservations that adopted in the global south recently such like flight tickets, hotel booking,...etc. India introduced a common identity card, used for online payment (Josef Noll 2018). Operators have established mobile money (M-Pesa), and governments such as Tanzania has forced interoperability across operators, MobileOnMoney - Interoperability - to become the first African market with full interoperability for mobile money peer to peer (P2P) transfers. So customers using M-Pesa can conveniently send and receive funds directly to and from mobile wallets of the three providers using the same P2P tariffs (Millicom International

Cellular 2016). With a retail outlet distribution channel in India of 335,000 shops, 200 million unique phone numbers and more than 1 million domestic money transfer transactions processed in August 2017 alone (Bernard Lunn 2017). Though basic transaction can be performed using the SIM-toolkit, thus working even on 2G networks, advanced features require a mobile broadband coverage (3G/4G). Although the majority of villages in Tanzania do not have Mobile Broadband (Josef Noll 2018).

Undoubtedly, that the Internet positive implications are increasing rapidly through its unique information flow and communication channels which are developing local awareness, enhance the creation of new opportunities, introducing global connections, and facilitate novel systems adoption/creation. In contrast to what is in India the population density in the rural parts of the african countries is meager what makes almost no Internet service. In places without decent Internet coverage or high prices, e-Commerce is basically not existing - need a) connectivity and b) local content/information across neighbour villages. What makes immense demand for domestic solution where the essential decision is village platform versus cloud information.

2.2. Woman Entrepreneurship in Developing Countries

Women are crucial to the success of family planning programs; bear much of the responsibility for food production and account for an increasing share of wage labor in Africa. Despite their significant contributions, women continue to face formidable social, economic, and political barriers. Also, while the growing scarcity of resources within subsistence economies increases the burden on women and erodes their productivity, little is being done to reverse this trend (Fredoline A. 2002). According to Blackburn and Kovalainen 2009, in their latest review of the shifting research agenda that informing our recognition of the contemporary entrepreneurial discourse, emphasized the impact of the gender upon expectations, entrepreneurial ambitions, and behaviours is critical.

Taking a specific view on Africa on developing economies, Where women undertake paid work, there is often a wage gap between their earnings and those of men. With jobs mostly entailing the same work, this gap can only be attributed to gender discrimination. In certain

sectors, women also face barriers to joining trade unions or doing business as self-employed individuals (Our Africa 2018). women as a group suffer more and have access to fewer resources and opportunities than do men. It is important to note that African societies and gender roles are highly diverse; this makes efforts at generalization somewhat tentative and not applicable to every society. Many grassroots self-help groups have been formed, often by poor, peasant women who are so frequently neglected by government or development agencies. These groups provide vital economic assistance, such as credit for farming or business ventures, or other forms of mutual assistance to members (e.g., childcare, piped water) (Fredoline A. 2002). Hours worked in producing subsistence goods are rarely offset by a reduction of duties at home. Moreover, gender disparities in total hours worked are greatest among the poor and developing African countries. Since the cultivation or collection of food use for the family is not considered a "business," the women who engage in such work usually are not granted access to land, credit, or other resources. While men are more likely both to have access to resources and to earn cash wages for their work, they are less likely than women to spend it on family maintenance-food, clothes, health care, and the like. Such patterns are disturbingly prevalent across countries and cultures mutual assistance to members (Fredoline A. 2002).

Generally, the amount of self-employed men predominate their counterpart women by some margin, but more recently, the inflow of the female into self-employment has significantly increased. Where women firms usually are settled within crowded, low-value-added sector of the service industry (Marlow et al., 2009; Wilson and Tagg, 2010) and that leads consequently to limited sales, profitability, growth in the term of employment, and market share (Carter and Marlow, 2007; Center for Women's Business Research, 2006).

On the other hand, entrepreneur women are uncommonly utilizing the available resources. As claimed by Watson (2003), women-owned businesses performed better than their men-owned counterparts. Female entrepreneurship to date represents an important engine of economic growth for developing countries as it has a leading role in generating productive work, achieving gender equality and reducing poverty; thus, the analysis of its main characteristics can be useful for developing successful entrepreneurship-related policies and for understanding a country's competitiveness and growth potential (De Vita et al., 2014). According to the Global

Entrepreneurship Monitor (2010) Women's report so female entrepreneurial activities in developing countries is equal to 45,5% which is higher than the registered percentage in developed countries (GEM, 2010). Taking in account the economic point of view, in those countries women play a fundamental driver role in running and creating businesses for economic growth and development of the whole community (De Vita et al., 2014).

Currently one of the most important economic sectors in Africa is agriculture. It accounts for more than 32% of Africa's GDP and it accounts for around 65% of Africa's employment. According to the UN Food and Agriculture Organization, women in Africa are responsible for 70% of crop production, 50% of animal husbandry and 60% of marketing. Women undertake nearly 100% of food processing activities, in addition to child care and other responsibilities in households (idebate idea beta 2018).

All in all, women play crucial role in pushing the developing wheel in the Global South but some recurring themes seem to have impacts such like the unavailability of training in basic business skills and difficulties in access to business support systems, access to internet. What could absolutely empower women's role is to introduce an entrepreneurial/ business learning source (platform), so they would acquire business skills, more creativity in solving their challenges, seeking fund nationally and internationally, and connections through the value chain (suppliers and buyers).

2.3. Woman Business Facilitation in Technology Disadvantaged Regions

Internet technologies now enable professional, social, and labor market interactions to take place across increasingly 'virtual' contexts (Benson, Morgan, & Filippaios, 2014; Benson et al., 2014; Bryan-Kinns, Healey, & Leach, 2007; Luther, Caine, Ziegler, & Bruckman, 2010). The growing popularity of online social network sites (SNS) suggests that much professional social networking is, or will soon be, carried out online (Beer, 2008; Benson et al., 2014). Internationally, women's enterprise initiative has been both investigated and facilitated such like the European Commission scheme for women. Similarly, developing countries seek such projects, but in different levels, and have suggested the need for gender-specific program evaluation in order to (a) verify the reason for such public action, (b) determine whether the

needs or problems of (potential) female entrepreneurs still exist, (c) improve programs and (d) enhance accountability (Sheikh and Steiber, 2002; Barbara O. and Allan R., 2006).

Traditional social networking (i.e., socializing face-to-face and attending professional meetings) has been shown to positively influence a wide range of career outcomes including income, advancement, employability, career satisfaction, and job search success (DiRenzo, Greenhaus, & Weer, 2015; Gibson, Hardy & Buckley, 2014; Forret & Dougherty, 2004). Studies suggest, however, that men and women may not benefit equally from their social networks. While women may network more frequently than men, they accrue fewer benefits with regard to both objective and subjective career outcomes (Forret & Dougherty, 2004; Ioannides & Loury, 2004; Mayer, 2009; Morgan & Trauth, 2006; Van Emmerik, Euwema, Geschiere, & Schouten, 2006). Scholars have posited that this may be due to differences in the structure and composition of men's and women's networks, in particular women's relative lack of ties to high-status professionals (Gremmen, Akkerman, & Benschop, 2013; Kegen, 2013; O'Connor, 2013; Kathryn et al., 2017).

In recent years, a number of developing countries have enacted pro-market economic reforms aimed at developing their markets to promote entrepreneurship and private enterprise with focus on women (Murali et al. 2015). As a result of these reforms, these countries are becoming major economic forces in the world, and entrepreneurship (including the startup and growth of formal businesses) has been credited with playing 'a key role in this development' (Bruton, Ahlstrom, & Obloj, 2008: 1).

Some developing countries have outstandingly created new opportunities and reinforce women entrepreneurship component in the societies nationally and internationally due to the raise in the awareness level of business women role. For instance, Uganda had the highest percentage of female business owners at 34.8 percent where women are offered resources such as business advisory services and credit facilitation services (Aza W. Sile 2017). Similarly, the government of Ethiopia, in collaboration with the private sector and development partners, has been taking measures to address the inequality and discrimination faced by women entrepreneurs. This includes the establishment of micro and small enterprise agencies to support and enhance entrepreneurship and production capacity of these enterprises which will benefit

women who often start their businesses on a small scale (ITC News 2014). Although, these effort and inputs by some african governments, women entrepreneurship in the Global South still need more facilitation activities from both the public and the private sectors to utilize the role of the women enterprises in the domestic economies such, new policies and regulations, more small and medium loans, consultation and advisory services, business training, and communications channels.

2.4. Digital Tools for Facilitating Entrepreneurship and Business

This section focuses on the digital tools that used in facilitating entrepreneurship. Digital skills are becoming increasingly essential for getting access to a range of products and services (Allan F. 2016). During the last few years there has been considerable interest for digital game-based learning. This interest can be attributed to the increased popularity of digital games among school students, as well as to their potential as effective learning environments for collaborative learning-by-doing activities. On the other hand, fostering entrepreneurial mindsets through teaching and learning has been a key priority for entrepreneurship education in Europe (Hercules P. et al., 2011).

Entrepreneurship is defined as “a dynamic and social process where individuals, alone or in collaboration, identify opportunities for innovation and act upon these by transforming ideas into practical and targeted activities, whether in a social cultural or economic context”

European Commission 2007

In particular, there are some efforts to exploit digital games in technology-supported teaching and learning of financial management and/or entrepreneurship. Whitton, 2010, described a scenario of educational activities, built around an online game (namely “Marketplace”) and implemented as part of a university marketing course. Participating students were prompted to work in groups, make decisions regarding the management of a virtual enterprise, and perform actions such as undertaking market analysis, designing marketing strategies, and designing products for sale. Sandford et al., 2006, described an educational design, fully supported by a commercial digital game (namely “Roller Coaster Tycoon”),

targeting at engaging secondary school students in activities related to the management of an entertainment park (Hercules P. et al., 2011).

With the global financial system having undergone vast changes since the financial crisis of 2007, scientific research concerning the investor's point of view on sustainable investments has drastically increased (Sascha et al. 2018). Digital platforms, as a facilitation tool, play a critical facilitating role in the changing models of entrepreneurship and innovation. Such platforms integrate disparate data sources and formats, providing basic foundation of knowledge. Research on digital platforms has taken either a market or technological perspective (Gaver, 2014). A market based perspective starts with a focus on demand and examines transactions, network effects, and competition; value is created from matching supply and demand and pricing. The focus is on competition between platforms and how economies of scope in demand can create value. In the market perspective, the primary role of the platform is as a coordinating device (IOS and Android platforms are classic examples), and "the existence of the platform itself is also taken for granted, exogenous and unchanging" (Gawer, 2014). Recent research highlights how digital platforms can facilitate opportunity formation, creation, and scaling of entrepreneurial ventures (Sirkka L. et al., 2018; E. Davidson et al., 2010; J. Huang et al., 2017; S.A. Zahra and S. Nambisan, 2012). Thus, common features fostering entrepreneurship are video introduction, interaction, ideas sharing, consultant feedback.

Indubitably, that digitalization has introduced novel methods to facilitate entrepreneurship and establishing innovation which is clearly illustrated in the developed countries. The challenge would be puzzling out the optimal digitized tool to ease entrepreneurship adoption and practice in regions with InfoInternet. That recommended instrument should provide learning material that could explain business principles, interaction zones, consultation, and feedback.

In this chapter, I have investigated the literature on access to information implications on domestic economy in the Global South, women entrepreneurship in developing countries, women business facilitation in technology disadvantaged regions, and digital tools for facilitating entrepreneurship and business. That investigation has guided me to specific problem of women entrepreneurship and businesses in developing countries and how could empower women businesses. In the following section, I'm presenting my research question for this thesis.

3. Research Question

After examining the literature on women entrepreneurship, business facilitation, and access to information impacts within developing countries, I have built the research question below that I'm going to work on for this thesis

“How to Facilitate Women Entrepreneurship in Developing Economies through Access to Internet ?”

This chapter has presented the research question for this thesis. The coming chapter is going to address the thesis case, its collaboration with the Norwegian Digital Inclusion foundation, DigI project¹¹, and a short brief about this foundation.

4. The Case

In this chapter, the main focus will be on explaining the collaboration between this thesis and the Norwegian Digital Inclusion Foundation, with a short brief on this foundation.

4.1. The Collaboration

This thesis is a case study to find out an optimal tool can be used in regions with access to InfoInternet. The thesis will work in collaboration with the Norwegian Digital Inclusion Foundation to find how to facilitate women entrepreneurship. The plan is that the thesis will work on the coined research question to suggest a facilitation tool that could be used as a part of the Norwegian Digital Inclusion Foundation to facilitate and empower women businesses within the developing economies in the regions that the foundation supports. The leader and the working team of the DigI project have provided the researcher with the needed documents about the foundation, the work on the field, and connection with potential interview participants. Moreover, the leader of the project, Josef Noll, in a collaboration with the Precise Modelling and Analysis group at the University of Oslo, Christian Johansen, have connected

¹¹ <http://its-wiki.no/wiki/Digl:Home>
Norway's DigI project (The Non-discriminating access for Digital Inclusion)

the researcher with one of Christian's master students, Dmitry Filosofov at Informatic department, could do his master thesis on creating the recommended solution of this study.

4.2. The Norwegian Digital Inclusion Foundation

A Norwegian foundation with the aim to provide free access to the Internet in regions of the Global South where there is a limited or no access to the internet, targeting the Sustainable Development Goals of the Agenda 2030¹² (SDGs). The foundation machinery is fueled by the concept “**Internet is a human right**” to provide access to basic Internet where they refer to by the term “**Internet light**”. The Foundation was established in December 2014 as collaboration between The University Graduate Centre (UNIK, since 1. Jan 2017 part of UiO) and Kjeller Innovasjon AS. The foundation vision is that “**Digital Inclusion is the key for sustainable development**”. It includes three main projects BasicInternet, InfoInternet, and Digital Inclusion.

4.2.1. BasicInternet (Internet Light)

The Basic Internet¹³ Foundation is a Norwegian foundation aims at providing infrastructure for free and efficient access to the basic information of the Internet, with the following purposes:

- Offer free access to low capacity Internet as a carrier of digital content to people in areas with low admission and / or no internet coverage.
- Assist organisations and companies to adapt and disseminate information for the affected recipients should be able to help themselves.
- Is not bound to own/operate and deliver their benefits in perpetuity in an area.

In the course of this study, the terminology Internet light is used to refer to information provided through the InfoInternet standard.

¹² <https://sustainabledevelopment.un.org/post2015/transformingourworld>
Sustainable Development Knowledge Platform

¹³ <http://basicinternet.org/>
The Basic Internet Foundation

4.2.2. The InfoInternet Standard

InfoInternet is the standard for free access to text and pictures, as well as local videos, as bearers of information. Free access to information (i.e. text and pictures) is the catalyst for the Sustainable Development Goals (SDGs) of the Agenda 2030. The direct focus is on offering affordable access to the Internet, which is directly addressed through the InfoInternet standard. Its expectation is that free access to information is a basis for digital health in SDG 3, digital information for education in SDG 4, and digital jobs and economic growth in SDG 8. Free digital information access will thus become a strong contributor in reducing inequalities (SDG 10), and make human settlements inclusive (SDG 11)¹⁴. The figure 3 illustrates the need for an Information-Internet that is non-profit and could realize the goal seventeen of the Agenda 2030, Partnerships For The Goals.

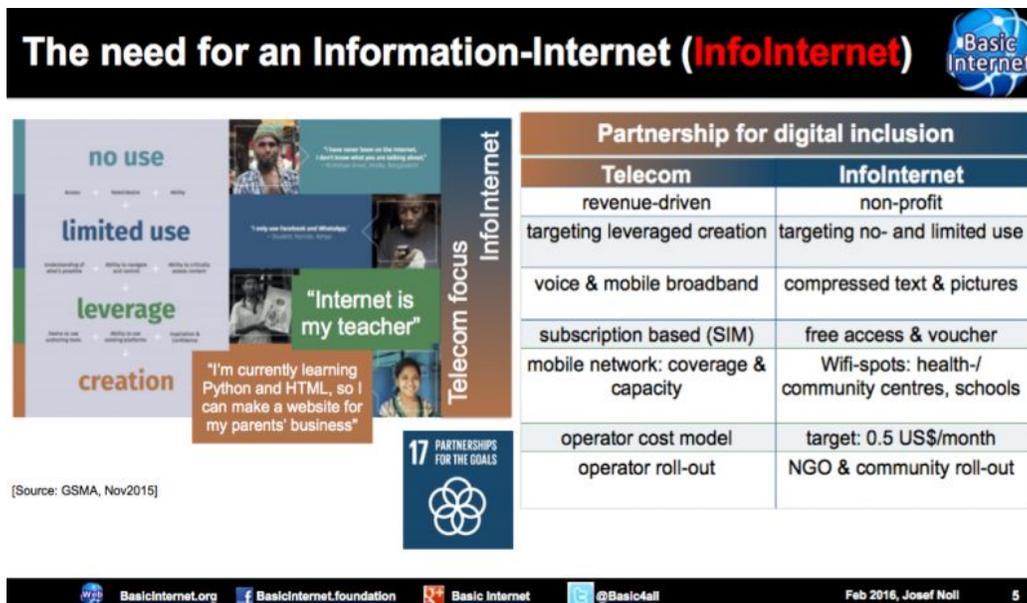


Figure 3: Partnership for digital inclusion

4.2.3. Digital Inclusion (DigI)

The Non-discriminating access for Digital Inclusion (DigI) project is a three year project, running from 2017 - 2020 with the main objective to establish pilots for the

¹⁴ InfoInternet standard: <http://its-wiki.no/wiki/InfoInternet>
InfoInternet - Free Access to Information for All

InfoInternet access in DRC Congo and Tanzania¹⁵. The project was funded by the Research Council of Norway as part of the Visjon 2030 portfolio¹⁶, where its main areas of work are indicated by the figure 4 below.



Figure 4: Visualizes Digital Inclusion areas of work

Ultimately, this chapter has introduced the thesis case and the Norwegian Digital Inclusion Foundation. In the following chapter, I will present the thesis structure, data collection, and the methodology used for the work.

5. Thesis Structure

In this section, I presented the path way of the thesis in regard to the methodology used, the thesis design, and the method of data collection. This thesis is a case study to find out an optimal tool can be used in regions with access to basic information. According to Easterby, the rationale of a case study is to attain in-depth knowledge of one (single-case study), or a small number of (multiple-case study), organizations, events or individuals, generally over time (Easterby-Smith et al., 2015). The case study approach is the appropriate methodology to choose for studies for which research questions are in the form of “how” or “why”, the focus of study is

¹⁵ <http://its-wiki.no/wiki/Digl:Home>
Non-discriminating access for Digital Inclusion

¹⁶ Norwegian Research Council, "57 millioner til innovasjon for fattigdomsbekjempelse",
online: Forskningsradet.no, 16 Dec 2016

on contemporary events in which the focus of study cannot be manipulated or controlled by the researchers (Yin, 2014). Choosing a qualitative approach provides several benefits to both data gathering and analysis, as opposed to strictly quantitative methods. For instance, a qualitative approach allows for the use of multiple data sources, such as interviews and written records, and provides an opportunity to generalize the findings to a broader context (Easterby-Smith et al., 2015).

5.1. Methodology

The research method applied in this thesis was case study. Yin is widely known for this research method and present a twofold definition of case studies (Yin, 2014); (i) a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real world context, in particular if the boundaries between the phenomenon and context are unclear, and (ii) it deals with situations where there will be more variables of interest than data points, and will therefore rely on multiple sources of evidence, and benefit from prior advancements in theoretical propositions to guide the collection and analysis of data.

This thesis took on an explorative research approach, starting with the collaboration with BasicInternet project leader at UNIK - Kjeller from which I was granted an external supervisor (Prof. Josef Noll). He used to help in subjects regarding the Internet Light project, and he was also a door opener during the data collection process to many important actors in the fields of the project implementation regions during the research progression.

The researcher has gone through many stage during this study. First, I have studied all the available documents on the Norwegian Digital Inclusion Foundation. Second, I have accomplished a deep revision for the literature and studies done in this fields. Third, I have conducted interviews with relevant actors to gain a solid foundation of primary data for my findings. Forth, I have analysed and coded the collected data so as to derive the study's final recommendation. Fifth, I have built an initial side map and prototype for the recommended solution.

5.2. Data Collection

In this section, I'm going to discuss the methods used to collect the needed data for this study. The first step in collecting data for this study was to gather a variety of studies and statistics done on the developing economies, in general, and women businesses, in particular.

The next step was to identify the type of interviewees that I will target for my primary data. The question was should I talk business consultants, developers, investors, or women entrepreneurs from the local community. In the end, I interviewed people from the different categories so as to get a thoroughly view.

5.2.1. Primary Data

For this case study, the primary source of qualitative data was the conducted interviews. The data derived by using in-depth, semi structured interviews. Some observation and secondary data are gathered from the same interviews. The interviews were conducted face to face, on Skype, and phone call due to the interviewees location and situation. All interviews were transcribed and dictated within two weeks of the interview date.

An interview-guide was established beforehand to work as a foundation through the interviews conversations. The interview guide was built with the intent of being used with highly structured interviews, as well as semi-structured interviews. Based on what the interviewees seemed most convenient and responded best to, the interview was shaped to best fit the respondent. This way the interview participants follow the guide, but has the freedom to pursue and steer the conversation towards relevant information. The semi-structured interview was found the most appropriate, since it provides the same type of data quality as a unstructured interview. It was also designed in a way that controlled the interviews to be more than 30 minutes and not longer than one hour timewise, as the interview participants have already expressed concern that they could not do lengthy interviews.

In the interview guide, the majority of the questions were open-ended questions. Open-ended questions are the pillars of the unstructured interview, and provide multiple possible answers that are not suggestive or influenced by the interviewer. These questions usually start with pronouns such as what, why, how, followed by the necessary information for the question. The wording of the questions differed, and synonyms and examples was often provided to paint a clearer picture of what the question was about. All the interviews were conducted in English as it the main language of this study and to reduce the misinterpretation that could happen due to the general nature of both the languages and the subjects.

All the interviews were started with a short brief about the thesis and clarification of some words and subjects so as to provide a solid framework to the interviewees. Also to insure that the interviewer and the interviewees have the same interpretation of the terms of the subject. Some examples of the terms that needed deeper explanation were 'business facilitation', 'women entrepreneurship' and some brief about InfoInternet. In each interview the interview guide was adjusted to suit the interviewee field of experience and the type of contribution and information expected from him/her where there were some questions that were attached with a specific scenarios. Most of the interviews were recorded after the interviewees notification. In the end of each interview, interviewees were asked to be contacted in case of need for more information during the interview transcribing. Also, they had been asked if they can recommend relevant people that could be interviewed in regard to this case.

Generally, through the interview conducting process, there were no negative aspects that could impact the integrity of the data. The challenges that I faced with the interview conducting were that sometimes the interview participants allusion to other topics of their interest which weren't that relevant to the interview focal subject.

5.2.2. Secondary Data

Secondary data refers to data that was collected by someone other than the user¹⁷. Common sources of secondary data for social science include censuses, information collected by government departments, organisational records and data that was originally collected for other research purposes. In this study, I used the UiO library and its database connections to gather my secondary data. Many factors were considered during the secondary data collection such like the date when the data produced and the citation of the found sources etc.

The main use of the secondary data was in the literature review section where reviewed wide range of articles over the last two decades. The collected secondary data worked as foundation for doing the case study where it helped find out what has been done in relation to business facilitation. The reviewed studies were all built around the internet and its implications on the developing economies, women entrepreneurship, and how business is facilitated within the digital society.

The interview guide was mainly based on the conclusion derived from the secondary data collected. Most of the interview guide questions were built on the theoretical framework to suit the case under study and the targeted interviewees.

This chapter has presented the thesis structure, methodology, and data collection. Next chapter is going to display data analysis, coding, reliability, validity, final findings and discussion.

6. Analysis and Findings

In this chapter, I will present the data analysis, coding, code categories, and the codes used. Then, I'm going to discuss the results that I got and deriving the main findings of this study.

¹⁷ https://www.managementstudyguide.com/secondary_data.htm
Management study guide

6.1. Data Analysis and Coding

All the data from the interviews was transcribed within the first two weeks from the interview date as a preparation for the analyzing stage. The total of eight interviews were conducted, transcribed, and the interviews results are placed in the appendix A. The interviews were analyzed with QDA Miner Lite, a free qualitative data analysis software for text-mining and coding¹⁸. The analyzing process was in conformity with the theoretical framework. Thence, the code categories and codes were created depending on the literature review primary themes. The code categories were education, entrepreneurship, Internet, and economy.

The use of the QDA was a helpful tool to examine the primary data using the coined codes and find the common patterns. The program enables data labeling according to their inhold of the specific codes. Then, after the interviews were coded, it was analyzed using the supported diagrams that indicate the codes frequency and percentage. The figure 6a and figure 6b present an example for the analysis diagrams of the coded data, Ndola's interview codes distribution. The code frequency / percentage indicates the importance of the code as of the needed solution. The figure 5 below displays these categories and the codes beneath. The categories have been selected according to the main topics that the study has been built on: women entrepreneurship, business, Internet, and developing/learning. The codes beneath each category are coined depending on the most important factors that arose by the interviewees or the theoretical framework. The figures 6a and 6b show a sample for how coding diagrams of interviews look and how it supports the understanding of the patterns and the deriving of the findings.

¹⁸ <https://provalisresearch.com/products/qualitative-data-analysis-software/freeware/>
QDA Miner

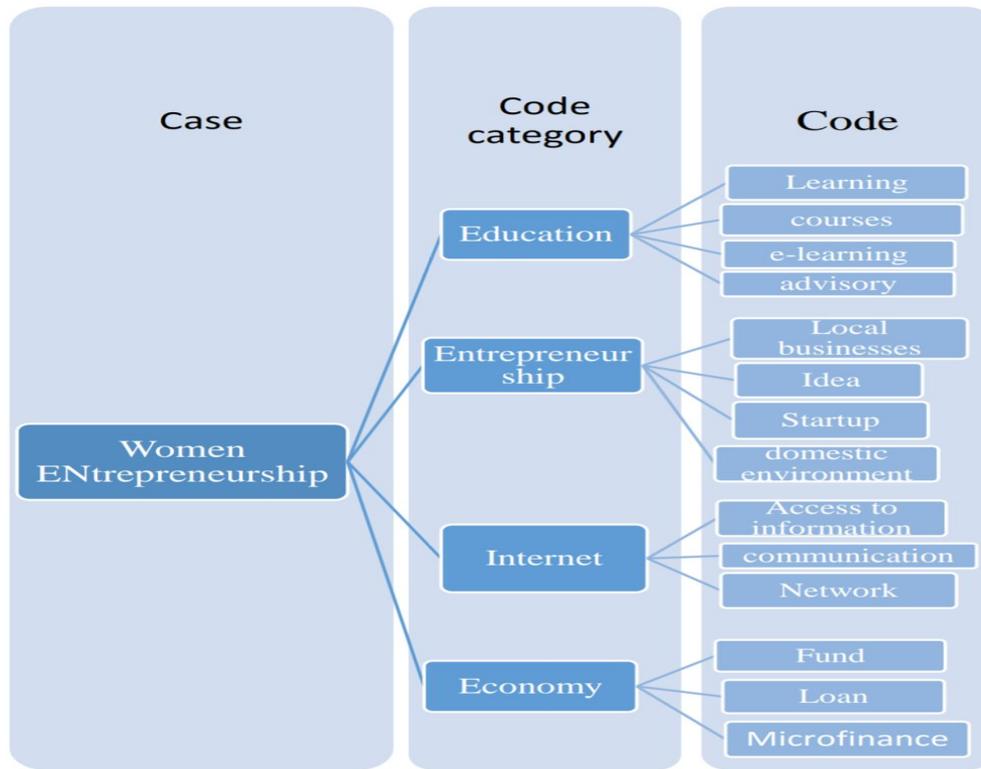


Figure 5 : Presents the codes

Distribution of codes (Frequency)

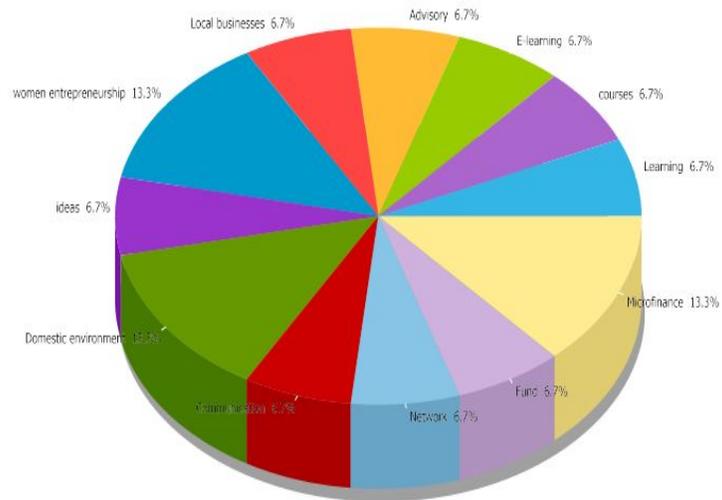


Figure 6a : Ndola interview coding (code percentage)

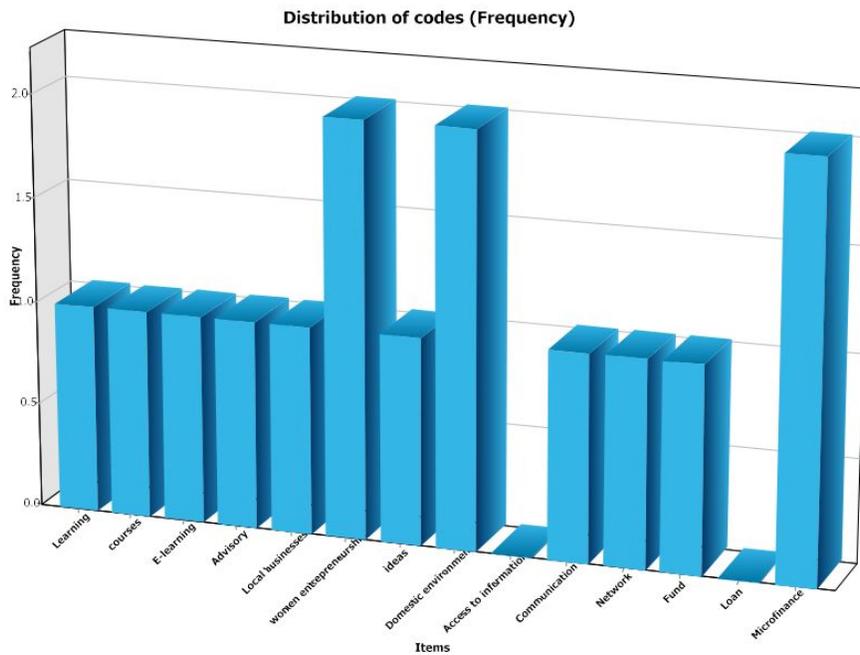


Figure 6b : Ndola interview coding (code frequency)

At this stage, I export all the interview transcript to the QDA Miner Lite library to analyze them depending on the created. Furthermore, I applied an a-priori method of coding¹⁹. All the interviews were analyzed in correspondence with the theoretical framework. The interviews were analyzed in a very deep systematic process and coded according to theoretical subjects from the literature, sub-theories, and processes. The pure mass of the picked codes made easier to understand the most essential factors. The selected analysis method was a top-down approach that concentrated on the main subjects from the theory and the needed solution. Based on the structure of the literature review and the interview guide, the data was organized into four main headlines: Women entrepreneurship, access to information, digital business tools, and developing economies.

In the analysis diagrams, There was strong existence of the codes learning, courses, entrepreneurship, startup, access to information, fund, and microfinance. That made it obvious to understand the main needs in that environments, developing economies. There was a vital need for business learning materials, networking, fund and investments.

6.2. Reliability and Validity

To preserve the reliability of the data in this research various sources of evidence were used to predict the appropriate solution could be implement. The sources included BasicInternet plans and goals, Internet light field meetings drafts, international entrepreneurial platforms ranking, local partner, international team, Digi foundation websites, the World Bank reports on developing economies, and interviews with related individuals in both Norway and Tanzania. All these diverse data sources were used a means of data source triangulation²⁰ what contributes to improve inter-judgemental accuracy. The final findings and the internal validity

¹⁹ <https://plato.stanford.edu/entries/apriori/>
Stanford Encyclopedia of Philosophy

²⁰ <http://www.write.com/writing-guides/research-writing/research-process/data-triangulation-how-the-triangulation-of-data-strengthens-your-research/>
Data Triangulation: How the Triangulation of Data Strengthens Your Research

were been improved by using this triangulation of data and theory and it gave a form of parallel reliability to this study.

Furthermore, the content validity (Wilson, 2010) could be an issue in this research since the researcher doesn't have neither the English nor the Norwegian as her first language, which could affect the conducted interview and data collection. However, she acquires an advanced level of knowledge in both of the languages, with a very good understanding of the Norwegian and African culture and tradition, what makes the effect on content validity should be minor. English was the main language of communication with the interviewees where all the interviews were conducted in English, except from some emails and messages which may affect the validity of the collected data since English is not the mother tongue of the interview participants.

The websites, documents, and information that were not available in English were translated to English based on the researcher's knowledge of the languages. Since the majority of data gathered was not related to restricted or confidential information domain, such as health or military, this should have a limited impact on content validity.

The aim of this thesis was not to study the just the effect of the free internet access on the communities but rather to identify a suitable tool that could facilitate the entrepreneurship in the societies with limited internet access, with the Internet Light access.

The prime threat to the reliability of this case study is the fact that this research is a short thesis, just a snapshot in time, which planned to be done in four months for a pretty large and internationally spreaded project to bring an efficient business facilitating tool. To improve the reliability of this research a repetition of the study with the use of different methodology and longer period of time what could guarantee more interviews and data acquisition. To facilitate that possibility, a database of all of the data collected during this study has been formed including a list of references, secondary data sources, and interview recordings and summaries. Almost all the data gathered during the period of this study is available in the attached appendices to assure transparency.

Although the mentioned threats to reliability and validity, this case study is still acquiring high credibility since it aims mainly to recommend a digital tool that could be added to the Internet Light system to facilitate entrepreneurship in the communities.

6.3. Findings and Discussion

In this section, the focus will be on deriving the main results and findings from the data collected and the study of the existing digital business facilities. The primary consideration was for the data acquired from the interviews. The findings will be related to the data mentioned by interviewees, and the theoretical framework. This method will make an easier analysis and a more organized presentation of the findings. All the interview results are attached in the appendix B.

Throughout the analysis and coding process, there was strong existence of the codes learning, courses, entrepreneurship, startup, access to information, fund, and microfinance. That has presented common patterns in the interviews during the data analysis. Therefore, digging deeply into these aspects and related them to the theoretical framework and the primary data obtained to find the best solution.

According to the analysis, the women are playing a major role in developing economies. What has been indicated in the literature review through the Global Entrepreneurship Monitor (2010) Women's report, female entrepreneurial activities in developing countries is equal to 45.5% which is higher than the registered percentage in developed countries (GEM, 2010). What manifests from the analysis and coding of the interview with both Joseph and Eline that women need to learn more skills such like money tracking, budgeting, planning ...etc.

One of the findings is that women need more means of connections with other businesses to develop their work. That has been emphasized by Ndola's observation for the domestic societies and Shalua Joseph OVOP project, in Tanzania, that women and local entrepreneurs lack networking and connections with businesses in the surrounding region that could build new markets. Through the data coding and analysis it was obvious that there is a need for more communication and collaboration between businesses within the domestic environment. Ingrid Stange and Mwajuma have also alluded to the need to be connected to business advisors and

aware of the standards to develop the quality. One of the major notes pointed in the theoretical framework, women entrepreneurship, that women need more connections in the domestic business environment.

On the other hand, I found from analyzing the interviews that what entrepreneurs struggling with is the fundraising and capital acquisition. Generally, local governments in developing countries don't give any financial aid for the start-ups, but in some countries they offer some facilities that could help their domestic entrepreneurs. In recent years, a number of developing countries have enacted pro-market economic reforms aimed at developing their markets to promote entrepreneurship and private enterprise with focus on women (Murali et al. 2015). As well Elaine and Ingrid have emphasized the need for more financial support and collaboration with microfinance organizations e.g. SACCOS . That means the local entrepreneurs need more support and guidance to the institutes/organizations where they could seek fund.

As per analysis and coding manifests the need for more teaming and networking to both develop the overall quality and the creation of new markets. There is also demand for digitized solutions and services. Agreeing with the literature review where electronic commerce (EC) has the potential to improve efficiency and productivity in many areas and, therefore, has received significant attention in many countries. Local businesses, in developing economies, are lacking the proper use of the network to market, offer services, and increase revenues as claimed by Ndola, Joseph, and Mwajuma. The basic transaction can be performed using the SIM-toolkit, thus working even on 2G networks, advanced features require a mobile broadband coverage (3G/4G). Although the majority of villages in Tanzania do not have Mobile Broadband (Josef Noll 2018). What means that there is a need for more digitized tools and connections.

From reviewing the prior studies done on the entrepreneurship digital facilitation tools , it's clear that digital skills are becoming increasingly essential for getting access to a range of products and services (Allan F. 2016). One of the analytical findings, I found that what could be offered is business skills learning courses through the local network. What could be also done is to use additional local memories so the courses would be available offline. In another words, to obtain the maximum utilization by the use of video courses that are available online and offline

locally by adding USB stick connected to the village server. It could also be used as a start spring for new services and products.

One of the most vital factors is the language. According to the interviews with local actors, in Tanzania, slight percent of the population can use English as working language what means the suggested tool should be offered in the local language also. So, I found that to bring the maximum utilization of the recommended tool, it should be offered in the local languages.

Based on these analytical findings and what indicated by the literature review women entrepreneurship could be facilitated by offering business skills learning, entrepreneurship participation and discussions, and business support sources for the local women entrepreneurs. As this thesis is a part of the Norwegian Digital Inclusion Foundation the previous needs should be introduced in a digitized way. After I investigated the digital tools for business facilitation, literature review, I found that all those needs could be covered by an entrepreneurial platform. This platform must include a learning part as there is a fundamental need for skills learning and business educational material, so users could learn the business capabilities. Besides, it should include a discussion zone where entrepreneurs get the ability to share ideas, discuss opinions, and get some feedback. It is also essential to consider including a fund and investment section when building the platform. In addition, the platform should look as simple as possible with the minimum number of features, light theme, and using local language so as to ease its use and adoption by the local community. The language is the most vital factor that could impact the suggested platform usage. The platform will also have an incentive system that would work as a catalyst for the local entrepreneurs. Likewise, a controlling system would be added to ensure that the users following the right path when start using the entrepreneurial platform.

Producing a platform concerned for entrepreneurship and business, as it was the study final suggestion, would raise the level of overall entrepreneurial awareness, support the local entrepreneurs, develop the domestic entrepreneurship and business models, and health the national economic system by pumping new businesses rapidly. Not ignoring, the fact that it will inspire connections between businesses in a wide range and more cooperation regionally.

In this chapter, I presented the data analysis, coding, reliability, validity, discussion, and the final findings of this study. The thesis final recommended solution was implementation of a

local entrepreneurial platform that would cover the domestic needs, so I found it important to gain at least a basic understanding of the entrepreneurial platforms function and domestic types of women businesses. That is why the next two chapters, I'm going to study some of the best existing entrepreneurial platforms and the common types of women businesses. In the following chapter, I'm going to study and investigate the main features of some selected entrepreneurial platforms in order to acquire an improved understanding of their features and functions.

7. Entrepreneurial Platforms Investigation

As the study final recommendation was an entrepreneurial platform, In this section, I selected and investigated five of the best and top ranked entrepreneurial platforms in order to understand the most effective features that they offer to their users. The entrepreneurial platforms were a mix of an international platforms that work with startups and small businesses. The selected platforms are mix of two of the best norwegian entrepreneurial platforms and three of the best fifty international entrepreneurial platforms according to the ranking done by INC.com. In the table below, I tried to rate the features of each platform. I created a scale from 0 to 5 to rate each feature where 5 is the most user friendly/uncomplicated and 0 when the feature is intricate or not offered by the website. The scoring was given according to the general evaluations done by Business magazine such like Inc., in addition to my personal judgments after observation

7.1. Entrepreneurial Platforms

In this part, I'm presenting the selected platforms. Its divided into two categories A) Norwegian, and B) international. I selected two of the most famous and used entrepreneurial platforms in Norway, and three of the top ranked international entrepreneurial platforms.

Norwegian platforms

I. Innomag.no

One of Norway's leading independent digital Innovation news magazine and meeting point for Norwegian changemakers wanting inspiration, innovation and insight²¹.

II. Innobørs.no

Here entrepreneurs will find Norway's independent Innovation Exchange. InnoBørs is the site where entrepreneurs and capital meet²².

International Platforms

I. Forentrepreneurs.com

The name says it all: This website is the result of David Skok's years of experience at Matrix Partners. With an MBA to complement his background, Skok's approach to startup techniques and financial modeling is user friendly, though strongly technical, rich in charts and equations²³.

II. Dutiee.com

The go-to site for social entrepreneurs, you can glean information on how to succeed as a nonprofit and ways to incorporate social into any type of business. There's an emphasis on ethically made goods, too²⁴.

III. Entrepreneur.com

Another obvious one, right? However, signing up for Entrepreneur's notifications or getting the app can help you stay up to date on the latest strategies and news affecting entrepreneurs. It's a must for founders²⁵.

7.2. Platform Features

In this section, I studied the main feature through creating a scale from 0 to 5 to score the features of the selected platforms, where 5 is the most user friendly/uncomplicated and 0 when the feature is intricate or not offered by the website. First, I tabled the different scores of each feature in the platforms, and then, I explained the given scores. The scoring was given

²¹ <http://www.innomag.no/>
Innovation magazine Norway

²² <http://www.innobors.no/>
Norway's InnovasjonsBørs

²³ <https://www.inc.com/drew-hendricks/50-best-websites-for-entrepreneurs.html>
50 Best Websites for Entrepreneurs by INC.com

²⁴ <https://www.inc.com/drew-hendricks/50-best-websites-for-entrepreneurs.html>

²⁵ <https://www.inc.com/drew-hendricks/50-best-websites-for-entrepreneurs.html>
50 Best Websites for Entrepreneurs by INC.com

according to the general evaluations done by Business magazine such like Inc., in addition to my personal judgments after observation

Table 1: Shows entrepreneurial platforms evaluation

	Theme	Learning material	News	Feedback	Fund	Investor access	Language
Innomag	2	0	4	3	1	4	5
Innobørs	3	0	0	4	5	4	2
Forentrepreneurs	4	3	0	4	1	0	4
Dutice	5	2	3	0	1	0	4
Entrepreneur	5	4	3	4	3	5	4

The coming paragraphs will discuss and argue for these scores and give more clarification on each aspect.

7.2.1. Theme

Considering the platform theme, both Dutice and Entrepreneur.com presenting their content in a simple and clear lay out with a light background displaying the main tools for the users (start a business, fund, inspiration, marketing). Thus, I gave them a grade 5. In contrast, the innomag theme is dark with a lot of advertisements and puzzled photos of businesses news what makes it looks inconvenient a bit specially for the first time users.

7.2.2. Learning Material

By observing these platforms, I found that most of them don't provide a solid learning material as they mainly targeting entrepreneurs from developed countries and in a way they consider that the users already acquire the basic business skills/understanding. I gave Entrepreneur 4 as it provides to some extent good learning material. In contrast, providing learning material is an essential element required by the vast majority in the developing countries. Among the selected entrepreneurial websites Entrepreneur.com is the best where it

tooled up with a convenient video learning system with a wide variety of topics. In the second place, For Entrepreneurs which is offering a pretty decent amount of learning material on business model and startup help.

7.2.3. News

News and latest events update is the Innomag unique feature as they display regularly the latest news and updates in tech and startups. in contrast to For entrepreneurs and Innobørs which don't cover this side. Consequently, I gave Innomag a grade 4 for this feature. Have updated news connects the users frequently with the latest trends and changes in the market. In addition, it could work as a catalyst or motivator for the would-be entrepreneurs as they will get more engagement and learn from the other successful stories.

7.2.4. Feedback

In regard to the feedback that the entrepreneurs get, there are many platforms used to have a feedback space which might help the entrepreneurs to develop their work. Users of innobørs has the ability to write their opinion about the ideas and even share it through the social media profiles such like Facebook, Twitter, Pinterest, google, and LinkedIn. Both innobørs, entrepreneur, and for entrepreneur provide a pretty adequate feedback systems. Therefore, I gave them a grade 4.

7.2.5. Fund

When looking to the ability to seek/get fund, I found Innobørs presenting the most favorable features to get fund and involve investors. Innobørs gives a clear brief overview on the targeted fund, type of investments, and the founder valuation. The website offer three funding alternative 1) money 2) time or 3) partnership. The investing process starts with a simple form should be filled by the investor and sent to the aimed startup/idea. Thus, I gave Innbørs a grade 5.

7.2.6. Investor Access

After observing the selected platforms, the most investors friendly is Entrepreneur.com where it provides a detailed information for the investors about the top 500 franchise, top franchise for veterans, fastest growing, top brands, and for sale. Furthermore, the website present a short biography about the presented franchise. Also, Innobørs.no and

innomag.no have a particular part for investors (Norwegian Business Angel Network-NorBAN). In consequence, they got grades 5 and 4 respectively.

7.2.7. Language

Considering the platform language, most of the platforms are using English as the main instructive language which gives sense of global use except Innobørs which use only Norwegian what could limit the targeted groups and users. Innomag is offering the side in both English and Norwegian what makes it more favorable by the users. Thereby, I gave it a grade 5.

Ultimately, to create an entrepreneurial platform that could be used within the developing economies in the developing countries the previous studied features should be considered. By and large, creating entrepreneurial platform targeting users from developing countries should be deem the level and type of the business skills the users have where it used to be less than what users from developing countries acquire what mean more learning material/course should be offered. In regard to the language, English and a minimum one local language should be used as usually not all the population can speak English, but English could be used in the start and then introducing other language. The theme should be simple and user friendly with the minimum number of features required to induce faster adoption by the local users. The fund part should highlights the available sources of fund that entrepreneurs could seek where it normally international fund sources as almost all the domestic governments in the Global South don't grant financial aids for the small businesses. Further, the fund part could attract business angels who are willing to send their time or money or both of them.

Chapter 7 has provided a brief overview over some of the top entrepreneurial platforms and discussed its features to bring better understanding for the entrepreneurs needs when creating one that targeting entrepreneurs from developing economies. In the next step, the coming chapter, I will present the types of businesses that women used to do in targeted regions, Norwegian Digital Inclusion regions, according to the primary data.

8. Women Entrepreneurship and Businesses in Developing Countries

While the final solution the thesis suggested was an entrepreneurial platform focusing on women entrepreneurship, I studied the type of businesses women entrepreneurs primarily do in developing economies to gain an overview over the targeted groups of users and the type of the material offered by the entrepreneurial platform. Currently one of the most important economic sectors in Africa is agriculture. It accounts for more than 32% of Africa's GDP and it accounts for around 65% of Africa's employment. According to the UN Food and Agriculture Organization, women in Africa are responsible for 70% of crop production, 50% of animal husbandry and 60% of marketing. Women undertake nearly 100% of food processing activities, in addition to child care and other responsibilities in households (idebate idea beta 2018). According to the interviews with local actors and the prior study on this domain, I found the most common types of women businesses in rural areas of the Global South especially in Africa are agriculture products selling, food production, handcraft, fishing, retail shops, husbandry, hairdressing, and mobile shops. So, the entrepreneurial platform, final recommendation, should bring a high focus on the most done businesses locally. In the coming sections, I'm presenting a short brief about each type.

8.1. Agriculture Products Selling

Usually, african women in rural areas used to farm a small pieces of land around their houses where they plant vegetables and fruits. The harvested greens are normally divided into two parts one for the family and the rest to be sold in the local market what is ordinarily happened for a paltry amount of money.

8.2. Food Production

In many regions, women collect in group and work together to produce large amount of the local food that they used to sell it to restaurants, farmers, fishermen, workers, and for the local market.

8.3. Fishing

Fishing is commonly a men job the developing countries, but in some districts women are also participating in this domain. Women used to buy fish from fishermen and sell them again to obtain some margin. It's similar to some extent with the others where women use the fish to cover their families food demand and gaining income.

8.4. Handcraft/Handwork

Large percentage of women are used to make local hand made tools, clothes, furniture, and accessories to be sold in the domestic market or for the tourists.

Essentially, women businesses are still of small scale compared with men ones and they mainly need financial support to start and business skills education to gain the ability to growth and scale up. Women also need new channels to advertise and market their products and brands.

8.5. Retail Shops

Opening a retail shops is one of the most common businesses that women a small african villages do. They usually rent or build a small room be used as their shop. They used to sell for the local people their daily need such like oil, cheese, sweets, biscuits, drinks, soap, notebooks, pens ..etc.

In this type of shops, the purchasing could happen in two ways. The first method, buyers pay in cash for their items as normal. The second method, the buyers don't pay for their items, but rather the shopkeeper or the shop owner usually has a notebook where they register the items have been taken under the name of the buyer. In the second type of purchasing ordinarily the seller and the buyer make and agreement of when the buyer will pay. As a rule, the payment used to happen in the end of the month when the buyer gets his/her salary.

8.6. Hairdressing Salons

African women are very keen on their appearance what makes the hair dressing salons are common successful business. Generally, those hairdressing salons are managed by women. There are many services offered by those salons such like bodycare, monicare, henna, sauna, ... etc.

Opposite to what is rule in the developed countries, in Africa and developing countries the salons workers don't have any relevant education or even training.

8.7. Husbandry

Similarly to the agriculture, considerable number of women work with farm animals. They used to take care, and breed of farm animals like sheep, cows, rabbits, chickens, pigs, ...etc. The women usually get income by selling those animals or their product as milk, egg, wool, .. etc.

8.8. Mobile Shops

In the recent years and due to the technology spreading, women started to enter new field of businesses like mobile shops. The woman is normally has a small kiosk where they sell mobile, mobile accessories, and mobile balance cards. In some mobile shops, there could be a maintenance service and mobile buying.

To conclude, this chapter has presented the main types of businesses that women do according to literature review and the primary data. After studying the features and the building of entrepreneurial platforms, and women common businesses, the next chapter will attempt to illustrate the suggested solution through presenting its targeted users, features, side map, prototype, and exemplification.

9. Entrepreneurial Platform (EntrepNet)

In this chapter, I'm going to introduce the factors that surrounding the suggested solution, the entrepreneurial platform, such as the intended users, the platform's features, prototype, incentive system, and a walk through study (simulating the user experience). From this chapter and onward, the entrepreneurial platform will be called EnterpNet (Entrepreneurship + Network).

9.1. The Intended Users

Unconnected communities in the Global South, where Infointernet is provided. According to the Internet Society (Michael K., 2015), the majority of the Global South population does not have access to an adequate Internet, i.e., is unreliable, slow, and often offline; only around ca. 30% of the population have 3G coverage in 2013 and a small minority having 4G, where smartphone subscriptions in Sub-Saharan Africa were only ca. 25% of the population in 2016 (Josef N. et al 2018).

Citizens

Citizens who are unable to access digital tools, are often confined to the lower or peripheral edge of the society, both geographically and economically. The result of this inaccessibility, those groups are denied full involvement in mainstream economic, political, cultural, and social activities. This usually also implies.

Women

From those poor communities are the primary users regarded in this study. Their characteristics and needs are strongly influenced by the socio-economic context they grow-up in.

Characteristics:

- a. Little knowledge of what a digital device can do and how to operate it, as there is little technology accessible (R. Unnikrishnan et al, 2016).

- b. Lack support from family, because of illiteracy or little awareness and understanding for why women need to learn such technology.
- c. Irregular participation, e.g., due to local workload.
- d. Have much more less knowledge than what their peers in more developed countries due to the quality of education they received (Ann M. 2013).
- e. Some women have psychological problems caused by a challenging home environment, which affects, e.g., their motivation, attention, and curiosity.

Needs:

- a. Access to flexible and remote teaching sources.
- b. Access to digital content translated to their language and relevant for their capabilities.
- c. Easy access to internet and digital devices.
- d. Guidance and help, e.g., receiving training from adequate users.
- e. Interaction with persons with the competence and willing to share their experience.
- f. Internet use should be supervised by supervisors, so that learning uses would outweigh the entertainment ones.

Other Stakeholders

While the main stakeholders that we consider here are women from technological disadvantaged societies, the larger scope of BasicInternet is to help all sorts of users forced to work in different contexts than the classical office space. These are individuals that work in professional isolation, freelancers that would like to work from remote places, commuters, or researchers involved in projects meant to help these communities. The researchers from the Community Lab at Namibia University of Science and Technology mention that having a mobile lab, equipped with Internet and electricity will be very useful for their research work within the community setting (Heike W. et al, 2017).

9.2. Features and Functions

In this section, I'm going to explain the main features of the platform that would support the local users in their entrepreneurial path. The platform consists fundamentally of three parts skills, entrepreneurship, and business.

1. Skills

The first domain the users need to accomplish. In this section is a learning designed material has been added. It will focus mainly on providing an intensive learning input to support the users to acquire the basic business skills that are required to make a successful commerce.

The users in this page will be offered a series of video courses. These courses are designed to teach the skills starting from the early basic ones, and to take the participant from one level to a higher one when which are meant primarily to help the entrant to build a solid business understanding.

Throughout participating in this learning system and watching the courses, the participators will get points as a control measures. This point system would aid the administrator to ensure that users have a maximum benefits from the prepared contain. In addition, this system could be used as a catalyst where participants would get some free Internet surfing time as they get a lot of points. For example, if the entrant got 60 points due to watching three video courses and participating in the tutorials, they will get a 15 minutes free surfing in the normal Internet to use it as the want.

This part of the platform is going to be available offline for the local use. All the video courses are going to be downloaded and saved to the domestic server, so the local users can come back and watch it again without any need for the Internet. This availability will support the entrepreneurs to secure a permanent access to this learning material. Furthermore, as the used bandwidth isn't that big this downloading process would affect its speed, but the final benefits worth that keeping the learning material available and easy to access.

2. Entrepreneurship

The entrepreneurship part is mainly taking care of the population of the users who have the entrepreneurial personality. In this part, the would-be entrepreneur will find more learning material giving deeper understanding for the entrepreneurship. There will be also some links to simple entrepreneurship online courses.

They will also find a space to share the ideas and plans. They participants are going to be able to give comments on others participation or reply and response to the others. That will add an interactive sense what could trigger the entrepreneurs for more participation.

The entrepreneurial section is going also to contain some successful entrepreneurial stories from the local communities. The display of such stories could motivate the new entrepreneurs to both making more effort and learn from the other to avoid the pitfalls.

Through the participation in this zone won't be similar point system as the users involvement is not that easy to measure in this type. Besides, that the main focus here not to check whether the users have done a specific single action or not, but rather to provide a fertile ground for their ideas and discussions.

In this entrepreneurial part will be some links to an international entrepreneurial platforms. That gives the local entrepreneurs the ability to go internationally, if they like. The links would also ease the understanding of the entrepreneurship in the rest of the world.

In addition, this page will serve as village entrepreneurship representative. The goal is to attract all the local entrepreneurs in the area to share their ideas, comment, and interact with the others. That will make it the first destination for the entrepreneurship interested parties. In this way, local people will get much more benefits of learning from each other experiences.

3. Business

The business part is focusing on the more practical action that entrepreneurs could take to start their businesses. In this section, people with the same interest could agree to create teams and work together. There will be also a chatting room where entrepreneurs from the different villages could interact with each others. In this way, there will be more collaboration between the domestic villages. This collaboration will insure the optimal utilization of local resources and human capital.

The most important part in this page will be the fund raising. In the most developing countries neither the government nor the local community give any type of financial support for the starting businesses. There will be links for the users to apply for the SACCOS²⁶, as it one of the best capital and microfinance solutions available. In addition, there will connection to the M.Pesa²⁷, the mobile money transfer system.

The international fund sources will be also included. That will definitely enable the local entrepreneurs to able for more opportunities. There are numerous international fund programs that could be seeked such like the United Nations Funds²⁸, Global Fund For Women²⁹, International Fund For Agriculture development³⁰ ...etc.

Investors will have access to this page as the will be offered the option to invest their money, time, or both money and time. The investors will be able to contact and team or individual in regard to make a collaboration. The investors will also get an overview over the registered businesses in the platform.

²⁶ <https://www.scribd.com/doc/208723322/Importance-of-SACCOS-in-Tanzania>
SACCOS Tanzania

²⁷ <https://vodacom.co.tz/>
Vodacom M-Pesa Tanzania

²⁸ <http://www.un.org/en/sections/about-un/funds-programmes-specialized-agencies-and-others/>
The United Nations Funds, Programmes, Specialized Organization and others

²⁹ <https://www.globalfundforwomen.org/apply-for-a-grant/#.WuEafzaQzIU>
Global Women Fund Grant Application

³⁰ <https://www.ifad.org/>
International Fund For Agriculture Development

9.3. Prototype and Side Map

A prototype is an early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from (Blackwell & Manar 2015). As preparation for the platform prototype, in this part, I'm going to build up a side map for the aimed platform explaining the main sections. In this entrepreneurial platform there are primary three sections skills, entrepreneurship, and business. In each section there are learning material, links to international contents, and feedback what could support the local entrepreneurs in the path.

Initially, a simple prototype will be implemented according to this side map. The prototype then will be introduced and tested out in the field, Tanzania, in three villages Izazi, Selela, and Migoli in order to observe its usage. After that trial period, more feedback will be collected what will aid the platform development and further needed work. The prototype will be of simple features as the targeted segments are of people with limited or no use of the Internet.

The challenge that could be faced while implementing the prototype is the language. As claimed by the domestic villages executive officers that not all the population able to use English. Similar to what has been done by the health team of BasicInternet, the offered platforms and any other soft or hard material are optimized by translating it into the domestic languages. The village officers or the local partners could do a vital work in translating these materials, as they could also work as trainers in the early stages.

What described by the side map, Figure 7, is the main content of the entrepreneurial platform will be offered locally in the three villages where Internet Light project working, Izazi, Selela, and Migoli. The landing pages will contain access to the entrepreneurial platform, EntrepNet, and the normal InfoInternet available.

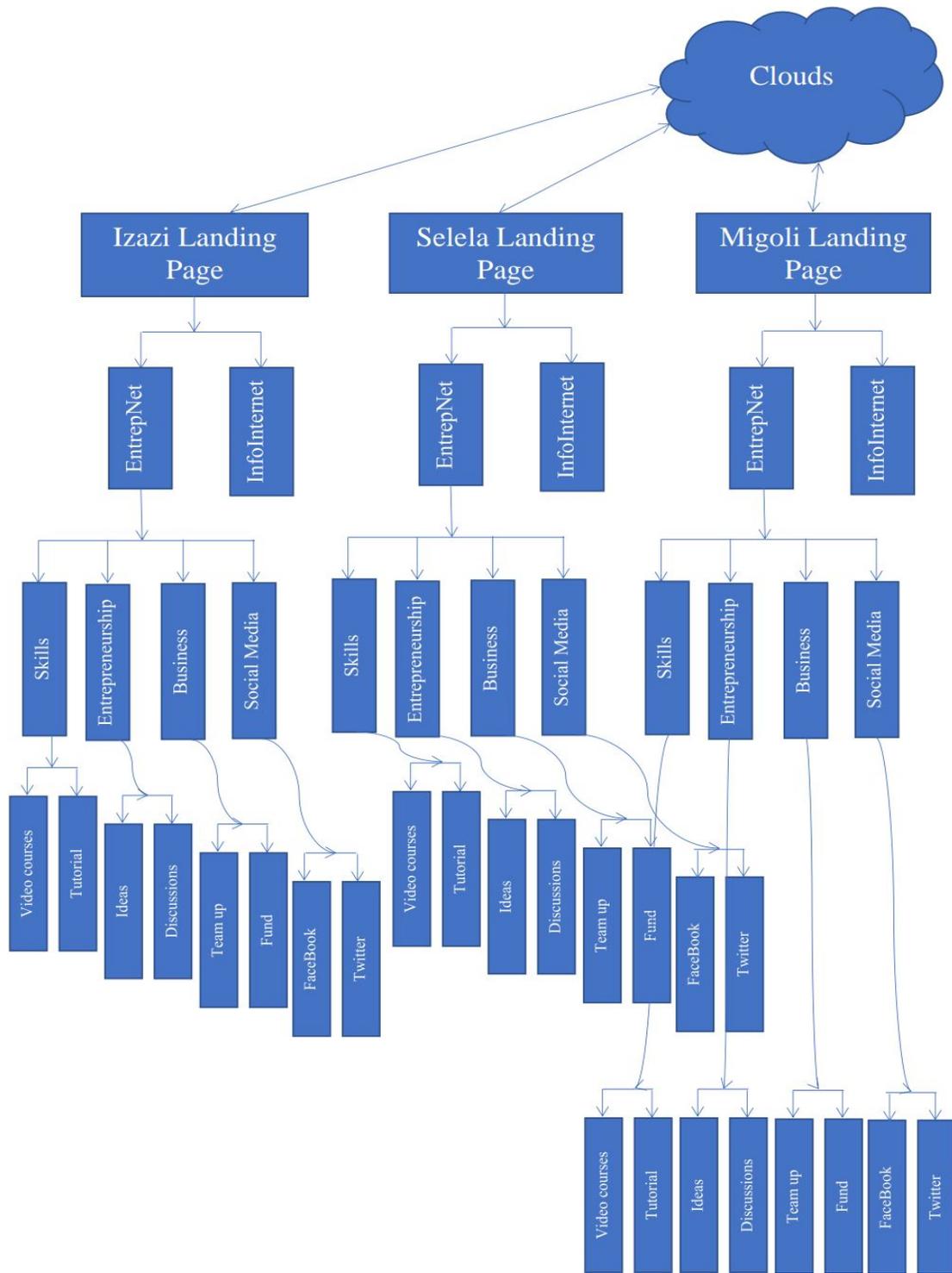


Figure 7: EntrepNet side map

The EntrepNet site will contain primarily of four section 1- Skills, 2- Entrepreneurship, 3- Business, and 4- Social Media. The Skills part will include video courses, and tutorials. In the Entrepreneurship part, the ideas sharing, and discussions will be covered. For the Business part, it's going to focus on teaming and fundraising. Last, there is a social media part where users can connect their activities with their profiles in the social media.

All the landing pages of the villages are connected with the cloud where there are some content will be available offline all the time for the local users and some are just available online. Mostly the offline content will be the courses and the learning materials that the would-be entrepreneur could find it available easily.

Before the real implementation of the platform, I made a prototype, figure 8a, that displays the various elements of the platform. The figures 8b, 8c, and 8d are presenting the main components of the three major parts of the entrepreneurial platform (EntrepNet).

The figure 8a shows how the platform home page looks like for the users in Izazi village, Tanzania. The home page displays the four domains of the platform 1) Skills 2) Entrepreneurship 3) Business and 4) Social media. In addition, there are some supporting features such like the search field, the language icon, and the contact us one.

In figure 8b, I present the skills part features. There are various types of courses on business planning, budget, and money tracking. The courses are also followed with some tutorials to realize the maximum utilization.

As well, in figure 8c, I present the different components of the entrepreneurship section. There are the ideas sharing, discussions, and feedback. Similarly, for the figure 8d, I show the main characteristics of the business division. There are primarily three main parts team up, invest, and fundraising.



Skills



Doing successful business starts from learning its skills

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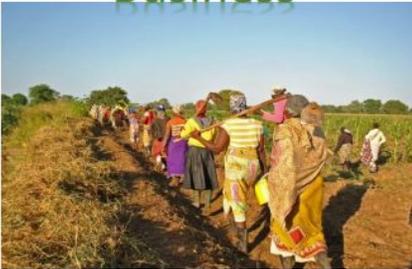
Entrepreneurship



Sharing your ideas, discuss, and get feedback

[More](#)

Business



In Izazi, we believe in people. Find team, investor, and more

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Social media



Get connected to the world

[More](#)

[CONTACT US](#)

Figure 8a: Illustrates EntrepNet homepage for Izazi village

Search

Business Plan courses

[More](#)



Budget courses

[More](#)



Expenses and Tracking

[More](#)

CONTACT US

Figure 8b: Illustrates the Skills page for Izazi village

Search

EntrepNet Izazi Kiswahili

Entrepreneurship



[Share your IDEA](#)

[More](#)



[Discuss](#)

[More](#)



[Feedback and updates](#)

[More](#)

[CONTACT US](#)

Figure 8c: Illustrates the Entrepreneurship page for Izazi village

Search



Team up

[More](#)



Invest

[More](#)



Fund, microloan

[More](#)

CONTACT US

Figure 8d: Illustrates the business page for Izazi village

9.4. Entrepreneurial Stages and Incentives

Controlling the platform usage to insure the right progress needs adding some measures. In this initial version the control measure will be a point system. As the platform is primarily divided into three sections, the users can't proceed to higher/later section without completing a specific amount in that section. While working with the content in each section the user will get points that determine whether he can move to the later stage or not.

The point system vary from level to the other, for example within the Skills section the points depend on the amount of courses and tutorials the user has done. This point system will force the users to navigate properly in each section and get maximal utilization.

On the other hand, there is a tremendous need for motivation that could encourage people to use the platform rapidly more. The suggested method is to add an incentive system connected to the point system. The main concept behind this incentive system is that the user will get a specific amount of free Internet time what means he/she could use the normal Internet for a specific amount of time for free. For instance, if the user has got 45 points or gone through some courses he/she will get 20 minutes Internet surfing free of charge.

Those two system will guarantee probably to some extent that the users will follow the platform right path of usage. Not ignoring that adding those systems means more factors to take care of by both the project operators and the platform developers.

9.5. User Experience Simulation

In this part, I'm going create a walk through study where the user real experience will be simulated in the coming scenario. In the walk through study³¹, there will be an exemplification for the experience that a normal african middle age village women could get through using EntrepNet platform. Showing the benefits she could get, for her local business. Exemplification, in the philosophy of language, is a mode of symbolization characterized by the relation between a sample and what it refers to³². The scenario will be built around an

³¹ <https://dictionary.cambridge.org/dictionary/english/walk-through>
Walk through study

³² <https://en.wikipedia.org/wiki/Exemplification>

imaginary woman called Maria Tjora to create a walk through study. The aim of that is to give a clear understanding of how the EntrepNet would empower women businesses.

The story (example)

Maria Tjora is women who lives in a remote area in Tanzania, Izazi. Maria is a 36 years old mother of five children. She is living in a small house with her husband, kids, and parents in Izazi village, Tanzania. The family has a small piece of land where Maria and her husband used to plant various types of vegetables to fill the family's needs and secure income from selling the rest of the crop.

Recently, Maria got engaged in a veggie program which was developed by the Norwegian Church aid (NCA) where she should work to fight the climate change. The veggie program gives women microloans to help in their businesses that the program aims in the area. The NAC has told her that she needs to get control of the water and the type of the corn and mealies she is going to plant.

Maria has applied for microloan from the NCA. Fortunately, she got positive answer for her application where she got a microloan of 320,000 TZS (Tanzanian Shilling). The loan should be used in a financially wise way to be able to pay it back in the end of the agreed period.

In this taimé, Maria thought that her way of working should be developed as she is going to scale up her production and the planted area. The main problem that faced Maria was finding the right sources of the business skills. Yoti, Maria's friend, recommend Maria to use EntrepNet platform as she benefited from it whereas starting her hair salon.

Maria started using the EntrepNet platform to develop her business. In the beginning, she started with the Skills part where she was able to learn how to make business plan, budget, expenses tracking. Though taking the business courses offered by EntrepNet, Maria started to prepare a proper budget for the microloan. The budget helped Maria acquire a good overview over her economic situation. Maria's budget was considering fertilizers, water, seeds, and the daily expenses. Maria also learned how to hold a daily tracking of her financial situation.

After finishing the learning part, Maria started to browse the entrepreneurial page and read the ideas shared and the feedback comments. Then, Maria got an idea of grading her

business to a high level by adding small part to her farm where it will used for canning vegetables. That idea of canning the harvest mean increasing the harvest lifetime, revenues, and solving storing problem. Maria wrote her idea of canning in the discussion area where she met Jemis and Mubasher who were interesting in something similar. They started to talk and discuss the idea and how to find a creative and not expensive machinery for that. They also got some comments and feedback from other who work with that or have relevant experience.

Thereafter, Maria, Jemis, and Mubasher decided to team up and work on this project together. Subsequently, they started to look for more fund for their project and to find angel investors who could be interested in investing in their work. The used the EntrepNet business page to talk to investors and seeking fund. In the end, they were able to persuade Treza, an angel investor from their neighbourhood village Migoli, to join the team by being a part of the team and investing around 45,000 TZS.

Maria and the team started the implementation and the work on their project. They followed all the construction from the NCA regarding the Climate Change program. The final canned crops has a growing demand in both the village market and the regional market. That made Maria able to ameliorate her family life and pay a large part of her loan due to the generous margin she got this year.

Ultimately, in this chapter, I presented the main targeted users, the platform main features and components alongside with an exemplification, a walk through study. Building the platform side map and prototype will make it much more easy for the web developer with the implementation. The following chapter is introducing the advantages of the recommended solution and the areas where more work is needed.

10. EntrepNet Assessment

In this chapter, I'm going to assess the entrepreneurial platform, suggest solution, by tabling its positives and negatives. The assessment is the action or an instance of making a judgment about something³³ in order to get the right evaluation. Moreover, the results that will be gained from the assessment could be used as foundation for further studies and improvements.

10.1. Advantages

Within this part, I'm going to present the strength features in each division of the EntrepNet platform, skills, entrepreneurship, and business. Those features will be evaluated in relation with three main essential aspects 1) emerging economies, 2) women entrepreneurship, and 3) village platform/clouds. The prior factors were chosen to present and emphasize the suitability of the thesis suggested solution to the local demands more than the available tools.

Table 2: Shows EntrepNet strengths

	Emerging economies	Women Entrepreneurship	Village platform /clouds
Skills	<ul style="list-style-type: none"> • Business basic concepts • Project planning and budgeting 	<ul style="list-style-type: none"> • Money registering and tracking • Working strategies • Small projects finance 	<ul style="list-style-type: none"> • Availability of the material locally offline • Updated content • Links to international courses
Entrepreneurship	<ul style="list-style-type: none"> • Idea 	<ul style="list-style-type: none"> • Local ideas 	<ul style="list-style-type: none"> • Available

³³ <https://www.merriam-webster.com/dictionary/assessment>
Assessment definition

	generation catalyst <ul style="list-style-type: none"> • Network 	sharing <ul style="list-style-type: none"> • Rich domestic discussions • Ideas quality developing • Feedback 	partially offline (Idea page, not the discussions)
Business	<ul style="list-style-type: none"> • Project quality improving • New fund sources • International connections 	<ul style="list-style-type: none"> • More capital possibilities • Private/angel investors • Regional collaboration 	<ul style="list-style-type: none"> • Basic funding information obtainable offline • Links to international business communities

10.2. Topics to Be Considered

Opposite to the prior section, in this part, I’m going to table the EntrepNet platform disadvantages in relation to the emerging economies, women entrepreneurship, and village platform/cloud. This aims to point the weaknesses and the needed additions to the platform. There are many factor lead to the existence of weaknesses such like the time framework for this study, and that the researcher hasn’t been personally in the field, language barriers (in communicating with some interviewees).

Table 3: Shows EntrepNet limitations

	Emerging economies	Women Entrepreneurship	Village platform /clouds
Skills	<ul style="list-style-type: none"> • Limited basic skills offered 	<ul style="list-style-type: none"> • Limited number of skills to 	<ul style="list-style-type: none"> • Heavy content (videos need

	<ul style="list-style-type: none"> • Narrow explanation for the business approaches 	learn <ul style="list-style-type: none"> • Limited number of translated video courses 	large storage space)
Entrepreneurship	<ul style="list-style-type: none"> • Classic entrepreneurship 	<ul style="list-style-type: none"> • Uncontrolled discussions and feedback 	<ul style="list-style-type: none"> • Need for storage space
Business	<ul style="list-style-type: none"> • Limited capital sources 	<ul style="list-style-type: none"> • Uncontrolled participation 	<ul style="list-style-type: none"> •

To sum up, in this chapter, I tabled the advantages and disadvantages of the suggested entrepreneurial platform, EntrepNet. That was to bring more focus on them and to present the part where there is need for improvement to be considered in the future work. In the ensuing chapter, I'm going to assess the whole research. I will introduce the limitations and improvements, as well as the future direction for further work.

11. Research Evaluation

In this chapter, an overall evaluation for the thesis will be done. This evaluation will include the limitation and restriction that faced the researcher during carrying out this study. Beside, trying to derive the improvements that could help with each hurdle.

11.1. Limitations and Improvements

Language barrier was one of the main challenges during the collection of the primary data. My goal when I started this study was to find an optimal tool that could support the entrepreneurs women in rural areas as a part of the InfoInternet

project. According to my goal, the selected path was first to talk to women, expert, and developer from those regions. People were very welcoming, but the primary problem was the mean of communication. Just a small percent of the population can speak English where the rest is using Swahili. The language barrier make the number of interviews have been conducted are much more less than the number of the people have been contacted. The ideal solution would be to find one of the local partner to be used as a translator, But that could lead to misinterpretation or misunderstanding.

Almost all the interviews were conducted through either phone or Skype. As it known previously that the best type of interview is the face-to-faces interview especially within the scientific researches. A large portion of the interviewees where out of Norway what made it difficult or impossible to conduct a face-to-face interview. The face-to-face interviews enable the interviewer to collect much more data through observing the interviewees, body language, and the ability to extend the time. The Skype video call feature was the main alternative for the face-to-face interviews, but also in some cases the Internet accessibility was problem for the interviewees.

All the interviews were designed to be conducted with either local women entrepreneurs, business and entrepreneurship experts, and developers. This was also caused some challenges, as individual people in such positions are usually so busy in a way its a real challenge to get an appointment with them.

Regarding the developing economies and entrepreneurship in the Global South, I found a very limited number of researches and articles have been done in these topics. Lack of the studies on the local business and financial nature of the rural African regions was another effect contributed to increase the difficulty of the solution finding. By and large, the number of the business and entrepreneurship studies that have been done on the Global South is very limited.

11.2. Future Direction

This section provides the suggested areas for further research based on the research question. In the few last decades, started entrepreneurship to a point of focus by both individual and institutes. Although, there were considerable amount of researches have been done in this field, they were mostly focusing on the entrepreneurship in the first world and developed countries. There is notable shortage in the magnitude of studies have been done in the Global South where there is an extreme demand for these research to mitigate the regional economies. What could be really interesting topic to study is the women entrepreneurship African rural areas. Also, a study about the national and international actions that could be taken to develop and empower innovation and entrepreneurship in the developing economies.

There were many reasons that made the need of further studies and research needed. As mentioned in the previous section, the communication wasn't perfect with all the targeted interviewees due to the language. What could be done is a new quantitative study that would concentrate on observation of the local businesses and the entrepreneurial environment.

As this study has recommended and built a woman entrepreneurship facilitation tool a further study could be done on the implementation of this solution in the targeted communities and the local response in the trial period. In this suggested study the researcher could evaluate whether the offered solution need more editing or additional features should be added to cover the domestic demand.

Not forgetting that this study was a part of the Digi project (Norwegian Foundation) which works in many countries such like Congo, Tanzania, India, Turkey and over multitude regions in these countries, while this study had a focus on Africa, in general, and on Tanzania, in particular. The main idea was to then generalize the solution, but this could be an opportunity for future studies on whether the generalization would be a preferable path.

As an innovation and entrepreneurship researcher with an engineering background, I suggested the entrepreneurial platform as the best solution and

prepared the prototype and the side map. Further study could be done by an IT programmer on developing and designing this platform. Also, further research could be done on producing a mobile application with real practical functions such like having money transfer in the fund and investment part.

To conclude, this chapter has provided the study limitations and improvements. It's also presented suggestions for the future work. The forthcoming chapter is addressing the conclusion of this thesis.

12. Conclusion

The purpose of this thesis was to create a tool that would facilitate the entrepreneurship in general and empowering women businesses and entrepreneurship in particular within the Digi project regions. This was done by studying the domestic businesses and women entrepreneurship using both primary data , interviews, and secondary data, prior studies in those fields within the targeted developing economies. That has been done through a quantitative case study that analyzes its findings with manual and computational coding to produce the optimal instrument that could be used. This case study was based on a solid theoretical foundation and theoretically based analysis aims to answer the research question:

“How to Facilitate Women Entrepreneurship in Developing Economies through Access to Internet ?”

To answer this questions, a qualitative study were conducted by interviewing eight individuals of different field of expert such like web development, business facilitation, entrepreneurship, business advisory, and communities researchers. The data collected , both primary and secondary, were studied and analyzed deeply and in details to predict the optimal solution could be used by developing economy societies. The results of the analysis indicated that the most convenient tool would be an entrepreneurial platform which offer business skills learning, entrepreneurship, and business support parts.

After the analysis and the discussion of the findings, an initial platform side map was created to present a clear picture of the included features. While the side map considered to be not enough for illustrating and visualizing the platform, a prototype was been generated, so it could produce a clearer image of the recommended solution. Moreover, a walk through study has been done in order to exemplify the user experience with the platform. The walk through study used an imaginary character to build a full scenario around the would-be real user experience.

In short, the thesis focuses were

- The need of entrepreneurship in the digital age

The thesis has concentrated on the essential role that entrepreneurship play and how it could thrive the developing economies through empowering the women entrepreneurship.

- Specific needs/entrepreneurship in developing economies

By studying the domestic needs thesis was been able to identify the optimal tool, entrepreneurial platform, that could be implemented to facilitate women entrepreneurship within developing economies.

- Components of the entrepreneurial platform, and exemplification

After recommending a specific solution, entrepreneurial platform, the thesis has presented the platform initial side map and prototype alongside with a walk through study.

Accomplishing this thesis has provided the Norwegian Digital Inclusion Foundation with a precious study and recommendations to expedite and accelerate the business domain on field. The final recommendations and results are going to be the catalyst for the entrepreneurial innovative activities. Not forget to mention that facilitating this concept in those communities is an essential element that could lead to the creation of more work opportunities, economic growth, equality distribution of decent life. All that attain the eighth goal of the United Nation Agenda for Sustainable development (SDGs) 2030 which the Norwegian Digital Inclusion Foundation works toward. The eighth goal aims to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Producing an initial

prototype for the platform, concerned for entrepreneurship and business, would ease the future work on the implementation phase. Introducing such facility in the society would raise the level of overall entrepreneurial awareness, support the local entrepreneurs, develop the domestic entrepreneurship and business models, and health the national economic system by pumping new businesses rapidly. Not ignoring, the fact that it will inspire connections between businesses in a wide range and more cooperation regionally.

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Appendixes

Appendix A - Interview Guide

Theoretical foundation	Concept	Questions
<ul style="list-style-type: none"> ● Joseph Josef Noll 2018 ● Bernard Lunn 2017 ● Millicom International Cellular 2016 ● Ewa Lechman 2013 ● Roberto G., 2012 ● Perez- Aleman, 2011 ● Japhet and Usman 2010 ● Greve, 2009 ● Sanders & Tuschke, 2007 ● Odedra-Straub, 2003 	<p>1. Access to information, implications on domestic economy in the Global South.</p>	<ol style="list-style-type: none"> 1. How would access to Internet influence the local economies in developing countries? 2. Which economic implications could access to basic information produce? 3. How would it introduce new services/ products? 4. How could access to information change the local trade policies or regulation? 5. How will access to Internet light change the domestic economics trends?
<ul style="list-style-type: none"> ● idebate idea beta 2018 ● De Vita 2014 ● Wilson and Tagg 2010 ● Marlow 2009 ● Blackburn and Kovalainen 2009 ● Carter and Marlow, 2007 	<p>2. Woman entrepreneurship in developing countries.</p>	<ol style="list-style-type: none"> 1. How differentiate women entrepreneurship? which challenges face women not men? 2. Which field of business used women to work with? 3. How they could mitigate local hurdles? 4. How would women improve their entrepreneurial activities?

<ul style="list-style-type: none"> ● Watson 2003 ● Fredoline A. 2002 ● Aza W. Sile 2017 ● Kathryn 2017 ● DiRenzo, Greenhaus, & Weer, 2015 ● Murali et al. 2015 ● Benson 2014 ● Kegen 2013 ● Beer 2008 ● Healey & Leach, 2007 ● Morgan & Trauth, 2006 ● Forret & Dougherty 2004 	<p>3. Woman business facilitation in technology disadvantaged regions.</p>	<ol style="list-style-type: none"> 1. How should domestic women businesses be facilitated? 2. how would Internet mitigate the challenges women face in the Global South? 3. How could local entrepreneur women develop their businesses skills/modules? 4. What should entrepreneur women adopt so as to evolve their work? <ol style="list-style-type: none"> 1. which tools could empower local women start-ups in regions with Internet Light? 2. How entrepreneur women in developing countries can share and discuss their ideas (with experts)? 3. How could women in the developing countries acquire business basic skills?
<ul style="list-style-type: none"> ● Sascha et al. 2018 ● Sirkka L. et al., 2018 ● J. Huang et al., 2017 ● Allan F. 2016 ● Gaver 2014 ● S.A. Zahra and S. Nambisan, 2012 ● Hercules P. et al., 2011 ● Whitton 2010 ● Sandford et al., 2006 	<p>4. Digital tools for facilitating entrepreneurship and business.</p>	<ol style="list-style-type: none"> 4. Which type of business support solutions should be established? Which digital elements/tools could be introduced? 5. Which functions should be added to motivate women to work on their own businesses?

Appendix B - Interviews Information

Name	Company	occupation	Interview type	Interview length	Interview date	Interview language
Christian Johansen	University of Oslo/InfoInternet	Researcher	Face-to-face	50 min.	19/3/18	English
Ndola Methuz	Internet Light	Village officer (Izazi)	Skype	45 min	19/3/18	English
Christine Holst	Digi Project	Co-ordinator	Face-to-face	30 min	21/3/18	English
Ingrid Stange	Partnership for Change	Founder and chair	Skype	30 min	3/4/18	English
Robert Steine	Mediamakeriet	CTO	Phone call	30 min	20/3/18	English
Mwajuma Rewebangila	Norwegian Church Aid (NCA)	Program Officer - PMER	Phone call	30 min	25/3/18	English
Shalua Joseph	Africa Outings Limited	Sales Director	Phone call	45 min	24/4/18	English
Elaine	PATH	Senior	Phone call	30 min	25/4/18	English

Baker		Program Officer				
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Appendix C - Interviews Results

In all the interviews, I used , first, to present myself and explain in brief the thesis and its aims. So, the interviewee will get a decent overview over the topic and prepare themselves to discuss something relevant to it.

Second, before start asking questions, I ask for permission to record the conversation for the later transcribing/results writing. That was usually acceptable of the interviewees and I used to explain that it would insure better understanding and interpretation.

Third, I start with some simple/easy questions of relevant to the interview participant background to warm up

1. Christian Johansen - InfoInternet

This interview was recorded on the 19/03/2018 and the audio files are available upon requests.

Christian Johansen is a researcher in the Precise Modelling and Analysis group of the University of Oslo (UiO) Section for Autonomous Systems and Sensor Technologies³⁴. Christian is a developer on the educational part within the InfoInternet and InternetLight.

The most important point that Christian has highlighted when introducing novel technology to the community is to train the people and to offer a support, so people will understand the main concept and won't be sceptical or embarrassed when using it.

From the experience within the educational part of the InternetLight, Christian found that providing children with technological learning methods (through tablets) has increased the their thinking capacity and even more if they followed up on how to use it. That is what could be predicted to be similar or even better for the adults.

³⁴ <http://www.mn.uio.no/its/english/people/aca/cristi/>
Academic staff ifi @ UiO

To make your service or product adopted or used, it should be what the community actually need, so for example to provide a product for the local workers/farmers helps with planning and organizing themselves. In addition, showing the community the tangible benefits of what is introduced for them would make it interesting for more users.

Facilitation the entrepreneurship in those societies, it should targeting the type of the businesses people are running. It would be smart to target women when introducing new technology as they can spread it easily among their families and network and willing more to adopted opposite the men. The women now are in a way busy by taking care of their families and work, but what is important to get them committed in some form and to use the free time they actually don't know that they have it because to wasted in a way or another for example watching tv, chating, social media. So, it's essential to communicate the message the free time could be invested better.

Thinking on sharing the information and build a virtual communities that is what people in the developing economies looking for. They really need to be connected, build networks, and start collaboration.

The motivation to use and adopt the new technology could be the key factor of the success measuring, so giving people an information source where they can learn not enough but also it should accompanied with some kind of incentives.

There are many differences between the businesses in the developing countries and the developed ones. In developed countries, entrepreneurs focus on new technology not services, seeking high profit margin, and internationality, while in developing countries, entrepreneurs developing services and product that could evolve their communities.

In regard to the content, it should fit the environment surrounding the communities taking the nature, animals, plants, and traditions in consideration when building and designing the entrepreneurial facilitator. Another thing to be stressed is the understanding of the concept entrepreneurship within those economies and how people consider it. Maybe, it's something more sustainable more than the developed countries, but in developed economies the countries has wealth enough to sustain the new start-ups as they

give a lot of support and fund, so if one of those start-ups success and reach the internationality that would cover those expenses.

I asked if I could follow up if there is any question or inquiry and he said yes.

2. Ndola Methuz - InternetLight Tanzania (Izazi)

This interview was recorded on the 19/03/2018 and the audio files are available upon requests.

Ndola is the Izazi village executive officer for the project InternetLight. He is responsible for the implementation and the communication between the team in Norway and the local partner in Tanzania.

As the responsible for the village, local people have many issues environmental, businesses, ...etc. The main issue is the lack of business education, strategies, skills, and the fundamental steps to start a business. So, what they really need is to get both the education and the training to be familiar with the proper business methods.

On the other hand, there are a lot of resources and facilities that could be used like fish, agriculture, but they don't know how to create a real market or generate a super profit. If there is a method to show how they could generate more profit from their businesses. The mainly field domestic people are engaged in are the fishing and agriculture through finishing, farming, and sell locally (no regional or national markets). They also need the mean of connection to be connected from different regions, promote their products online, find the market where there is a demand for their products, cooperating with other services such like transport, and expand their connections.

Another challenge is the business plan. Almost all people are engaged/focusing in the same businesses and aren't willing to undertake an entrepreneurial issues. They lacking awareness of the resources and how to create new businesses, but if they get teaching material to help them to develop their understanding for the new promising businesses.

People are afraid of starting new ideas because of the risk of losing their effort and capital as they don't get any support or aid from the government or the have their own land what make them motivated to do more agriculture. So the challenge is that people are now

going in a circle where they sale domestically their products and getting a paltry income that would be circulated again in the same process. If people could get a communication channel so maybe they could find new products or services or they can buy the raw materials from other villages and manufacture it to produce new line of products.

In regard to women, they are mainly engaged in small businesses such like food producing (mamaintlia) where they work in groups cooking food for small restaurants, fishermen, ... etc . Also, some women are doing agriculture activities also such like selling vegetables, fruits,etc. Women aren't involved in the social economy. There are actually many reasons for that the most essential reason could be that they are too busy because of taking care of their kids and family, and sometimes work in a bad conditions to help in the family economy.

The issue gender is still working strongly in the domestic societies. Women in some cases get rejection, denied by their families, if they think about been independent and doing their own work.

At present, women need many supporting tools such like learning tools to learn business skills, organizing tools to organize themselves and their teams, follow up tools to follow the progression and the market trends, and fundraising tools to help in acquiring more capital.

Recently, the local community started to fight against the gender discrimination by providing women with the education, skills, and help in managing their business. Until now, around 30 percent of them have started the own business exp. Restaurants, shops and some of them have started to go to the school. That percentage could be increased much more if an online channel to both communicate, learn, and share.

Fortunately, many local people have access to a private devices that are used to navigate and communicate, but they are now mainly have a superficial use call, messaging, and social media no learning or valuable use. After introducing the InternetLight, people started to be more eager to learn and to get more useful inputs in the health and education.

I asked if I could follow up if there is any question or inquiry and he said yes.

3. Christine Holst - BasicInternet Health

This interview was recorded on the 21/03/2018 and the audio files are available upon requests.

Christine Holst is the coordinator of the Digi project and a PHD student at University of Oslo. The project is aiming to provide a health information/ education to the local communities within the InfoNet villages. That basic health information has been earlier available in for example leaflets, and conversations with healthcare workers at the health spots. Now, Christine is working on three diseases with an international team from Tanzania, USA, Norway, Rwanda, France, and Serbia to increase the level of awareness among the dwellers and reduce the percentage of infection in a way that people find interesting.

By and large, people don't feel that going to the health station, taking a leaflets, or reading health information on a pamphlet is something interesting. That is why the Digi project team works in transform this material into another format that people will find alluring to read.

The implemented idea was to present that information online where person use screens and their fingers to reach the content, and with an interactive part between the information so people could train their knowledge (gamified).

There are many challenges in different levels that similar new projects could face for example the motivation to engage oneself and trying to adopt the new technology, that the community is driven by men where women are excluded to some extend, neither governmental support nor local one, and the language. The health project web-page was built in a way that gives the users the option to access either the InternetLight (free) or the normal Internet (paid). Through using the InternetLight to reviewing health information the person is going to a time to use the normal Internet for free.

For a new platform or technology that is going to be introduced for the local society the best is to translate the content into the local language as a high percent of the residents don't speak English. In regard to the content, it would be more efficient if it created from the local environment to be easier adopted.

Christine and her team travelled to the site (the villages) and they found it really welcomed by the local societies providing such service. In the first village, people were really enthusiastic to get online because from before they have to travel to another village in order to gain knowledge or even to charge the devices. The second village was more concerned by the health information and they pointed out that training or a well educated person to be there and assist people to use and exploit the service. Very classically, the younger people were always more interested and supportive where the elderly were more sceptical.

4. Ingrid Stange - Partnership for Change

This interview was conducted in the 03/04/2018 on Skype.

Ingrid Stange is founder and chair of Partnership for Change, empowering women and youth through education and job creation³⁵. Board member Search for Common Ground, Norwegian Climate Foundation. Impact investor - Member of Toniic. Advisory board member at Sahara Forest Project, the Oslo Center for peace and Human Rights. Active investor in social and sustainable business startups.³⁶

Ingrid Stange works through Partnership for Change contribute to break down barriers between the various sectors of society. She is working in many Norway, Myanmar, and Ethiopia helping in developing the entrepreneurial concept and supporting entrepreneurs.

The interview guide was prepared in advance, but most of the interview was more freely to Ingrid to tell about their experience in the developing countries where they work on supporting the entrepreneurship. Through discussing their work method, Ingrid clarified that they usually look for people that already started their own start-ups or planning to start it, so they would be assured that they providing their service/support to the right people. The main aspect Ingrid Stange and her team working on is providing the basic business skills and learning material for companies establishing through local courses. Ingrid with

³⁵ www.pfchange.org

³⁶ <https://no.linkedin.com/in/ingrid-stange-8709937>

Ingrid Stange LinkedIn

her team usually search for women who have already started establishing their small businesses and provide them with support. In the first stage, they habitually offer courses to learn them the needed skills for their growth and to gain the basic essential understanding of the entrepreneurship. The support in later phases could be in shape of loan and consultation and guiding until they build solid foundation to be independent.

According to Ingrid experience, to guarantee the complete commitment of the participants the project should include persons who have real passion to their ideas and motivated to strive for it. Microfinance is now what Ingrid's project tool entrepreneurs with, but she still feels it not a good solution and has a limitations.

The main aim that Ingrid works toward is job creation so they offer entrepreneurial education, whilst taking care of the environment, to build an entrepreneurial ecosystem so as to create job opportunities in the society (social context). In addition, they offer an entrepreneurial training schemes in Myanmar that raise the domestic number of successful entrepreneurial experiences.³⁷

In regard to the challenges that they faced through their work, Ingrid highlighted four challenges:

1. Finding the right local people that could facilitate and ease the communication between them and the local community. They normally looking for people who are familiar with the local environment and culture, the social demand , and have good communication abilities to present their goals and work locally.
2. Trust building, that actually manifest in developing societies due to an accumulated series of fake promises that are experienced from some local governments and foreign actors. The mitigation is typically by getting closer to the communities and be in the field regularly. What noteworthy is that their project CEO has periodic visits to Myanmar and Ethiopia so he follows closely the work and gives sense of commitment.

³⁷ <http://pfchange.org/myanmar/Myanmar>

3. Becoming a part of the community. That could be reached by getting involved in more domestic events and supporting the local projects.
4. Locate and define precisely the regional needs and demands. Understanding the community where the work should be implemented.

Ingrid was also mentioned some relevant project that work with similar principles of entrepreneurship catalyzing such like Acumen³⁸, Strømmestiftelsen³⁹, and Care Norway⁴⁰

5. Robert Steine - Mediamakeriet (Village platform)

This interview was conducted in the 20/03/2018 on phone.

Robert Steine is the founder and CTO of Mediamakeriet, Underskrift.no, and RnD-Research and Development. Mediamakeriet is an online media agency, focusing on user-friendly products and services, providing web-pages that help with the business growth, located in Fredrikstad, Norway⁴¹. Robert Steine is an entrepreneur and developer, and he had a partnership with the project leaders of BasicInternet in regard to create a village platform for the villages where InfoNet is distributed.

The village platform is a suggested idea of Robert Steine for the BasicInternet to optimize the use of the offered Internet in the villages. The idea is to install a local server in each village in order to make the material and the content always available locally and could be accessed both online and offline.

The interview guide was prepared in advance, so it works as the foundation the interview, but also the conversation wasn't restricted by only the question in the interview

³⁸ <https://acumen.org/>
Acumen

³⁹ <https://strommestiftelsen.no/>
Strømmestiftelsen

⁴⁰ <https://strommestiftelsen.no/>
Care Norway

⁴¹ <https://no.linkedin.com/in/robertsteine>
Robert Steine LinkedIn

guide. The interviewee had the freedom to explain his insights and what could be valuable inputs for the platform as a designer and developer.

Through discussing the existing hurdles, the agreement was that the main challenge facing the entrepreneurs in the developing economies was the lack of the skills and the learning materials to build it. The suggested solution was to build a learning system that depending on videos which could be both accessible online and offline. First, the local users get an access through log in to a simple browser with toolbar to the learning materials (videos). Then, the option of downloading the content will be available what mean that all the downloaded (download, share, send as a message) material and videos are going to be available locally offline, so people could watch them whenever they want for free. This would absolutely reduce the cost, traffic, and the usage of the Internet if there is a mandatory cost for the Internet usage not everyone will pay it not everyone will download the same content. This local storage could be hard driver/ memory that connected to the to the village server.

In addition, building a smart system will be perfect to provide the users with an overview or to differentiate between the important and unimportant content manually or automatically. This differentiation could be built upon the the users rating, number of watch, or administrative rating.

Implementing a framework that would allow different streams for specific regions to be implemented in different areas that allows people to push their content if for free or pay.

Some of the major challenges in such project could be, first, the weight of the videos used compared with the bandwidth available in those regions as videos in a larger bandwidth what make the download or upload could take a extremely long tie. That what makes the use of the text method is shape of chat rooms, forums, ..etc is much more better in the technical sense inverse to what derive the best learning results. Second, the electricity distribution in those regions and it's cost compared to the income per capita. Third, it could take a really long time to download content according to the bandwidth provided. Fourth, the use of the text would need more control in regard of writing issues and spelling issues.

What could be useful solution is to use USB stick connected to the village server and dividing the Internet capacity to allocate 80% for the users and 20% for the system (sending new contents).

I asked if I could follow up if there is any question or inquiry and he said yes.

6. Mwajuma Rewebangila - Norwegian Church Aid (NCA)

This interview was recorded on the 25/03/2018 and the audio files are available upon requests.

Mwajuma Davina Rwebangila is the program office (PMER) of the Norwegian Church Aid⁴². The NCA is an independent humanitarian and ecumenical organisation with headquarters in Oslo, Norway. NCA is working on many issues such like economic empowerment, resource governance, and gender-Based Violence and Reproductive Health to eradicate poverty and injustice across the world. In Tanzania the NCA work on economies empowerment and resource governance.

Mwajuma is a local partner for the InfoInternet project where they both working on Digitizing rural Tanzania. Mwajuma and her team are now working on digitalize the local system so the information would be available for everyone through a local service as a part of the NCA programs in Tanzania. According to Mwajuma, women in the rural Tanzania lacking many things such like the business planning methods and the fund. Now, they cooperate with the villages community banks where women can save and lend money. This banks are mobilized by religious leaders where people can get what call revolving fund, they don't give loans but rather people save their own money and lend from it. The NCA through Mwajuma and her team using those banks as a platform to send messages to the community like the income generating activities, agriculture projects, and the veggie projects. Furthermore, the NCA engage the community members in governance issues where get education. Mwajuma mentioned that the main problem which women struggle with is managing their own finance. She meant that local business women need finance skills learning on how women can manage their finance and access information.

⁴² <https://www.kirkensnodhjelp.no/en/>
Norwegian Church Aid (actalliance)

One of the major challenges that women face that they lack the ability to access information on businesses, agriculture, health financing, social protection ..etc. That is why they need a place where they can get information and to know the regulations. The local communities in Tanzania are used to dial with technology and smart devices, but in a few situation can literacy works as a hurdle for women to get access and understand of the business process.

Regard the types of businesses that women do in Tanzania, there are many types like mobile shops, cultivate vegetable, animals, retail shops, mini markets. The quality in the domestic market is of high percent what makes it a real challenge for women with producing projects. Women need to learn some skills on how to improve the quality of their products.

On the other hand, there are also valley chains so if one is producing a specific product he/she should know from where to get the raw material and the targeted buyers. There are also quality checking issues by the local government where they have specific quality standards and business license. Women also struggling with gaining the business license and a market space because of the quality issues.

Mwajuma suggested to create an information sources where people can find information on market, business registration, quality standards,... etc. This what could make a big different in the number of people doing businesses if the language considered. Mwajuma emphasize that such tools should be offered in Swahili to get the maximum utilization.

In addition, Mwajuma has mentioned that in order to empower women a family planning program should be implemented so women could get time and effort for the own work. There are many other issues such like the products prices, marketing, access to agriculture input, quality fees ...etc. All this issues need an information sources and learning material. Mwajuma also tensioned the cost of the solution that would be offered as usually local people have income of \$1.25 per day what makes it too tiedy to spend any of this income on other thing than food and other basic living needs.

Mwajuma was extreme friendly and suggested to send me more information through the email and to answer more questions if I come over some.

7. Shalua Joseph - Africa Outings Limited

This interview was recorded on the 24/04/2018 and the audio files are available upon requests.

Shalua Joseph is the Sales Director at Africa Outings Limited⁴³. He has excellent by statements on how women and youth can participate in the digital society. He has also a papers on his ideas on strategic development of the rural areas. Joseph is doing studies on developing rural Tanzania communities, in general, and women and children, in particular. He want to increase women and children life by increasing their income. Joseph and his team are working in supporting entrepreneurs by giving microloans and investments and when the initial batch of project success the generated money will be invested in new projects. As capital acquisition is the main problem for domestic entrepreneurship, entrepreneurs need more fund sources to be offered.

According to our conversation, a visit to the field would help a lot in observing the real life. Joseph means it very hard to implement a digital business solution as due to the literacy impact. He also emphasizes that Tanzania is now facing two crisis the business crisis and the financial crisis while more than 50% of the population are living in rural areas where most of them are still using old fashion mobile (not smart). In addition, the daily income for them is around \$1 what makes It a real challenge for to buy Internet subscription.

Joseph believe that women need for the education is in the first place because there are some women aren't able to calculate and manage their finance. The literacy level has a huge impact on the women and how they administer their business.

The local governments are focusing only on three vital projects, education, infrastructure, and culture. So, it's supposed to be the start from education as it will

⁴³ <http://www.africaoutings.com/>
Africa Outings

empower women by building the needed skills. Joseph believe that in this time it's hard to get support from the government or communication operators.

Women in rural Tanzania are doing farms, breeding animals, and house businesses. Joseph introduced a project call OVOP (One village one product). With the OVOP project villages will move from small or local business to move to be capitalism business. For instance, in the agriculture if one village chooses one crop to plant so it will become a strong supplier of it. Also, learning people to circulate the local resources to produce products that could cover the local demand. What is happening now that producers from Kenia used to buy raw materials from Tanzania manufacture it and sell it again to Tanzania. The domestic people need support and education to utilize the available resources and produce for the local markets. Recently, Joseph is giving education and business advisory in the local environment, but more power should be put in this to create a lot of money. Maybe opening a computer centers in the villages to give people accessibility information to gain more knowledge for example on how to do business, agriculture, .. etc.

Local women need more education and business support to develop their own projects. That could be presented in a digital way but it important to secure an access to it all the time

Joseph was also friendly and and sent me his paper on strategic development of the rural areas. He has suggested to send me more information through the email to answer more questions if I come over some or arranging another conversation.

8. Elaine Baker - PATH

This interview was recorded on the 25/04/2018 and the audio files are available upon requests.

Elaine Baker is a senior program officer at PATH⁴⁴ Tanzania. PATH is an international health organization driving transformative innovation to save lives. In Tanzania, women lacking the business basic skills such like planning and expenses tracking. The local women entrepreneurs need more learning to the business dexterities.

⁴⁴ <https://www.path.org/>
PATH

According to ELaine, the use of digital is growing domestically where many people are now changing from old phones to use smart ones dialing with more features. It could be wise to have some digital sources.

The women entrepreneurship is now increasing gradually, but they are suffering of some challenges such like access to credit and record keeping. Many women struggling with booknoting their financial actions where they need more skills learning. That recorded data of the sales, expenses, and income could help them take decisions and support them when applying for fund or financial aid.

The local governments don't use to give any type of financial support, the governmental resources are all for education and health services. The government is used just to tax the business. That what makes the only source of financial support is through the microfinance organizations what called SACCOS (saving and credit community). There are some organization that offer advisory for the entrepreneurs, but they are too few and not well developed. Women need to learn basic business administration skills, booknoting, training, access to finance and capital, managing money. It will be helpful to provide a digital courses on business plan, strategies, recording,etc.

Now a days, mobile money is a big area now and one of the most used type of money transfer. People in the local society use the mobile money as a small banks. This indicates that the society is accepting digital solutions. It could be worth to create a mobile application where users could track their mobile money. For example, when they sell through mobile transaction they could put the payment in categories to which its belong and they can enter also data on how much they received if they received cash. In the end of the day, they could have an overview over their financial situation.

The rural women are doing businesses such like farming crops, breeding animals, selling clothes, small food processing, and hair dressing salons. In the tourist destination regions, women used to sell crafts and handmade souvenir for tourist. They need to expand their network as many of those type of business need teams and group working.

Local people are also using the Unstructured Supplementary Service Data (USSD). All the mobile money systems are using the USSD interface. It's a functionality in the mobile phone that enables people to keep record and financial transactions.

Appendix D - Case Study Protocol / Proposal

This proposal was built to draw the thesis work initial path. It was created on the 12/02/2018 when started to work with the case study.

1. Personal Motivation

During the past two years, through my master studies, I have got deeper understanding for the approaches innovation and entrepreneurship and a thoroughly experience of how do these principles work. Examining the entrepreneurial experiment was the most intriguing to me and how could entrepreneurs establish and strive for their ideas. Simultaneously, comparing the technical facilities people have in the developed countries and how it looks in the Global South where individuals have almost no internet access which makes them totally excluded from the real world of today and also challenged by the difficulties that internet has solved. What makes me more curious about the entrepreneurship phenanona in these regions and how could entrepreneurs mitigate those disadvantages. Likewise, I became motivated by the fact that the participation in the digital society and the access to information is a human right.

On the other hand, getting in touch with BasicInternet⁴⁵ team and their precious work to provide BasicInternet in various technically disadvantaged regions (Tanzania, Congo, India,...), with aim to achieve the UN 2030 Agenda goals. BasicInternet project is concerned by promoting "Internet light to all", being free access to information for everyone on Earth. For the time being, the project team is pouring the efforts on tool up those excluded areas with gratis internet access. The project is is meant to initially help in three main social environments: education, health, and small businesses for empowering women. All that gave me encouragement to contribute to this virtuous work especially when I found out that the main focus was on the health and the education sides with a meager work on the business one.

⁴⁵ The Basic Internet Foundation is a Norwegian foundation established in 2014 as collaboration between The University Graduate Centre (UNIK) and Kjeller Innovasjon AS.

After acquiring a comprehensive perception of the BasicInternet's goals, I feel it an interesting domain to investigate the entrepreneurial concept, where that would enable me to have a thoroughly understanding of how the entrepreneurship notion pronounced in the Global South. I set out to study the consequences of providing free access to information in establishing novel entrepreneurial environment with the main focus of how to facilitate women entrepreneurship. So as to puzzle out what should be the optimal tool to add. All that will fuel my entrepreneurial and research abilities and empower my decisions appreciation in the future.

Having the opportunity of joining and contribute in an on going social project would absolutely be a catalyst to develop different analyzing skills considering much more valuable factors according to the studied groups of communities with completely different conceptual understanding for those approaches and principles.

2. Relevance

This thesis focuses on the societal challenges related to Digital Inclusion. Though mobile networks have the potential of reaching everyone, the reality is that roughly 3.5 Billion people are not connected to the Internet. Being left-out from the Digital Society removes the capabilities for reaching higher levels of the Maslow pyramid, e.g. meaningful work.

The thesis will focus on innovation for all, based on the concept of free access to information. The hypothesis is that access to information, being text, pictures and local video, and the connectivity to a local village server will foster digital inclusion. Special attention is drawn to content fostering innovation for all, and the relation to the Sustainable Development Goals of the Agenda 2030. As the BasicInternet project is meant to initially help in three main social environments: health, education, and small businesses for empowering women.

The ongoing work is mainly on the health and education sides where they did provide learning materials, applications, and learning tools however the business part wasn't activated in that mean. Testing the entrepreneurial implications of the internet on the technologically disadvantaged areas how that would open hidden opportunities for new services/products and resources for the local community in particular and for the whole country in general.

The thesis is going to find out what tools are needed to facilitate the entrepreneurial actions the those communities, how they can be established, where they should be implemented, and to refuel the local business sense. Alongside, checking whether that would insure more equality, revenues streams, work opportunities, services/ products, quality, saving time and money, and creating new types of businesses. Creating a specific platform for entrepreneurship and business, if it is the study final suggestion, would raise the level of overall entrepreneurial awareness and health the national economic system by pumping new businesses rapidly. Not ignoring, the fact that it will inspire connections between businesses in a wide range and more cooperation regionally. Accomplishing this thesis will provide the BasicInternet project with a precious study and recommendation to expedite and improve their business part on field toward their goals (Agenda 2030).

3. Literature

The use will be for articles that studied:

1. Local innovation and entrepreneurship (in areas understudy)
2. Entrepreneurship facilitation and adoption in areas with limited internet access.
3. Women entrepreneurship in technologically disadvantaged areas
4. Developing communities degree of newness acceptance.

4. Research question

How to facilitate the women entrepreneurship adoption in the Global South where BasicInternet is afforded?

5. Propositions

- A. Creating an entrepreneurial platform (the thesis will introduce an initial mock-up)
- B. Introducing business application (such like educational app provided by BasicInternet)
- C. Providing business materials (learning business courses)

6. Methodology

Thesis is based on the data collected from interviews with different stakeholders (as a case study inductive approach/ qualitative) to find out the tool needed to facilitate the entrepreneurship adoption/entrepreneurial ecosystem creation based through free information access (BasicInternet).

Stage 1: literature review (due 16/2/18)

Online search (UiO libraries and database channels)

Stage 1: Interviews and real data collection

Stage 3: Coding and analyzing the collected data

Stage 4: formulating the recommendations

Stage 5: reevaluate the used methods the overall results of the study

Stage 6: wrapping up and concluding

7. Data

A. UiO libraries and database channels (the theory and the literature review)

B. Interviews (BasicInternet leaders and other contributors, partners, and field researchers)

C. Survey (might be used to indicate more needed tools)