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Transition from Cash Payments to Digital Money from the Youth Perspective

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Abstract

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Abstract

The purpose of this thesis was to study the transition from cash payments to digital money from the youth perspective. The main emphasis was on understanding the tools and the methods that the late adolescents are utilizing for managing their daily financials with digital money.

In order to map the theoretical foundation for this thesis, the general transformation towards digital payment methods, especially within the Nordic countries, was visited, as well as the concept of financial literacy. In addition, the specific target group of late adolescents was studied in order to understand the key attributes characterizing this target group.

During the study phase, semi-structured theme interviews were used as the main method for obtaining primary data. Altogether 11 late adolescents were interviewed and these interviews revealed a number of both digital and non-digital tools and methods that late adolescents are utilizing when managing their daily financials. In addition, mind-mapping and creating personas were used as methods while analyzing the interviews.

This thesis provides value to developers that are creating financial services towards young people, as well as to bank representatives who are working with enhancing product suite and communication towards the young customer segment.

Keywords

digital money, financial literacy, late adolescents, financial tools

Tiivistelmä

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Tiivistelmä

Tämän opinnäytetyön tavoitteena oli perehtyä siihen, miten aikuistuvat nuoret siirtyvät käteisestä digitaalisen rahan käyttäjiksi. Tutkimuksessa perehdyttiin erityisesti nuorten käyttämiin työkaluihin sekä tapoihin, joilla he hallitsivat päivittäistä digitaalista rahankäyttöään.

Teoreettinen viitekehys muodostui perehtymällä yhteiskunnallisella tasolla tapahtuvaan muutokseen, jossa erityisesti Pohjoismaissa on jo merkittävästi siirrytty käteisestä kohti digitaalista rahankäyttöä. Lisäksi teoriaosuudessa tutkittiin talouslukutaidon määritelmiä sekä niitä piirteitä, jotka tekevät nuorista erityisen kohderyhmän talousosaamisen ja rahankäytön kannalta.

Tutkimuksessa hyödynnettiin teemahaastatteluja pääasiallisena menetelmänä primääridatan hankkimiseksi. Tutkimuksen aikana haastateltiin 11 nuorta koskien heidän rahankäytön työkalujaan. Haastateltavat toivat esiin useita erilaisia digitaalisia sekä perinteisiä työkaluja, joita he käyttivät päivittäisen rahankäyttönsä hallitsemiseen. Haastattelujen analysoinnissa hyödynnettiin menetelminä muun muassa käsitekarttaa sekä persoonien luomista.

Tämä opinnäytetyö tarjoaa hyödyllistä kohderyhmätietoa asiantuntijoille, jotka kehittävät ja markkinoivat finanssipalveluita nuorille.

Asiasanat

digitaalinen raha, talouslukutaito, aikuistuva nuori, taloudelliset työkalut

Content

1 INTRODUCTION

1.1 Background of the Thesis

Our daily lives are more and more based on digital services in a fast-paced economy. How and when we are purchasing goods and services has changed from restricted and tangible into a society which is operational 24/7 and enables purchasing easily through digital channels. One part of this global transformation is the shift from cash to digital day-to-day payments.

Day-to-day financial transactions are quickly transforming from cash towards digital payment methods. In Autumn 2019, almost 84 % of Finnish consumers used payment cards for their daily shopping, whereas the share of consumers preferring cash payments, or cash and card equally, is only 16% - in addition, the share of cash-preferring consumers has decreased rapidly, as in 2013 still 26% of consumers preferred cash (Suomen Pankki 2019, 2-3). This transformation has rapidly continued during 2020 as the Covid-19 pandemic has increased consumer´s awareness regarding digital payment methods, especially due to hygiene. Digital payment methods are enabling a touch-free, hygienic payment option in physical shops – and contactless card payments have become especially popular. According to Nets, the share of contactless card payments has increased from 48,8% in March 2019 to 67,5% in June 2020 (Nets, 2020).

The transition from cash to digital payment methods is a broader phenomenon, and the development has been very similar in the rest of the Nordic countries. The Bank of Sweden statistics from 2018 outline that the number of consumers paying with cash has decreased from 40% (2010) to 13% (2018). At the same time, the number of cash withdrawals in Sweden has also decreased – 20% of consumers state that they never withdraw cash. Debit card is equally popular in all age groups, but the younger age groups are already leaping into mobile payment methods. (Sveriges Riksbank 2018, 3-7.)

The usage of cash varies within the different consumer groups and it has a specific dependency to the age of the consumer. The statistics from Finanssiala show that cash plays a significant role in daily shopping in the age group of “below 18 years” whereas this is also the age group that quickly adopts digital and mobile payment methods (Finanssiala 2019, 56, 61). This transition from cash to digital payment methods within the young age group is the basis for this thesis.

Digital money has been well-researched area over the past years, especially in China and India where digital and mobile payment solutions are a step further than in Europe. These studies are typically quite general in nature, and not focusing on adolescents in specific.

One example is the study by Llewellyn, T. et al. in 2015, which focused on countries and their readiness to adopt digital payment methods. As a conclusion, they compiled a ranking list of countries, by comparing their readiness within institutional environment, infrastructure, solution provision and propensity to adopt – Nordic countries being well presented in the highest scores (Llewellyn, T. et al. 2015, 20, 37).

The usage of digital money has also been studied, as well as reasons for a person to choose one digital or mobile payment method over another. Bisht, A. et al. studied the use of plastic money in India in 2015, and specifically focusing on customers´ preferences. The study concludes that majority of respondents are aware of plastic cards and prefer using them over cash, as cards are seen convenient, easily accessible and very portable (Bisht, A. et al. 2015, 8-9). When it comes to digital money in the form of mobile payments, a theory called Unified Theory of Acceptance and Use of Technology "UTAUT" has been utilized in several studies when studying how consumers choose their preferred mobile payment methods. This theory was originally introduced by Venkatesh, V. et all in 2003 in "User Acceptance of Information Technology: Toward a Unified View". In 2018, Yali Zhang et al. utilized "UTAUT approach" and compiled a cross-cultural study to compare Chinese and USA consumers and the attributes that affect their willingness to utilize mobile payment methods. The findings suggest that especially social influence and personality traits have a direct impact on technology acceptance (Yali Zhang 2018, 11). Similar study was conducted also by Weihong Zhao and Shengcheng Xie in 2018 "How to Build Consumers' Adoption Preference for Third-Party Mobile Payment Platform". The study concluded that perceived pleasure had the strongest influence on consumer adoption preference when it comes to choosing a third-party mobile payment instrument (Weihong 2018, 3).

In addition, there are several studies around youth and financial literacy in general – but only some of them have included a view on the usage of digital money. One of the most extensive surveys in this area is conducted by PISA in 2012 and compiled in report "Students and Money – Financial Literacy Skills for the 21st Century" (OECD 2014). The report walks through the different findings around student performance in financial literacy and the underlying attributes and factors that predict differences in financial literacy. Similar study by OECD was also published during May 2020, describing the student performance in the 20 countries and economies that took part in the PISA 2018 financial literacy assessment. This report offers interesting insights into the financial literacy and dependency to the usage of digital financial tools (OECD 2020).

The topic of young consumers and digital money has raised general interest over the past year in Finland. Both Helsingin Sanomat (Vallinkoski 2019) and YLE (Aulasmaa 2019) have published an article related to this topic during 2019. In the article by Aulasmaa (2019), Turkka Suo from Nordea emphasizes that being able to use a payment card is actually one of the essential financial skills. Both articles contain comments from several banks stating that the typical age of acquiring the first payment card is nowadays lower than it used to be. Currently children usually get their first debit cards at the age of 10-15 years. The article in Helsingin Sanomat (Vallinkoski 2019) outlines that there are differences between banks regarding the age limits, but parents are the best experts when deciding if their children are ready to change from cash to a payment card. The article suggests that it makes sense to learn to pay with digital methods quite early, as it is the norm nowadays – but also reminds that younger children do need help and support from their parents until they are capable to use the payment card on their own (Vallinkoski 2019).

The motivation for this thesis derives from personal and professional interest in digital payment methods while understanding the concern around adolescents and their ability to manage their financials in a responsible manner. At the same time, there is a possibility that the concern is misunderstood or misplaced as there doesn´t seem to be enough understanding on how adolescents actually manage the transition from cash to digital money and what kind of tools do they use to manage their financials digitally. This thesis aims at providing insights to financial institutions and other companies, which are developing their services towards the young target group, as well as professionals working with enhancing the financial literacy skills among adolescents.

1.2 Research scope and objectives

The scope of this thesis lies within the young age group and the transition from small cash-based transactions (typically based on weekly allowance from parents) towards financial literacy and specifically towards responsible usage of digital money. As financial literacy is a broad concept, it is described on a general level only, but with special attention to day-to-day payment transactions which is the more relevant area for this thesis. As an end result, this thesis provides views, key findings and suggestions on what kind of tools the late adolescents would prefer to have and would benefit from in order to improve their financial literacy while utilizing digital payment methods.

The scope of this thesis can be described with the following research question and additional sub-questions:

- How do adolescents manage the shift from cash towards responsible usage of digital money?
    - What kind of tools and methods are there available on the market for the young target group and what do they utilize for managing their financials with digital money?
    - Are those tools and methods perceived as sufficient?
    - What should those tools and methods have in addition to support adolescents more effectively in learning towards responsible usage of digital money?

The term “late adolescents” is used in this thesis for describing the young people in their late teenage years. According to the Cambridge Dictionary, the term “adolescent” refers to a young person who is developing into an adult. Adolescence can be divided into different stages; early adolescence (ages 10 to 13), middle adolescence (ages 14 to 17) and late adolescence (ages 18 to 21) with different kinds of cognitive, physical and emotional changes happening in each of the stages (Allen & Waterman 2019). As this study mostly concentrates on young persons in their late teenage years, and during the study both students and a person already in working life were interviewed, a neutral term was chosen to describe this target group. To be noted that the term “late adolescents” is applied more broadly in this thesis, as it is used to refer to the age group from 16 to 19 year old – unlike described in the article by Allen, B. and Waterman, H. (2019).

In this research, the definition “Digital money” refers to commercial bank deposits, where transfers and transactions are carried out by using a digital technology such as a payment card or a mobile application. A payment card refers to a physical payment instrument issued by a financial institute, such as a bank, and used to initiate digital payments. Payment card is a wider term, and covers also different credit cards, but taken the young target group in this study into consideration, this thesis discusses only debit cards which have no credit facility. Mobile application, also referred to as “app” is software designed specifically to run on a mobile device, such as smart phones. Payments that are carried out by using digital technology can take place equally in physical shops and in online environments, such as webshops. Virtual or digital currencies are out of scope for this study. In addition, this study includes a geographic scope limitation as it concentrates in understanding late adolescents and their usage of digital financial tools specifically in Finland, even though the theory chapters are also discussing international cases and statistics.

1.3 Target audience

The purpose of this thesis is to provide valuable insights regarding late adolescents as a specific target group and their day-to-day financials – how do they perceive the usage of digital money and the related tools, as well as how do the current tools provide them support in managing their financials, and what kind of issues or risks do they see in using digital money.

There are three potential groups of audience, for whom this thesis is likely to provide valuable input and insights. The primary target audience is organisations or development teams that are developing their financial services towards this young age group. This could be either financial institutions, such as banks – or other companies within the financial industry that are targeting or planning to target their services to late adolescents. This thesis provides valuable insights that can be utilized in the development process, when designing new services or enhancing the current service portfolio.

The secondary target audience for this thesis are those departments at banks that are responsible for the customer service. The insights and conclusions from the interviews provide understanding and suggestions on what is the optimal set of tools for a late adolescent for managing their financials and supporting the adolescents in becoming responsible in their spending habits. This thesis also provides suggestions on informing and communicating the best practices towards the adolescents.

Lastly, this thesis provides valuable insights to those professionals that are working with young people and their families, with the aim of teaching adolescents about managing financials. This could be schoolteachers in either upper secondary schools, high schools or vocational schools – or persons working in social welfare or related associations. In addition, this research is interesting for parents who are interested in supporting their children on their path towards responsible finance management and financial independence.

1.4 Structure of the Thesis

This section explains the structure of this thesis. Chapter 1 provides an introduction to the phenomena of digital money and previous studies regarding this topic. It also describes the motivation behind this thesis, as well as the objectives, limitations, approach and key concepts.

The overall transformation from cash-preferring to a cashless society is described in chapter 2. Also the concept of financial literacy is discussed.

Chapter 3 describes late adolescents as a specific target group and the attributes that define them in the financial context in Finland. This chapter also provides an overview of the tools that are currently on the market for this specific target group.

Chapter 4 focuses on introducing the research and the methods used in this research project. In addition, the research material analysis as well as results are described.

Conclusions, views and potential suggestions are presented in chapter 5. The value and the applicability of the results of this thesis are discussed, as well as potential for future research.

1.5 Research Methods

This thesis is **applied research** in nature. Adams et al. (2014, 7) describe applied research as a methodology that specifically aims to improving human conditions, with results potentially having a commercial value. Applied research typically improves understanding of a particular problem and provides findings, results and new knowledge related to it (Saunders et al. 2009, 9).

This research focuses on understanding the specific target group of late adolescents within the context of digital money and therefore the **research approach in this thesis is inductive**. The relationship between theory and practice within a research is inductive, when the starting point is to research the phenomenon in practice, and then aim to draw conclusions and create a theory based on the findings (Kananen 2012, 27). Inductive approach is typical in a research, which focuses on the context in which the events take place – as opposed to the deductive approach, which has a tendency to follow scientific principles more strictly and typically starts by defining a hypothesis. Inductive approach emphasizes qualitative data and close understanding of the research context with the researcher being part of the research process. (Saunders et al. 2009, 124-127.)

The research design in this thesis project is exploratory, as it aims at gaining more understanding about the topic. Exploratory design is flexible in nature and can be conducted through three different ways; literature search, expert interviews and focus group interviews (Saunders et al. 2009, 139-140). This thesis utilizes all of these three above-mentioned ways in gathering data and insights and are described in further detail below.

Different forms of literature are explored in order to gather sufficient secondary data regarding the context of late adolescents and financial literacy, as well as the concept of digital money. For this purpose, **versatile sources of secondary data** are utilized. Secondary data can be divided into three sub-categories based on the data origin; documentary

data, survey-based data and those compiled from multiple sources (Saunders et al. 2009, 258-259). For gathering insights regarding the usage of digital money and mobile payments, as well as demographics, survey-based statistics and trend graphics from institutions such as Bank of Finland, Sveriges Riksbank and OECD are utilized. As written documentary data, recent newspaper articles and blogs by known professionals are utilized - these sources of documentary data are especially valuable in gaining understanding regarding financial literacy. One of the main areas of secondary data for this research is multiple-source data. Especially reports and analyses produced within the financial industry and other publications by professional organisations or government have a significant role in providing more insights regarding digital payment methods and their usage in Finland and neighbouring economies. In addition, books and journals are utilized for useful information regarding the theory of learning and research methods.

This thesis utilizes exploratory interviews as a way of obtaining **secondary data** regarding the phenomenon of late adolescents and usage of digital money. Exploratory interview is a method for obtaining relevant information and understanding regarding the phenomenon on a general level, and it is especially useful in gaining overall knowledge when defining the research scope and remit (Adams 2014, 143). In this thesis, exploratory interviews are used in gaining understanding regarding the concept of financial literacy and different tools that are available in the market for adolescents for managing digital money transactions. These exploratory interviews are conducted in an unstructured manner. Unstructured interviews are typically informal, without pre-defined questions and the interviewee is given the opportunity to talk freely about the topic at hand (Saunders et al. 2009, 321).

Primary data for this research is gained through in-depth interviews with persons within the target group of late adolescents. In-depth research interviews are a tool for qualitative research projects and they are often conducted with a semi-structured approach. This includes a high-level plan of questions and themes to be discussed, with the aim of provoking conversation and further in-depth questions. (Adams 2014, 144; Saunders et al. 2009, 320.)

2 FINANCIAL LITERACY IN CASHLESS SOCIETY

2.1 Towards Digital Money and Cashless Society in the Nordics

Nordic countries have been forerunners when it comes to digital payments. Already in 2015 CNN published an article stating “Denmark could be the first country to go cashless” (Harrison 2015). In 2017 BBC stated that “Sweden is the most cashless society on the planet” (Savage 2017). Regardless of which country is truly leading, it is evident that Nordic countries – especially Norway, Denmark and Sweden are showing the way. In Norway, average number of card transactions per inhabitant was already 475 during 2018, and a comparison (Figure 1) from the previous year 2017 shows that inhabitants of the Nordic countries have truly adopted card payments when comparing to many other western countries (Norges Bank 2019). While the Nordic countries have been well ahead on their path of becoming cashless, similar development is happening also globally. Especially China has been working towards cashless society, and analytics expect that China would turn fully cashless within a few years (Manninen 2020).

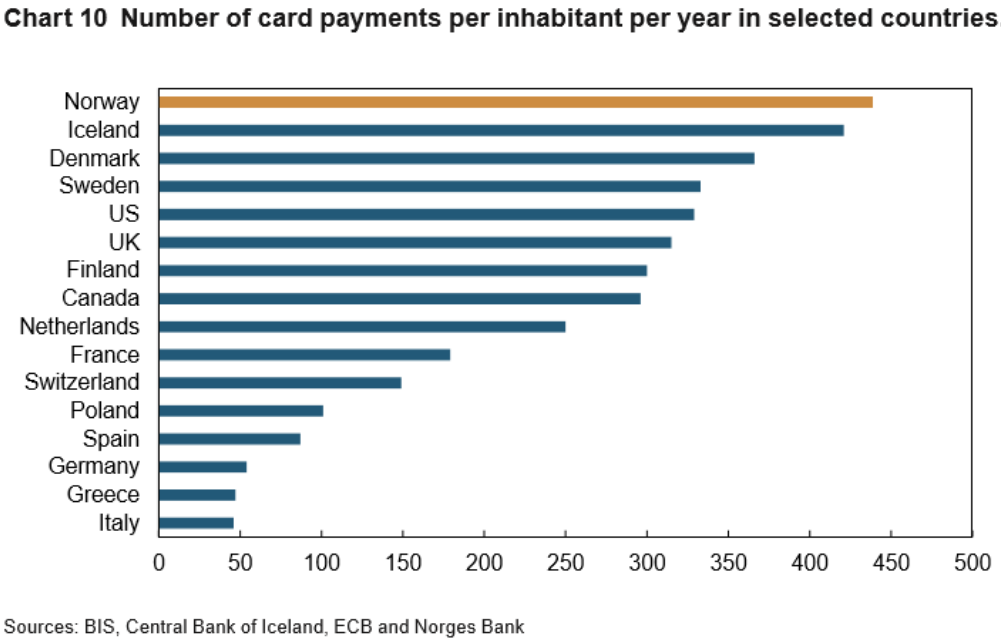

FIGURE 1. Number of card payments per inhabitant per year in selected countries 2017 (Norges bank 2019).

Digital payment methods are not only emerging because they are handy for the individual consumers, but they also bring benefits to the society on a more general level. Visa Inc

has conducted a study with RoubiniThoughtLab where they compared 100 cities worldwide and estimated the potential upsides for entire cities, when converting towards digital payments. These upsides included reduction in cash-related crime, companies having less costs for handling cash and at the same time improved potential for greater sales through digital channels. In addition, individual consumers are saving time, since digital payments are faster and easier. From the government perspective, the major benefits are savings in direct administrative expenditures as citizens adopt digital payment methods – as well as increased tax revenues from recaptured informal economy. Another important aspect from the government perspective is safety, as limiting cash-based payments is also a way to act against terrorist financing. (Visa 2017, 7.)

Even though the statistics show that digital payments are becoming more and more popular, there is also debate if a fully cashless society is worth pursuing. There is a growing concern if all inhabitants would be able to manage their daily financials with digital methods only. Specific groups of people are still relying on cash as an economic necessity - such as persons with disabilities, elderly people, young children and other vulnerable groups. It is seen as a risk that cashless retailers and restaurants would be discriminating vulnerable customer groups, as they would be excluded from some services. Even though cash payments represent only 1% of GDP in Sweden, also they are considering if access to cash should be secured through law (European Payments Council 2019). (Jones 2019; Deloitte 2019, 10.)

Finland has been somewhat behind the other Nordic countries when it comes to the usage of digital payment methods – one example being the number of card payments per inhabitant seen in Figure 1 - but this has been changing rapidly over the past years. The share of cash payments in retail shops has been decreasing also in Finland. During Autumn 2019, only 6,5% of retail payments were done with cash, while in 2014 the share was still 20% (Suomen Pankki 2019, 2). When comparing the usage of mobile payments as a specific form of digital payments, Finland has been even more behind the other Nordic countries. In a study by YouGov (2019, 5), 48% of Finns stated that they don´t use any mobile payment apps on their smart phone, while only 11 – 14% had the same view in the neighbouring Nordic countries. Until 2020, majority of mobile payment users in Finland have been young adults, but lately there has been a notable shift as also older age groups have started to utilize mobile payments in their day-to-day lives (Tervo 2020).

2.2 Financial literacy

This chapter discusses the concept of financial literacy, as well as the related terminology. In general, financial literacy is not a theoretical skill that would develop in a vacuum. Even though financial literacy skills are demonstrated in the most practical, everyday actions and situations – there is a wide range of underlying factors contributing to the individual´s level of financial literacy. In addition to having financial skills, individual´s knowledge, attitude and sense of responsibility are also important dimensions within the financial skill-set. There is a wide range of influencers that feed their input as well; parents, teachers, peers as well as media, authorities and companies within the financial sector. In addition, the general technical development, digitalization as well as changes in the legislation form a background as the underlying infrastructure. (Whitebread & Bingham 2013, 10-15; Raijas & Uusitalo 2012, 11.)

There is no single, unified definition of “financial literacy” – not in Finland, nor internationally. Terms such as financial capability, economic capability, financial knowledge and understanding, and personal financial literacy are used and they are somewhat overlapping (Peura-Kapanen & Lehtinen 2011, 2-4). OECD (2014) has created a rather thorough framework for defining financial literacy in a way that can be measured as part of the Pisa surveys. The term is made more tangible by dividing it into three categories; Content, Processes and Context (OECD 2014, 34), and is further described below in FIGURE 2.

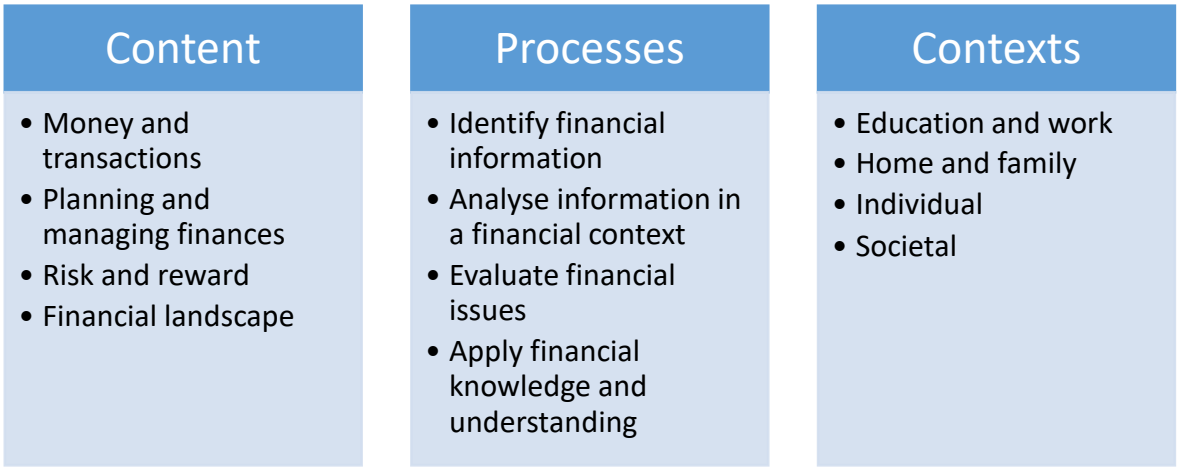

FIGURE 2. Summary of categories within financial literacy (OECD 2014, 35-38).

Content category focuses on handling simple, everyday monetary transactions with different payment instruments (Money and transactions). This includes planning, managing

and monitoring income and expenses – both short and long term (Planning and managing finances); identifying the potential for financial gains or losses in different contexts (Risk and reward) and understanding consumer rights and responsibilities, as well as consequences of change in economic conditions (Financial landscape). (OECD 2014, 35.)

Processes category is concentrating on identifying the relevant topics when searching and accessing financial information (Identify financial information). This category includes skills such as being able to interpret and compare information in financial contexts (Analyse information in financial contexts); constructing financial justifications and explanations based on financial understanding (Evaluate financial issues), and taking effective action by using knowledge of financial products and concepts (Apply financial knowledge and understanding). (OECD 2014, 36.)

Contexts category emphasizes applying financial skills and knowledge in different contexts, such as employment and moving into the labour market (Education and work); costs related to running a household (Home and family); choosing personal products and services (Individual) as well as understanding the societal aspects of individuals´ financial decisions (Societal). (OECD 2014, 38.)

In addition to the framework by OECD, also financial professionals have offered different definitions for clarifying the concept of “financial literacy”. For example, Kari Kemppainen (2017) has in his blog taken a more general view and concentrates specifically on financial literacy in the new, digital era. He uses the term “financial capabilities” (talousosaaminen) and divides it into three categories, where financial literacy is one:

1. Basic financial knowledge, such as understanding the concept of interest in general.
2. Financial literacy, which Kemppainen defines as understanding the basic concepts in different contexts. For example, understanding the meaning of interest rate when applying for a household loan or evaluating the risk and potential profit of different investment instruments.
3. Ability to apply the financial knowledge and literacy in real-life situations in personal life. This includes making personal financial decisions in a world that is full of options.

Another view is to emphasize that financial literacy is not just about the knowledge and capabilities. Professor Katariina Salmela-Aro and her group have studied young adults

and their experiences on financial challenges. She emphasizes that financial literacy is more than capabilities – it is also the feeling of being able to manage financials independently. This kind of positive sense of financial control actually has a broader impact on a person´s life, as it helps the young adult in managing day-to-day financials also when the income is small. On the other hand, challenges in managing financials had a correlation with symptoms of depression later on, as well as the overall satisfaction in life. (Puttonen 2020.)

According to Whitebread & Bingham (2013, 20-21), children are able to learn basic skills of financial literacy already at an early age through practicing conscious control over their own financial decisions – whether to save or spend their pocket money being one of the early learnings. Shopping experiences add to this, as comparing prices and deciding on how much to spend are valuable experiences when learning basic financial skills. Concept of lending money and paying back is another skill, which can be practiced with pocket money. The most effective method of learning these basic skills is through own experience, rather than just being told about them. Already with pocket money contexts, a child is able to learn basic benefits and tools of sharing, saving, and purchasing that occur in everyday situations. (Whitebread & Bingham 2013, 21, 24.)

While children tend to develop their financial understanding through "personal economic experiences", there is actually a statistical dependency between personal experiences with money and general financial literacy (Pisa 2012, 102; Whitebread & Bingham 2013, 17). As part of the PISA survey (OECD 2014, 102), 15-year old students were asked if they had a bank account or a debit card. On average, students who held a bank account scored 21 points higher in the PISA test than those students who did not. Similar, strong dependency was not visible when comparing students with a debit card. On the other hand, students with both bank account and a debit card were associated with a higher score. The latest PISA report (OECD 2020, 128) concluded that students who actively kept track of their bank account balance scored 50 points higher in the financial literacy assessment compared to those who had not done so.

While cashless payment methods, such as payment cards, are favoured by the vast majority of consumers, and encouraged by governments – there are risks that lead to the area of financial literacy (Deloitte 2019, 11). When digital money and its impact on financial literacy and person´s ability to manage everyday financials is considered, the concept of "pain of paying" is often mentioned. Pain of paying is "a crude but effective reminder of the sacrifice that even a minor purchase will entail" and it is influenced by the tool used to make the payment (Prelec & Loewenstein 1998, 4-28). Pain of paying is associated to a

wider concept of “mental accounting” which was introduced already in 1984. Mental accounting is the way that ordinary people construct simplified mental representations of their economic resources and especially monetary transactions. The medium of payment is one of the areas that affect the mental accounting, with some payment instruments being easier to manage mentally. (Antonides & Ranyard 2018, 124-129.)

Studies also suggest that the appearance of the payment instrument has an impact on the consumers´ willingness to pay. In a study performed in the IT University of Copenhagen resulted that people were willing to spend 37% more with a debit card compared to cash (Runnemark et al. 2015, 13). The findings in this study suggest that the physical form of cash makes it easier to control spending whereas for a digital payment method such as debit card, the willingness to pay is higher (Runnemark et al. 2015, 19).

Pisani & Atalay studied the use of mobile devices (mobile phones and wrist watches) as payment methods and saw evidence that the “pain of paying” is lower with these instruments compared to cash which is the most physically visible and therefore transparent payment method. Interestingly, their study focuses on the role of attachment and how it affects the “pain of paying”. As the mobile phones are used for a variety of different functions, and not just for payments – they are multifunctional and therefore there is a greater sense of attachment towards a mobile phone than a payment card. The study interestingly suggests that the greater sense of attachment towards a payment instrument contributed to a higher level of “pain of paying”. (Pisani & Atalay 2018, 238-239.)

3 LATE ADOLESCENTS AS A SPECIFIC TARGET GROUP

This chapter discusses late adolescents and the attributes that are defining them in the financial context. In addition, this chapter provides an outlook on the current digital financial tools available on the market for this specific target group.

Young persons, especially in the age group of 15 -20 year old, are facing several changes when it comes to possibilities to act independently in the society. At the age of 15, a person is legally allowed to sign non-significant agreements (such as agreement for summer employment). With the consent from parents, a debit card can be applied already sooner. At the age of 18, the rights and responsibilities are expanded, and the person is legally treated as an adult. Typically the years 15 – 20 are filled with changes; becoming independent, moving away from home, studying and potentially getting a job. Important and critical decisions, with a great financial significance. As one example; late adolescents are typically entering into a study phase characterized by limited income (Myllyniemi 2015, 60). Within this young age group, attitudes towards consuming and managing financials are typically a combination of scarce financial resources and tendency to focus on enjoying life today. The late adolescents see being able to provide for him/herself and moving out of the family home as important signs of adulthood, at the same time “not having money” is seen as a pivotal, potential risk – especially if the young person does not have sufficient skills and knowledge to manage his/her financials responsibly. In addition, for this age group, decisions regarding consuming and purchases are often based on pleasure. This tendency combined with little knowledge and experience on managing financials, makes the young people especially vulnerable towards financial difficulties. (Peura-Kapanen & Lehtinen 2011, 5-8; Raijas & Uusitalo 2012, 51.)

A study from Australia (Andalón et al. 2019) suggests that teenagers can be divided into three categories based on their money management styles and their tendency to either spend or save. “Spenders” found it easy to spend their money, where as “savers” were more likely to have a long-term view and tendency to save for a rainy day. “Neutral” money management style was not strongly either or. The study suggests that having had an experience of saving money in early adolescence resulted in stronger saving tendency during late adolescence. When the children had a savings account at the age of 12-13, they were more likely to have a “saver” money management style at the age of 16-17. In addition, a regular pocket money, without linkage to rewarding or punishing the teenager, was more likely to result in saving habits. The study also suggests that at this young age, the money management styles are more about personal preferences than driven by a sense of responsibility.

Also recent PISA assessment by OECD provides more information and understanding relating to adolescents and their financial skills – 15-year-old students in 20 different countries and economies participated in the assessment. One of the findings was that the more adolescents have influence and independence on their financials and spending, the better financial literacy skills they tend to have. The assessment found a strong correlation with students´ autonomy in spending decisions and financial literacy performance, as the more financially independent students scored 27 points higher in the financial literacy test. (OECD 2020, 87-89.)

The PISA assessment also studied the basic financial tools and access to those. Interestingly, in Finland approximately 90% of 15-year-olds had a bank account, and almost 80% had a payment or debit card – but only 25% had a mobile app access to their bank account (OECD 2020, 105-106). Although the report states that the question regarding mobile bank apps might have been misinterpreted and results might not be accurate, for Finland it is probably close to correct. Typically, in Finland teenagers have been receiving access to full banking services only after their 15th birthday (Danske Bank, 2020b), so it is possible that only a small portion of that age group had access at the time. Although the age limit is gradually changing and some banks are already offering full services to teenagers below 15 years (Pakkala, 2020).

3.1 Late adolescents are characterized by specific attributes

This chapter provides more insights regarding young consumers and the general financial environment that they are living in. The following attributes are typical when discussing young consumers and their usage of money; they commonly have a low income level, and the timespan for financial planning is short. In Finland, the tendency to move out of family home at an early phase is considered normal. In addition, the young consumers typically have high motivation in utilizing digital and mobile solutions. All these attributes together make the late adolescents a potentially vulnerable group when it comes to managing financials and emphasize the importance of financial literacy already at a young age.

Within the young age group, the monthly income is typically low. For all pupils studying still in comprehensive schools, only 15% state that they have income from salary, as the majority of 62% get most of their income from family and relatives. For students in upper secondary education, the situation differs between students who live on their own and those that live with their family. When living still with the family, half of students state that the monetary support from their family is the main source of income. For those living on their own, this is the situation for 22% of students. (Myllyniemi 2015, 63.)

When looking at how much exactly do children have to spend on a monthly basis, it makes sense to divide between pupils in comprehensive schools and those in upper secondary education. Children between 12-14 years receive on average 8,27 eur per week from their families (Danske Bank 2019). For those in upper secondary education, the situation is different as they are entitled to student grant and other benefits, and they might have regular income from part-time work. The typical method of evaluating person´s income level is to compare it with the median income within the reference group. In the age group of 18-24 years, the percentage of persons with income less than 40% of median is 27,5%. In all age groups the percentage of persons with small income is 12,7%. Although it must be noted that many students utilize also student loans as one source of income, which is not visible in the statistics. (Tilastokeskus 2017.)

Even though the income level is low, late adolescents are already gradually becoming consumers with a variety of categories for day-to-day spending, as described in FIGURE 3. 84% of teenagers in the age group 13 – 17 are spending money on sweets and drinks, and 63% are buying food when going out with friends. In addition, especially girls are spending money on clothing, cosmetics and accessories, as 57% of girls are regularly spending on clothes. While consuming, teenagers are also saving some part of their limited income. 48% of Finnish teenagers are saving part of their income. (Ravantti & Tervonen 2020.)

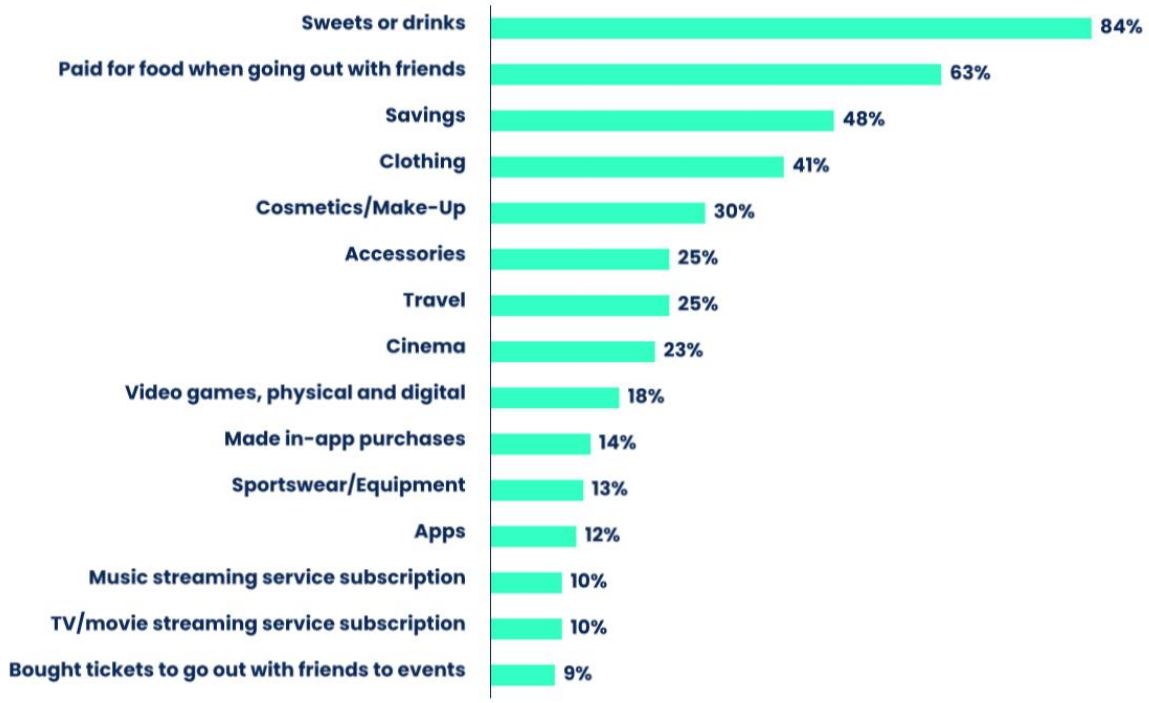

FIGURE 3. Typical spending categories among teenagers (Ravantti & Tervonen 2020).

Compared to many other European countries, children in Finland tend to move out of their family homes at an early age – the average age is 21,8 years in Finland while the EU average is 26,2 years (Eurostat 2020). Comparison between different countries is presented below in FIGURE 4. The main underlying reason is typically the young person´s urge to become independent, while leaving the parental household is often seen as a sign of independence in the Finnish culture in general. On the other hand, Finland is to a large extent sparsely populated country, and studying might require the young person to move as the distance to school becomes too long otherwise. In addition, society is supporting early independence through social benefits, such as student grant and housing allowance. (Custódio 2020, 8; Myllyniemi 2015, 22.)

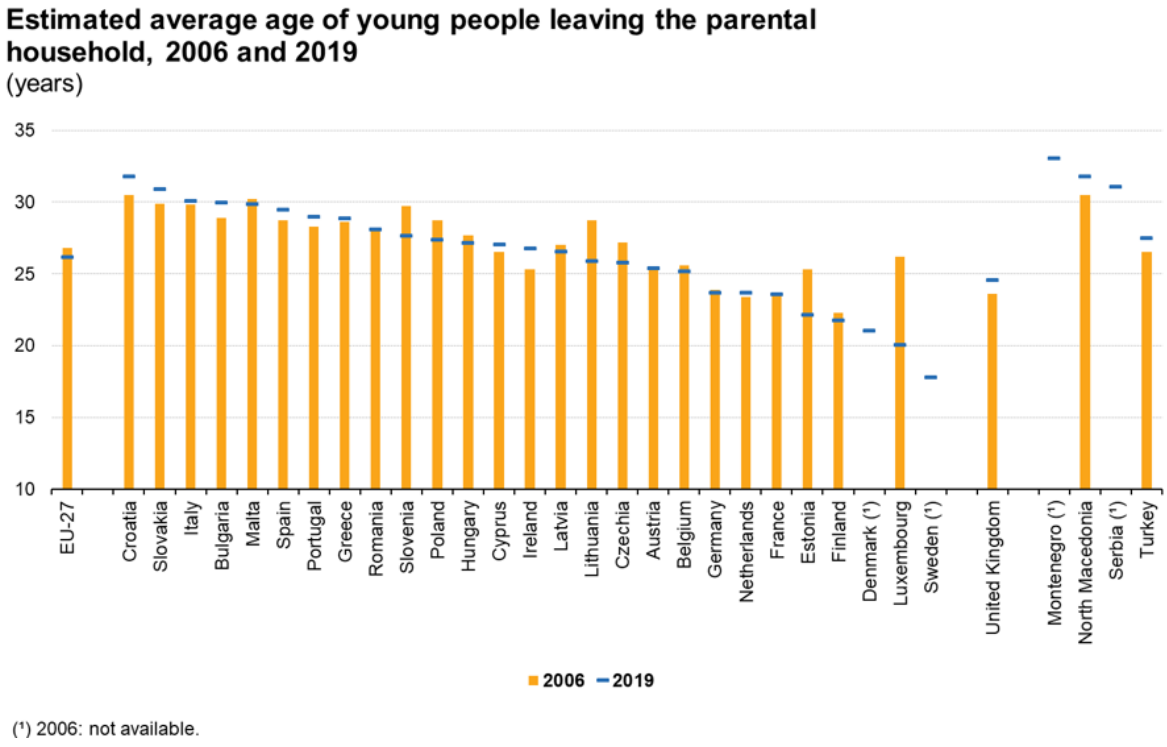

FIGURE 4. Estimated average on young people leaving the parental households (Eurostat, 2020)

In addition to leaving the parental household, independence can also be viewed by understanding the mental readiness to act independently. According to a research conducted by GroupM (Ravantti & Tervonen 2020), Finnish teenagers (age 13 – 17 year old) are among the most independent ones when comparing to seventeen other countries globally, such as UK, Spain, India, China and South Africa. Culture and tradition plays the least significant role in the lifes of Finnish teenagers, and they feel the least pressure to apply for a

career that is approved by family and friends. In Finland only 18% of teenagers feel external pressure regarding their career choices, when the global average was 36%.

Adolescents are typically characterized by their tendency to have a short time-span for planning their financials in general (Berry, 2011, 45). The same can be observed in FIGURE 5, which presents the statistics gathered by Finance Finland (Finanssiala, 2019). In total, 63% of interviewees between 15 – 17 year old stated that they have a maximum of 3 month time-span for financial planning. In addition, 14% stated that are not planning their financials at all.

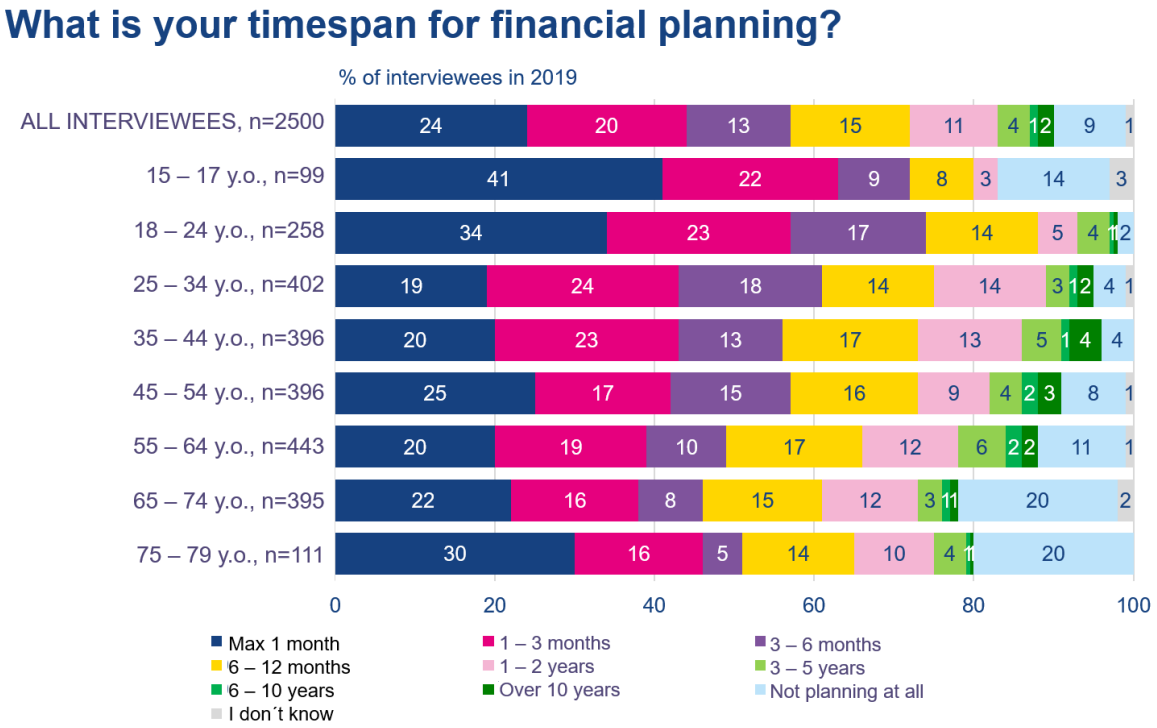

FIGURE 5. Timespan for financial planning in different age groups. (Finanssiala 2019, 10)

The adolescents are typically adopting digital tools and services at an early age. According to the research by GroupM (Ravantti & Tervonen 2020), this is not only due to their tendency to adopt new technologies and services quickly, but it is very much also related to the importance of friends and sharing experiences with them. Based on the GroupM research, almost all Finnish teenagers within the age group 13 - 17 are using mobile internet and social media on a daily basis. Altogether an average teenager spends almost 8 hours per day with digital services; 2,5 hours is spent on social media, and 2/3 of media content

is consumed via mobile phone or tablet – instead of more traditional devices, such as television. Compared to the global average, Finnish teenagers are spending more time with mobile phones and social media, while mobile payments and shopping online is, interestingly, less widely used by the Finnish teenagers. Late adolescents in Finland are less likely to purchase or browse products in web shops and only 14% is using a mobile wallet application on a weekly basis, while the global average is 33%. This is in line with the findings in the latest PISA study, where 25,7% of teenagers in Finland had made a payment using a mobile phone in the last 12 months, as the OECD average was 39,1% (Pisa 2019, 19).

3.2 Digital financial tools targeted to adolescents

The usage of physical cash has benefits that have been seen as vital in managing everyday financials. Harju, A. lists these in her essay (2018, 59) which is part of a publication by the Bank of Finland. According to Harju, the usage of cash actually supports managing financials by being tangible. The money that you have physically in your wallet is what you have to spend. It is easy to realize the amount and value of cash, as it is physical and tangible. Cash can also be divided into smaller sums, to create a weekly budget. Harju states that physical cash is often the first payment instrument that people learn to use and it helps children to understand the value of money and prices.

It is unlikely that cash would be disappearing in the near future, but children are also introduced to digital ways of spending money at a very young age. Banks are issuing debit cards to children as young as seven years old (Vallinkoski 2019, 34). In Sweden, only 9% of children between 12 - 14 year old are receiving pocket money in cash, while 74% are already receiving their pocket money in a digital format (Bankomat, 2020). In addition, it is quite difficult in today´s world to run all financial transactions on cash, so a combination of digital methods and cash would be more typical. While cash has benefits in being tangible, some of those good qualities can be added to digital money through sufficient supporting tools. The list below introduces the most commonly used digital tools that are available today in Finland to help late adolescents in managing their day-to-day financials.

- All Finnish banks offer a mobile bank application, which is available to their customers, regardless of age. Mobile bank app typically offers a full range of functionalities, such as access to accounts, bill payments, money transfers etc. The usage of mobile bank applications requires specific bank identification codes and for that reason it has been a less widely used service within the younger teenagers. The same bank identification codes are used nowadays for a variety of digital services,

such as access to health care information. During the Covid-19 pandemic, more and more families have applied bank identification codes for their children – enabling also access to the mobile bank services (Pakkala 2020).

- PCKT is new service, launched in April 2019 and it is especially designed to teach children and teenagers to manage their financials – already when the income is just “pocket money”. PCKT service was created together with Vanhempainliitto to ensure that the service fits the needs of families (Rytsölä, 2019). PCKT app is an independent service, which is available to all, regardless of which bank the family is using.

  The service comprises of a MasterCard debit card and an app available for smartphones. PCKT has implemented a three-dimensioned pocket setup within the service. Pocket for day-to-day usage includes funds that are available to be used through the debit card. Earning of funds is supported by possibility to add chores and earn pocket money by completing chores as agreed together with parents. Weekly/monthly allowance from the parent to the child can be automated. Pocket for savings is a functionality where the child can create one or several saving targets and transfer funds independently to the savings pocket. The idea is that the child is active in determining what to save for and how. Investment pocket allows the child to decide on investing some of the funds. In practice, it is then up to the parents to determine how and when it is done. (Rytsölä, 2019.)

- OP Junior (previously called Pivo Junior) is a light version of a mobile bank application, developed by OP bank for its customers. It offers a child easy access for checking bank account balance. The service requires that the child has a bank account and a debit card from OP bank. The application is taken into use together with parents, and therefore it doesn´t require bank identification codes or a visit to the bank. (OP, 2020.)

- MunRahat is a mobile application similar to OP Junior, but developed by Danske Bank to its customers. MunRahat is targeted to children between 8-14 years, but can be used as a light mobile bank until the child turns 18 years. The service consists of a debit card and two bank accounts – the other one being linked to the debit card and the other being a savings account. The child is able to transfer money between the two accounts (if allowed by the parent) and check the bank account balance easily. (Danske Bank, 2020a.)

- MobilePay is a mobile application, which is not targeted to a specific age group, but is still popular among teenagers. In July 2020, approximately 120 000 Finnish teenagers within the age group 15 – 19 years had MobilePay application installed on their smart phones. MobilePay is an independent service, and available to all, regardless of their banking relationship. MobilePay offers an easy way to transfer money between friends and relatives, based on the phone number – but it does not offer any access to the bank account. It is rather a service supplementing the day-to-day banking services, such as mobile bank apps. MobilePay can be also used as a payment method in many purchases, especially ticketing in public transportation is a relevant context for young consumers. (Tervo 2020.)
- Nordea Wallet is a mobile application for all Nordea customers, regardless of age. It doesn´t replace mobile bank application, but offers more insights and control into payment card usage. Consumption is visualized and categorized – how much was spent and where - in order to follow-up on card payments during specific months. Another interesting feature is notifications, which can be enabled to remind the user on the purchases and spending during the month. Nordea wallet makes digital money more visible for the consumer and adds cash-like “pain of paying” through notifications. (Nordea 2020.)
- In addition, global mobile payment applications that utilize card payment technology are gradually gaining popularity in Finland. Apple Pay and Google Pay are typical examples of such applications. Their main functionality is enabling card payments in shops through a mobile phone, allowing a consumer to leave the physical wallet home altogether.

4 RESEARCH PROJECT

4.1 Description of the research project timeline and methods

As discussed in chapter 1, this research project aimed at understanding the late adolescents and the tools that they utilize in order to manage digital financials. The research project was launched in late 2019, and finalized during early autumn 2020, the timeline and the related phases are described below in FIGURE 6.

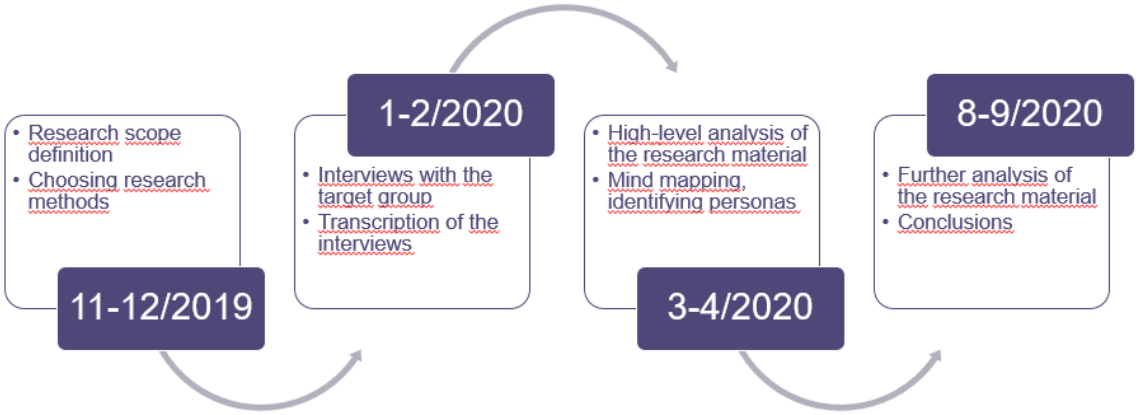

FIGURE 6. Timeline and phases of the research project

The research project started in late 2019 by defining the scope and choosing the applicable research methods. It was decided to focus on the shift from cash payments towards digital payment methods and especially the tools that the late adolescents have in use, as well as their views on what kind of tools would best support their digital financial management. The research questions (Chapter 1.2) were formulated at this point and the target group to be researched was clarified.

During early 2020, the project continued through contacting relevant potential interviewees from the specified target group and conducting the interviews as further described in chapter 4.1.2. The analysis of the research material was conducted in two phases during spring and early autumn 2020.

4.1.1 Target group

This research aims at understanding how young adolescents manage their day-to-day financials and which tools do they utilize. The target group of “late adolescents” in this research is more precisely Finnish citizens born from 2000 to 2003, meaning young people in the age group of 16 – 19. This target group was chosen for the following reasons:

- They have recently learned to use money with cash, and then changed over to digital payment methods. This transition from cash to digital payment methods is still fresh in their minds and experiences are recent. In addition, some of them might still be in the transition phase from cash to digital.
- This age group has utilized digital services since childhood; therefore, there is a general expectation that these “digital natives” will have no trouble in adapting digital tools.

The size of this target group is vast, as the average number of children born per year during 2000 - 2003 is 55 000 (Väestöliitto, 2020). In total the size of the target group is approximately 220 000 young adolescents. Geographically, this target group is spread throughout the country, but focusing around capital region and other larger cities. Half of the Finnish population lives within 200 km radius from Helsinki, and especially young people and families tend to move towards larger cities, which provide better possibilities to work and study. (Savolainen 2016.)

Choosing the best way to pick a sufficient sample for this study was challenging. For practical reasons, it was not possible to take accurate samples from the vast target group that would sufficiently represent all potential variables, such as age, location (city/countryside), life situation (studying/working/unemployed) etc. The aim was to interview approximately ten adolescents regarding their usage of financial tools.

The fact that the target group included adolescents below 18 years brought also other considerations. When interviewing children below 18 some ethical views must be considered; self-determination and privacy of the participants must be protected. It might also be necessary to obtain consent from the parent. The need for parental consent is based on many aspects. When the research does not harm the child, and the child is capable of understanding what the research is about and can form his/her own opinion about the participation – then parental consent is not necessary (Pekkarinen 2018). In this research, the ethical view of ensuring that the participants have given sufficient consent was seen as more important than ensuring that the sample group was geographically representative. The participants in this research were therefore recruited through friends, colleagues and

family members. In practice, the consent was obtained orally from majority of parents (when participants were below 18 years). In addition, the objectives, the aim of the interview and the usage of data were always discussed with the interviewee both before the interview (on a general level) as well as in the beginning of the interview (in more detail). This part of the interview is further described in chapter 4.1.2.

4.1.2 Interviews

The research method for this study was semi-structured, in-depth interviews. In-depth research interviews are a tool for qualitative research projects and they are often conducted with a semi-structured approach; this includes a high-level plan of questions and themes to be discussed, with the aim of provoking conversation and further in-depth questions (Adams 2014, 144; Saunders et al. 2009, 320). This research method was chosen for the following reasons:

- As this study aims at understanding the day-to-day financials and managing digital money, it was important to have a dialogue with persons within the target group.
- A semi-structured approach was chosen, as there were specific pre-defined topics and questions, which could have been researched through a survey, but at the same time it was important to allow open discussion and comments to obtain full insights.

The interviews were conducted mainly via telephone, due to distance and more flexibility in finding a suitable time for the interview. One interview was conducted face-to-face, and one was conducted as a pair interview. The average interview took 30-45 minutes. All interviews were held in Finnish during January-February 2020.

Each of the interviews started with a walk-through of the following topics:

- Introduction of the interviewer and the background for the thesis. The expected length of the interview was discussed and a permission to record the interview was also obtained.
- Explaining how the interview material will be utilized in the thesis. Emphasizing that the interview is anonymous and even though the topic is around day-to-day financials, sensitive questions regarding income, money usage or banking relationship will not be asked.

- Finally, the interviewees were encouraged to think of the situation as an informal discussion, they were reminded that there are no right or wrong answers, and all input and views are equally valuable.

The interviews were semi-structured theme interviews and had a high-level interview template, with four pre-defined themes (Starting with Digital Payments, Budgeting and Planning, Usage and Control, Learnings).The high-level interview template is presented in Appendices. Each of the themes had also a group of supplementary questions that were designed to help guide the interview and ensure that all topics were covered. These supplementary questions were specifically useful, if the interviewee was less verbal and required precise questions. In addition, a list of background questions were asked from each of the interviewees to ensure that a certain level of demographic data was gathered as part of the interviews. These questions were related to age, life situation (school/work), area of residence and age of when they started using a payment card.

The four predefined themes were ideated based on a concept of “learning cycle”. The underlying assumption was that these late adolescents were in the process of learning to manage their day-to-day financials with digital money and digital tools. In order to understand the different phases on learning, the theory of experiential learning cycle by David A. Kolb was visited. An adapted version of the experiential learning cycle is visualized in FIGURE 7. The theory was introduced in 1984 and it focuses on the idea that learning is a continuous process, instead of specific set of outcomes (Kolb 1984, 28). Learning actually happens when the person interacts with the surrounding environment, the “real world” (Kolb 1984, 34). By visiting the theory of experiential learning before preparing for the interviews, it was possible to ensure that the questions and themes included all views of the learning experience. In other words, not just understanding the tools and methods that the late adolescents use, but also to understand what kind of learnings have led them to those methods, as well as how would they instruct others based on their learnings.

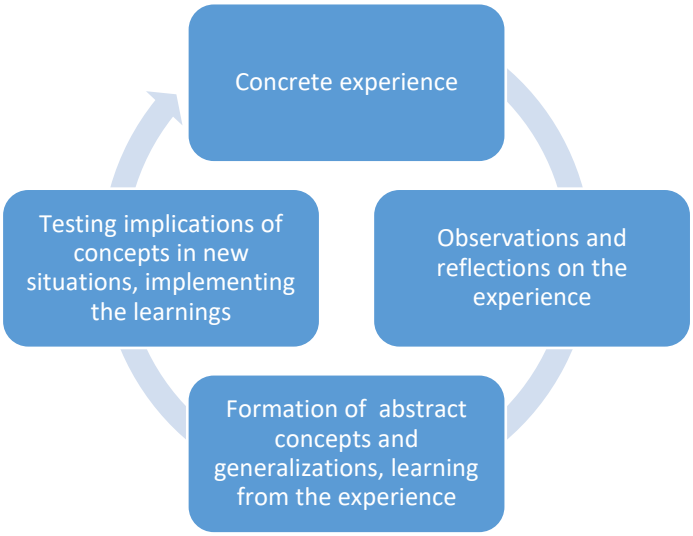

FIGURE 7. The experiential learning model. Adapted from the model presented by Kolb. (1984, 21)

The experiential learning model could not be utilized for the interviews as such, as it was quite abstract – therefore the four pre-defined themes for the interview template were a practical adaptation of it. The theme Starting with Digital Payments focuses in understanding what the initial assumptions, expectations and experiences were when the interviewee took digital payment methods into use. Budgeting and Planning theme concentrates in recognizing how the interviewees perceive their own finance management – how do they plan for their upcoming expenses? The theme Usage and Control aims at understanding the actual and concrete experiences of managing digital financials – the different kinds of day-to-day monetary interactions and ways of controlling those. The theme Learnings focuses in understanding the reflections and key learnings that the interviewee has. What kind of experiences have changed the interviewees financial habits along the way and how? And what would they have done differently, based on their current understanding and experiences?

4.1.3 Analysing the results

In order to objectively analyse results of qualitative research material, careful processing of data is needed. According to Jorma Kananen, processing can be divided into the following phases: Interview, Recording of the interview, Transcribing the recording into text format, Segmentation of the text and Classification of the text. The sequential phases are visualized in FIGURE 8. The aim is to fully understand the phenomenon being researched

through structuring the research material. The transcribed text needs to be simplified and coded into segments, to ensure that an objective analysis is possible. (Kananen 2012, 109-120.)

FIGURE 8. Phases of processing qualitative research material (Kananen, J. 2012, 110)

In this research, all interviews were recorded electronically to ensure that the full interview was captured, without the interference of writing down notes. For the recording purpose, a specific recording application for an Android tablet was utilized. Before the first interview, the recording application was tested to ensure that it would reliably record the full length of the interviews.

After the interviews, the electronic recordings were transcribed. Interviews were written down in an Excel sheet, each comment or reply to its own cell. Excel was chosen as the tool for transcription, as it offered an easier and more effective tool for adding columns for segmentation, classifications and keywords, as well as search and filtering options. The transcription was conducted with a standard language convention, instead of transcribing the interviews word-for-word. There were two reasons for using a more high-level convention; firstly, the interviewees were from different parts of Southern Finland, and some of them had a distinctive dialect. Secondly, some of the interviewees were more verbal and had a tendency of utilizing filler words to a notable extent. Therefore it made sense to transcribe in a more high-level, standard language format to ensure that all comments and replies could be analysed and compared equally. To be noted that the transcription was conducted following the commonly used, spoken Finnish language – instead of transforming the interviews to a standard written Finnish language, which is more formal.

The segmentation of the transcribed interviews was conducted in phases. The comments and replies from interviewees were segmented by using the themes defined earlier (Starting with Digital Payments, Budgeting and planning, Usage and Control, Learnings). For each comment and reply, also key words were identified. Typical key words that were used, were Card, Cash, Account, Budget, Tools, Spending, Saving. Adding key words allowed to quick search the material for specific topics. An example of the segmentation and identified key words is presented in FIGURE 9.

Theme	Key words	Interview
Tilin ja kortin saaminen	kortti, verkkopankki	Positiivinen kokemus, oli mun mielestä helppoa (maksukortin saaminen). Esim. lähimaksu kaupassa oli niin paljon helpompi kuin käteinen. Samaan aikaan tuli käyttöön verkkopankki. Verkkopankin käyttö ei ollut hirveen vaikeeta, ainoa että piti aina etsiä niitä tunnuslukuja sieltä taulukosta. Muuten ihan simppeliä.
ja kortin aminen	kortti, opastus	En saanut mielestäni mitään opa… vanhemmat mukana ensimmäisille…
lin ja kortin aminen	kortti	…vereilla oli jo maks…
lin ja kortin saaminen	kortti, käte	…siirtyminen oli help…
Rahan käyttö ja seuranta	käteinen	Harvoin, hyvin harvoin käytän käteistä. En muista koska olisin viimeksi käyttänyt käteistä.

2. Each of the comments were classified by the pre-defined theme

1. The comments from the interviewee were transcribed in standard, spoken language and divided into separate cells in Excel to allow classification.

3. Keywords were added to enable filtering of comments

FIGURE 9. Example of interview data with theme and key word classification.

In order to visualize the material and the topics in it, a mind-map technique was also utilized. A separate mind-map (example presented in FIGURE 10) was created for each of the defined four themes and an additional mind-map was compiled to gather views around different payment methods, as it was a specific theme that occurred in all of the interviews.

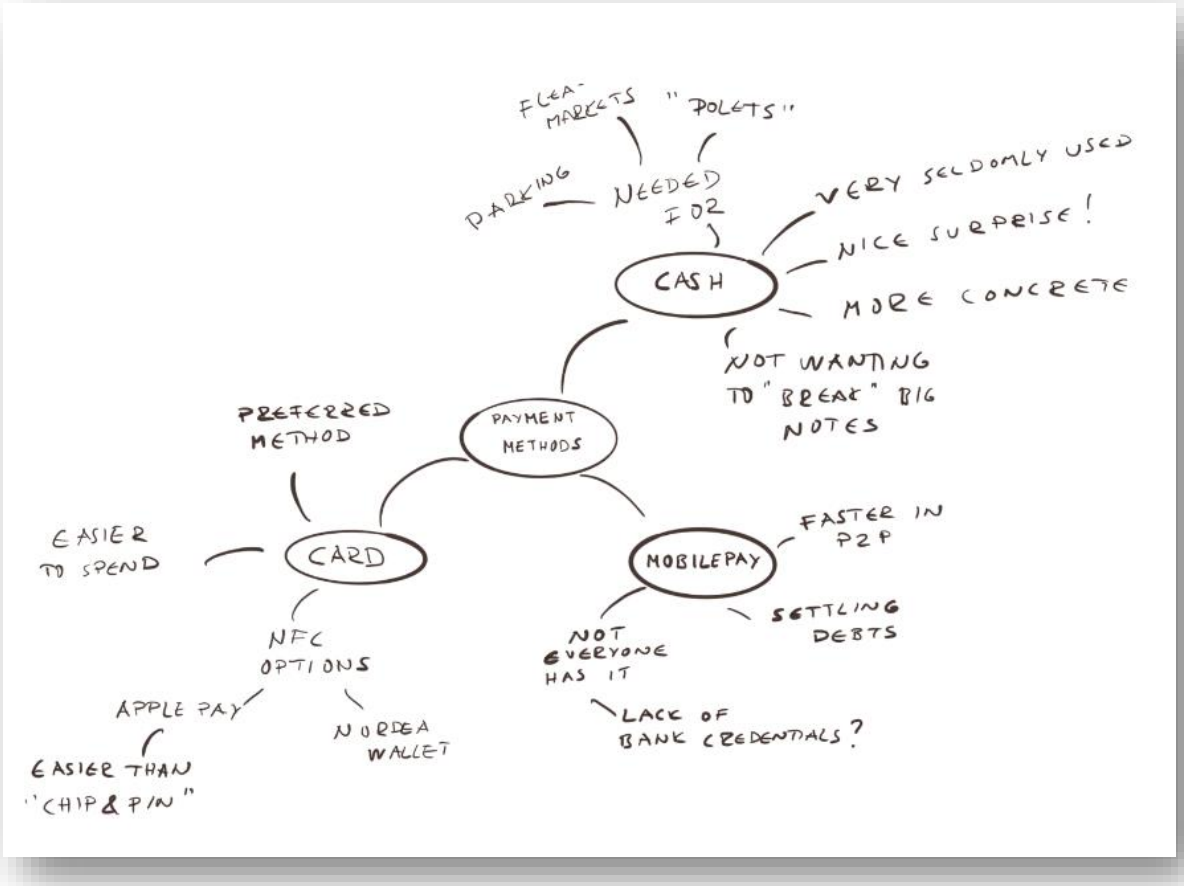

FIGURE 10. Example of a mind map that was compiled during the analysis phase.

As the interviews were conducted in Finnish, also transcription, segmentation and classification of the research material was handled in Finnish. Only when further analysing the research material was the language changed into English.

While further analysing the research material, a method of creating personas was utilized to categorize the interviewees in to different segments. Creating personas is a tool widely utilized when designing products and services, and it was first introduced in 2003 by Alan Cooper. The aim is to understand the target group audience, in order to design products and services that would cater for the needs of the target group – and especially, in order to identify the most optimal target group. This requires collecting enough information to describe several users, in order to find patterns and similarities that would lead into identifying different personas. As a result, typically 3-5 personas would be identified and presented in a persona description. These types of descriptions are utilized by the design teams when developing products and services, but they also provide a tool for illustrating and communicating product design throughout the design phases. (Hanington & Martin 2012, 132-133.)

4.2 Results

4.2.1 Demographics of the interviewees

Demography and other background information regarding the interviewees is described in this chapter. The interviewees presented the age group of 16 – 19 years and the majority out of 11 interviewees were female. The age and gender division is described below in FIGURE 11.

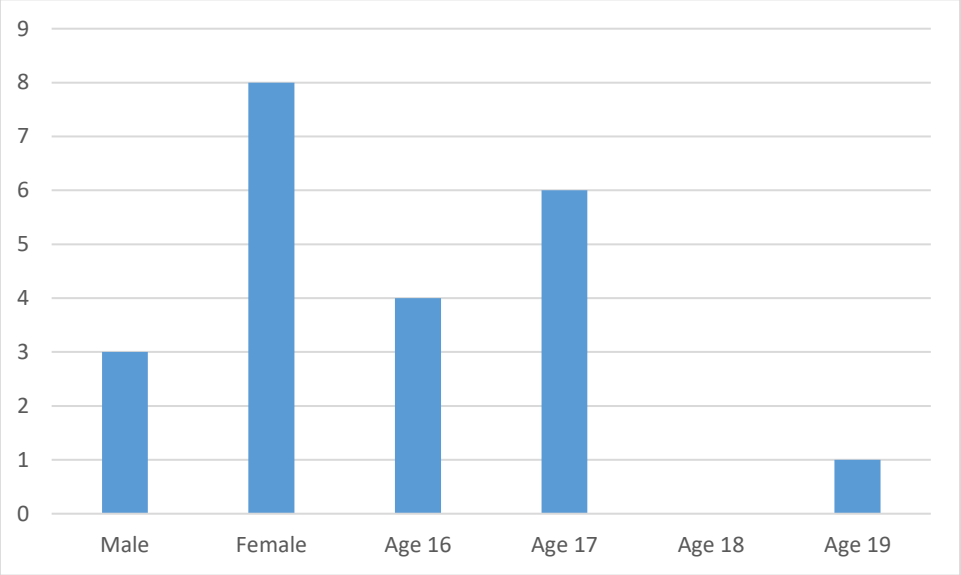

FIGURE 11. Demography: Age and gender division of the interviewees.

Geographically all the interviewees were from different parts of southern Finland, either from a larger city or a mid-size municipality. Altogether they presented eight (8) different cities of municipalities. The division is presented in FIGURE 12. One of the interviewees was from a small municipality, representing area that is more rural. Interviewees represented altogether eight different cities or municipalities. The below graph shows the size of cities and municipalities according to the division used by the Association of Finnish Municipalities, Kuntaliitto (Kuntaliitto 2018).

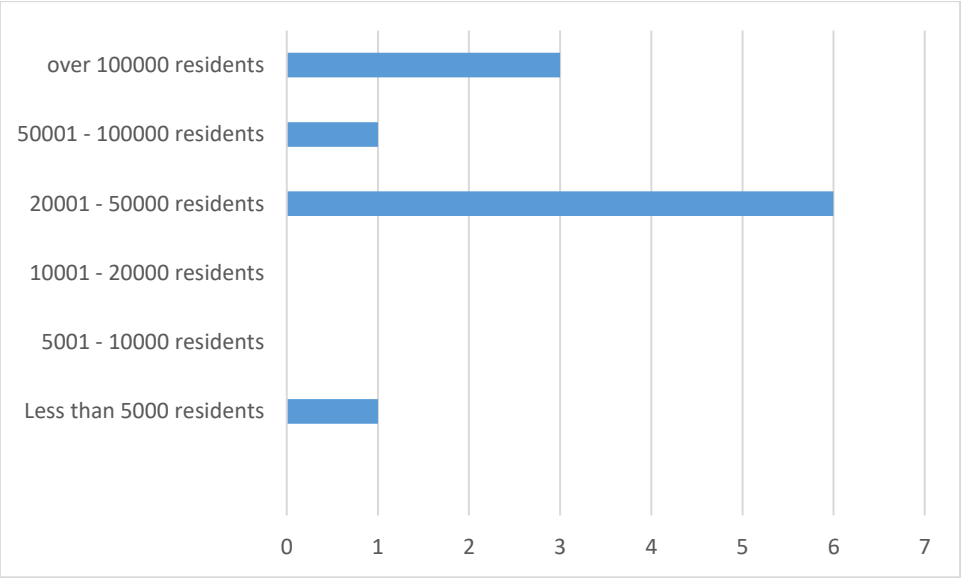

FIGURE 12. Demography: Size of the interviewees´ home towns and municipalities.

The current life situation of the interviewees is presented in FIGURE 13. Majority of them were currently studying in senior high school (“lukio” in Finnish), but a few were also in vocational schools or working. One of the interviewees had just turned 16 and was still in secondary school. In addition to studying, five of them also received regular income from work. Two of the interviewees had already moved out of their family homes and were living independently.

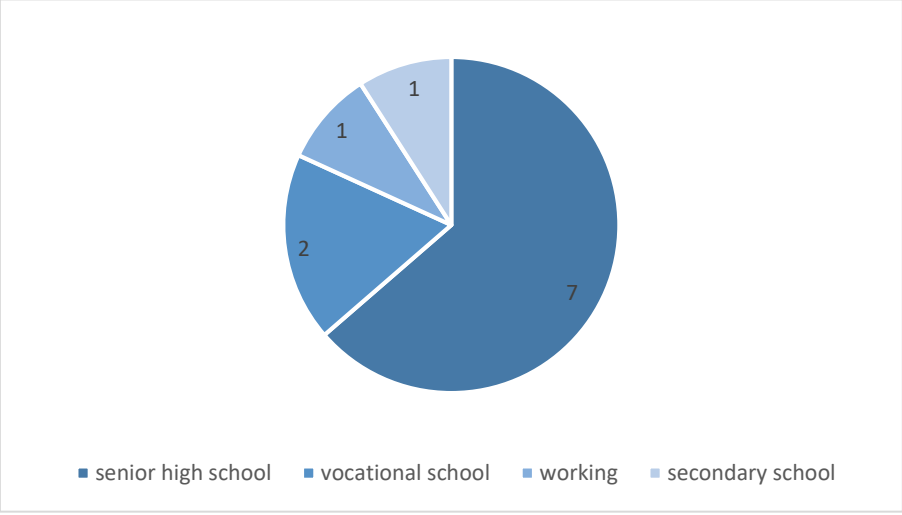

FIGURE 13. Demography: life situation and school.

The age division for when the first payment was obtained is presented in FIGURE 14. The majority of the interviewees had obtained their first payment card during their early teen-age years, on average at the age of 13,5 years. This is in line with the article by YLE (Aulasmaa 2019), where it is stated by Danske Bank that the most common age for obtaining the first payment card is 13-14 years.

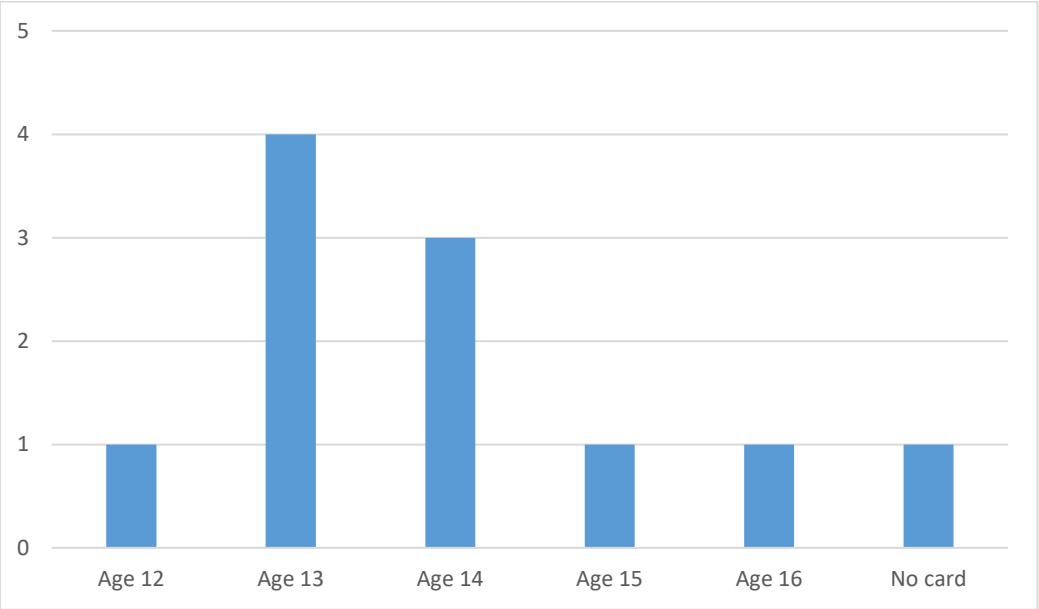

FIGURE 14. Demography: Age when the first payment card was obtained.

There were clear differences in which phase of the cash to digital –transition the interviewees were, as well as in the eagerness to utilize digital money and related digital tools. Interestingly, not all of the respondents were yet using payment cards, nor did all of them have access to their bank account. In order to visualize the differences in both the transition and the usage of digital money and tools, the interviewees were placed on a digital readiness scale. Digital readiness is a term used when evaluating organisation´s or people´s readiness to operate in a digital environment, and it often refers to technical digital skills combined with ability to operate safely in a digital environment (Horrigan 2016). For this study, the digital skills of the interviewees were purely evaluated in relation to the usage of digital money and related digital tools, as well as the motivation and interest for utilizing digital financial tools. The positioning on the scale for each of the interviewees was determined by the number of digital tools in use, as well as the eagerness to use them. In addition, a colour coding was utilized to compare the digital readiness based on the geographical area.

Based on the digital readiness scale, high-level personas were identified to further understand the sample group of interviewees.

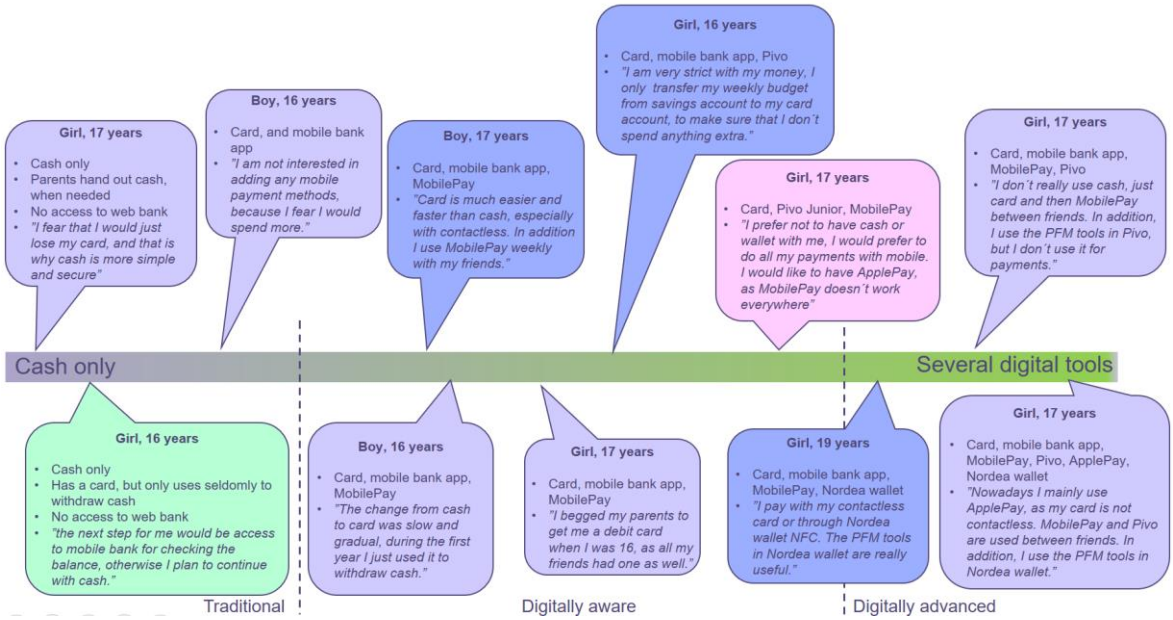

FIGURE 15. Interviewed adolescents represented different personas on the Digital Readiness scale.

FIGURE 16. Colour coding used in the Digital Readiness scale.

The interviewees represented three different personas, when it comes to utilizing digital payment methods and supporting digital tools. The interviewees are visually presented on the digital readiness scale in FIGURE 15 and the identified personas are further described below.

- 3 of the interviewees were “traditional minded”, showing a strong willingness to use only cash or suspicion towards digital and mobile payment solutions and tools. They either didn´t have a card at all, or were using it only to withdraw cash. Or

they did have a card and mobile bank app, but no interest or need to add any new payment or money related apps into their smartphones.

- 5 of the interviewees were “digitally aware”, they preferred to pay with a debit card, and had in addition a mobile bank app and one app for Person-to-Person payments (either MobilePay or Pivo), which they used actively.
- 3 of the interviewees were “digitally advanced” and utilized several mobile tools to support their day-to-day financials. In addition to having a card, mobile bank app and an app for Person-to-Person payments, they were utilizing mobile payments also when paying for their purchases instore or web shops. They also used their smartphone applications to categorize their payment transactions and receive information and notifications about their spending habits.

There was no specific correlation between age or place of residence and the digital readiness. Adolescents in the same age and similar place of residence might differ greatly when it comes to utilizing digital money and digital financial tools. Even though not specifically asked during the interviews, the findings implied that the underlying mentality towards digital financial tools was potentially more dependent on the support and digital readiness from parents, as well as the experiences and opinions from friends. Interestingly, the person´s willingness and tendency to systematically manage his/her financials in an organized manner did not correlate with the digital readiness. One might be very organized and responsible even with more traditional payment methods and tools.

4.2.2 Late adolescents use a variety of tools to handle digital money

As described in chapter 1.2, the research question in this thesis focuses around tools for handling digital money, and one of the objectives was to understand what kind tools are currently utilized by the young target group. This objective was formulated in one of the sub-questions as follows: “What kind of tools and methods are available on the market and what do late adolescents utilize for managing their financials with digital money?”. This theme also formed a key focus area as part of the interviews, and the findings are presented in this chapter.

During the interviews, a variety of different methods for handling digital money were discussed – some of the tools were digital but also several traditional methods and tools had a role in the day-to-day financials for this young target group. Digital tools consisted of mobile applications such as mobile bank, MobilePay, Pivo, OP Junior and Nordea wallet, the division between the different digital tools is presented in FIGURE 17. The more traditional methods and tools were mental accounting, cash, savings account, pen and paper,

parental control and utilizing spending limits. The most typical combination of digital tools was mobile bank app and an application for person-to-person payments (either MobilePay or Pivo). This combination of digital tools was in use for five of the interviewees (“digitally aware” personas). Among the digitally advanced interviewees, one person was utilizing altogether 5 different mobile applications for financial management and payment transactions (mobile bank, MobilePay, Pivo, Nordea Wallet and Apple Pay).

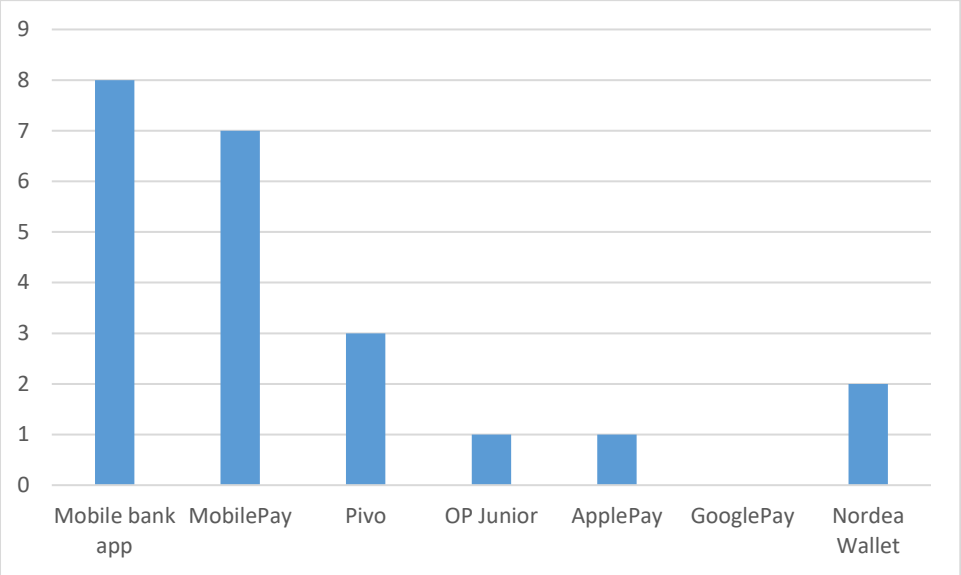

FIGURE 17. Digital financial tools utilized by the interviewees.

Mobile bank application was the most common digital tool and was in use for 8 out of the 11 interviewees. In general it was seen as a useful tool, and most typically the interviewees stated that they check their balances “once or twice a week” (6 interviewees). For this group, checking their payment transactions and bank account balance was the most common functionality. Only few had experiences in other functionalities such as bill payments or transfers to other accounts. Even though mobile bank application was seen as a useful tool, many interviewees mentioned that it could be improved. Visualization of “how much money do I have and what am I spending on” was missed. This was specifically mentioned by two interviewees; having a visual image of notes and coins in the mobile bank app would help understand the value of digital money. Also some of the functionalities, such as classification of payment transactions was not available in the interviewee´s mobile bank app, but only through browser – this was seen as a challenge. One interviewee

mentioned that for budgeting purposes, it would be useful to be able to also form categories of “how much can I spend on different categories, such as clothes, per month” and with spending limits on such categories.

MobilePay application was used by 7 interviewees. Even though MobilePay is not a personal finance management tool as such, it was still seen as an important supplement as it enables easy payments between friends and relatives, as well as in other person-to-person payment scenarios, such as flea markets. In general, this age group is not used to remembering numbers and codes. One of the interviewees mentioned “being used to transfer money with MobilePay, doing a regular bank transfer in my mobile bank seemed very complex with long account and reference numbers”. MobilePay app allows late adolescents to pay their friends instantly, without the need to maintain bookkeeping of debts and remembering to pay back. MobilePay was also a must-have tool for selling and buying second-hand products, such as high school books. One of the interviewees described “In some cases the seller refused to sell me books, since I didn´t have MobilePay but cash instead”.

Pivo app was in use by 3 interviewees, mostly for sending and receiving money between private persons. One of them mentioned that she took it into use “just because not all of my friends had MobilePay, some of them use Pivo instead”. One interviewee was using the classification tool in Pivo, to check where the money was spent during a specific period. It was also mentioned by one interviewee that Pivo is not so much used by her anymore, as the same easy person-to-person payment option is available in her mobile bank app which is simpler to use.

OP Junior was used by 1 interviewee, and it is listed here specifically – even though it can be considered as a mobile bank app with limited functionalities. It was used for the same purposes as a normal bank app, for checking the balance of the account and payment transactions. With OP Junior, the parent has still more control over the financials, as the functionalities are more limited.

Nordea wallet was utilized by 2 interviewees, specifically as a personal finance management tool. The classification of card payments into different categories was seen as a useful functionality. Also the possibility of receiving a notification every time the attached payment card was used was seen as an effective controlling factor. One of the two interviewees also utilized it for instore payments occasionally, but also then the interviewee carried a payment card for backup, just in case there are issues with the payment.

In addition, 1 interviewee utilized also Apple Pay for instore payments. The motivation for utilizing Apple Pay was less about the possibility to pay with mobile in itself, but mostly for

a more practical reason. The interviewee did not have a contactless-enabled payment card in use, and through Apple Pay application the interviewee was able to pay similarly as with a contactless payment card. The fact that the interviewee had her mobile phone with her always was an additional benefit, as it was then possible to pay for purchases even if the physical wallet was left home.

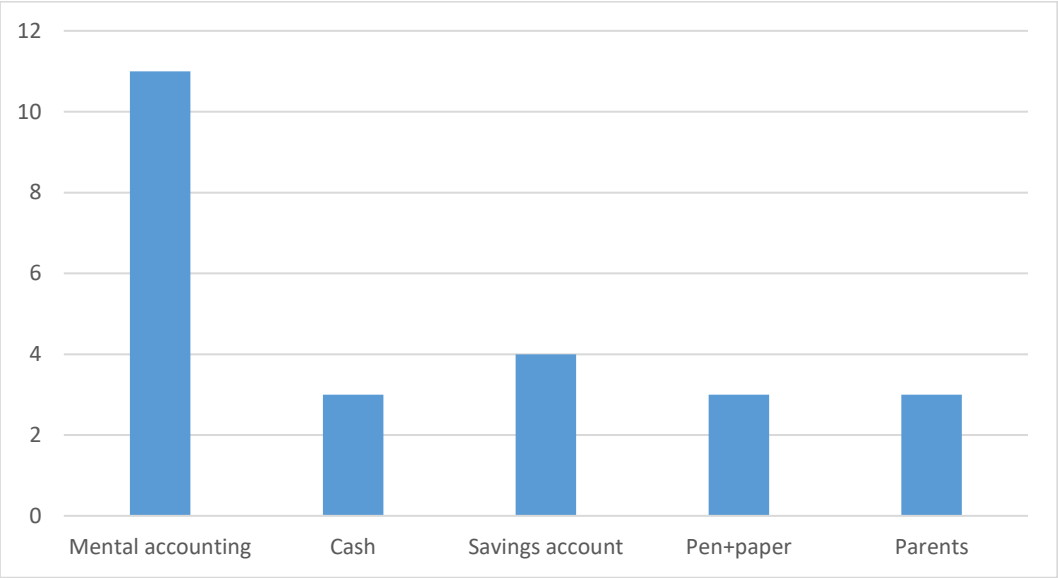

FIGURE 18. Non-digital tools and methods utilized by the interviewees.

In addition to digital tools, more traditional methods were also utilized, the most common one being “mental accounting”. The non-digital tools and methods are presented in FIGURE 18. All of the interviewees mentioned examples that indicate that they are utilizing mental accounting. Two interviewees explained that they have a mental limit on what the minimum balance on the bank account should be. One of the respondents also mentioned “mentally over-budgeting”, when estimating how much money will be spent on specific needs. The reason being that by estimating the price of products or services higher, eventually less money will be spent. Another example that was mentioned during the interviews was a habit of planning mentally how much could be spent for different categories.

Savings account was utilized actively by 4 of the interviewees. They had a habit of transferring a pre-planned sum to their savings account immediately after receiving their monthly allowance or salary. This gave them peace of mind, as they could not overspend with their payment cards. A savings account also allowed them to easily save for buying something more expensive. In one example the savings account was used the other way

around; the interviewee received all her money onto a savings account. Then the interviewee asked her parents to transfer from savings account to the card account for usage.

Pen and paper or the equivalent digital notebooks were also utilized as a practical and visual method by 3 interviewees. It was used when budgeting for specific needs to understand how much money is needed, for example by creating a simple list of goods or services and their prices. It was also used for follow-up, one of the interviewees described having created simple lists of her spending, based on receipts. This helped her understand how much was spent on different categories. One of the interviewees described creating a high-level budget plan every six months on a paper and placing it on the wall. It was not used actively or filled in afterwards, but it served more as a guide and supplement for mental accounting.

Cash and cash deposit ATMs were also mentioned. ATM refers to Automated Teller Machine; typically used for self-service balance checking and cash withdrawals (in Finland with brand names Nosto or Otto) or for depositing cash on the bank account (Talletusautomaatti). Three interviewees gave examples of situations where they were utilizing physical cash to manage digital money. One practical example is withdrawing cash and placing it some place safe at home, to ensure that it is not spent through payment card. This way the money is “safe from spending”. At a later stage, the same cash would then be again deposited to the bank account for usage. Cash was also described as supplementary funds, just in case it was needed or for emergencies. Another way of utilizing cash was to withdraw a certain sum of money to be spent (e.g. at an event) and leave the payment card at home. This way there was a physical limitation preventing additional spending.

Parents and parental control had a significant role specifically for those 3 interviewees who did not have access to their bank accounts through a mobile bank app. Being reliant on the parents to check the balance and withdraw or deposit cash was mostly seen positive, as it often lead into discussions around budgeting and spending. Being forced to ask parents to transfer funds from savings account to card account, or to withdraw cash was described as a useful, additional control. It was also seen positive that the responsibility over the usage of funds was then more on the parents, and not purely on the interviewee. One of the interviewees mentioned that “you must be responsible with your money, otherwise your parents will take your card away” implicating that the parental control has a mental significance.

In addition to having a mental usage limit, other kind of limits were also mentioned during the interviews. One of the respondents had one payment card with no intention of taking additional payment methods, such as mobile payment applications, into use. The reason

was the idea of “limiting the number of payment methods” to decrease the risk of overspending. Also the possibility of setting low usage limits on the payment card was mentioned, but none of the interviewees were utilizing such limits currently.

In general, the interviewees had picked and chosen those tools and methods that suited their needs in the most optimal manner. The same can be noticed when exploring their usage of financial mobile applications specifically. Even though many of the applications had several functionalities, typically only some of them were used. The interviewees did not know all the functionalities of their mobile applications and did not see the need to explore those. They were used to utilizing only specific features and functionalities, and they were comfortable in having several tools for managing their financials. Only one of them mentioned that it would be useful to have those features combined into one application, instead of being forced to download several applications.

Transformation from cash-only to card payments and the early experiences were discussed with those interviewees who were actively using a payment card, summary of the early perceptions is shown below in FIGURE 19. Majority of the respondents changed quite rapidly from cash to card, once they had made their first purchases with it. One interviewee remembered utilizing the card first for withdrawing cash for some time, as it felt more natural to use cash. Another respondent was still in a similar phase of cash withdrawals. Mostly it was seen that the payment card “made life easier”, or it was “not a big change” compared to previous experiences with cash. The first payment experiences had been exciting for some of the interviewees – there were multiple reasons; remembering the PIN code, knowing how to insert the card into the terminal, how to hold the card for contactless payments etc. After a few purchases it became easier, and quite soon the usage began to feel natural and ordinary. It was also stated that having seen parents paying with a card helped in learning and gave confidence that card payment is easy to learn. Regarding the digital access to bank account, two interviewees specifically mentioned that it was “nice and exciting to see the balance on the bank account”, and it gave a sense of independence.

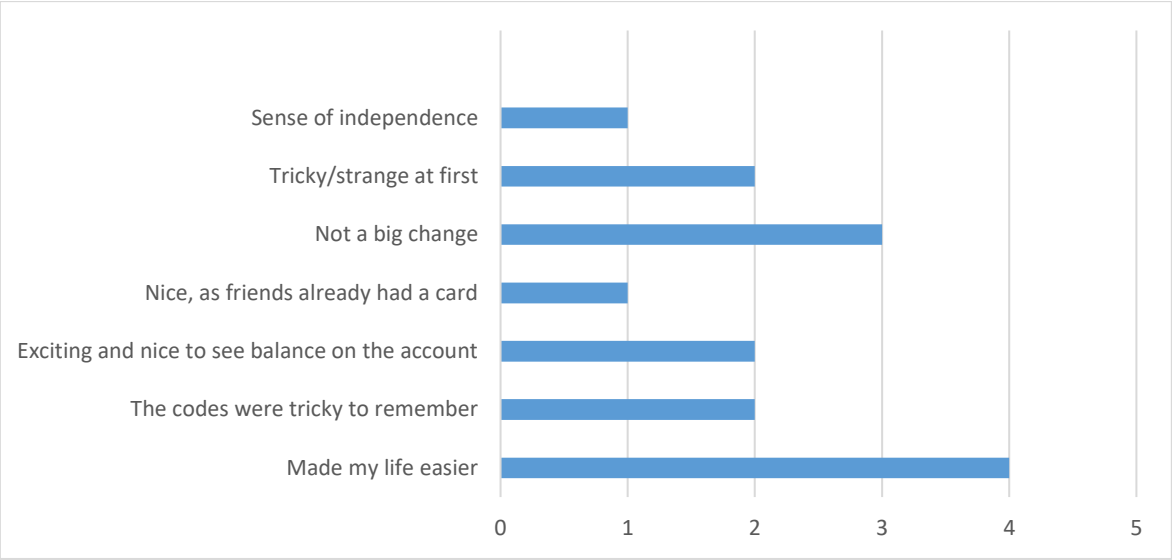

FIGURE 19. First experiences with a payment card and access to bank account.

When discussing the first experiences with card payments and managing financials independently, only three interviewees mentioned that they had received information and advice from their bank (see FIGURE 20).

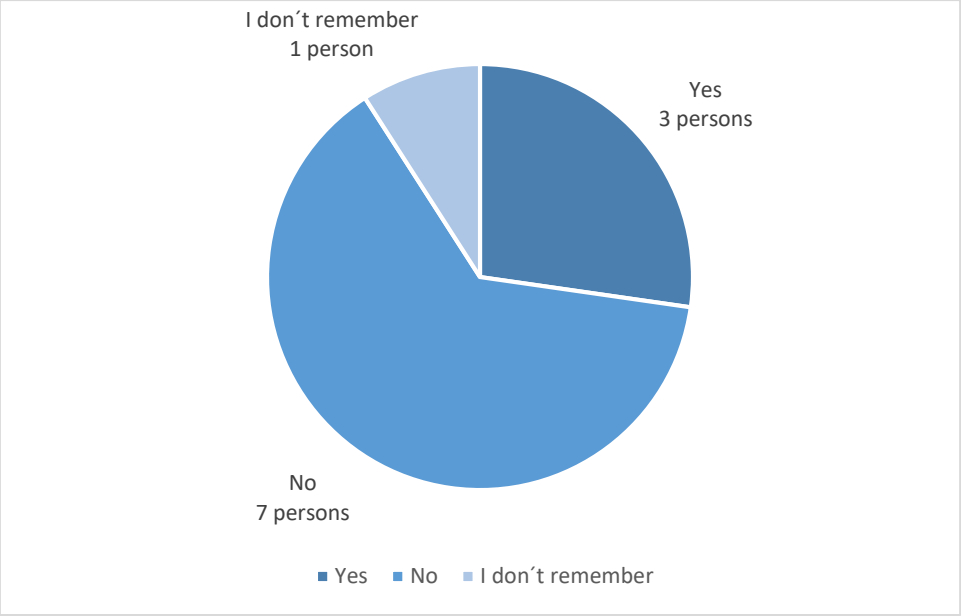

FIGURE 20. Did you receive guidance from your bank?

Majority of the interviewees – 7 persons – had not received any guidance from their bank personally. One of the interviewees did not remember. The more typical source of information was parents and friends. One of the interviewees specifically mentioned that it was her idea to apply for a payment card, as most of her friends already had one. In addition, friends, instead of banks, often recommended the digital tools. For example, the interviewee with OP Junior app had heard about it from a friend first, and had then presented the idea towards the parents.

4.2.3 Cash is a special creature

Even though the focus of this study was around digital money, and related tools and methods – the interviews also revealed interesting views regarding cash and how it is perceived. Cash is not a preferred payment method, but it is still seen as something special.

All of the interviewees were asked about preferences in payment situations and receiving money gifts. Those who had a payment card, also preferred it as a payment method. Only few scenarios were identified where cash would be useful, such as flea markets, parking and tokens to unlock shopping carts at supermarkets. Cash was seen as “awkward” payment method in instore environments, as finding and calculating the right sum in your wallet might take time. Card was seen as easier and faster in all scenarios, it was also described as “easy to carry with you”. One interviewee also mentioned, “not liking the sound of coins in the wallet”. Some of the interviewees even stated quite directly that “cash is not needed, and therefore I don´t have it”.

Even though card was the preferred payment method for those who have it, it was also considered to have a higher risk of over-spending, as presented in FIGURE 21.

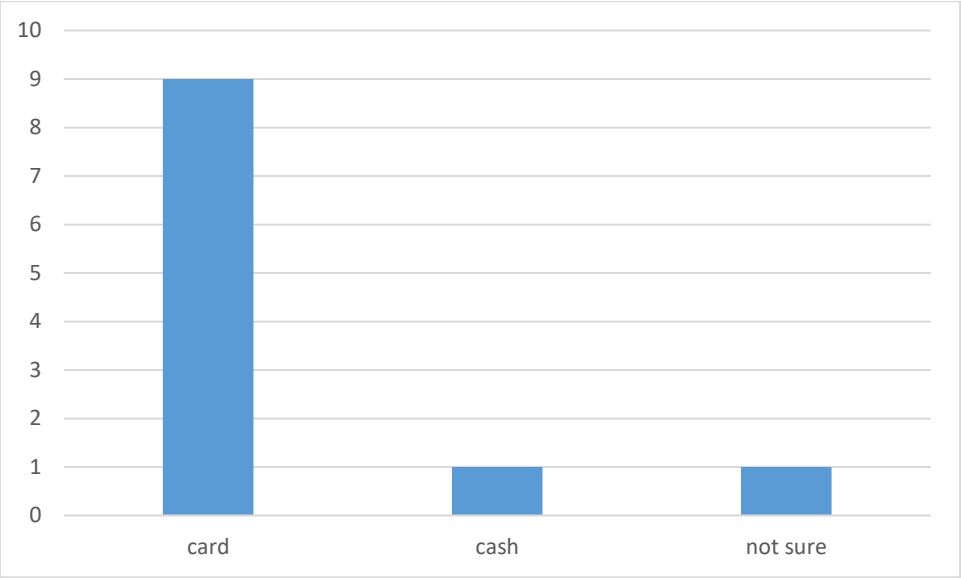

FIGURE 21. Which payment method would more likely lead into over-spending?

Many of the interviewees described cash as something “sacred”, and stated that it feels more difficult to give away cash than pay with a card. Especially unpleasant was “breaking a big note”, e.g. paying a purchase with a 50 eur note and receiving smaller notes and coins back. One interviewee also mentioned that she actually feels bad depositing cash to her bank account, as it will be then included in the total balance and eventually will be used in her day-to-day payments. Some of the interviewees also stated that they would use money less often if it was in cash, as they would then consider their purchases more carefully. Spending money with a payment card was also seen more easy, as the whole bank account balance is available through the payment card – where as you typically would not carry all your money with you in cash. Also, finding cash in your pocket or at home was described as “a nice surprise”, as you might easily forget having small quantities of cash if only card is used for payments.

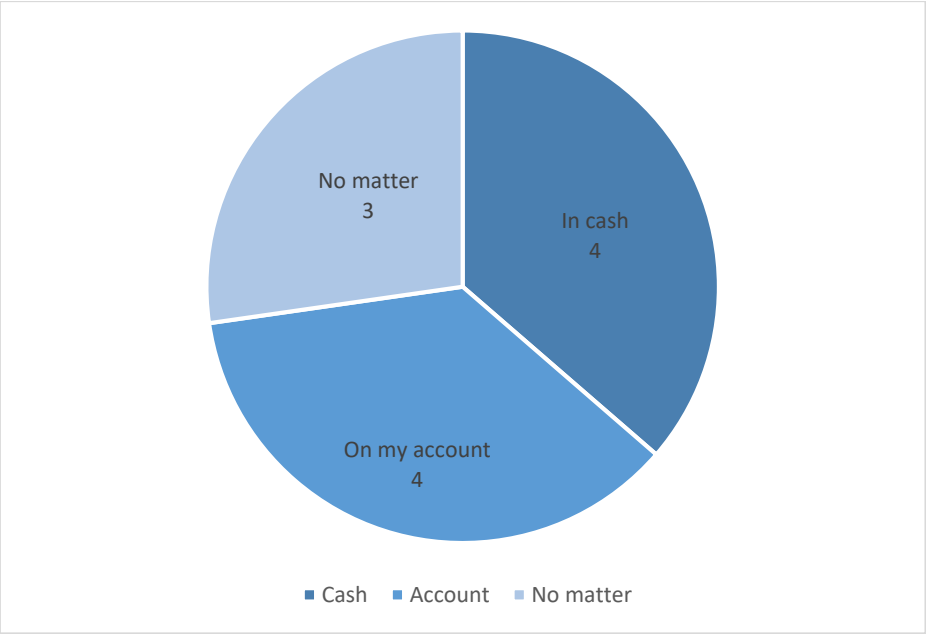

FIGURE 22. How would you rather receive a money gift?

Physical cash was also seen as “festive” and “meaningful” and therefore a suitable present. As presented in FIGURE 22, 4 interviewees stated that they would rather receive a money gift in cash as it has a more festive feel to it. In addition, it was seen as a traditional way of handing out money gifts, and something that the relatives preferred as well. In many cases, the money gift in cash was then eventually deposited to the bank account, as it was not the preferred payment method. But until then it was kept “safe from spending”. It was also stated by four of the interviewees that having money both on the account and in cash was sometimes confusing and made it actually harder to fully understand and calculate what is the total balance. Therefore, the sum of cash was convenient to deposit to the bank account, instead of using it for payments directly. One of the interviewees stated “it is easier to plan your spending when everything is on the bank account, and that is why I don´t have more than 20 eur in cash, because then it doesn´t interfere with my budgeting”.

4.2.4 Over-spending is a four-letter word

One of the over-arching themes during the interviews was the importance of saving money and avoiding additional spending. All of the respondents described several examples of saving methods.

When asking about the key learnings that the interviewees had gathered when using money, all of them mentioned situations where they had over-spent and then felt regret afterwards. All interviewees had similar experiences, regardless if the person was using cash or a payment card. Easiness of purchasing candy and snacks after school was seen as something that will rapidly lead into over-spending. They all had experienced that small purchases that don´t feel like much at the time will eventually pile up to bigger sums. This was also something that they would now point out to younger teenagers. These examples also correlate with the findings in chapter 2.2, where it is concluded that learning by doing is more powerful than just being instructed.

All of the interviewees also emphasized the importance of saving money, even if it did not include any long-term planning. “Not spending all of it” means that there is something saved for a specific short-term purpose, or just for a rainy day. It also gave them peace of mind, and seemed like an important part of managing financials – even if interviewees could not describe specifically why they are saving. The methods varied, as some of them were utilizing a separate savings account, while others utilized cash or a mental limit on their bank account. One interesting aspect in saving is the terminology that was used during the interviews, as the word “safe” and “safe from spending” was mentioned several times. In many cases, the respondents had a clear understanding of when the money is “safe” – and it was dependent on the preferred payment method. Card users had a “safe place” in savings account or cash, while the cash users felt that the bank account was safer. The risk of themselves over-spending was seen as the most likely risk. One of the interviewees stated that parents should ensure that the children´s bank account does not have too much money, as it forms a greater risk when losing a card.

Another learning, which was mentioned by the interviewees, was the responsibility of taking care of the card and other financial credentials. Experiences of losing a card, or forgetting the PIN code of the card (Personal Identification Number) were described as tedious and unpleasant, and something one should try to avoid.

5 CONCLUSIONS AND SUGGESTIONS FOR DEVELOPING DIGITAL FINANCIAL TOOLS FOR ADOLESCENTS

The purpose of this study was to deep-dive into the methods and tools that late adolescents use for managing their day-to-day financials with digital money. The following research question and sub-questions were defined as a starting point for the study.

- How do adolescents manage the shift from cash towards responsible usage of digital money?
    - What kind of tools and methods are there available on the market for the young target group and what do they utilize for managing their financials with digital money?
    - Are those tools and methods perceived as sufficient?
    - What should those tools and methods have in addition to support adolescents more effectively in learning towards responsible usage of digital money?

Chapter 3.2 offers a high-level walk-through of the digital financial tools and methods that are currently available in Finland. The topic of tools and methods was also very much discussed and deep-dived into during the interviews and the analysis phase in order to fully understand what the late adolescents are utilizing to manage their financials. A variety of tools and methods were discovered and discussed, both digital and non-digital. One of the key findings was the wide and versatile usage of non-digital tools and methods. Mental accounting was used by all of the interviewees, but in addition also parental control, pen and paper, as well as cash as a substitute for a savings account were utilized. Some of the non-digital methods were such that a right combination of efficient digital tools would make them obsolete. The most typical digital tool was mobile bank application, or the equivalent junior version – and the possibility to check the bank account balance was the main reason for utilizing it. Access to mobile bank was seen as an essential tool to manage digital money, which is “invisible” otherwise. Those who did not have access to bank account, described having to constantly ask parents to check the balance, or they were frequently visiting ATM to check it themselves.

Based on the interviews and findings, an optimal set of tools for a young person to manage digital financials efficiently is a combination of bank account, debit card, mobile bank application and a savings account. The mobile bank application can be either the full version, or a limited junior version such as OP Junior or MunRahat by Danske Bank. Having

a bank account with access to it, even if it is only to check the balance and transactions, provides a sense of independence. A debit card provides the young person a simple access to his/her funds, and enables purchases without the need to withdraw cash. A debit card without access to the bank account will bring easiness to actual payment situations, but linkage to the bank account balance and planning of financials will likely remain weak. This would result in a need to find other ways to check to balance and be on top of spending. In addition, a savings account will help the adolescent in dividing funds into “safe from spending” and “allowed to use”, without the need to set mental limits on usage or withdraw cash only to keep it “safe”. This was another interesting finding in this study. Even those interviewees, who did not have a savings account, evidently had the need for it, as they had found workaround methods to supplement the lack of savings account.

In addition, the interviewees described also other digital tools, which were more or less substituting the basic set of bank accounts, debit card and mobile bank. Additional digital tools were especially practical in three contexts; person-to-person payments, instore payments without a card and adding cash-like “pain of paying”. Majority of the interviewees were using an application for easy person-to-person payments, MobilePay being the most used application, but also Pivo was used by a few of them. Most typical contexts for using such applications were buying and selling schoolbooks and other items, and situations where a friend would visit the store or kiosk for buying snacks and would buy for the interviewee at the same time. It was seen as convenient and easy that cash is not needed in those contexts. Mobile payments in instore context was not really used by the interviewees, only one of them was frequently using Apple Pay. This could potentially be a next step for some of the interviewees, as it provides a payment method even if the payment card was left home. A smart phone has such a significant role in the lives of young people that it is hardly ever forgotten. In addition, Nordea wallet was used by two interviewees and it was specifically mentioned as a good tool to keep track of spending, and especially notifications were a liked feature. Having a reminder after the purchase added a cash-like pain of paying, and was seen as a useful functionality.

Another sub-question in this study was “Are those tools and methods perceived as sufficient?”. This topic was more challenging to discuss during the interviews, as majority of the interviewees were quite happy with the current set of tools and methods. In addition, due to their young age and limited experience in financial tools, it was challenging for them to describe what was potentially lacking in the current ones. This specific sub-question can be viewed from two different angles; firstly, what views were presented by the interviewees, and secondly, what was observed by the interviewer when analysing the inter-

views. It became evident that some of the interviewees would have benefitted from additional tools or wider utilization of their current tools, if they only had known about them. Clearly all of the interviewees were able to manage their day-to-day financials with the combination of tools, methods and habits – and they did not find them cumbersome. One of the interviewees managed saving by having a mental limit indicating the amount of money he should always have on his bank account. Still the idea of having a savings account did not seem relevant for him currently, but something that could be useful later on when entering into the adult life. The same observation was evident for those who withdraw cash to save, instead of having a savings account – they did not see it as cumbersome. Two of the interviewees did not yet have access to their bank account, but continuously asked their parents to check their balance. They perceived that it would be an improvement to have personal access to bank account, which indicates that access to bank account, plays a significant role in managing day-to-day financials, even if other areas, such as saving, would still be manual and required additional effort.

Lastly, the sub-question “What should those tools and methods have in addition to support young students more effectively in learning towards responsible usage of digital money?” is discussed. Visualization was mentioned by several interviewees as a potential improvement to really understand how much money is on the bank account and what is it used for. Pictures of notes and coins was suggested as something that would add cash-like feeling to digital financials. From the interviewer point-of-view, one of the challenges seemed to be the diversity of tools in different banks. Nordea Wallet provides useful features, but is only available for Nordea customers. It was also mentioned by one of the Nordea Wallet users that it would be handy if the same features were available in Nordea mobile bank application. Having so many applications installed on the smart phone just for financial management purposes was seen cumbersome.

While the interviews provided insights into the research questions, also a parallel theme around the current digital tools became evident, namely “Are the young people utilizing the currently available digital tools efficiently?”. In many cases, it was clear that the interviewee had not received sufficient information from his/her bank regarding the current basic tools that are offered by the bank. Only few of them had received guidance from bank, instead they relied on their parents and friends when learning about the potential digital tools. When discussing how to improve the current digital tools, it is equally important to evaluate how the usage of current tools could be further promoted. Especially when keeping in mind that this particular age group seems to have a tendency to “pick-and-choose” those tools and functionalities that best suit their needs, regardless of the

service provider. In practice, it meant that even though many of the smartphone apps that they used had several functionalities, they were likely to use only few of them.

The transition from a cash user (with weekly allowance) to a fully independent person with adequate day-to-day financial skills is a journey, with multiple supporting factors (parental guidance, financial tools and methods, ability to perform mental accounting, learning by doing…). The journey is gradual and it potentially includes several phases. In addition, this journey is characterized by personal preferences and tendencies towards money usage. One of the interviewees, who described that the usage of cash as the dominating payment method actually continued as the card was first used mainly to withdraw cash, gave a typical example. The actual payments were still cash-dominant for some time, meaning that the change was more gradual and happened in phases. Another interesting observation during the interviews was that it seemed that the more focus the person had on budgeting, the less need there was to follow-up on where the money actually was spent.

Interestingly, the interviewees were not specifically worried about operating their funds digitally. Even though the topic of potential risks was not specifically asked and discussed during the interviews, it became evident that these late adolescents are not afraid to use their smart phones on managing their financials. They did not mention risks specifically relating to utilizing digital payment methods and smart phone applications as a tool. As a comparison, the studies conducted previously around mobile payment penetration typically list security concerns as one of the main reasons for not adopting mobile payments. For example, in the YouGov report (2019), 21% of persons not using smart phones for payments stated “I don´t think they are secure” and almost equally as many were concerned about financial exposure if the smart phone is lost or stolen, as well as potential virus/malware that would steal details from their phones. The young interviewees in this thesis research did not raise such worries; instead, they all shared one concern – risk of over-spending. They saw themselves as the biggest risk, and they had all taken into use a variety of habits and tools that would help them in avoiding over-spending. In addition, some of them had experienced losing their debit card and felt it was also a likely risk, but losing their smart phones was not a specific worry for them in regards to financial data.

Based on the findings in this study, the following suggestions and considerations can be listed when developing digital financial tools and services for young people:

- Developing digital services with a user experience mind-set is important, but equally important is to understand the target group needs and user journeys more broadly. The current tools might actually be already quite good, and further communication might be a more crucial step to ensure that the existing digital tools find their audience.
- Start by educating the parents, as they do have an impact on how the adolescent perceives his/her skills and ability to manage digital money. When parents see the benefits of using digital financial tools and payment methods, such as payment cards or mobile payment options – and use those tools themselves, the motivation and trust is more likely to transfer to the children as well.
- Utilize customer personas and tier approach. Creating a clear understanding of what are the minimum tools for an adolescent to manage his/her financials in the digital world is a useful starting point, as well as utilizing the knowledge that you might already have on your customers and the touch-points with the parents and the family. For example, a bank would typically know when the children in the customer family are approaching the common age for obtaining a payment card. Communication towards the parents at that point could already initiate the first steps. In addition, many of the bank services require the person to have bank identification codes in use. This typically requires a personal visit to the bank branch and is often one of the first times an adolescent would meet a bank representative. This face-to-face meeting would be an excellent opportunity to ensure that the young person has at least the minimum set of tools in use.
- Mobile first approach when developing new features. One of the pains mentioned regarding the mobile bank, was that it did not provide all the needed features. For some features, the user would need to log in through a browser instead of the mobile bank application. In addition, the adolescents are rapidly gaining experiences from all kinds of mobile applications; they are quite good at spotting cumbersome functionalities.
- Adding visual elements to highlight saving targets, consumption categories, funds on the card account and on the savings account etc. Most of the respondents were worried that they will overspend while using a digital payment method instead of cash. Adding functionalities, such as notifications, that would bring the “pain of

paying” to the digital tools could potentially help the late adolescents in ensuring that they are managing their financials responsibly also with digital money.

- The most digitally advanced young people are likely to pick and choose the tools they want, and utilize just the needed functionalities. Therefore, it is worthwhile to educate the users regarding the current features, but also to continuously benchmark similar solutions in the market and learn from them.
- None of the interviewees had very specific suggestions on how to improve the current tools, which is understandable taken their limited experience with financial services into consideration. Therefore, one suggestion would be to engage members of this target group into the different product development phases, as it would be potentially easier to give feedback when testing something more concrete.

While analysing the results of this study, several potential ideas for future research appeared. As late adolescents are not a unified group, it would provide further insights to deep-dive into the different profiles and their tendencies when managing digital money. A further study regarding what kind of user groups are there within young people when it comes to handling everyday financials, would potentially provide valuable information for developing digital services for them. Another interesting aspect is the role model from home and family. A study regarding how the parental example and attitudes impacts the young person’s journey towards a fully independent person with adequate day-to-day financial skills would provide potentially interesting insights into how the parents are to be educated and informed by their bank. In addition, the study conducted in Australia (presented in chapter 3) regarding the linkage between early experiences with managing money and the person´s tendency towards spending or saving, provided interesting views. A similar study in Finland would potentially bring new insights into what kind of mechanisms would nudge a young person towards a responsible usage of digital money.

6 EVALUATION OF THE THESIS PROCESS

This research project allowed me to gain more in-depth knowledge around digital payments and the specific target group of late adolescents. Even though the exact scoping and research questions were not easily determined, the idea of performing an applied research project was clear from the start. The digital revolution is changing payments and financial routines rapidly, and that is why I chose to utilize the momentum and deep-dive into this subject to gain more insights about a specific target group. Another aspect that was guiding my decision regarding the research topic was the possibility to work with it independently without dependencies to any projects in my current work role. Based on these prerequisites I chose to focus on a topic, which is linked to my area of expertise, but not directly to anything that I am currently working with in my professional role. This kind of research topic also enabled me to work with a research project that would be publicly available once finalized.

The scoping and choosing the exact topic was the most challenging phase, as it determined also the next steps and corresponding research methods. The inspiration for choosing this particular topic eventually derived from a discussion with a relative regarding her teenager´s use of mobile payment methods. A small sentence, really, which somehow grasped my mind and started evolving into a research plan. And as quite often is the case, also in this project the scope was shaped and re-shaped a few times, before concluding on the final scoping.

The timeline for the project was challenging, as the research was mostly executed while working full-time. On the other hand, this also enforced structure and efficiency into the project, and therefore it has been truly a project management and prioritization exercise as well. The outbreak of Covid-19 pandemic and the closing of schools forced a longer break for the thesis project during spring 2020, as it became very difficult to work with it – working from home while supporting our children with home schooling was hard enough combination in itself. Luckily, the interviews and the transcriptions were already done, allowing the project to continue efficiently in August 2020.

The background research phase was particularly useful in providing the framework and sufficient understanding before heading into the actual research project. The biggest surprises during the project also provided the biggest moments of inspiration – it felt intriguing to be surprised and challenged by new thoughts. Towards the end of the interviews I felt tempted to assume that all the variations had now been gathered – expecting that the

last interviews would just highlight the previous ones. To my surprise, each of the 11 interviews brought new insights, understanding and ideas. I was amazed by how clever and responsible all these young interviewees were with their financials, even if the methods varied significantly. Still, there were obviously patterns and a mix of tools that provided the most useful combination for managing digital money efficiently. My biggest realization was that digital money can be partly managed with non-digital tools, and there were more factors with a strong influence, such as parental control.

Even though the scope of the research was heavily around tools for managing digital money, the interviews also revealed other additional, interesting themes, which were also discussed in this report. Especially attitude and feelings towards cash were truly interesting, as the usage of cash is continuously decreasing. Perhaps cash has a similar, special role as hand-written letters nowadays. Something rare and nostalgic that it feels special. Another interesting theme was the attitude towards saving and avoiding over-spending, and the idea of keeping your “money safe from spending”. This is a topic which is frequently discussed in the media – not just regarding young people, but on a broader scale; and potentially one of the first things that will be taught to children about managing financials. Assumedly this is why it was also emphasized by all of the interviewees.

The aspect of reliability has been considered throughout the research project – both when describing the project methodology as well as when conducting the actual research interviews and documenting them. The reliability of a qualitative research is typically more difficult to evaluate than a quantitative research, since human-beings are not acting in the same, rationale manner in all circumstances. It might be difficult to repeat the exact same research and expect the exact same outcome. For this reason, also the evaluation of reliability must be based on several aspects. According to Kananen (2012, 172-176) a qualitative research can be evaluated through the following criteria: documentation, consistency, reliability (from the examinee´s perspective) and saturation. Careful documentation of the different phases and the reasoning behind each of the decisions is an important way of improving reliability in a qualitative research already during the research project – and something that cannot be added and improved afterwards. Consistency can be improved by utilizing a peer review where another researcher would walk through the research material to see if same conclusions can be drawn. Reliability from the examinee´s perspective can be improved by requesting one or more examinees to read the research report and comment on the findings. Saturation is another important aspect to be evaluated and new examinees should be included as long as they provide new information.

In this research project, research methods were carefully studied before deciding on which methods to be used, in addition, the justifications and reasons for choosing specific methods are documented in this report. Consistency was taken into consideration by presenting the key findings to other digital payment professionals in order to receive comments and questions. These discussions offered interesting views to be included in the conclusions, but findings in general were not questioned. One of the important aspects when evaluating the reliability of this research is saturation. 11 persons were interviewed out of all 16-19 year old adolescents in Finland, all of the interviewees living in Southern parts of Finland. It is a valid question to consider if the number of interviewees was sufficient in this case and if the research material was therefore vast enough for drawing conclusions. As mentioned, all of the interviews brought new information and therefore it is difficult to say if having more interviews would have added new insights. At the same time, also with the limited group of 11 interviewees, specific themes became noticeable and it was possible to group the interviewees on digital readiness scale and draw conclusions. It certainly would have been useful and beneficial to have more interviewees – also from other parts of Finland, but due to the limited timeline it was not possible.

The main target in this research project was to deep-dive into the group of late adolescents and the ways that they manage their digital financials, with specific focus on tools and methods. I find that this target was reached, and the interviews revealed a full picture of this topic – and even more than I had originally anticipated. It was especially interesting to understand the role of non-digital tools that were supporting the usage of digital money, as well as the underlying differences in attitudes and expectations. It again shows that being “digital” or operating digitally is not either or – but instead, there are variances and personal preferences. Traditional methods can co-exist with the digital ones, but there is still room for improvement when ensuring that this age group has the optimal digital tools in place, supporting them on their journey towards adulthood and responsible financial management.

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APPENDICES

Appendix 1. Haastattelurunko

Esittely	• Tutkimuksen esittely
	• Haastattelun käytännön asiat
	  • Kesto
	  • Anonymiteetti
	  • Haastattelun nauhoittaminen
	  • Anonyymien kommenttien lainaaminen
	  • Rentoa jutustelua – ei ole olemassa vääriä vastauksia!

Tilin ja kortin saaminen	• Onko sinulla käytössäsi maksukortti? Mobiilimaksusovellus? Pääsy verkkopankkiin? • Minkä ikäisenä sait maksukortin? Millainen kokemus se oli, mitä ajatuksia herätti? Millaista opastusta ja keneltä sait maksukortin käyttämiseen? • Entä minkä ikäisenä sait pankkitilin ja pääsyn sinne? Millainen kokemus se oli, mitä ajatuksia herätti? • Kerro millainen kokemus oli siirtyä käteismaksamisesta korttimaksamiseen?
Rahan käytön suunnittelu	• Miten tiedät, paljonko sinulla on rahaa tällä hetkellä käytettävissä? Millaisilla tavoilla varmistut, että rahat riittävät? • Miten ja millaisilla työkaluilla suunnittelet rahankäyttöä, esim. mihin eri tarkoituksiin käytätte rahaa? • Miten kuvailisit rahan käytön suunnittelua käteinen vs. digitaaliset maksutavat?
Rahan käyttö ja sen seuranta	• Jos saisit vaikkapa sukulaiselta lahjaksi rahaa, ottaisitko mieluummin käteisenä vai tilille? Miksi? • Käytätkö pelkästään käteistä tai pelkästään korttia? Missä tilanteissa käytät käteistä? Missä tilanteissa käytät korttimaksuja (esim. verkko-ostokset)? Onko jompikumpi maksutapa helpompi tai konkreettisempi? Tuleeko rahaa käytettyä enemmän jollain tietyllä maksutavalla? • Miten seuraat kulutustasi?
Oppiminen ja oivallukset rahan käytöstä	• Millaisia rahan käyttöön liittyviä asioita olet oppinut käytännössä? • Millaisia vinkkejä antaisit nyt nuoremmille, jotka vasta ottavat käyttöön digitaalisia maksutapoja? • Millaisia työkaluja olisi hyvä olla tukemassa digitaalisen rahan käyttöä? • Ovatko nykyiset työkalut riittävät? Pitäisikö niissä olla vielä lisäksi joitain toiminnallisuuksia?

Appendix 2. Interview template in English

Presentation	• Presenting the thesis project
	• Presenting the practicalities
	  • Duration of the interview
	  • Anonymity
	  • Permission to record the interview
	  • Permission to quote
	  • Reminder: there are no right or wrong answers

Starting with Digital Payments	• Do you have a payment card? Mobile payment app? Access to your bank account? • How old were you when you obtained your first payment card? How would you describe it as an experience? Did you receive any instructions or guidance from someone? • How old were you when you obtained your bank account and access to it? How would you describe it as an experience? • How would you describe your experiences from changing from cash to card payments?
Budgeting and Planning	• How do you know, how much money you have for spending? How do you make sure that you have enough money for your typical spending? • How do you plan your spending, e.g. for different categories? What kind of tools do you utilize for planning? • How would you describe financial planning with cash vs with digital payment methods?
Usage and Control	• If you are to receive a money gift from your relative, would you rather receive it in cash or on your bank account? Why? • Are you using only cash or only card? Or does it differ based on the situation? Do you find either of them more easy or more concrete? Do you feel that you are more likely to spend more with either of them? • How do you follow-up on your spending?
Learnings	• What kind of learnings have you experienced in practice? • What kind of tips would you give now to younger adolescents, who are now starting to use digital payment methods? • What kind of tools do you feel that would be useful in supporting the usage of digital money? • Do you feel that your current tools are sufficient? Or should they have something additional to support your financial management better?