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A Discrete Choice Experiment to estimate Willingness to Pay for a microfinance product in urban Romania.

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Abstract

INTRODUCTION: Many startups in Romania lack funding from banks. They depend on other sources of finance to start and grow their businesses. Entrepreneurs are seen as major job creators and therefore one of the main accelerators of economic growth. Access to finance is important to further stimulate this sector. As an increase in the demand for seed and growth capital is expected in the coming years, potential for banks exists to tap this market. Of course there is a reason that banks do not serve startups. Many do not survive the first years, thereby leaving banks with high risk.

OBJECTIVE: The main objective of this research is to discover wants and needs of entrepreneurs and find the cornerstones for a suitable microfinance product for ING to serve startups in urban areas in Romania that currently cannot find any finance.

METHODS: Data was collected with qualitative interviews and a follow-up survey to reveal respondents' wants and needs. The survey also includes a discrete choice experiment to reveal preferences for 3 loan attributes: technical assistance, repayment amounts and interest rate. A D-efficient design is used wherein each respondent was shown 9 choice sets with 2 alternatives that each consisted of different attribute levels. The conditional logit model is used for the analysis, which is performed in SPSS with a Cox regression. The coefficients of the regression analysis are used to calculate respondents' willingness to pay.

RESULTS: Qualitative interviews show that even though some interviewees are skeptical about banks, a bank loan is still preferred over most other finance solutions. High value is given to extra technical assistance. Providing mentoring and training in the loan package, increases the probability of acceptance with approximately 6 times. Slightly less, but still sufficiently significant are the results for the repayment amounts attribute. Results show that respondents prefer reducing repayment amounts over increasing repayment amounts in their loan package with approximately 5 times. For the interest rate attribute, the odds for choosing a loan package reduces with 5 times when the interest rate increases with 1%. Higher interest rates are accepted when technical assistance is offered. Respondents are willing to pay an extra of 1.22% interest rate for including a mentor and trainings in their loan package. And they are willing to pay an extra 0.98% interest rate for reducing repayment amounts compared to increasing repayment amounts.

CONCLUDING REMARKS FOR ING: ING could win the trust of entrepreneurs by offering mentoring and trainings and at the same time this service can function as a tool to reduce risk profiles. During the trainings and coaching sessions, the entrepreneur can be monitored more closely by the bank to help prevent business failure. This also is in the advantage of entrepreneurs; they show demand in these extra services and are willing to pay for it. An extra tool that could be used to reduce risk is the Elefin application that offers a financial platform for micro and SME businesses and is built to confirm their needs. It is a new technology that gives banks extra and actual information about cash flow and business proceedings. Offering these extra services can win the trust and improve the relationship with the business environment.

Keywords: Microfinance, Discrete Choice Experiment, Willingness to Pay, Conditional Logit, entrepreneurs, financial product, startup businesses, Romania, ING Bank.

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List of abbreviations

CI = Confidence Interval
DCE = Discrete Choice Experiment
EBRD = European Bank for Reconstruction and Development
ICT = information and communication technology
IR = Interest rate
MFI = Microfinance Institution
NGO = Non-Governmental Organization
OR = Odds Ratio
PPF = Post Privatization Foundation
RA = Repayment amount
SME = Small and Medium Sized Enterprise
TA = Technical assistance
WTP = Willingness to Pay

1 Introduction

Many entrepreneurs turn great ideas into new businesses, generate employment and try to make a difference.

> "I am an innovator, I develop new products and services, I apply efficient production methods and I create new business models. I am eager to learn, I network. I think globally and make a significant impact on my communities through creating jobs and bolstering economies." (a Romanian entrepreneur interviewed by EY; EY 2013, 4)

Young talent in Romania is highly present. Eager to work, but unfortunately facing many barriers in their careers. Not able to find a job, the wish to stay independent, the desire to carry out their entrepreneurial skills, or maybe a mix of these and other reasons might stimulate young talent to start their own business. The entrepreneurship barometer of EY (2013) identifies the main barriers that entrepreneurs are facing. They describe the entrepreneurial environment that slows down the success rates of startup companies in Romania. Even startup companies of talented entrepreneurs with high potential, as e.g. the person who introduces himself in the above citation, are deterred and slowed down in their development. An important barrier for entrepreneurs is to find finance for their newly started business. According to EY (2013), bank loans are expected to have the largest impact on sustaining entrepreneurship in Romania. Unfortunately most banks do not finance startups due to high risk for business failure.

Romania still has a poverty rate among the highest in the European Union (World Bank Group 2014a). According to Nistor et al. (2010), the recession that started in 2008 increased the level of vulnerability and the primary reason is the dependence of external financing. This study will focus on using the financial system for stimulating economic growth and reducing inequality. Inclusive financial systems are systems that create broad access to financial services, without price or non-price barriers to their use (Demirguc-Kunt and Klapper 2012). Without inclusive financial systems, poor people must rely on their own limited savings to invest in their education or become entrepreneurs, while growth opportunities for small enterprises are limited due to a lack of finance (Demirguc-Kunt and Klapper 2012). This can contribute to persistent income inequality and slower economic growth (see e.g. King and Levine 1993; Beck, Levine, and Loayza 2000; and Klapper, Laeven, and Rajan 2006). The influence of bank loans on businesses is expected to be high, but still 88% of entrepreneurs in Romania believe that access to funding is difficult or very difficult (EY 2013). The lack of capital to start with is higher in Romania (67%) than the average of the European Union (57%) (Agerpres 2013). Access to funding has worsened in 2013 according to 48% of entrepreneurs. Even though improved financial access is considered to be crucial for the development of entrepreneurship. The main reason for this reduction is the pressure on banks since the financial crisis to boost regulatory capital. This makes banks more selective in granting loans. In general, banks risk strategy became more strict and new businesses without financial history are considered as having a higher risk. Hence finding finance and developing business ideas becomes more and more difficult for entrepreneurs. Entrepreneurship is discouraged indirectly, while entrepreneurs are seen as a major job source and therefore one of the main contributors to economic growth (Ecorys 2012; EY 2013). The European Commission (2013) expects an increase in demand for seed capital and

capital to grow businesses in the coming years, hence the Romanian entrepreneurial market has great potential for ING.

This creates possibilities for ING Bank, who commissioned this research. As ING Bank Romania has its branches located in urban areas, it is most efficient for a new microfinance product to have an urban focus. There is a lot of unemployment in these areas, especially among youth (24%), hence stimulating entrepreneurship can have high impact (Etchart et al. 2014). To serve this sector research is needed to address the needs of entrepreneurs and find a suitable solution for ING without increasing their risk profiles. Therefore, the main objective of this study is to discover wants and needs of entrepreneurs and find the cornerstones for a suitable microfinance product for ING to serve startup companies in urban areas in Romania that currently cannot find any finance. This study gives an answer to the following research question:

How can ING Bank Romania serve startup businesses in urban areas in Romania with microfinance?

This research question is broken down into the following sub questions:

1. What are the (financial) wants and needs of entrepreneurs with startup businesses in urban areas in Romania?

2. What is the willingness to pay of entrepreneurs with startup businesses in urban areas in Romania for a loan with a bank?

These two questions are used to answer the main research question and find the cornerstones for a new microfinance product. To address these questions data has been collected during fieldwork in Romania. Starting with qualitative interviews and a follow up survey to investigate the wants and needs of startups. To answer sub question 2 the survey includes a Discrete Choice Experiment (DCE) to elicit preferences for loan attributes and to calculate willingness to pay. The used loan attributes are technical assistance, repayment amounts and the interest rate. They were chosen after conducting the qualitative interviews.

Results show that even though some interviewees are skeptical about banks, a bank loan is still preferred over most other finance solutions. High value is given to extra technical assistance. Including a combination of mentoring and training in the loan package increases the probability of acceptance with approximately 6 times. Slightly less, but still sufficiently significant were the results for the attribute repayment amounts. Results show that respondents prefer reducing repayment amounts in their loan package with approximately 5 times over increasing repayment amounts. For the interest rate attribute, the odds for choosing a loan package reduces with 5 times when the interest rate increases with 1%. Higher interest rates are accepted when technical assistance is offered. Respondents are willing to pay an extra of 1.22% interest rate for including a mentor and trainings in their loan package. And they are willing to pay an extra 0.98% interest rate for reducing repayment amounts compared to increasing repayment amounts.

The following chapter will give the conceptual framework of this study. Chapter 3 describes the current (economic) situation in Romania and the entrepreneurial mindset. This will be followed with Chapter 4 which describes the research process and methodology used. Chapter 5 will give answers to sub question 1 and Chapter 6 gives the results for sub question 2. Chapter 7 contains the discussion of the results and methodology. And chapter 8 gives a conclusion with recommendations

for ING Bank Romania and recommendations for further research. It will give an answer to the main research question.

2 Conceptual framework

This research started with a question from ING Netherlands to start microfinance in Romania by using their own branches. But how to give shape to this product? What should be the target group? What are the possibilities for a bank to offer microfinance? And many more questions needed an answer before implementation could actually start. While investigating the topic with colleagues from ING Romania, I gave shape to the main objective. The objective of this research is to discover the wants and needs of entrepreneurs and find the cornerstones for a suitable microfinance product for ING to serve startups in urban areas in Romania that currently cannot find any finance for their business.

A literature study has been done to find existing information regarding this topic. Lots of general information about microfinance is available. Microfinance offered by banks has some advantages, but also disadvantages. According to Pretes (2002) three major reasons exist that poor people cannot get access to finance. The first is that investment capital often is scarce. The second reason is that you need to be near a bank branch to have financial access. The last reason shows the inability of the poor to take repayment risks if their business fails and they often do not have collateral. The poor avoid to take risk as they cannot afford it (Hulme and Mosley 1996). For this reason banks are often not the best capital source. Also in developed countries research shows that banks often do not provide capital to startups. It is not seen as their market share, it is more of a market for the venture capital system (Barriers to Bank Lending 1993). Startups have different needs that need to be addressed and banks often do not have the capabilities to do so. Worldwide barriers exist and one of the main barriers is the lack of education and experience of startups. Adequate technical assistance is often not available and contains high costs (Barriers to Bank Lending 1993). However, more and more commercial banks are entering the microfinance sector, showing the possibilities for banks to serve this market.

Unfortunately, specific information about the microfinance sector for banks in Romania is not available. The microfinance sector in Romania mainly exists of MFIs and NGOs. A literature study with regard to the target group of this research and their wants and needs has been done, without showing results. Using different search engines like Web of Science, Google Scholar and Scopus did not find useful hits. Microfinance research in Romania is scarce, hence this study gives answer to the research question by doing its own fieldwork. Figure 1 gives a schematic illustration of the research design of this study. It shows the process of answering the sub questions as mentioned in chapter 1.

The first sub question to address the wants and needs of startups is answered by doing qualitative interviews. Respondents were asked about their wants and needs with open questions. An advantage is that results have a smaller bias as you do not guide the conversation in certain directions. In addition, it allows you to reconsider the direction your research is heading when results show certain outcomes (Silverman 2013). As the number of qualitative interviews was limited, a follow up survey was used to see if some wants and needs were present on a wider scale.

The second sub question will be answered with the help of a DCE, which is new in the microfinance sector. The outline for creating DCEs given by Johnson et al. (2013) is used for setting up this study, and several other studies are used as side reference. DCEs and WTP studies have never been used for research in the microfinance sector. It is a particularly advantageous method in the evaluation of new products and programs where market information is not available (Hall et al. 2004). The method

is more common in sectors of business, marketing, environmental economics and health to address the prediction of market share and the estimation of societal benefits (Hall et al. 2004). To introduce the method in the microfinance sector, I have used the lessons learnt from other sectors and in that way created a comprehensive and encompassing study. Note that literature from the health care sector is mainly used for this study.

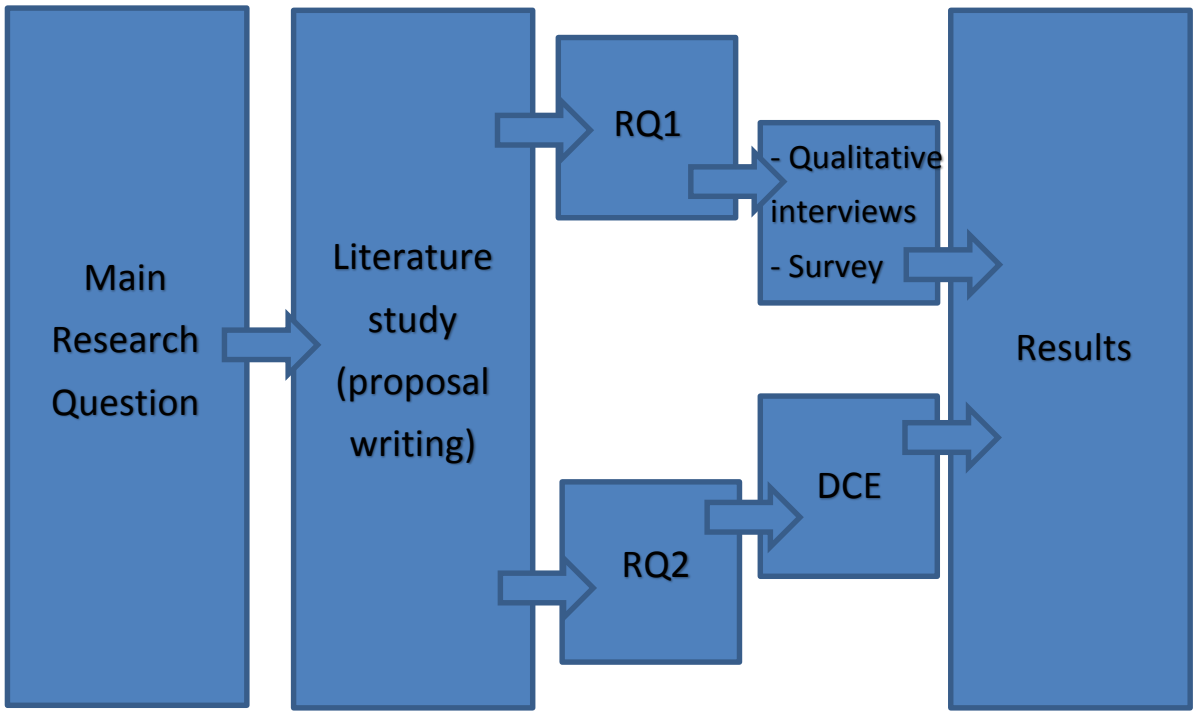

Figure 1: Research design

3 Study area: current situation and entrepreneurial mindset

This chapter gives a description and some background information of the study area of this research. It starts with a brief introduction of the commissioner of this research. Followed by a brief elaboration of the history and the current situation of Romania, including its economic situation and the mindset of entrepreneurs gives an overview of local circumstances. For decision making processes and product design it is helpful to have some general knowledge and recognize microfinance possibilities. Different sectors in Romania are described that might be interesting for ING for offering microfinance.

3.1 ING

This research is conducted on behalf of ING Microfinance, part of ING Greenbank which is a department within ING Bank Netherlands that contributes to worldwide improvements in financial inclusion. One of their new goals is to start a microfinance product in Romania by using their own retail channel. They aim to create impact using their own branches and reach out to an underserved market in need of finance.

Figure 2: ING branches in Romania.
Source: https://www.ing.ro/ingb/ing-in-romania/sucursale.html

ING Bank Romania has branches throughout the entire country (see Figure 2) and their head office is located in the capital city Bucharest. The department for micro companies and self-employees offers products and loans for the micro segment. As they do not give loans to startup businesses younger than 2 years, they are interested in a market research for a new product to extend their services to these startups.

3.2 Current situation in Romania

Romania is an Eastern European country, located on the western side of the Black Sea and bordering the countries Hungary, Serbia, Bulgaria, Ukraine and Moldova. Romania is member of the European Union since 2007, although still having its own currency RON (exchange rate RON/EUR is 0.22571[1]). Romania has a size of 238.291 km^2 with a population of 21.73 million in 2014[2]. The capital city Bucharest has approximately 2 million inhabitants and is the biggest city of Romania. Other major cities are Cluj-Napoca, Timișoara, Iași and Constanța (for geographic location see Figure 3). Urban areas are growing as cities offer more employment and higher wages,

Figure 3: Country map Romania
Source: http://wwp.greenwichmeantime.com/time-zone/europe/european-union/romania/map/ (accessed on 05-05-2015)

[1] XE Currency Charts. RON/EUR Chart. http://www.xe.com/currencycharts/?from=RON&to=EUR (viewed 05-05-2015).
[2] Index Mundi. Romania Demographics Profile 2014. http://www.indexmundi.com/romania/demographics_profile.html (viewed 05-05-2015).

however, still 45% of the population is living in rural areas (World Bank Group 2014a). Cities also attract the younger generations by offering a huge variety in higher education. There are 49 public and 8 private Universities in Romania[3]. Four of these Universities feature in the QS World University Rankings 2014/15. They gain solid national and international prestige and offer good quality education.

Since the early 90s, Romania's population is decreasing with 0.32% per year, mainly caused by a slowing birth-rate and emigration[4]. This decrease is spread across different ethnic groups. Romanian inhabitants are the main ethnic group and cover 83.4% of the total population, Hungarians cover 6.1% and Roma 3.1% (estimated in 2011)[5]. Other minorities, present in small numbers, are e.g. Ukrainians, Germans, Bulgarians and Armenians. The Hungarian population mainly lives in Transylvania, a province near the Hungarian border. The Roma population is more dispersed. They live in rural and urban areas, sometimes populating their own village or neighborhood. Roma people are a vulnerable minority group in the country and excluded of many systems, whereas Hungarians are better integrated in the Romanian society and have more rights and political power. The exclusion of Roma faces a long and complex history crossing many European borders. According to the World Bank (2015), Roma are the largest and most vulnerable minority group in Eastern Europe. At least 71% of Roma households in Eastern Europe live in deep poverty, hence Roma communities face considerable economic vulnerability (World Bank 2015). It is extremely difficult for them to improve their situation due to discrimination, persistent unemployment and low education levels. Less than 29% of Roma graduates from secondary school and less than 50% of Roma men and 25% of Roma women can find a job (World Bank 2015). It is a big challenge for Roma and other vulnerable groups in Romania to improve their conditions. Focusing on these vulnerable groups includes many complications and would require a more extensive research than is possible with this study. It might be interesting for ING to further investigate this topic to increase their social impact.

According to Etchart et al. (2014) Romania faces four societal challenges:

1. Reducing poverty and social exclusion. Romania faces poverty rates among the highest in the EU[6]. According to Eurostat data, 22.4% of the total population was at risk of income poverty[7] and 40.4% was at risk of poverty or social exclusion in 2013[8], which is equivalent to 8.601 million people[9].

[3] QS Top Universities. Worldwide University rankings, guides & events. Country Guides: Study in Romania. http://www.topuniversities.com/where-to-study/europe/romania/guide (viewed 05-05-2015).
[4] World Population Review 2015. Romania population 2105. http://worldpopulationreview.com/countries/romania-population/ (viewed 07-05-2015).
[5] Central Intelligence Agency. The World Factbook. https://www.cia.gov/library/publications/the-world-factbook/fields/2075.html (viewed 07-05-2015).
[6] World Bank Group. World DataBank. http://databank.worldbank.org/data/views/reports/tableview.aspx and http://www.worldbank.org/en/country/romania/overview (viewed 10-12-2014).
[7] Eurostat. People at risk of poverty or social exclusion. http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion (viewed 09-05-2015)
[8] At risk-of-poverty are persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers). Material deprivation covers indicators relating to economic strain and durables. Severely materially deprived persons have living conditions severely constrained by a lack of resources, they experience at least 4 out of 9 following deprivations items: cannot afford i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone. People living in households with

2. The second societal challenge is the aging population as costs for health care and pensions will rise, houses need to be adapted to different needs and loneliness of the older generation will increase. This will lead to an increase in public spending of approximately 7% of GDP (Etchart et al. 2014).
3. The third challenge is related to the labor market, due to youth unemployment in large cities and too early labor force exit of the 50+ generation. The unemployment rate of youth in 2014 was 24%, compared to 12.7% in the Netherlands[10].
4. Reduce the major gaps in living standards between rural and urban areas. Romania has the highest incident of rural poverty of 70% while almost half of the population lives in rural areas (World Bank Group 2014a). There are many possibilities to stimulate agriculture, e.g. by reducing import and fulfilling food needs in urban areas with Romanian resources.

As ING does not have branches in rural areas yet, this report will focus on the first and third challenge to reduce poverty and unemployment by stimulating the entrepreneurial environment that will create jobs by opening new businesses.

3.3 Economic situation

The transition to a functional market economy has been a long and painful process. After the fall of the communist political leader Nicolae Ceauşescu, Romania has experienced periods of recession during 1990-1992 and 1997-1999, periods of recovery during 1993-1996, periods of growth during 2000-2008 and again a recession starting in 2009, although they show recovery since 2011 (Duma 2012). Besides these periods of recession, Romania has also faced high inflation (up to 250%), especially during the '90s. This had a devastating effect for startup companies. As it had devalued their savings, it became impossible to find bank credits for new businesses and the huge inflation made it almost impossible to write a business plan (Duma 2012). Fortunately, inflation remains low and stable since 2005 despite a modest pick-up in July 2014 (World Bank Group 2014b), offering potential for bank loans.

As mentioned, Romania faces high poverty and unemployment rates compared to other EU countries. They are struggling to reduce the number of people living in poverty since a long time and although it has decreased substantially, significant efforts need to be made. Like many other countries, Romania has been hit by the world economic crisis that started in 2008. Their GDP saw a decrease of 6.8% and 0.9% in 2009 and 2010 respectively. Recovery started with an increase in GDP of 2.3% in 2011 and 0.4% in 2012. The latest available figures about Romania show a GDP of US$ 189.6 billion in 2013, while facing a growth rate among the highest in the EU of 3.5% and a decrease in inequality (World Bank Group 2014b). The income share held by the richest 20% in Romania was 38.1% in 2009, compared to 36.3% in 2012. The income share held by the lowest 20% went up from 8.5% till 8.9% in the same time range. However, the poverty head count ratio of the national poverty

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very low work intensity are those aged 0-59 living in households where the adults (aged 18-59) work less than 20% of their total work potential during the past year (http://ec.europa.eu/eurostat/tgm/web/table/description.jsp (viewed 09-05-2015)).

[9] Eurostat. Your Key to European Statistics. Database. http://ec.europa.eu/eurostat/data/database (viewed 09-05-2015)

[10] Eurostat. Youth unemployment rate (15-24 years old) - % of active population in the same age. http://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=0&language=en&pcode=tipslm80 (viewed 09-05-2015)

line saw a small increase starting in 2010. It went down to 21.1% in 2009, but it rose again to 22.2% in 2010 and 22.6% in 2011 (no data available for more recent years)[6].

According to World Bank Group (2014b) the high growth rate of 2013 is mainly driven by export performance that expanded by 7.8% and a strong base of agricultural crop to absorb (unexpected) fluctuations. The export-oriented automotive sector and information and communications technology (ICT) ensure these high growth rates. These sectors are booming in Romania, hence the Universities offer a high variety of ICT studies and the younger generation already has many high quality graduated ICT students amongst them. The sector that keeps playing an important role in Romania is agriculture, mainly because of the size of the rural population and because it is a significant source of employment in the country. Romania has approximately 15 million hectares of agricultural land whereof 5 million hectares of highly productive arable land. Although they were once considered as a breadbasket for Europe, the agricultural sector remained underdeveloped. The sector faces high poverty and one of the lowest rates of agricultural productivity and competitiveness. Romania keeps importing an increasing amount of its food needs although they have 30% of their work force in agriculture, compared to 2% in the EU15 (World Bank Group 2014b).

3.4 Entrepreneurial mindset

Entrepreneurs lay the foundation of the microfinance sector, hence the entrepreneurial mindset is relevant for this study. The special communist history of Romania highly influenced this mindset and creates some advantages and disadvantages that are important to consider before focusing on this sector. In this study the following definition of entrepreneurship is used:

> Entrepreneurship refers to people's choices and actions in the initiation, acquisition or operation of a business or involvement in strategic decision making within the firm. The *genius of entrepreneurship* is the process of thought, creation and development of economic activity by blending risk-taking, creativity and innovation with good administration of a new company or of an existing one. Most economic, psychological and sociological research points out that entrepreneurship is a process and not a static phenomenon. (Marchis 2011, 130).

The communist era from 1965 till 1989 highly influenced entrepreneurial attitudes, beliefs and motives in Romania. The liberation of the country, after the death of the communist leader Nicolae Ceaucescu in December 1989, created an opportunity for the rebirth of entrepreneurship. Owning a business was illegal until January 1990, hence over 95% of the businesses were state-owned (Pistrui, Welsch and Roberts 1997). Entrepreneurs could not flourish for years and the entrepreneurial mindset was not developed. The lack of entrepreneurial culture was highly visible especially in the first years after the changes from 1989, but even nowadays it can still be seen (Duma 2012). However, due to economic uncertainty and overall instability during the transition, a less centralized approach and freedom became an internal drive for Romanian people to start their own business. The desire for security, freedom and a personal sense of accomplishment became the base for entrepreneurial activity in Romania (Pistrui, Welsch and Roberts 1997). According to Pistrui, Welsch and Roberts (1997) a strong desire exists to achieve this personal sense of accomplishment along with making better use of trainings and skills. Social recognition can be received and self-esteem can be boosted by having your own business and being able to use your own creativity.

To have a clear overview of the pros and cons of Romanian entrepreneurship, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis will be shown in the next four paragraphs. SWOT analyses are often used by companies and organizations to improve their products and/or activities as it gives an easy to access representation of the useful elements. It will start with describing the Strengths of Romanian entrepreneurship and continue with its Weaknesses, Opportunities and Threats respectively.

3.4.1 Strengths

The fast development of entrepreneurship and the many business opportunities are the main strengths for entrepreneurship in Romania. As some sectors in Romania are underdeveloped compared to Western countries, high potential remains for entrepreneurs to start their own business. For example, because of the low-level of service market development, many young people have business ideas. The younger generation, raised in a liberated country with a liberated educational system, is more open minded and creative. For many Romanians, entrepreneurship means freedom and independence and especially young people are more attracted by these qualities than by working in a corporate structure. Flexibility is the main characteristic of Romanian entrepreneurship and 75% of young Romanian think that in the next 10 years entrepreneurship will be more important than, or at least as important as it is now, whereas 30% of Romanians think they will have their own business (Factsheet: Case Study Entrepreneurship in Romania). When asked about the change in mentalities on entrepreneurship, 35% of entrepreneurs believe that it has improved, compared to 26% who think it has worsened (EY 2013). The country is stabilizing and development is highly visible. One of the biggest problems for entrepreneurs in the '90s was the high inflation rate that made it very difficult to obtain finance and make business plans. Most of Romanians were not familiar with inflation as prices were fixed and established by central authorities during the communist regime. Having passed this uncertain period, inflation has been stable and low for many years, in favor of the microfinance sector (Duma 2012).

3.4.2 Weaknesses

According to Duma (2012), a lack of entrepreneurial culture exists which creates a lack of investments and a higher investment risk. Also a lack of knowledge of making a business plan and the abilities to put that into practice is a major weakness. Those factors were supported by preferences for stable jobs and a poor understanding of the market economy mechanisms (Duma 2012). Research shows that the most common problems of entrepreneurs are referring to the legislative framework (51.32%), excessive bureaucracy (45.22%), low possibility to predict the evolution of business environment (32.30%) and corruption (31.76%). These are accompanied by social tension (27.12%), political changes in country management (22.93%) and the politics of IMF and WB (17.11%). Entrepreneurs also have to face some internal barriers such as financial instability, unfair competitiveness, lack of communication between state institutions, the collapse of real estate, reduction in purchasing power of population and the credit policy of banks (Factsheet: Case Study Entrepreneurship in Romania). Financial resource scarcity results in a low level of technical equipment and low levels of investment in training and education. Funding continues to be one of the most important challenges for the Romanian entrepreneurs: 88% of them consider access to funding difficult or very difficult and 48% of entrepreneurs consider access to funding has worsened during the last year in Romania, despite the fact that entrepreneurs from EU, as well as from Romania, say that funding is the most impactful factor for the entrepreneurship environment. (EY 2013). Another major weakness for entrepreneurs is the fear of business failure (EY 2013; Factsheet:

Case Study Entrepreneurship in Romania). Only 14% of the respondents believe that society tolerates business failure, while 81% believe this failure represents a barrier to future business projects, a career failure or it indicates a lack of necessary skills (EY 2013).

3.4.3 Opportunities

The many untapped business niches, the high potential for external benchmarking and the lack of efficiency of different sectors of economic activity create opportunities for entrepreneurs (Factsheet: Case Study Entrepreneurship in Romania). Many young people with University degrees have business ideas. A lot can be gained in the rural as well as the urban areas. Agricultural activities are still underdeveloped and have high potential, and in the urban area the ICT sector is emerging with the help of many graduated young ICT students. According to EY (2013), among the instruments that are considered to have the largest potential impact in Romania are bank loans, venture capital investments, business angels and private equity. EY (2013) recommends Romanian banks to have a more flexible and adapted strategy to the Romanian market, as their strategy is not in tune with the dynamics of the Romanian economy and they also recommend to reduce banking costs as these withdraw entrepreneurs from entering the market. Regarding the areas of action for the government, the Romanian entrepreneurs consider that tax incentives for investments in SMEs (16%), more effective and simplified regulatory systems for businesses (13%), and credit warranties (13%) would have the most significant impact on funding in Romania (EY 2013).

3.4.4 Threats

The main threats for Romanian entrepreneurs are the frequencies of changing legislation, the high level of hypermarket competition, and external competition due to globalization. Although a great potential for development is present, juridical, institutional and psychological barriers remain, creating a threat for the sector (Factsheet: Case Study Entrepreneurship in Romania).

3.5 Conclusion

High poverty levels in Romania show that social impact can still be accomplished. Social impact can be reached by focusing on a variety of sectors. As GDP is growing and quality of education increases, educated people should be stimulated to use their entrepreneurial skills and flourish the labor market. Starting new businesses can create jobs and job creation is seen as a major source of economic growth, having high (social) impact all over the country. The impact of the communist history of Romania is still present. It created some advantages for entrepreneurship as a higher percentage of the population has the desire to become independent and start their own business. The economic situation still lags behind the level of other European countries, hence creating many possibilities for startup businesses. More insights in the wants and needs of these startups are necessary to be able to further encourage this sector.

4 Approach and methodology

This chapter consists of two sections describing the approach and corresponding methods to answer both sub questions. Before data collection started, I first wanted to get familiar with the entrepreneurial sector in Romania. As I had never been in Romania before, I wanted to have some basic knowledge before starting with the actual qualitative interviews as described in the next section. Talking to several people from different organizations in the microfinance and startup sector improved this basic knowledge. It gave me a better feeling of the present perceptions, active players, current situation and trends. In addition, I talked to many ING colleagues from different departments to observe opinions and possibilities for microfinance. This helped me to better align wants and needs of entrepreneurs with microfinance opportunities for ING.

4.1 Addressing wants and needs of startups

4.1.1 Qualitative interviews

Qualitative interviews were conducted with 9 entrepreneurs to elicit their preferences and ideas: 5 of them from Impact Hub Bucharest, 3 from the Post-Privatization Foundation (PPF) and 1 from Tech Hub. The interviews were recorded and transcribed for further review. The interview guide (see Annex I: Qualitative interview guide) contains open questions and consists of 4 parts. The first part asks for general business information and the key challenges they face. The second part aims to discover their wants and needs with regard to the startup. Third, their opinion about banks and important banking needs are addressed. The fourth and last part aims to select attributes to be used for the DCE. The last part is further explained in paragraph 4.2.1. The opinion, perceptions and ideas of interviewees are summarized in chapter 5.

4.1.2 Survey

As the number of interviews was limited, the wants and needs were also tested with a survey on a bigger scale. An online survey was made available by using SurveyMonkey[11]. As the online survey did only achieve 25 responses, a call center called more respondents to let them answer the questions on the phone. In total 84 completed surveys were achieved. The survey takes approximately 10 minutes and starts with asking information about their business to have some background information and to be able to make some categorizations, e.g. how many years they are registered with the Chamber of Commerce or how much money they would need to grow their business. The second part of the questionnaire aims to get information about wants and needs regarding technical assistance and mentoring. This also functioned as an introduction for the DCE as it showed them the type of trainings that might be possible with the technical assistance attribute (the DCE is explained in the next paragraph). The last part of the questionnaire contains demographic information. See Annex II: Questionnaire. SurveyMonkey offers a test phase wherein some respondents can test the questionnaire. Five respondents with startup businesses have completed the test questionnaire and provided me with feedback regarding the structure and type of questions. The feedback was used to adapt some questions and reduce the complexity of the DCE.

4.2 Discrete Choice Experiment

A DCE is a quantitative method to reveal preferences of individuals. With DCEs, different hypothetical alternatives can shed light on how individuals value selected attributes of a product, program or

[11] SurveyMonkey offers online surveys. For more information see www.surveymonkey.com.

service (Mangham et al., 2009), under the assumption of utility-maximizing behavior of the respondents (Danthurebandara et al., 2011). DCEs collect stated preference data and are often used in the absence of revealed preference data (Ryan and Wordsworth, 2000). In other words, if preference data of new products is not available, stated preference techniques can be used to assess utility from responses by individuals to hypothetical questions. These hypothetical questions will form alternatives that describe certain attributes. Responses to these questions will be used to determine if the attributes significantly influence preferences and to reveal their relative importance (Mangham et al. 2009). The coefficients of the regression analysis can be used to calculate the Willingness to Pay (WTP) of respondents for the attributes of the loan package. This can help ING in their decision making for offering certain packages.

Two theories constitute the basis of DCE methods. The first is called Lancaster's characteristics theory of value and shows the importance of characteristics in choice decision making. Individuals face a certain demand that influences their choices. This demand does not depend on the available goods (alternatives), but on the characteristics (attributes) of these goods (Lancaster, 1966). The second theory is the random utility theory and states that alternatives will be chosen with the highest utility for the decision maker (Manski 1977; McFadden 1974). In this model, utility consists of a structural part *V* with observable determinants and a random component with unobservable determinants, also called the error term ε. This means that the utility *U* for individual *n* for alternative *i* can be written as $U_{in} = V_{in} + \varepsilon_{in}$. An individual will choose this alternative if it exceeds the utility of another alternative *j*, i.e. $U_{in} > U_{jn}$. As the value of the error term depends on the complexity of the choice set, it is important to keep the choice set as simple as possible (Danthurebandara et al. 2011).

The upcoming paragraphs in this chapter describe the key stages for designing the DCE, doing the statistical analysis using the Cox regression model in SPSS, and the WTP calculation.

4.2.1 Attributes and levels

An important stage in creating a DCE is the selection of attributes and levels. Offering choice sets with hypothetical products requires a certain variation in its design. This variation is made by using different attributes that function as the elements of the product. The attributes are assigned with different levels and these levels affect the preferences of individuals for making the choice decision (Lancsar and Louviere 2008). A variety of scenarios (i.e. choice tasks) can be composed by varying the levels of the attributes. By showing at least two choice tasks at the same time, respondents can choose for their most preferred scenario. The choices made on a series of choice tasks can be used to draw conclusions regarding the elements that construct a most desired product (Veldwijk et al. 2013). It is used to determine the significance of attributes that describe a product, the tradeoff between these attributes and the WTP for a unit change in each attribute (Drummond et al. 2005).

Assigning the relevant attributes with the right levels highly influences the validity of the study (Mangham et al. 2009). Its selection and definition requires a good understanding of the perspective and experience of the target population (Hall et al. 2004). Attributes can be country specific and an understanding of the local situation needs extra attention. According to Hall et al. (2004), qualitative data is important for assigning the levels to the attributes and the levels should reflect the range of situations that respondents might expect to experience. However, it should also be realistic from the providers point of view, in this case ING. Ensuring that levels are realistic and meaningful will

increase the precision of parameter estimates (Hall et al. 2004). Hence the levels that interviewees assigned to the attributes were discussed with ING colleagues of different departments. This resulted in the final levels that were both realistic for ING and potential clients.

To assign the right attributes and levels, a section in the qualitative interviews was added. During the interviews the entrepreneurs were asked about loan aspects that they considered as important. They had to mention at least 3 loan aspects (i.e. attributes). Afterwards, they were shown a predefined list of 8 different loan aspects that they had to rank from most to least important:

A. Technical assistance (trainings)
B. Loan amount
C. Repayment amounts
D. Interest rate
E. Loan term
F. Grace period
G. Collateral
H. Repayment frequency

Considering the attributes mentioned by the interviewees in the open question and the ranking of the predefined list (for the analysis see Annex III: Attributes), three attributes were chosen for the survey, having three levels each. This resulted in the attributes and levels shown in Table 1.

Table 1: Attributes and levels for discrete choice experiment

Level / Attribute	0	1	2
Technical assistance (trainings)	No technical assistance	Personal mentor	Trainings and personal mentor
Repayment amounts	Reducing repayment amounts	Equal repayment amounts	Increasing repayment amounts
Interest rate	11%	13%	15%

The first attribute is technical assistance and contains an extra service that can be given as a supplement to the loan. The qualitative interviews showed a demand for technical assistance regarding business and personal skills. Providing technical assistance can be an extra client screening tool for the bank and it can succeed in lower default rates. The respondent can choose between no technical assistance, a personal mentor and both a personal mentor and trainings. The trainings will be specified for entrepreneurs, e.g. trainings about marketing, finance and how to write business plans. The personal mentor is someone with experience in the respondent's field of business that can help and assist to reach objectives and to face difficulties and challenges. The second attribute is the type of repayment amount. With reducing repayment amounts only the interest of the outstanding money at that same moment will be repaid. I.e. when the outstanding loan shrinks, the costs for interest will reduce as well. With equal repayment amounts, every repayment will add the same costs and they will not shrink or increase over time. Hence, increasing repayment amounts will be more flexible for the client as it starts with lower repayment amounts and as the business becomes more mature, the repayment amounts will increase. The interest rate shows an annual percentage to be repaid gradually with the agreed installments. This attribute will show the price entrepreneurs are willing to pay for a loan including the two other attributes.

4.2.2 Experimental design

The next stage is the creation of the experimental design to construct different choice sets that were shown to the respondents. The right design needs to be identified in order to analyze the data with unbiased parameter estimates for every parameter in the model (Johnson et al. 2013). To be able to identify the effects of interest, the experimental design should sufficiently vary the relevant attribute levels within and between choice sets (Johnson et al. 2013). The combination of three attributes with three levels each can result in a very large questionnaire that will require many respondents if using all possible combinations. A design that uses all possible level combinations is called a full factorial design and allows for calculations of main effects and interaction effects. Main effects refer to the direct independent effect on the choice variable of the difference in levels. Interaction effects are the effects on the choice variable obtained by varying two or more attribute levels together (Mangham et al. 2009). A full factorial two-alternative design using three attributes, each with three levels, yields 27 (3^3) possible profiles and has 351 (3^3 x (3^3 – 1)/2) possible combinations of two-alternative choice questions (Johnson et al. 2013). To reduce the number of choice questions, I will use a fractional factorial design to calculate main effects only (Chen, Sun and Wu 1993).

The efficiency of fractional factorial designs will increase when it is both orthogonal and balanced (Kuhfeld 2010). Designs possessing both characteristics are also called orthogonal arrays and they are perfectly efficient as its attributes are statistically independent. A balanced design means that each level appears equally often within each attribute and an orthogonal design means that each pair of levels appears equally often across all pairs of attributes within the design (Johnson et al. 2013). Orthogonal arrays can be obtained from different websites. I have used the library of orthogonal arrays of N.J.A. Sloane[12] as this is a very accessible website. The orthogonal array obtained from N.J.A. Sloane's webpage is oa.9.4.3.2. This means respectively an orthogonal array with 9 choice tasks, 4 attributes, 3 levels and strength 2 (which means that only main effects can be estimated). I started with this design, however, during the test phase the design seemed too complicated and it was confusing for the respondent to compare and weigh all the attributes for each choice task. As this can result in less reliable data (Danthurebandara et al. 2011), I deleted the least important (according to ING) attribute from the design. As orthogonal arrays do not exist for all combinations of attributes and its levels, I choose the design most close to the number of attributes and levels in my research. The orthogonal array becomes a D-efficient design. The more efficient the design, the closer it gets to the orthogonal arrays which are both orthogonal and level balanced (Kuhfeld 2010). It is therefore useful to choose a design that is closely related to an already existing orthogonal array. Hence I only used 3 attributes, which results in a set of codes shown in the column of Option 1 in Table 2. These codes are similar to the design of N.J.A. Sloane for oa.9.4.3.2, except for the last row, i.e. the fourth attribute, that is deleted.

[12] http://neilsloane.com/oadir/index.html (accessed on 05-02-2015)

Table 2: Optimal pairs for estimating main effects for DCE with 3 attributes having 3 levels each.

Choice question	Option 1			Option 2		
	A1	A2	A3	A1	A2	A3
1	0	0	0	1	2	1
2	0	1	1	1	0	2
3	0	2	2	1	1	0
4	1	0	1	2	2	2
5	1	1	2	2	0	0
6	1	2	0	2	1	1
7	2	0	2	0	2	0
8	2	1	0	0	0	1
9	2	2	1	0	1	2

Table 3: Optimal pairs decoded from Table 2

Choice question	Option 1			Option 2		
	A1	A2	A3	A1	A2	A3
1	None	Reducing	11%	Mentor	Increasing	13%
2	None	Equal	13%	Mentor	Reducing	15%
3	None	Increasing	15%	Mentor	Equal	11%
4	Mentor	Reducing	13%	Trainings and mentor	Increasing	15%
5	Mentor	Equal	15%	Trainings and mentor	Reducing	11%
6	Mentor	Increasing	11%	Trainings and mentor	Equal	13%
7	Trainings and mentor	Reducing	15%	None	Increasing	11%
8	Trainings and mentor	Equal	11%	None	Reducing	13%
9	Trainings and mentor	Increasing	13%	None	Equal	15%

These codes show the levels corresponding to the 3 attributes in Table 1. Each attribute has 3 levels and they are labelled 0, 1 and 2. E.g. the first attribute technical assistance (A1) codes its levels with a 0 for no technical assistance, a 1 for a personal mentor and a 2 for trainings and a personal mentor. So the code 011 means a combination of respectively no technical assistance, equal repayment rates and 13% interest rate (see Table 3 for a transformation of the codes of Table 2 in words). The column of Option 2 in Table 2 is a transformation of the column of Option 1, made with the use of a generator. This generator creates the second option in each choice question while maintaining orthogonality and minimal level overlap (Johnson et al. 2013). Street, Burgess and Louviere (2005) calculated some generators for DCEs with 4 attributes that provide you with the most efficient designs. Just like with the orthogonal array I picked the best suiting generator and deleted the 4th attribute. This resulted in the generator 121, which means a shift in the level for each attribute of respectively 1, 2 and 1 levels. E.g. the code 210 with a generator of 121 results in a second option for the choice question of 001 (see choice question 8 in Table 2).

An extra question was added to the DCE to ask if respondents are willing to take a loan with any of the packages mentioned in the choice questions. This question is added because the choice questions do not provide the possibility to opt out. To obtain as much data as possible, it is important to know the preferences of respondents, even if they prefer to find finance in a different way than having a bank loan.

4.2.3 Study sample

The target group of this research are entrepreneurs in urban areas in Romania having their own business. Startups (below 2 years of existence) are compared with more mature companies. There are different platforms and organizations in Romania that facilitate e.g. knowledge sharing, trainings and work spaces for entrepreneurs. PPF, Impact Hub, NESsT Association, Civitas and the Alternative University in Bucharest were willing to send out my online survey and/or post a link on their webpage. However, due to a low response rate (25 responses), PPF provided me with a set of phone numbers to call entrepreneurs that also received a participation request by email. These entrepreneurs were called by a call center as a reminder and offered the possibility to directly answer the questions on the phone. This resulted in an extra 59 respondents, summing up to a total of 84. Using the equation of Orme (1998) for stated choice experiments that estimate main effects only, this is exactly the minimum sample size (N) needed for this study:

$$N \geq 500 \times \frac{L^{max}}{J \times S}$$

With L^{max} as the maximum number of levels for any of the attributes, J as the number of alternatives and S as the number of choice questions. Having 3 levels for each attribute, 2 alternatives for each choice question and 9 choice questions in total, this gives a sample size of $N = 500 \times \frac{3}{2 \times 9} = 83\frac{1}{3}$. Table 4 shows information regarding the composition of some of the characteristics of the respondents. The average age of the respondents lies in the 25 to 29 years of age category. 45% of the respondents is female and 55% is male. Note that the categories of corresponding organizations exceed the total of 84 respondents as each respondent can be member or can have received trainings or funding from more organizations at the same time.

Table 4: Information about study sample

	Category	Number of respondents
Corresponding organization	Post-Privatization Foundation	58
	Impact Hub	18
	Alternative University	11
	NESsT Association	6
	Civitas	2
Age	18 to 24	12
	25 to 29	38
	30 to 34	14
	35 to 39	13
	40 or older	7
Years of registration at Chamber of Commerce	Not registered yet	11
	Below 1 year	16
	1 to 2 years	27
	2 to 3 years	14
	More than 3 years	16
Highest educational degree	High school	4
	Bachelor	40
	Master	35
	MBA	2
	Other	3
Monthly	Below RON 1500	8

household income	RON 2500 to 2500	15
	RON 2500 to 3500	13
	RON 3500 to 4500	17
	RON 4500 to 5500	6
	More than RON 5500	25

4.2.4 Statistical analysis

The analysis of DCE data involves regression models that have a dichotomous or polychotomous categorical dependent variable, such as probit and logit models (Mangham et al. 2009). The most common are conditional, multinomial and mixed logit models. Which model to choose depends on the type of variables you need to analyze. Individual specific variables, which are alternative invariant hence do not change over the choice questions (e.g. the variable ''age'' remains the same for the respondent and does not change over the choices in the DCE), can be analyzed with multinomial logit models. Alternative specific variables, which have a different value for each choice question (e.g. the attribute levels), are usually analyzed with conditional logit models and models containing both kind of variables can be analyzed with a mixed logit model (Croissant 2011). The DCE in this study uses alternative specific variables and therefore the conditional logit model will be used to fit the data, also known as the McFadden choice model (McFadden 1974).

The conditional logit model assumes both Lancaster's characteristics theory of value and the random utility theory as mentioned in the beginning of this chapter. It applies a logistic regression analysis over the utility (*U*) equation and dummy coding has been applied for the levels of the attributes with the first level as reference. The reference levels were set to zero to be able to estimate the remaining levels (Sawtooth Software 2010). The interest rate attribute is the only attribute which is not transformed in a dummy variable. The reason is that the levels of the attribute differ with the same value (2% interest rate more for each higher level), while the other attributes do not have discrete values and therefore cannot be analyzed with a regression analysis without dummy coding. See the below utility equation *U* that gives the total utility of a scenario with conjoint attribute levels:

$$U = V + \varepsilon = \beta 1 \times DTA1 + \beta 2 \times DTA2 + \beta 3 \times DRA1 + \beta 4 \times DRA2 + \beta 5 \times IR + u + \varepsilon$$

Wherein V + Ɛ demonstrates the random utility theory as mentioned in the beginning of this chapter. β1 till β4 are the attribute estimates that indicate the relative importance of the dummy attributes technical assistance and repayment amount to their reference level. The dummy variable DTA1 is 1 when technical assistance is 1 and DTA2 is 1 when technical assistance is 2. The dummy variable DRA1 is 1 when repayment amount is 1 and DRA2 is 1 when repayment amount is 2. In all other cases the dummies are set as 0. β5 is the attribute estimate for the interest rate (IR). Usually regression analysis adds an individual specific constant β0, but in this case, β0 is the same for the alternatives in each choice question, i.e. it does not vary over the alternatives. For this reason the constant term has no added value and is taken out of the equation. The consequence is that correlation between the included variables, due to individual specific unobserved variables, is not accounted for. Conditional logit does not account for fixed effects; i.e. a different constant for each individual. An unobservable error term *u* is added, to capture the differences among respondents (Ryan 1999).

The conditional logit regression will be performed in SPSS by using Cox regression analysis. The choice for package A or B is the dependent variable in the dataset analysis and the attributes DTA1, DTA2, DRA1, DRA2 and IR are the independent variables. The dependent variable is coded with a 0 for package A and a 1 for package B. The independent variables are coded in line with the former used codes for the attribute levels (0, 1 and 2). In SPSS a long format is used wherein each individual has 2 x 9 = 18 rows; two options (package A and B) for all 9 choice sets. Calculating the parameters of the utility equation shows if the attributes significantly influence individuals preferences and it reveals their relative importance. The parameters β1 to β4 show the utility change of an increase in the corresponding attribute of 1 level. As β5 does not correspond with a dummy variable, it shows the change in utility of a 1% increase in the interest rate. As this is a logistic model, you cannot draw direct conclusions of the parameter sizes, however, their sign gives an indication of the positive or negative effect of the attributes on total utility (Dougherty 2011). With logistic regression, the odds ratio is often used to draw conclusions using the parameter sizes (Field 2000). It functions as an indicator of the change in odds when the attribute increases with one level. It is automatically calculated (in SPSS output written as Exp(B)) when performing the Cox regression. For an explanation of the calculation of the odds ratio used by SPSS, see page 270 and 271 in Field (2000).

Because the design includes the interest rate (cost attribute) for the loan package, an estimation for willingness to pay (WTP) can be produced. This will help to understand the relative importance given to the attributes. The marginal WTP for a discrete change in an attribute level can be calculated with the following equation (Nieboer, Koolman and Stolk 2010):

$$WTP_a = -\left(\frac{\beta_a}{\beta_{interest\,rate}}\right).$$

5 Wants and needs of entrepreneurs

The main aim of the qualitative interviews is to select the most adequate attributes and levels for the DCE. In addition, interviewing starting entrepreneurs gave the opportunity to ask more in-depth questions about their thoughts, feelings, wants and needs regarding entrepreneurship, setting up their own business and financial related matters in Romania. The upcoming paragraphs share the most outstanding ideas and insights of these interviews for ING and can be used for further research.

5.1.1 Challenges of startups

Entrepreneurs have been asked about their major challenges related to starting up their business and the challenges they face in their first few years of existence. What is considered as a startup company differs between entrepreneurs. For ING it is defined as companies younger than 2 years, however, some entrepreneurs do not look at the number of years, they look at the maturity of the company. One of the interviewees still considered himself as a startup although he was in business for 5 years. He does not see his company as mature yet, and although his company can sustain itself, its growth rate is still very low. Low growth can be due to many reasons and the process to a mature company is different for each startup. Some startups mention not to face any issues or big challenges, and others run into many problems. Usually the startups that do not face big challenges are founded by entrepreneurs that already have the experience with opening other businesses. To show the high variety of challenges, you find below a list with the major challenges mentioned by the interviewees:

- Dealing with a lack of time, or to put it differently, with a lack of hands. Some startups need employees but cannot afford it yet.
- How to work with people and other companies that do not stick to their words?
- Access to a network of startups in other areas: to exchange services and share experience. You cannot be good in everything related to your startup business, e.g. you are good in marketing, but how to design the product?
- Access to a network of clients for a wider outreach.
- How to easily send invoices with VAT? The European legislation is different than the Romanian legislation, how best to align this?
- Writing business plans and predicting the future. Often it turns out differently than planned. It is hard to predict how sales will go and how much you will earn. Especially with innovative and new businesses it is hard to find the right information due to a lack of experience in your new market with your new product or service.
- Lack of money: starting a business without capital is a big challenge. Even though you do not need capital for certain products, working capital and having a buffer is seen as a necessity.
- High bureaucracy and many fees when opening your business. Not just registration fees, but e.g. fees for paying your lawyer and accountant.
- Personal challenges like staying motivated and not losing faith in difficult times.
- Managing and training a team of employees and finding the right employees for your business.

5.1.2 Wants and needs

To address their challenges, the interviewees mention that they need more collaboration with other startups and like to have access to more knowledge and information. Most of them are open for technical assistance, however, not all of them believe in banks for giving the right assistance.

Perceptions towards banks seem skeptical and cautious due to bad experiences and overall negative thoughts about banks. Mainly because of high prices raised by banks and inaccessibility. Also some interviewees mention that banks do not possess the knowledge and experience that startups need. Financial management trainings from banks can be useful, but some interviewees prefer to follow trainings elsewhere.

Most interviewees are looking for technical assistance and/or mentoring. They need someone with experience and knowledge of their sector. Trainings are helpful to get them through the startup process, but specific knowledge seems more valuable for them. And a platform or a group with startups where experiences can be shared and services can be exchanged is assumed to be very helpful.

Some interviewees mention that they would like to have access to a consultant that is able to help with topics like law and regulation, finance and business proceedings. Regular evaluations with a consultant from a bank can be helpful and some interviewees mention that they are willing to pay for this service. Obtaining sufficient business revenues is crucial for the future of businesses and many entrepreneurs are not focused well enough on this topic. If banks offer special services for startups and it seems to be valuable and useful, entrepreneurs seem to be willing to pay for it.

5.1.3 Financial needs

Startup companies are aware of the difficulties related to finding finance. They all say that it is impossible to find finance with a bank, so most of them do not even consider banks as an option. They instead search for funds or investors for their financial needs. Mainly because the risk for a loan with a bank is higher compared to an investment, as in the latter case, there is no repayment and interest rate pressure. In addition, investors are seen as having more patience as they realize that it can be in their advantage to wait for the business to grow; they give startups more time to grow and to increase their return on investment. Investors often are familiar with the sector they invest in and are experienced with startup businesses. They do not just function as capital inflow for the startup, they also function as a mentor and/or trainer. The advantages of an investor are his knowledge and connections.

As a disadvantage for an investment in their business, some interviewees mention that they become too dependent on the investor. Some startups like to stay independent and have their own control over their resources. So if there would be a possibility to obtain a loan with a bank, some interviewees would prefer this option. One of them says that he will take more care of the money since in the end it is his own money he is working with. He would work and use it more careful than if someone would invest in his business.

Financial needs in the IT sector are seen differently than other sectors. They often do not need start capital as it is easier for them to bootstrap their company; i.e. they start small with their own finances and grow in line with their operating revenues. They do not need to invest in a certain product, they only need work capital. While their business grows they will search for finance with for example an investor, but often this is not during their startup phase. The same story can hold for the service sector where entrepreneurs can prefer to bootstrap their company. Interviewees mention that these type of businesses need different investments often used as work capital.

5.1.4 Possible solutions

To fulfill financial needs of startup companies, the interviewees came up with some ideas for banks to be able to assist startup businesses:

- Banks should have an advice section that you can visit to ask questions. It is important for startups to have personal contact with an experienced and dedicated person. As most startups are new in their field, their knowledge level is not sufficient yet. An advice section can e.g. give tax advice and help to structure and organize the new company. If this service comes in the same package as the loan, the price for the service can be added to the interest rate and gradually paid back.
- Banks should have a variety of products for startups that addresses the need for different types of finance. E.g. startups in the service or IT sector usually do not have a product to show, but they need capital for hiring an extra employee or to rent an office. In addition, there is a need for short term loans (for 1 till 4 weeks) to be able to make transactions. If banks would accept payment contracts with clients as a guarantee for repaying within a certain amount of time and if they can give quick access to these short term loans, it would be very interesting and helpful for startups that do not yet have their own buffer to cover these transactions.
- Exchanging the interest rate for equity. E.g. the bank provides a loan and instead of charging an interest rate, they can receive equity in the business. It is seen as an exchange of services; for the services the bank provides to the startup (this can be anything, e.g. interest rate, technical assistance, etc.) they receive equity in the company.
- Offer financial consultancy and accountancy services. Banks will have access to more information that can be used for better decision making regarding the provision of loans. Startups can change their accountant or the bank can decide to collaborate with their accountant or consultant.
- Offer progressive interest rates. I.e. start with lower rates and increase the rate when the business matures. The first few months of the startup are crucial and revenues are the lowest. It should therefore be possible to have lower repayments in the first months or year.
- A replica of the funding system of the government can be a solution for having more security that the loan will be repaid. This government fund doubles your money. I.e. if you own 3.000 euro, they give you another 3.000 euro to invest in your business.

A possible solution from one of the interviewees that deserves, to my opinion, a separate paragraph is the Elefin application. Elefin is a cash therapy application that can be used by micro and SME companies. It is an innovative business idea that addresses some of the wants and needs of startup companies and it can serve as a tool for banks to reduce risk profiles of borrowing clients. It is a new technology brought on the Romanian market that can give banks extra and actual information about cash flow and business proceedings of the company. Currently, most businesses are working with excel documents and spreadsheets for their administration and it costs them lots of money and time to do their financials. Elefin simplifies this process and offers a communication platform between the involved stakeholders. Elefin offers different services like overviews of transactions, financial forecasts, invoices, salary records, timekeeping of employees, equity management, automated calculations, accountancy services, generation of charts to show risk degree of the business, suggestions to improve the business and possibilities for education. Using all these functions in the

same application gives businesses the opportunity to save time, resources and money and it gives them extra security and stability. The main benefit for ING to be involved in the application is that it can provide them with additional information regarding their clients and they can receive necessary information to track the status of their clients businesses. If the business is not performing well, ING can immediately notice the changes in the application and take the necessary action. It can function as a screening tool for clients having a loan with ING. In addition, it can also be used as a tool to send special offers to the clients. Statistics about how clients manage their money and data monitoring can help to decide the perfect timing to send these offers.

5.1.5 Survey results: types of finance and technical assistance

The survey contained questions regarding the wants and needs for technical assistance and the types of finance that respondents prefer for their business. Figure 4 shows the number of respondents that have already received finance and what type of finance. It shows that 46.4% of the respondents has not received any type of finance yet, while 34.5% has received a fund from an organization and 14.2% received a government fund. Only 3.6% of the respondents (3 respondents) took a loan with a bank, however, these businesses are no startup businesses. Two of them are registered with the Chamber of Commerce for more than 3 years and one of them has an age between 2 and 3 years. To test respondents preferences for type of finance, the survey included a ranking question wherein they could rank a government fund, a fund from an organization, an investment by an investor, finance from relatives or friends and a loan with a bank from most (option 1) to less (option 5) preferred. The averages of all the ranking numbers for each type of finance were calculated and resulted in 5 averages with the lowest average as the most preferred option. The most preferred option was finance from relatives or friends with an average of 2.76. The second best option is a loan with a bank with an average of 2.80 and the third best option is an investment by an investor with a score of 2.88. The least preferred options are a fund from an organization and a government fund with scores of 3.14 and 3.42 respectively. It seems that respondents prefer to receive finance from relatives or friends, however it is not clear if it is in the shape of a loan, a grant or an investment. A loan with a bank is highly ranked as well, although only 47.6% of the respondents answered positive on the question if they are interested in taking a loan with a bank if they would need more finance for their business (out of the 92.9% of all respondents that need more finance for their business now or in the coming future). In addition, 46 respondents (54.8% of all respondents) would be willing to take a loan with a bank with any of the packages of the DCE. That means that more respondents would like to have a loan package with one or more of the combinations of attributes and levels as in the survey than having just a regular loan with a bank. Their interest in a loan with a bank was tested before doing the DCE, so their opinion might have been changed after seeing the choice questions with the different possibilities.

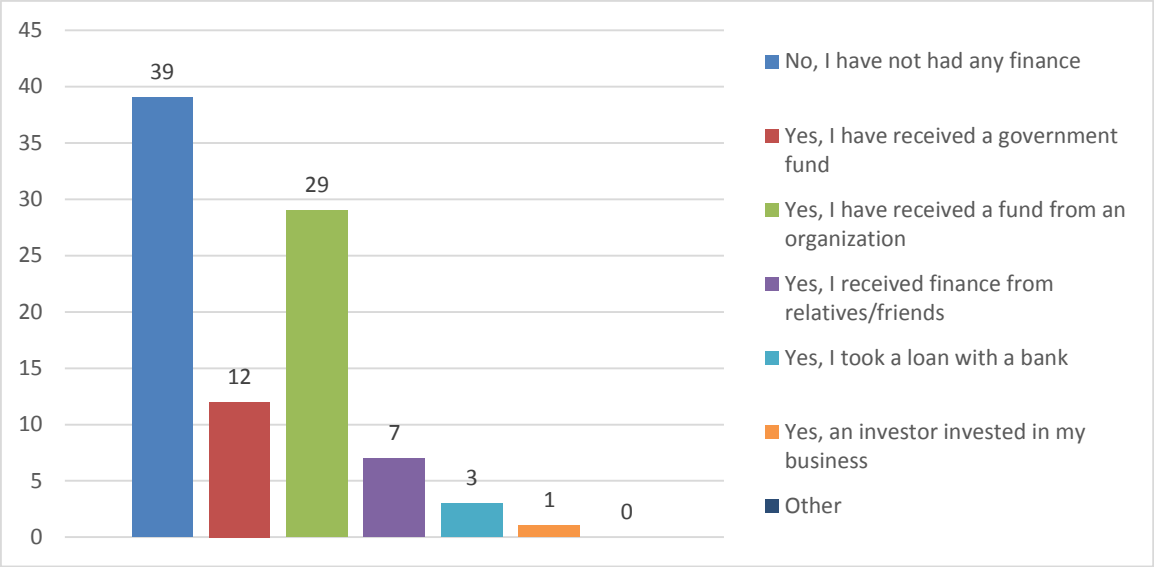

Figure 4: Survey question 2.9: 'Have you already received finance for your business and what kind of finance?'

In the first part of the survey, prior to the DCE and the questions regarding technical assistance, respondents were asked to describe in what way they think a bank can help them with their business. Although some think that banks are not able to help them in any way, many different topics are mentioned. Most of the respondents think that banks only function for money related matters. They want to have finance from banks; in the form of a loan, a credit line or work capital. Some of the respondents mention that they just need a bank account and the possibility to make transfers. Payments should be easy to make and information should be fast. One respondent mentioned that he would like to have a mentor from a bank and a few others mentioned that a bank might be able to help them with the promotion or acquisition of equipment. Some respondents would like to be in touch with other clients of banks. They can use this to promote their business or for knowledge sharing. Respondents also mention topics related to technical assistance. They would like assistance of a bank with their business plan or with business development in general. Banks could train their clients and help them with product development and promotion, if possible on international markets or fairs. According to the respondents, banks could also provide consultancy services, and in particular financial consultancy. Banks could help with interpreting financial details, with the use of software and its development, accounting evaluations and with the search for finance or grants. Some respondents would like to receive workshops or trainings from banks and others do not think about this topic as a possible service that banks could offer. Many of the respondents have already received trainings and a mentor for their business, but usually they receive this technical assistance from other organizations than banks. It is seen as a new phenomenon when banks will offer these services. The question if respondents are interested in having a mentor is negatively answered by 3 respondents. That means that 96.4% of respondents would like to have a mentor specialized in their business. As the respondents of this research are members of organizations for startup companies, most of them have received trainings already, however, there still is a need for more trainings. In Figure 5 and Figure 6 you can see what kind of trainings respondents already received and in what they are still interested in. Only 13.1% of the respondents is not interested in any trainings, the remainder would like to receive at least one training. The most followed courses are related to writing your business plan and marketing trainings. Sales and finance trainings have also been quiet popular among this group of respondents. Other trainings they have received are very diverse,

ranging from general trainings like entrepreneurship trainings to specialized trainings like trainings for businesses in the creative industry. Examples are trainings related to human resources, web programming, product development, management, speech, customer loyalty, creative entrepreneurship, software, creativity regarding EU funds, online leadership, branding, (online) communication, self-awareness, personal development, advertising, design and voice of customer trainings. Regarding the trainings that respondents would still like to receive, the most wanted training is marketing, followed by sales and finance trainings. Respondents mention in the category 'other' that they like to receive more industry specific trainings and trainings related to doing business internationally, online marketing, finance acquisition, management, project management, new business ideas, entrepreneurship, taxation, accounting, team management, finance, business scaling, lean management and business coaching.

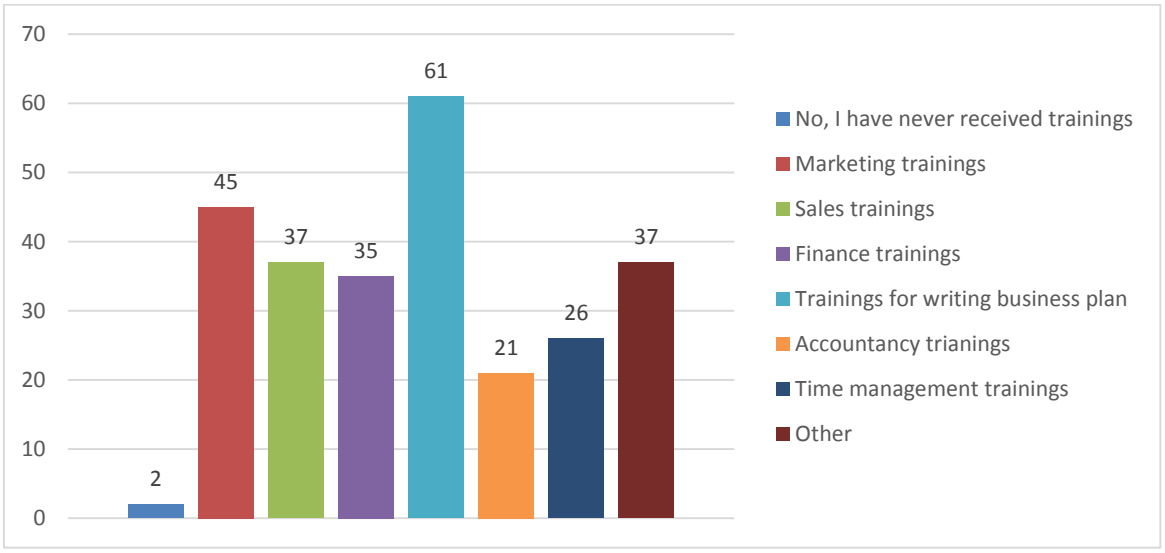

Figure 5: Survey question 3.1: 'Have you ever received trainings related to entrepreneurship and starting up businesses?'

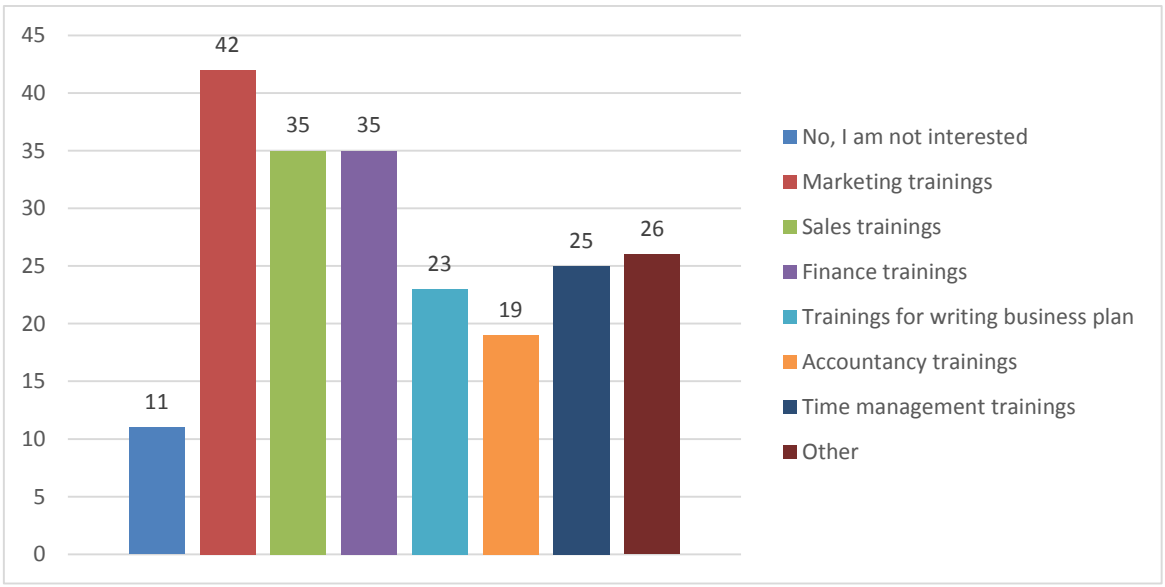

Figure 6: Survey question 3.2: 'Would you be interested in receiving (more) trainings related to entrepreneurship and starting up your own business?'

6 Results Discrete Choice Experiment

The Cox regression in SPSS is performed three times. First to show the analysis of the entire study sample to see the averages. Second to compare the startup companies that are registered with the Chamber of Commerce for less than 2 years with the companies that are registered for more than 2 years. The entire study sample has a total of 84 respondents and 84x9=756 completed choice questions. The subsample of startup companies consists of 54 respondents, hence 54x9=486 completed choice questions. The subsample of companies with more than 2 years of existence consists of 30 respondents and 30x9=270 choice questions. The last two analyses do not have sufficient respondents for a conditional logit model according to Orme (1998), however, most results are significant. Note that results of the subsamples give an indication. I recommend a follow-up study with more respondents to double check the results.

6.1.1 Analysis for complete study sample

Table 5 shows the results of the Cox regression of the entire study sample. All levels of the attributes are significant at the 5% level, suggesting that the attributes are relevant to the respondents in their decision making for obtaining a loan with a bank. However, not all levels have the expected sign. It was expected that all dummy variables would have a positive sign and that the interest rate would be negative. A positive sign in front of the β coefficients of the dummy variables indicates that the presence of this level in the choice set is considered as a benefit compared to the reference level, while a negative sign suggests the attribute level as a disadvantage. As the levels are ordinal and the reference level was picked as being the least preferred option, all signs were expected to be positive. The TA attribute indeed has a positive sign, meaning that trainings and a mentor are preferred over no technical assistance. The sign of the RA attribute was not as expected; it appeared to be negative. Meaning that reducing repayment amounts are preferred over equal and increasing repayment amounts. Paragraph 7.4 in the discussion chapter discusses the unexpected results. The interest rate is not a dummy variable and its negative sign is as expected. It represents a negative change in utility with an increase in the interest rate. In other words, an increase in the interest rate decreases the probability of choosing the loan package.

Crucial to the interpretation of logistic regression is the odds ratio (OR), which is an indicator of the change in odds resulting from a unit change in the predictor (Field 2000). If the value of the OR is greater than 1, it indicates that as the predictor increases, the odds of the outcome occurring increases. Conversely, a value less than 1 indicates that as the predictor increases, the odds of the outcome occurring decreases (Field 2000). In Table 5 you can see the OR for the levels of the attributes of the DCE, calculated by SPSS. It shows that the probability that one package was preferred over the other was approximately 3 times higher when it included a personal mentor compared to no technical assistance at all (OR 3,246 and 95%CI 1,873 to 5,625). If the package would include trainings and a personal mentor, the probability to choose the package would be approximately 6 times higher compared to a package without technical assistance (OR 6,067 and 95%CI 3,893 to 9,456). For the attribute repayment amounts, the odds ratio is smaller than 1. This means that the probability that a package with equal repayment amounts is chosen is approximately 2 times lower than those for reducing repayment amounts (OR 0,563 and 95%CI 0,330 to 0,960). For increasing repayment amounts it is approximately 5 times lower compared to reducing repayment amounts (OR 0,236 and 95%CI 0,151 to 0,371). The odds ratio of the interest rate variable implies an

odds of approximately 5 times lower when the interest rate increases with 1 level (OR 0,229 and 95%CI 0,169 to 0,311).

As mentioned before, the sizes of the β coefficients cannot be interpreted directly, however, they can be used to calculate WTP for each attribute level. Standard errors have been added in the tables to roughly see the precision of the β coefficients, but as no conclusions can be drawn regarding the size of the coefficients, a different calculation needs to be done. WTP is calculated by dividing the negative of the β coefficient by the β coefficient of the cost attribute (in this case the interest rate). So the WTP estimates in Table 5 show how much percentage interest rate respondents are willing to pay extra or less in comparison to the reference level. Respondents are willing to pay 0,80% extra for having a personal mentor and 1,22% interest rate extra for having a mentor and receiving trainings compared to having no technical assistance. As the coefficients for repayment amounts are negative, it seems that respondents are not willing to pay extra for equal or increasing repayment amounts. They are willing to pay more for a loan with reducing repayment amounts. Note that it is not possible to calculate the standard errors of the WTP estimates. This makes them more difficult for comparison. You cannot say if they are statistically different from each other.

Table 5: Cox regression and WTP of complete study sample

Attributes and levels	β	s.e.	Significance	OR	95% CI for OR	WTP
Technical assistance						
None (reference)	0					
Personal mentor	1,177	0,281	0,000	3,246	(1,873 to 5,625)	0,80
Trainings and personal mentor	1,803	0,226	0,000	6,067	(3,893 to 9,456)	1,22
Repayment amounts						
Reducing (reference)	0					
Equal	-0,575	0,273	0,035	0,563	(0,330 to 0,960)	-0,39
Increasing	-1,443	0,230	0,000	0,236	(0,151 to 0,371)	-0,98
Interest rate	-1,472	0,155	0,000	0,229	(0,169 to 0,311)	

6.1.2 Analysis to compare startups with more mature companies

Table 6 shows the Cox regression results of startups and Table 7 the results of the more mature companies. Almost all levels are significant at the 5% level, except for equal repayment amounts for startups. Startups did not find a change from reducing to equal repayment amounts relevant for making a choice between the loan packages. All the other attributes levels are relevant in the decision making of both groups. Similar to the analysis of the complete study sample, the signs are positive for technical assistance and negative for repayment amounts and interest rate. The values of the β coefficients are not relevant for comparison, however the odds ratios are. For technical assistance for startup companies, the odds ratios are higher compared to the complete study sample and also compared to the companies older than 2 years. The probability that one package was preferred over the other was approximately 4 times higher when it included a personal mentor

compared to no technical assistance (OR 4,375 and 95%CI 1,933 to 9,898). For the more mature companies this is approximately 2,5 times higher (OR 2,592 and 95%CI 1,169 and 5,747). I.e. startup companies have a higher preference for a personal mentor than companies older than 2 years. This also holds for the attribute level trainings and personal mentor. The probability that startup companies prefer one package with trainings and personal mentor over another package without any technical assistance is 7,5 times higher (OR 7,511 and 95%CI 3,979 to 14,179). For the more mature companies this is a bit more than 5 times higher (OR 5,335 and 95%CI 2,636 to 10,797). The attribute levels of repayment amounts cannot be compared as one of the values is insignificant. The odds ratio of the interest rate variable for startups implies an odds of approximately 5 times lower when the interest rate increases with 1 level (OR 0,191 and 95%CI 0,124 to 0,293). For the more mature companies this is approximately 4 times lower (OR 0,279 and 95%CI 0,175 to 0,445). Note that most of the 95% confidence intervals are quit large, meaning that it is likely that the odds ratio for individuals differs between these estimates. Hence the odds ratios do not necessarily have to be different for all individuals: only the averages are.

The last column of both Table 6 and Table 7 shows the WTP for each attribute level. Startups are willing to pay an extra 0,89% interest rate when they will have a personal mentor in their loan package, for the more mature companies this is 0,75%. For receiving trainings and a personal mentor startups are willing to pay 1,22% interest rate extra compared to having no technical assistance. The more mature companies are willing to pay 1,31% interest rate extra. So the WTP for a personal mentor for startups seems to be higher, while the WTP for trainings and a personal mentor seems to be higher for the more mature companies. The WTP for different repayment amount schemes also differ among the two groups, however, due to an insignificant value it is not relevant to compare them.

Table 6: Cox regression and WTP of startup companies

Attributes and levels	β	s.e.	Significance	OR	95% CI for OR	WTP
Technical assistance						
None (reference)	0					
Personal mentor	1,476	0,417	0,000	4,375	(1,933 to 9,898)	0,89
Trainings and personal mentor	2,016	0,324	0,000	7,511	(3,979 to 14,179)	1,22
Repayment amounts						
Reducing (reference)	0					
Equal	-0,195	0,377	0,606	0,823	(0,393 to 1,724)	-0,12
Increasing	-1,500	0,309	0,000	0,223	(0,122 to 0,409)	-0,91
Interest rate	-1,656	0,219	0,000	0,191	(0,124 to 0,293)	

Table 7: Cox regression and WTP of companies older than 2 years

Attributes and levels	β	s.e.	Significance	OR	95% CI for OR	WTP
Technical assistance						
None (reference)	0					
Personal mentor	0,953	0,406	0,019	2,592	(1,169 to 5,747)	0,75
Trainings and personal mentor	1,674	0,360	0,000	5,335	(2,636 to 10,797)	1,31
Repayment amounts						
Reducing (reference)	0					
Equal	-1,124	0,438	0,010	0,325	(0,138 to 0,767)	-0,88
Increasing	-1,426	0,350	0,000	0,240	(0,121 to 0,477)	-1,12
Interest rate	-1,277	0,238	0,000	0,279	(0,175 to 0,445)	

Comparing the three Cox regressions and WTP calculations of Table 5, Table 6 and Table 7, you can notice that the Cox regression of the entire study sample has estimates in between the results of the startups and the more mature businesses. This makes sense as the results for both groups are different and the two groups together represent the entire study sample. Hence the results show the average of the two groups together. As the more mature companies are willing to pay more for trainings, it seems relevant to offer these services for these groups as well instead of only for startup companies. It seems a product wherein both target groups are interested in. In that case the WTP estimates of the complete study sample should be used. But if focusing on one of the groups, only the results of the Cox regression and WTP calculation of that specific group should be used.

7 Discussion

This chapter will go through all the steps taken in this research and it will discuss the validity of the results. First it will describe the qualitative interviews and discuss the chosen attributes and levels. Second, the experimental design will be further elaborated and third, the process of data collection will be discussed. The study sample and survey questions are part of this paragraph. Finally, the statistical analysis with the use of SPSS, and how this affects the results, will be evaluated.

7.1 Attributes and levels

Choosing the right attributes and levels for your DCE deserves some special attention. Different studies show the complexity and dependency of DCEs with respect to its attributes and levels (Hall et al. 2004; Danthurebandara et al. 2011; Mangham et al. 2009; Voelckner 2006). According to Danthurebandara et al. (2011), the consistency of respondents' choices depends on the choice complexity. They performed research to investigate the importance of taking the complexity into account in the design stage of DCE. They demonstrate that the error variance in the utility function varies with the complexity of the choice set. The bigger the choice set, the bigger the error variance. It is therefore better to keep the amount of attributes and levels as small as possible. I have therefore chosen to use 3 attributes with 3 levels each. This also reduced the required sample size, because the more attributes and levels you use, the more respondents you need for significant results.

In the literature different methods can be found to select the right attributes. For my research I first discussed the attributes with colleagues and then I made a ranking question for the interviewees. In that way I assured the attributes and levels to be realistic and meaningful, hence this would increase the precision of parameter estimates (Hall et al. 2004). The interviews have been transcribed and analyzed. Mangham et al. (2009) recommend a coding technique to analyze the data in case of many interviews. This involved reading the transcripts and notes to identify major themes and sub-themes and can be done using certain software. As I didn't perform so many interviews, I did it manually and I calculated the scores on the ranking question to discover the most important attributes. Interviewees also mentioned other attributes in addition to the ranking question, however, these were not mentioned often enough by all interviewees and they were not realistic and appropriate for the DCE and for ING. Only the TA attribute did not score high on the ranking question, but as it was mentioned by almost all interviewees as necessary for their business, I concluded that it is important for them. The idea of offering TA in a loan package came from the interviewees.

Some evidence suggests that the levels of the cost attribute can affect the parameter estimates and therefore the levels need to be as realistic as possible (Radcliffe 2000; Drummond et al. 2005). In this study I detected the overlap between the levels mentioned by interviewees and the options for the bank to ensure small affection on the estimates. Unfortunately I cannot completely exclude a bias in the parameter estimates due to the chosen levels.

7.2 Experimental design

Originally I had chosen for an orthogonal array oa.9.4.3.2 (see paragraph 4.2.2 for more information). However, during the test phase the respondents mentioned that the experiment was too complicated and to reduce the error variance I decided to delete the loan term attribute as that was the least important attribute for the respondents (based on the outcomes of the qualitative interviews). This decision was based on the consideration of either having an orthogonal array design

that was more complicated for the respondents or having a d-efficient design that has a lower level balance and orthogonality, but is easier to understand for the respondents. Carlsson and Martinsson (2003) discuss that D-efficient design can sometimes result in even more precise estimates, when you use the right algorithm, compared to orthogonal arrays, as according to them an efficient design does not necessarily has to be orthogonal. As D-efficient designs with an efficiency level close to the orthogonal arrays (100% efficiency level) function well in DCEs (Kuhfeld 2010) and are being increasingly used (Bekker-Grob, Ryan and Gerard 2012), I decided to use a D-efficient design as similar as possible as the nearest orthogonal array. Although the error variance cannot be calculated in the statistical analysis, it will be affected as little as possible.

Unfortunately the DCE in this study could not include interaction terms and could only calculate main effects. Including interaction terms would make this research too complicated as a fractional factorial design could not have been chosen and the questionnaire would become too big. Street et al. (2005) solve this problem by dividing the study sample into blocks and showing each respondent a certain set of choice questions. This reduces the size of the questionnaire and might increase the response rate. However, dividing your study sample into blocks requires many more completed questionnaires, i.e. more respondents are needed. Unfortunately this was not possible in my study and therefore I decided to only calculate main effects. A disadvantage of my analysis is that I am not able to show in what way the attributes and their levels influence each other, i.e. do the levels chosen for repayment amounts influence the choices for the levels of technical assistance? These interaction terms now have to be included in the error term that cannot be calculated.

Another disadvantage of the design of this study is that no literature can be found to include the survey question if respondents are willing to take any of the packages of the DCE at all. The results show that 54.8% of respondents is willing to take at least one of the packages. This means that 45.2% of respondents is not interested in the loan packages with the chosen levels for interest rate, technical assistant and repayment amount. Hence they are not interested in a loan with a bank or they are not interested in the composition as used in the DCE. As 47.6% of the respondents answered positive on the question if they are interested in taking a loan with a bank if they would need more finance for their business, I assume that respondents prefer to find finance elsewhere. And some respondents, who previously answered not to be willing to take a loan with a bank, changed their minds after seeing the loan packages including TA and RA and are now willing to consider these packages. Unfortunately, the effect on the results of the DCE and WTP estimates are not clear and cannot be calculated. Therefore, the WTP estimates can be negatively biased, e.g. when respondents have to make real decisions regarding the loan packages, they are willing to pay less for technical assistance compared to the results in this study.

7.3 Study sample and data collection

Pilot testing the survey is an essential research component prior to the data collection phase (Hall et al. 2004). According to Hall et al. (2004), for DCEs it includes qualitative interviews for obtaining feedback on how the attributes were perceived, understood and evaluated. As SurveyMonkey offered a test phase, I have sent the survey to 5 entrepreneurs to test my survey. They provided me with feedback by email. Although they did give me some good tips on how to improve the survey and how to simplify the DCE, the feedback would have been more extensive if I performed qualitative interviews with these entrepreneurs. The feedback they gave me was limited while it is of high importance to have all the input and thoughts of the test respondents. Especially in the case of

cultural and language differences between the researcher and respondents, it is of particular importance to do a pilot test (Mangham et al. 2009). This resulted in some doubts about wrong interpretations and might have been overcome by a more comprehensive pilot test. These doubts related to the results will be further elaborated in paragraph 7.4.

After testing the survey and making the final adjustments, the survey has been sent to many organizations that have a wider outreach to startup businesses. These organizations have sent the survey by email to their startups and/or posted on their platforms. The survey has also been posted on several Facebook pages for startup businesses. Hence it is not possible to know the exact response rate of this survey. However, I expect the response rate to be extremely low as there were only 25 responses. This can be due to several reasons, e.g. to the length of the survey. Unfortunately I cannot know the exact way that organizations have approached their members, so it is difficult to draw conclusions regarding the response rate. After calling respondents with a call center, the total amount of responses increased to 84 which is just enough for this DCE. However, a disadvantage of approaching several organizations in different cities in Bucharest is that it is difficult to define the study sample in detail. The study sample is too small to generalize to all startup businesses in Romania. For ING it would have been better to have results from their own client base, as now the results can be biased to a certain target group. The study sample exists of entrepreneurs that are better educated than the average Romanian citizen and they might be more successful than others. So depending on the target group that ING wants to achieve with a microfinance product, they should consider that the results of this research come from a particular group of entrepreneurs. The study sample is too small to divide the group in subgroups to take their characteristics into account, so they have only been divided in the analysis in subgroups regarding the age of the business.

Using different data collection techniques can also be a disadvantage for the results of this study. Using an online survey and doing the questionnaire over the phone can lead to different results and different interpretations. Although the call center staff have been trained extensively, I cannot know the exact interviews that have been executed over the phone. On the other side, the use of different data collection techniques can be an advantage as averages will be calculated in the analysis and if one of the techniques contains a certain bias, the bias can be reduced by the other technique. Hence the online survey and phone calls can compensate each other, although it makes it more complicated to define any present bias and to what extent it influences the results.

7.4 Statistical analysis

Cox regression analyses are also known as survival analyses and are usually used for calculations regarding proportional hazard. The results of the model describe the influence of attributes on the chance for survival, resulting in parameter estimates that cannot directly be interpreted and compared. Using the Cox regression might be confusing and other techniques need to be used for the right interpretation. The odds ratio and WTP estimates are therefore used for the interpretation of the β coefficients.

As mentioned before, the sign of the β coefficients of the RA attribute is not as expected. The conclusion is drawn that respondents prefer reducing repayment amounts over equal and increasing repayment amounts. However, some doubts exist about wrong interpretations of the DCE by respondents. The speed in making the choice questions can lead to a wrong interpretation of the RA attribute. In first instance, reducing repayment amounts can be interpreted as better compared to

increasing repayment amounts as the word reducing repayments seems favorable because you will pay less and less. However, when considered twice, you have to pay more in the beginning. Therefore it should not be preferable as it is a startup that cannot pay that much in the beginning. During the qualitative interviews, the interviewees stressed the importance over flexible and increasing repayment amounts so that they could start with low repayments and pay more while their business increases its revenues. Therefore, I expected the results of the analysis for RA to be positive instead of negative. The results also seem uncertain as the significance levels for equal repayment amounts are lower compared to the other levels and attributes. Although for the entire study sample and the subsample of more mature businesses it is significant, for startup companies it is not significant. This can mean that the attribute was not relevant for the startup businesses, but it can also mean that the subgroup was too small and therefore the analysis cannot show the right results. When increasing the sample size to the entire study sample, the analysis becomes significant with a level of 0.035. According to Orme (1998) the size of the study sample in this case is sufficient, so that might be the reason that the results of the subsamples are sensitive for inaccuracies.

Another inaccuracy is that the Cox regression analyzes all the choice questions separately, instead of looking at the 9 choice sets for each individual at the same time. It makes sense that an individual with a strong preference for e.g. trainings and a mentor will choose all the options that will give the highest TA level. Hence all the 9 choice sets of this individual will be biased to the higher level, without considering the RA attribute. Results should be corrected for these data trends as in this case RA estimates are influenced by this individual, while he or she might not care about this attribute. So there is a specific correlation between the choice sets of individuals that cannot be solved by the Cox regression. To capture these individual specific effects, the mixed logit model can be used (Bliemer and Rose 2009; Revelt and Train 2000). According to Bliemer and Rose (2009), the mixed logit model solves for three important limitations: first, the model accommodates the presence of preference heterogeneity within choice data. Second, it allows for the fact that individuals respond to more choice tasks in the same survey. Third, it does not impose a constant error variance across all alternatives in the model. See Bliemer and Rose (2009) for more details.

Last but not least, the conditional logit model takes away the alternative specific constant β0 from the regression equation as it is assumed to be the same for each choice question. As dummy coding is used, the estimates of the reference levels of the attributes correlate with the alternative specific constant. According to Beck and Gyrd-Hansen (2005), the constant term may be associated with elements of utility derived from other characteristics than the used attributes. It is seen as a disadvantage to take out the constant term as you cannot account for the other characteristics anymore. The dummy variables become difficult to interpret. Effects coding can be used instead of dummy variables so that the alternative specific constant can be included in the equation and further analysis. Effects coding is seen as an alternative in which the effects are not correlated with the constant term β0 (Beck and Gyrd-Hansen 2005).

8 Conclusion and recommendations

Although startup businesses in different sectors have different wants and needs, some general conclusions can be drawn. Entrepreneurs in Romania seem skeptical about banks because their trust level towards banks is not that high. They express some frustration regarding high and hidden prices and they stress the need for fairness, transparency and flexibility in banking services. As finance remains a high need among entrepreneurs, respondents rank a loan with a bank as the second best finance option, even though the interest rate increases their risk of business failure. Another need of starting entrepreneurs is technical assistance. Almost all respondents would like to have a mentor that is able to assist and coach them. And results show a high need for trainings, especially marketing, sales and finance trainings. To reduce the risk for both the bank and the entrepreneur, respondents came up with some solutions. One of them is that loans could be combined with technical assistance. Banks can win the trust of entrepreneurs by offering extra services, and at the same time they are able to screen their clients.

The DCE tested loan packages with the attributes technical assistance, repayment amounts and interest rate. Results show that all three attributes are relevant to the respondents in their decision making for obtaining a loan with a bank. When both a mentor and trainings are included in the loan package, the probability that this package will be chosen is approximately 6 times higher than when the loan does not offer any technical assistance. For only a personal mentor the probability is approximately 3 times higher. Slightly less, but still sufficiently significant were the results for the attribute repayment amounts. Results show that respondents prefer reducing repayment amounts in their loan package. The probability that a package with reducing repayment amounts will be chosen increases approximately 5 times compared to a loan package with increasing repayment amounts. It increases two times compared to equal repayment amounts. For the interest rate attribute, the odds for choosing a loan package reduces with 5 times when the interest rate increases with 1%. Higher interest rates are accepted when technical assistance is offered. Respondents are willing to pay an extra of 1.22% interest rate for including a mentor and trainings in their loan package. And they are willing to pay an extra 0.98% interest rate for reducing repayment amounts compared to increasing repayment amounts. Startup businesses as well as more mature companies are willing to pay extra for technical assistance. Technical assistance could be offered to both groups as they both show their interest and are willing to pay for these extra services.

Recommendation to ING Bank Romania:

This recommendation is based on the quantitative and subjective qualitative results of this study. Addressing the wants and needs of the entrepreneurs and considering the limitations and possibilities for ING, I recommend ING to offer a loan package to startups together with a mentor and trainings/workshops. ING can win the trust of entrepreneurs by offering extra services and at the same time entrepreneurs are willing to pay for these services. During the trainings and coaching sessions, the entrepreneur can be monitored more closely so the risk for business failure will be reduced. An extra tool that I recommend to ING is the Elefin application that offers a financial platform for micro and SME businesses and is built to confirm their needs. It is a new technology that gives banks extra and actual information about cash flow and business proceedings. Offering these extra services can reduce risk profiles, win trust and improve the relationship with the entrepreneurial environment.

Recommendations for further research:

1. As this study did not specialize on a particular sector, it is recommended to further research the wants and needs of separate sectors. Especially the IT sector needs a different study, mainly because they can more easily bootstrap their businesses. They have a very different approach and different financial needs than other sectors. To focus more on the IT sector, a follow up study is needed.
2. Follow up studies are also recommended for banks to offer microfinance in rural areas where a high proportion of the population is living and is underserved by the financial system. In addition, possibilities to focus on disadvantaged groups in rural and urban areas, like Roma communities, should be further investigated.
3. The parameter and WTP estimates of the discrete choice experiment could be more useful for ING when they do the same analysis with their own client base. In that case the target group of the research correctly fits with their own target group, whereas in this study results can be biased due to the chosen target group with external organizations.

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Annex I: Qualitative interview guide

1. Introduction

Welcoming the respondent.

Hello, my name is Rayke, I am a graduate student from the Netherlands and doing my thesis research about the market potential for financing startup companies in Romania.

First of all I would like to thank you for your willingness to participate in this research. It is of high value to be able to hear about your wants and needs. The information will be used to be able to design a new product for a bank with the objective to serve groups that cannot find financial services.

As I will write a review about the interviews, I would like to record our conversation. The recordings will only be used for myself so that I do not have to take notes and I don't miss anything of what you are saying. Of course this interview is confidential and the recording will not be used for any other purpose besides my research.

2. Business information

Objectives:

- Personal background and the business of the respondent
- The challenges they face

First I would like to have some general information about yourself. How old are you? What is your highest degree and what is your expertise? Where and how do you live (e.g. with parents, own apartment)? Do you currently have a job (next to his/her startup) and/or have you worked before? Where and for how long? (check his/her level of experience)

If your business does not succeed, what other job opportunities would you have?

Can you tell me about your business and your own role? Objectives/vision/mission? What activities does your business have? How many employees/coworkers (and who are they: e.g. friends, relatives)? When did you start (since when are you registered)? Structure of the business (shareholders)? Is your business driven by a bigger company (does your idea come from another company)?

In what stage is your business at this moment (e.g. registered, writing business plan, searching for finance, etc.)?

Thinking about your business, what challenges/difficulties do you encounter? Main market barriers? How does this affect your business?

And what major challenges were you facing when opening your business? What kind of information did they need when they decided to start a business (how to make a business plan, how to register SRL or PFA, accountancy info, etc) and where did you search for the information (websites, friends, lawyers)?

3. Wants and needs

Objectives:

- Discovering respondent's wants and needs related to further develop their business.
- In what way to fulfill their wants and needs.
- Financing needs
- Perception towards government projects/funds

How do you address the challenges you face? What do you need for further development?

Does your business possess sufficient knowledge and skills? If not, what kind of support could you use (think of support of platforms, business incubators, companies, trainings, etc.)?

How did you manage to finance your business so far? How much money did you invest in your business so far? What further financial plans do you have? What is/was the moment that you have/had the highest need for extra finances? (at the beginning - when you started the business or later on?)

If in need of extra financial support: How will you further finance your business? What resources do you need? What is the loan size you would need?
If you are not able to find finance, what other possibilities do you have? (e.g. applying for a job)

What will make it easier for you to find finance? What services do you need?

Have you considered government funds? Why/why not? What is your perception towards government support? Do you know of policies for startup companies and/or entrepreneurs? What kind of programs do you need to facilitate finding financial support?

4. Banking needs

Objectives:

- Financial background and behavior
- Other important services (that could be) offered by banks
- Discovering respondent's wants and needs related to banking

What is the bank you are working with now? Why did you choose to use this bank for your business? (if he works with more banks – why did you choose to work with more than one bank?)

Do they have products/services dedicated for startups? (if yes, please describe) Did you search for banks in the market who have products/services dedicated for startups?

What products/services do you use from your current bank? Did you already take a loan for your business? What is the loan size? Did you have to give collateral (if yes, what type of collateral)? What

were minimum requirements to qualify for your loan? What type of documents did you need to provide them with?

Regarding products for your business offered by your bank, is there something that you miss now or that you have missed at the beginning, when you started your business?

What qualities/services of banks are most important for you (like personal contact, automated systems, extra services, access to lending)?

Thinking of your experience so far, if there was a bank dedicated for startups, what products/services do you think it should have? (banking and non-banking).

5. Attributes and levels

Objectives:

- Perspectives towards different attributes and levels (for the design of the quantitative interviews)

In order to design a product that addresses the wants and needs of entrepreneurs and their startup business, I would like to have your input. What components of financial products do you stress as important? What are the first three things you want to know when considering a loan?

We also made a list of loan aspects. Can you rank the aspects below according to importance when considering a loan?

A. Technical assistance (trainings)
B. Amount
C. Repayment amounts
D. Interest rate
E. Loan term
F. Grace period
G. Collateral
H. Repayment frequency

1. Amount

- If already having a loan: what is the loan size? For what purpose did you use the money?
- And if not having a loan yet or in need of a new loan, what loan size would you need for your business? How did you calculate this? For what purpose would you use the money?

What is the maximum loan size the bank should grant for a startup company (microfinance)?

2. Interest rate

- Former loan: what was the interest rate for the loan you took?

- In need of a (new) loan: Have you ever thought about the interest rate that you would be able to pay? What do you see as a reasonable interest rate? What is, according to you, the maximum interest rate a bank can ask for microloans?

3. Collateral

Usually banks ask for collateral when disbursing loans. What collateral should a bank ask for a loan granted to a startup? Do you have the option to give collateral (and what type? – residential property, land etc)? Or any other way to show your capability for loan repayment in case your business is facing difficulties?

4. Loan term

- Former loan: what was the loan term of the loan you took?
- In need of a (new) loan: What is the maximum term the bank should grant the loan for? And what loan term do you think necessary if you would take a loan? (of the size mentioned before)

5. Technical assistance

- What kind of TA have you had so far? From who? Was this helpful and crucial for your business?
- What kind of technical assistance should banks give according to you?

6. Repayment frequency

- Former loan: what is the repayment frequency of the loan you took?
- In need of a (new) loan: What would be the repayment frequency that you are able to pay?

7. Grace period

- Former loan: what grace period did the bank give to you? What was the reason for this grace period?
- In need of a (new) loan: Would you need a grace period for your loan? How long would you need before starting with your repayments? Why?

8. Repayment amount

- Former loan: What are the repayment amounts of the loan you took? Were these amounts equal or variable (changing due to interest rate and decreasing outstanding loan)?
- In need of a (new) loan: What would be the repayment amount you are able to pay (with repayment frequency as mentioned at point 6)? Would you prefer equal or variable repayment amounts? (variable in the sense that the interest fee becomes less due to decreasing amount of outstanding loan)

Annex II: Questionnaire

Welcome to this survey and thank you in advance for your time.

The aim of this research is to design an innovative banking product for entrepreneurial support. The survey functions as a tool to get better insights in the financial wants and needs of startup companies and to explore their needs for technical assistance (trainings and mentoring). It takes approximately 10 minutes to complete the survey and it consists of 4 parts:

1. Business information
2. Technical assistance
3. Experiment for product design
4. Personal information

Below I ask for your name and email address. They will help to filter out the people that already responded and to be able to send a reminder to the persons who did not respond yet. Your name and email address will be deleted as soon as data collection is completed. If you choose for the option to receive the results of this study, your contact details will only be saved for this purpose. If you have any questions you can send me an email (rayke.berendsen@wur.nl) and I will be happy to answer them.

1.1. What is your name? (optional question)

1.2. What is your email address? (optional question)

1.3. Would you like to receive the results of this study (by email)?
   a) yes
   b) no

2. <u>Business information:</u>

2.1. What is the name of your business?

2.2. Since how many years is your business registered in the Chamber of Commerce?
   a) Not registered yet
   b) Below 1 year
   c) 1 – 2 years
   d) 2 – 3 years
   e) more than 3 years

2.3. In what field is your business?
   a) Services
   b) Retail
   c) IT
   d) Social industry
   e) Creative industry
   f) Other (please specify)

2.4. Can you give a short description of your business?

2.5. What is your role?
a) Founder
b) Co-founder
c) Administrator
d) Manager
e) Other (please specify)

2.6. How many employees do you have?

a) 0

b) 1 to 5

c) 6 to 10

d) more than 10

2.7. What is the legal structure of your business?

a) SRL

b) SA

c) PFA

d) Liberal Profession

e) Other (please specify)

2.8. Please describe in your own words in what way you think a bank can help you with your business.

2.9. Have you already received finance for your business and what kind of finance?
a) No, I have not had any finance.
b) Yes, I have received a government fund.
c) Yes, I have received a fund from an organization.
d) Yes, I received finance from relatives/friends.
e) Yes, I took a loan with a bank.
f) Yes, an investor invested in my business.
g) Other (please specify)

2.10. Can you drag (rank) the following sources of finance from most (= option 1) to less (= option 5) preferred?
1) Government fund
2) Fund from an organization
3) Investment by an investor
4) Finance from relatives/friends
5) Loan with a bank

2.11. How much Euro have you already invested in your business?

a) Nothing
b) Below 5.000 euro
c) 5.000 to 10.000 euro
d) 10.000 to 15.000 euro
e) 15.000 to 20.000 euro
f) 20.000 to 25.000 euro
f) More than 25.000 euro

2.12. How much more finance would you need now or in the coming future?

a) Nothing
b) Below 5.000 euro
c) 5.000 to 10.000 euro
d) 10.000 to 15.000 euro
e) 15.000 to 20.000 euro
f) 20.000 to 25.000 euro
f) More than 25.000 euro

2.13. If you would need more finance for your business, are you interested in taking a loan with a bank?

a) yes
b) no

3. Technical Assistance

3.1. Have you ever received trainings related to entrepreneurship and starting up businesses? If yes, please choose what kind of trainings.

A) No, I have never received trainings

B) Marketing trainings

C) Sales trainings

D) Finance trainings

E) Trainings related to writing a business plan

F) Accountancy trainings

G) Time management trainings

H) Other (please specify)

3.2. Would you be interested in receiving (more) trainings related to entrepreneurship and starting up your own business? If yes, please specify what kind of trainings.

A) No, I am not interested

B) Marketing trainings

C) Sales trainings

D) Finance trainings

E) Trainings related to writing a business plan

F) Accountancy trainings

G) Time management trainings

H) Other (please specify)

3.3. Are you interested in having a mentor that is experienced in your field and can coach you?

A) Yes

B) No

4. Discrete Choice Experiment:

This is the most important part of my research. You have already completed half of my survey, so please stick around a bit more. These 10 questions will ask you to give your preference between different packages of loan products. The packages will vary on 3 components (technical assistance, repayment amounts and interest rate). Please see the table below for a description so that you know the definition of the different components and their levels.

Components	**Level**	**Description**
Technical assistance (trainings)	No technical assistance	No additional trainings and coaching will be given.
	Personal mentor	A personal mentor is someone with experience in your field of business that can help you and assist you to reach your objectives and to face difficulties and challenges. You can see it as a coach that can help you regularly.
	Trainings and personal mentor	You will receive trainings specified for entrepreneurs, like trainings about marketing, finance, how to write business plans, etc. You will also have a personal mentor to assist you in your process.
Repayment amounts	Reducing repayment amounts	Repayment schemes where you pay only the interest of the outstanding money at

		that same moment. So when your outstanding loan shrinks, the costs for interest will also become lower.
	Equal repayment amounts	You will pay the same amount at each repayment.
	Increasing repayment amounts	Start with lower repayment amounts and pay more as your business matures.
Interest rate	11%	These are annual interest rates. For example when you take a loan of RON 10.000 for 1 year with an interest rate of 13%, in the end you will repay a total of RON 13,000.
	13%	
	15%	

4.1. What package do you prefer?

	Package A	**Package B**
Technical assistance	None	Mentor
Repayment amounts	Reducing	Increasing
Interest rate	11%	13%

4.2. What package do you prefer?

	Package A	**Package B**
Technical assistance	None	Mentor
Repayment amounts	Equal	Reducing
Interest rate	13%	15%

4.3. What package do you prefer?

	Package A	**Package B**
Technical assistance	None	Mentor
Repayment amounts	Increasing	Equal

Interest rate	15%	11%

4.4. What package do you prefer?

	Package A	**Package B**
Technical assistance	Mentor	Trainings and mentor
Repayment amounts	Reducing	Increasing
Interest rate	13%	15%

4.5. What package do you prefer?

	Package A	**Package B**
Technical assistance	Mentor	Trainings and mentor
Repayment amounts	Equal	Reducing
Interest rate	15%	11%

4.6. What package do you prefer?

	Package A	**Package B**
Technical assistance	Mentor	Trainings and mentor
Repayment amounts	Increasing	Equal
Interest rate	11%	13%

4.7. What package do you prefer?

	Package A	**Package B**
Technical assistance	Trainings and mentor	None
Repayment amounts	Reducing	Increasing
Interest rate	15%	11%

4.8. What package do you prefer?

	Package A	**Package B**
Technical assistance	Trainings and mentor	None
Repayment amounts	Equal	Reducing
Interest rate	11%	13%

4.9. What package do you prefer?

	Package A	**Package B**
Technical assistance	Trainings and mentor	None
Repayment amounts	Increasing	Equal
Interest rate	13%	15%

4.10. Would you be willing to take a loan with a bank with any of these packages?

a) yes

b) no

Additional comments: …..

5. <u>Personal information:</u>

5.1. What is your gender?

a) Female

b) Male

5.2. What is your age?

a) Below 18

b) 18 to 24

c) 25 to 29

d) 30 to 34

e) 35 to 39

f) 40 or older

5.3. What is your marital status?
   a) Unmarried
   b) Married
   c) Widowed
   d) Divorced

5.4. How many children do you have?
   a) 0
   b) 1
   c) 2
   d) 3
   e) more than 3

5.5. What is your highest educational degree?
   a) No degree
   b) High school
   c) Bachelor
   d) Master
   e) MBA
   f) Other (please specify)

5.6. Are you currently enrolled as a student?
   a) yes
   b) no

5.7. What have you studied or are you studying?

5.8. In what city do you live?

5.9. How do you live?
   a) renting apartment/house
   b) own apartment/house
   c) renting a room/studio
   d) living with my parents
   e) Other (please specify)

5.10. Are you member or have you received trainings/funds from (one of) the following organizations?
   a) Impact Hub
   b) Post-Privatization Foundation
   c) NESsT Association
   d) Civitas
   e) JCI
   f) Alternative University (CROS)
   g) Other (please specify)

5.11. Besides your startup business, do you have other sources of income?
   a) No, only my own business.

b) Yes, I have side activities.
c) Yes, I am an employee somewhere else.
d) Yes, I have a partner that earns an income.
e) Yes, my parents are supporting me with my financial situation.
e) Other (please specify)

5.12. What is the monthly income of your household (i.e. income of you, your partner, and possible other people living in the same house)?
a) below RON 1500
b) RON 1500 – 2500
c) RON 2500 – 3500
d) RON 3500 – 4500
e) RON 4500 – 5500
f) More than RON 5500

Many thanks for your willingness to participate and for your time to complete this survey. The information you gave us is confidential and will only be used for this research. Your help is really appreciated. If you have any additional comments regarding the questionnaire you can leave them in the box below. For questions you can send an email to rayke.berendsen@wur.nl.

Please press the 'done' button to send me your completed survey. Thank you!

6. Optional: comments/recommendations

……

Annex III: Attributes

The interviewees were asked to mention components for financial products that they stress as important when considering a loan. In addition to the list of attributes in Table 8, respondents came up with the following components (attributes):

- Transparency in fees: none of the fees should be hidden.
- Fair and flexible reimbursement plans: e.g. flexible amounts that shrink while the interest goes down or shrink when the client decides to repay earlier.
- Level of complexity to obtain a loan.
- Speed of service: should be fast with little bureaucracy.
- Currency of the loan
- A dedicated person for your business: e.g. a consultant for personal contact.
- Flexibility to fit needs
- Fair prices; i.e. not necessarily cheap as long as quality and good service is offered.

This list was used for comparison with a ranking from a pre-defined list. After mentioning their own attributes, interviewees were asked to rank a pre-defined list with attributes from most to less important (as mentioned in paragraph 4.2.1). The results of the ranking are shown in Table 8, where you can see, for each interviewee, the ranking from 1 (most important) to 8 (least important). The last column adds up the numbers of the ranking and shows the total score. The attribute with the lowest total score appears to be the most important attribute for these respondents. In the table you can see that the type of repayment amounts are the most important, followed up with the interest rate and the loan term respectively.

Decision for the final attributes was made with 3 criteria: what attributes seem most important according to respondents, what attributes can be used in the design of the DCE and what is the relevance for ING. This resulted in the attributes technical assistance, repayment amounts and interest rate.

Table 8: Ranking of attributes from most (option 1) to least (option 8) important for each respondent.

Attributes	Interviews									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total score**
Technical assistance	8	2	7	1	8	2	7	3	7	**45**
Amount	7	7	3	4	7	7	6	2	4	**47**
Repayment amounts	1	4	1	3	3	4	3	5	5	**29**
Interest rate	5	1	2	2	4	6	1	8	1	**30**
Loan term	3	6	4	5	5	5	5	1	3	**37**
Grace period	6	3	8	6	1	1	2	4	8	**39**
Collateral	2	8	5	8	2	8	8	7	2	**50**
Repayment frequency	4	5	6	7	6	3	4	6	6	**47**