



D1.3 Behavioural mapping and engagement toolkit for Families-Share

WP1 – Conceptual framework for users' engagement, needs' analysis, behaviour analysis strategy and co-design

Version 1.0 – 29.03.2018

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Executive summary

This deliverable is part of work package 1, T1.4 “Development of the behavioural mapping and communities engagement strategy”, and provides a first baseline measurement of the behavioural profiles of the prospective Families-Share users in the different city labs. The behaviour profiles help to better understand and support the pilot coordinators in terms of main barriers and enablers (or motivators) that are currently present within their communities for organising child care, sharing time, tasks, services or products with each other, and using digital technologies. For this baseline measurement, a survey was developed and distributed among the seven city labs from which a “child care profile”, a “sharing economy profile” and a “digital profile” was constructed. The survey was filled in between November 2018 and mid-January 2019, and was filled in by 665 respondents in total. After data cleaning, behavioural profiles were constructed for each specific city lab. Each profile consists of descriptive statistics of the prospective Families-Share users, as well as a more in-depth analysis of certain barriers and enablers for using the Families-Share solution. Based on these insights, specific recommendations for the engagement strategy for each city lab were formulated, as well as the first version of the COM-B model that summarizes the main barriers and enablers for the adoption of the Families-Share solution. It seems that the main potential barriers for adopting the Families-Share solution are the digital skills of prospective users, while mainly social and economic motivations are drivers for using it. Based on the experiments during the pilot trials (WP3), an update of the COM-B model will be presented in D4.4 “Perceived barriers and enablers for up taking the Families-Share solution” (M28).

The reader of this document is advised to read the conclusions chapter for consulting the main conclusions per behavioural profile, the recommendations for the engagement strategy and the COM-B model. For specific details of each city lab, the reader can check chapter 4.

1. Introduction

This document is part of WP1 (T1.4) and describes the behaviour profiles of the communities in the Families-Share city labs that are potentially going to use the project's solution. The behaviour profiles help to better understand and support the pilot coordinators in terms of **main barriers and enablers** (or motivators) that are currently present within their communities for organising child care, sharing time, tasks, services or products with each other, and using digital technologies. The profiles are constructed through several identified variables in literature, and are grouped in the following sets: (1) Current practices and routines of organising child care: professional versus self-organised child care, (2) Motivations affecting participation in a sharing-based community, (3) Motivations for using the COKIDO platform for the Kortrijk city lab (4) Work/life balance for the Trento city lab (5) Technology adoption profile, and (6) Socio-demographic characteristics. An online questionnaire was developed by imec with profiling questions for each set (with the exception of set 4 which was specifically developed by FBK), and which was spread with the help of the pilot coordinators in six city labs (Trento, Venice, Bologna, Thessaloniki, Budapest and Kortrijk) towards prospective Families-Share users during November-December 2018. The Hamburg city lab also distributed the survey, however, seen the low response rate (N=7) it was not possible to construct behavioural profiles in a meaningful way. Therefore, the results of Hamburg are not taken into account for this deliverable and will be updated for the next deliverable (D4.4 Perceived barriers and enablers for up taking the Families-Share solution, M28).

After data collection, imec performed the data cleaning and data analysis for each city lab, and constructed behaviour profiles. The outcomes of the data analysis are presented in four main profiles for each city lab, being the "child care profile", "sharing economy profile", "digital profile" and "socio-demographic profile". A specific section is also included for the questions about work/life balance organised by FBK.

The current behaviour mapping exercise conducted within WP1 is the first baseline measurement of the behavioural profiles that identifies current barriers and enablers for organising child care and participating in sharing economy activities. Through monitoring the pilot results in WP3 and by performing a final assessment during the uptake of the solution (WP4, T4.3), the behaviour profiles will be updated with validated barriers and enablers in D4.4 "Perceived behavioural enablers and barriers for up taking the Families_Share solution" (M28).

1.1. Intended audience

This document has the objective to collect insights about current barriers and enablers for organising child care in a formal and informal way, and sharing time, tasks, products or services with others. The document supports the Families-Share consortium members in better understanding the profiles of prospective Families-Share users, and especially the pilot coordinators in understanding their target audiences.

In general, the document is relevant for any academic researcher, practitioner or policy maker who is interested in analysing motivations for participation in the sharing economy within the field of childcare.

1.2. Document structure

For conducting the behavioural mapping exercise, several steps were followed:

- **Chapter 2** presents the conceptual framework with the main theoretical dimensions that were found in the literature for constructing the behavioural profiles:
 - Trends in Europe around organising informal child care
 - Motivational research regarding choosing the type of child, and participation in the sharing economy
 - Theories and models for understanding behaviours
- **Chapter 3** describes the survey methodology for collecting responses, including the data cleaning process and main investigated hypotheses
- **Chapter 4** describes the results for the different behavioural profiles per city lab
- **Chapter 5** formulates recommendations for the engagement profiles based on the specific of the behavioural profiles per city lab

2. Literature review

This chapter provides a literature review about the following topics: (1) child care trend in Europe with facts and figures about the use of formal and informal child care, (2) motivational research about choosing formal or informal care, and reasons for participating in a sharing economy, and (3) behavioural models.

2.1 Child care trends in Europe

This chapter presents some figures and general trends in Europe around family composition, typologies of child-care and the enrolment in child care. For this information, the OECD family database¹, the OECD Child Well-Being data portal² and Eurostat³ were consulted. These databases provide cross-national data about the situation of families in OECD countries, and from which the specific figures for the five Families-Share countries (Belgium, Germany, Hungary, Greece and Italy) were selected. This background information is useful for the pilots to know what the general trends are around child care in their country, and to what extent the targeted population through the Families-Share survey is diverging. It will also highlight some key trends that need to be taken into account for the engagement strategy of the project.

For the comparison of statistics it was opted to choose for the most recent available data from the OECD databases. In the next paragraphs, key figures are described for the following two types of indicators:

- **Children in families** – this indicator presents the distribution of children (aged 0-17) according to the presence and marital status of parents in the household
- **Typology of child care and early education services:** Not every country provides the same childcare or early education service, it may also be different labelled, funded or have a different enrolment age. This indicator will provide an overview of the different available child care services in the Families-Share countries, with specific figures about formal and informal child care usage

It has to be noted that the current available information around child care in Europe is quite dispersed, and that there is a lack and inadequacy of available statistics on childcare at national and European level. The heterogeneity of the types of services and the children's ages within the services is one of the main obstacles to compare the statistics of child care systems in different EU countries. The collection of standardized information would improve the knowledge about the quality of the child care services, and for which a methodology was proposed by Eurostat in 2004⁴.

For the development of the survey for the Families-Share pilots, some of the questions were replicated that were found in the above-mentioned databases. However, some specific adjustments were made to meet the country specific requirements of child care services and usage (See Annex I for the survey).

¹ <http://www.oecd.org/els/family/database.htm>

² <http://www.oecd.org/els/family/child-well-being/data/>

³ <https://ec.europa.eu/eurostat/web/main>

⁴ <https://ec.europa.eu/eurostat/web/products-statistical-working-papers/-/KS-CC-04-001?inheritRedirect=true>

2.1.1. Children in families

The OECD family database presents information on the distribution of children (aged 0-17) according to the presence and marital status of the parents in the household. Based on these variables, children are categorised into three groups: (1) living with two parents, where the child lives in a household with two adults that are reported as 'parents' of the child, referring to both biological parents, step- or adoptive parents, (2) living with a single parent, where the child lives primarily in a household with only one adult that is reported as a 'parent', and (3) other: where the child lives primarily in a household where no adult is considered as a parent, for instance the child is living with grandparents, or other relatives or unrelated adults. For the European countries in the OECD database, further disaggregation was made between two married parents, or two cohabiting parents. For the Families-Share survey, the same categorization into the three groups was used to ask about the household composition, however, no specific disaggregation was made for the marital status.

Table 1: Distribution (%) of children (aged 0-17) by presence and marital status of parents in the household (2017).

| | Living with two parents (unspecified) | Two married parents | Two cohabiting parents | Living with a single parent | Other |
|------------|---------------------------------------|---------------------|------------------------|-----------------------------|-------|
| Greece | 91,3 | 91,0 | 0,3 | 7,7 | 0,9 |
| Germany | 82,9 | 74,5 | 8,4 | 16,0 | 1,2 |
| Hungary | 77,8 | 60,0 | 17,8 | 20,8 | 1,4 |
| Belgium | 73,8 | 54,8 | 19,0 | 24,6 | 1,7 |
| Italy | 85,4 | 77,9 | 7,5 | 14,5 | 0,1 |
| EU average | 82,3 | 68,4 | 14,0 | 16,7 | 1,0 |

Most children **live in households with two parents**, with the EU average being over 80%. Rates vary from country to country (Table 1). Greece has the highest distribution of children living with two married parents among the Families-Share countries, while Belgium has the lowest distribution. In contrast, the proportion of children living with a single parent is the highest in Belgium among the Families-Share countries, followed by Hungary. A general trend among the OECD countries is that between the period 2005 and 2017 the proportion of children living with two married parents decreased from 72% to 65.6%; while the proportion of children living with cohabiting parents increased and single parents remained fairly stable.

2.1.2. Typology of child care services in Europe

The provisioning of qualitative and accessible childcare and early education services is crucial in today's society for both social and economic reasons. The participation in early childhood education and care (ECEC) can increase children's wellbeing and can have a positive impact on their cognitive function, education performance and life chances (Augustine, Cavanagh, & Crosnoe, 2009). Further, ECEC enables parents to work, deploy and develop skills and contribute to the economy (as a taxpayer).

Increasing access to high-quality ECEC is thus a crucial part of strategic frameworks in several EU policies. One of the targets is to have a participation in ECEC of at least 95% of children between the age of 4 and the compulsory school age by 2020 (strategic framework in education and training, ET2020⁵), and to provide childcare to at least 33% of children under the age of three (Barcelona targets⁶).

There is a variety of early childhood education and child care services among Europe, with also a considerable variation in the intensity of usage (the number of hours spend per week) depending the age of the child and the income of the household. In general, parents have a range of options to choose from, and some parents also choose to care for their children themselves or by a relative without solely making usage of formal childcare services. This latter is being labelled as '**informal child care**', whereby the care is not subject to legislation and is provided by grandparents, other household members (besides the parents), relatives, friends or neighbours. Parents usually do not pay for this type of informal child care.

Out of the range of **formal child care services**, parents can mostly choose out of three types of services (OECD Family Database, 2016): (1) centre-based day care, (2) family day care and (3) pre-school early education programmes. Centre-based day care is mostly being referred to as nurseries, day care centres, and crèches, and is provided in a licensed centre with several childcare professionals. Family day care is traditionally provided in a home setting. This can be at the childcare professional's own home, at the child's own home, or can also be provided in another location. The number of children who can be cared for in this setting is lower than in a centre-based day care, and the maximum number is usually 3 to 4 children on average. Last, pre-school early education programmes include the centre-based (often school-based) programmes that are designed to meet the needs who are preparing to enter primary education (starting from the compulsory age).

In order to have the right context in referral of formal child care services and compulsory school age, the table below provides an overview of the typology in the six Families-Share countries:

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:ef0016>

⁶ [http://europa.eu/rapid/press-release MEMO-08-592_en.htm](http://europa.eu/rapid/press-release_MEMO-08-592_en.htm)

Table 2: Typology of formal child care services until the compulsory schooling age (OECD database, indicator PF4.1)

| Centre-based and/or family day care | | | | Pre-school | | | Compulsory school | |
|-------------------------------------|--|---|---|---|---|--|-------------------|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Belgium | Kinderdagverblijf (centre based crèches) | | | Kleuterschool, part-time or full time with out-of-school hours care (accessible on voluntary basis starting from age 2,5) | | | Compulsory school | |
| Germany | Krippen (centre-based creche public funded) | | | Kindergarten | | | Compulsory school | |
| | Altersgemischte Kindertageseinrichtungen (mixed age ECEC settings). Most German children are enrolled in non-profit and for-profit government dependent private settings than in public ones. | | | | | | | |
| Greece | Vrefonipiaki stahmi (crèche for children < 2,5 years) | | | Nipiagogeia (nursery school for > 2,5 years) | | | Compulsory school | |
| Hungary | Creches (mainly public) and family day care (mainly private) | | | Kindergarten | | Compulsory school: school starting age is flexible depending on the school maturity of the child | | |
| Italy | Asili nidi (creches) | | | Scuola dell’infanzia (pre-school) | | | Compulsory school | |

2.1.2.1 Figures about formal child care usage

In this section, the enrolment rates in early childhood education and care services are presented for the age groups (OECD Family Database, 2018): 0-2 years, 3-5 years and 6 to 11 years for the Families-Share countries.

According to the OECD statistics, on average, around 31,3% of children in EU countries aged between 0-2 are enrolled in formal child care services. The highest enrolment rates are in the Nordic countries and in the BENELUX, such as in Belgium with roughly 60%. The participation rates tend to be the lowest in the Eastern European countries, such as in Greece with 11.5%.

Table 3: Enrolment rates in early childhood education and care services (0-2 years) in 2018 (%).

| | EU average | Belgium | Germany | Greece | Hungary | Italy |
|------------------------|------------|---------|---------|--------|---------|-------|
| Enrolment rates | 31.3 | 59.8 | 37.3 | 11.5 | 16.7 | 35.5 |

Another finding of the OECD family database, is that in many countries the participation rates for children aged 0-2 increase with the **household income**, and that children are more likely to use early ECEC when **their mother is educated to a degree level**. For instance, in Belgium 60% of the children of the highest income families are enrolled, while this is only half (roughly 30%) for the children in the lowest income families. The difference is less significant for Germany, Italy, Greece and Hungary, whereby participation rates of children of low versus high-income families only differ 5 to 7%

Looking to enrolment rates of children aged 3-5, the average enrolment rate is 87.7% for the EU average. Again, there is a variation across countries, and also among the Families-Share countries. In Belgium, Germany and Italy enrolment in early childhood education and care or primary education is almost universal among 3 to 5 years old. For Greece, this is substantially lower: 63.1%.

Table 4: Enrolment rates in early childhood education and care services (3-5 years) in 2018 (%).

| | EU average | Belgium | Germany | Greece | Hungary | Italy |
|------------------------|------------|---------|---------|--------|---------|-------|
| Enrolment rates | 87.7 | 98.7 | 94.9 | 63.1 | 92.1 | 94.9 |

Last, the proportion of children aged between 6 to 11 in out-of-school care services is on average 28,6% for the EU. Participation rates are high in Belgium and Greece, and rather low for Germany and Italy. Again here, the OECD family database found that children from relatively **advantaged socio-economic backgrounds** are more likely to use out-of-school care services, and when their mother holds a university level qualification.

Table 5: Participation rates in before and/or after school care services (6 to 11 years) in 2018 (%).

| | EU average | Belgium | Germany | Greece | Hungary | Italy |
|------------------------|------------|---------|---------|--------|---------|-------|
| Enrolment rates | 28.6 | 35 | 10.9 | 48.4 | N/A | 7.8 |

2.1.2.2 Figures about informal child care usage

For the statistics about informal child care usage, the Eurostat database 'Being young in Europe' today was consulted (Coyette, Europäische Kommission, & Statistisches Amt, 2015). The most recent and validated data in this dataset is from 2016. Similar to the OECD database, the statistics are provided per age group: 0 – 3 years, 3 years until the minimum compulsory school age, and from the minimum compulsory school age up till 12 years old.

The table below shows the percentages of each age group that is only being cared for by their parents. The EU average (28 countries) for informal care provided by parents for children less than 3 years is 47.3%, and most of the Families-Share countries are around this average, with the exception of Germany and Hungary that score 10 per cent higher.

In all countries in Europe, the share of children from 3 years to compulsory education only cared for by their parents drops substantially to only 8.8%. It seems through that in Greece informal care arrangements are more likely to continue until the minimum compulsory school age (22.5%). As seen above, the enrolment rates for children between 3 and 5 years old for formal child care was almost absolute for Belgium, Germany and Italy. Here, we could assume that informal care arrangements are prevailing in all the Families-Share countries for children less than 3 years, and that from the age of 3 there is a shift towards more formal care provision (although to a lesser extent in Greece).

Table 6: Children cared only by their parents by age group - % over the population of each age group (2016⁷).

| | EU average (28 countries) | Belgium | Germany | Greece | Hungary | Italy |
|---|------------------------------|---------|---------|--------|---------|-------|
| Less than 3 years | 47.3 | 44.9 | 59.3 | 46 | 57.7 | 45 |
| From 3 years to minimum compulsory school age | 8.8 | 1.4 | 7.9 | 22.5 | 6.8 | 5.9 |
| From minimum compulsory school age to 12 years | 2.4 | 7.1 | 9.8 | 1.6 | 1.3 | 0.1 |

Some children are also being cared for by other forms of childcare, such as by grandparents, other household members, relatives, friends, and neighbours. The EUROSTAT also ranks the care by either a professional child-minder at the children's home as another type of informal care. Within these statistics, some of the children are recorded as cared for under informal care, but this does not mean that they also didn't attend formal childcare for part of the week. In the table below, the statistics are provided for children less than 3 years, 3 years until the compulsory school age, and up to the age of 12 years for 1 to 30 hours of care (or more).

Table 7: Children cared for by other types of child care (1 to 30 hours or over, %) – 2016⁸.

| | EU average (28 countries) | Belgium | Germany | Greece | Hungary | Italy |
|---|------------------------------|---------|---------|--------|---------|-------|
| Less than 3 years | 30.2 | 20.2 | 13.1 | 50.3 | 32.9 | 39.1 |
| From 3 years to minimum compulsory school age | 28.7 | 23.6 | 12.3 | 48.6 | 44.3 | 32.9 |
| From minimum compulsory school age to 12 years | 26.5 | 17.1 | 14.7 | 35.4 | 31.6 | 28.4 |

The overall EU average (28 countries) for children being cared for by other types of informal care is the highest for children less than 3 years (30.2%), and drops with a few percentages for the other age groups. It is remarkable that the highest scores for other types of informal care are mostly in Greece, Italy and Hungary and less prevailing in Belgium and Germany. It should be noted that informal child care provision is used by parents for mostly under 30 hours per week (or on a part time-based).

⁷ <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

⁸ <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

Further, other research has shown that grandparents are the most common providers of informal childcare (Glaser et al., 2013), mostly because of the unavailability of formal childcare, and the normative values and attitudes towards child care. In some European countries, the care provided by grandparents had a significant influence on the mother's decision to enter the labour market, which is the case for Germany and Hungary (Aassve, Arpino, & Goisis, 2012). Regular childcare is mostly provided by grandparents who are younger and healthier, and retired, living close to their grandchildren from the maternal side. Further, lone parents, parents working long- or nonstandard hours and from financially disadvantaged families are also more likely to use grandparent care.

Another remarkable difference is the influence of co-housing or co-residence between elderly parents and their children (Jappens & Van Bavel, 2012). The highest level of intergenerational support is in Central and Eastern European countries, whereby support and care are mainly being provided by family members who are living together: mothers in Italy, Greece, Hungary, and parts of Spain and Austria are the most likely to mainly rely on grandparents as childcare providers.

2.1.3 Main lessons learned for Families-Share

Based upon the above facts and figures about general child care trends in Europe, the following main lessons learned are distilled for the development of the behavioural mapping survey and related engagement strategy:

- The engagement strategy in the Families-Share project pursues an inclusive engagement process for the design and usage of the platform, and this for all **types of households** with children. City labs should thus ensure that their recruitment and dissemination messages are represented as relevant for different household types, and that they are able to reach out to a relevant proportion of children living with single parents (especially for Belgium and Hungary), or to other types of household.
- The five Families-Share countries provide different types of child care services, linked to the age of the child and subsidy levels. For the development of the survey, the distinction will be made between formal and informal care, and labelled as “**self-organised care**” and “**professional care**”; whereby we specifically focus on the provision of child care for children aged from **0 to 12 years old**.
- **Informal care arrangements** are prevailing in all the Families-Share countries for children less than 3 years, and from the age of 3 there is a shift towards more formal care provision (although to a lesser extent in Greece). The **usage of informal child care** is relatively high in Europe, with the overall average being between 25 to 30% up to the age of twelve.
- The usage of **formal child care** is linked with the **household income**, and the **education level** of the mother. For instance, the higher the income, the more likely that the participation rate of children aged 0-2 in formal care increases; and similar for 6 to 11 years old in before and/or after care at school. For the construction of the behaviour profiles, the relationship between these socio-demographic characteristics (income and education level) and the usage of formal and informal child care will be explored.
- In Mediterranean countries there is a higher rate of **intergenerational support of grandparents**, especially in Greece, Hungary and Italy. The survey will question the frequency of relying on self-organised care via grandparents, older siblings, other relatives, neighbours, friends, other parents from school, nannies and babysitters.

2.2 Motivational research

This chapter collects insights about the decision-making process of parents for choosing formal or informal care, or a combination of both. On the one hand, these decisions are formed through the inherent characteristics of the provided child care service, such as accessibility, quality and cost of the care, etc. On the other hand, choices are also driven by individual preferences, normative values and attitudes towards care.

2.2.1 Child care arrangements: motivations for using informal or formal child care, or both

The motivations and reasons for choosing a particular childcare arrangement are bounded to many different factors these days. For many families it is no longer a simplistic choice seen the intertwined combinations it might have on the employment status and the parental leave policy, or labour market opportunities in general. As seen from the figures above, many families in Europe rely today on some type of child care provision, either provided by professional care givers or self-organised care by relatives, grandparents, friends, etc.

From the perspective of the Families-Share project, it is particularly relevant to know when families are relying on informal care. For some families, it can vary considerably – while some might be using it sporadically, for others it can be their main type of child care arrangement. Rutter and Evans (Jill Rutter & Evans, 2011) found that parents mostly use informal care in four main ways:

- To supplement formal care, in particular when the openings hours of the child care service are not sufficient
- As after-school and holiday provision for school-aged children
- As the main type of childcare for very young children and babies
- As emergency or back-up when regular childcare arrangements are insufficient

In general, childcare arrangements are mostly made based upon the (i) characteristics of the provided child care services in the specific country and region, (ii) the socio-demographic characteristics of the household, and (iii) individual preferences based on the child's needs, parental values and attitudes towards child care. These three main groups of variables are discussed in the following paragraphs.

2.2.1.1 *Child care arrangements based upon accessibility, availability, cost and quality of the care*

The characteristics of the child care service, such as the **availability**, the **accessibility** and **quality of the care** are important determinants of service usage (Janta, 2014). Difficulties in accessing child care related to inadequate working hours seems to be of particular relevance for parents in Greece, Romania, Poland and the Czech Republic, while issues related to the quality of the service are noted in Italy, Greece, Romania, Slovakia, and Poland (ibid.). The **cost of the childcare** is also an important factor for work-life reconciliation. A high cost of childcare seems to have an impact on the low level of usage, with parents moving to part-time employment (especially mothers) or leaving the labour market. These characteristics are mostly constraining families in using their preferred child care option:

Table 8: Characteristics of the provided child care service.

| Determinants: Characteristics of the provided child care service | Description ⁹ | Reference |
|--|---|-------------|
| Availability | The maximum number of children that each provider can accommodate, and the times of operation (opening hours). The availability of places can be linked to the local area: city (mostly waiting lists) versus rural areas (to no child care at all) | Janta, 2014 |
| Accessibility | Places that are within reasonable reach of home and work | Janta, 2014 |
| Affordability | The cost of the childcare in relation to the income of the households | Janta, 2014 |
| Quality of the care | The childcare qualifications among the staff, as well as the maximum group size, or child staff ratio | Janta, 2014 |

2.2.1.2 Child care arrangements among different socio-demographic groups

Childcare arrangements also vary considerably across different socio-demographic groups. The table below provides an overview of demographic characteristics that generate differences in child care usage patterns.

Table 9: Child care arrangements among different socio-demographic groups.

| Determinants: Socio-demographic characteristics of the household | Description | References |
|---|--|--|
| Education level of the parents | Higher educated households are more likely to rely on formal child care arrangements | Capizzano, Adams, & Sonenstein, 2000 |
| Household income | Higher income households are more likely to rely on formal child care arrangements | Mills et al., 2014; Capizzano, Adams, & Sonenstein, 2000 |
| Employment status of mothers, and the related | Mothers employed part-time with young children are more likely to rely on | West, 1995 |

⁹ Definitions from: <https://ec.europa.eu/eurostat/web/products-statistical-working-papers/-/KS-CC-04-001?inheritRedirect=true>

| | | |
|---|--|---|
| work status and flexibility at work of parents | <p>informal child care arrangements</p> <p>Mothers who work evening or night shifts are more likely to rely on informal child care arrangements</p> <p>Families with the lowest flexibility at work are more likely to choose informal care, or in-home care.</p> | <p>Bowen & Neenan, 1993</p> <p>Emlen, Koren, & Schultze, 1999</p> |
| Household composition | <p>Larger families are more likely to use relative or informal child care arrangements than families with only one or two children</p> <p>Families that are living together (or are living nearby) with grandparents are more likely to rely on intergenerational support.</p> | <p>Brown-Lyons, Robertson, Layzer, Columbia University, & National Center for Children in Poverty, 2001</p> |
| Ethnicity | <p>Immigrants prefer informal over formal child care (possible explanations: it allows them to pass on their culture to their children, formal child care is more difficult to afford)</p> | <p>Seibel & Hedegaard, 2017</p> |
| Child age | <p>Parental preferences for child care arrangements change as their children get older. Parents prefer more informal home-like arrangements for infants and toddlers, and opt for formal child care arrangements for their pre-school aged children (for promoting school readiness)</p> | <p>Porter, 1998; Rodd & Milikan, 1994</p> |
| Children with special needs | <p>Parental preference to have informal or in-home care arrangement for children under age of six who are disabled or chronically ill.</p> | <p>Brown-Lyons, Robertson, Layzer, Columbia University, & National Center for Children in Poverty, 2001</p> |

2.2.1.3 Parental values, beliefs and attitudes of parents

Besides the characteristics of the provided child care service and differences in usage patterns along different socio-demographic groups, there are also other factors that influence the arrangement of child care. Hereby, we are referring to factors that lead to a variety of considerations between the perceived needs of the child and the parental values about the child care, as well as individual preference and attitudes. In the table below, a list of variables is summarized that were found in literature that might influence parents' beliefs and attitudes around child care:

Table 10: Child care arrangements and parental values, beliefs and attitudes.

| Determinants: Parental values , beliefs and attitudes towards child care | Description | Reference |
|---|--|---|
| Trust | The preference for relying on informal care with persons who the parents personally know and trust | Galinsky, 1994; cited in Brown-Lyons et al., 2001 |
| Safety | <p>The preference for relying on informal care, cause safety is assured by persons who the parents personally know and trust</p> <p>The preference for relying on formal care, cause there is safety in a structured, monitored environment with trained staff</p> | Galinsky, 1994 cited in Brown-Lyons et al., 2001 |
| Stability / familiarity | The preference for relying on informal care with persons who can provide some stability and familiarity for the children. This is especially the case for parents whose employment requirements might be unstable. | Hand, 2005 |
| The perceived importance of having close, warm relationships | The preference for relying on informal care that resembles parental care, or which can act as a 'substitute for mother love' | Hertz, 1997 ;cited in Brown-Lyons et al., 2001 |
| Community bonds | The preference for relying on informal care to maintain strong family bonds | Hand, 2005 |
| Views about life and child rearing | The preference for relying on informal care with persons who share the same views about life (e.g. religion) and child rearing | Hand, 2005 |

| | | |
|---|--|------------|
| Cognitive and social development | The preference for relying on formal child care and its linked professional standards for raising the opportunities for cognitive and social development | Hand, 2005 |
|---|--|------------|

2.2.2 First experiences from organising informal child care through social networks and with support of a digital platform

Within the Families-Share project, the objective is to build a social networking platform dedicated to childcare and work life balance. The platform hereby relies upon **reciprocal informal childcare networks**, where citizens come together and share tasks, time and skills. Families-Share is thus proposing a new type of informal childcare, whereby (grand)parents, neighbours, family or friends provide childcare to their network based upon a reciprocal arrangement of exchanging time. For instance, it could be a routinized exchange of time during a holiday period, or for occasional and emergency situations. For the described situations, a person will look after your children, while in return you will look after their children without any specific cash exchange.

The usage of informal social networks with the support of a digital platform that help to put interested parents in contact with each other such as Families-Share, have not been widely used or realized in many European countries. According to a study of NESTA about child care in the UK (J. Rutter, 2016), the main opportunity for organising informal childcare through these social networks is that it broadens and deepens access to child care, particularly for parents who have ad-hoc, emergency or atypical child care needs. Other benefits are that parents with the same needs can easily connect with one another, especially in areas where child care services are less available.

However, some **barriers** for adoption were also described in the study. First, there is the low likelihood of take up in the target group if a **digital-first approach** is chosen. Therefore, it is recommended to start from an existing group or infrastructure, and then use the platform as supporting tool for arranging childcare needs. Secondly, there is the **development cost** of the platform and the unclear revenue model. The platform also has to be **well designed, and easy to use and secure**. Further, there might also be on-going questions of **trust and confidence** amongst parents. Parents might be worried about the exchange and tracking of time while supervising each other's children. It might be that an **imbalance in exchange of time** occurs between parents, with some of the parents taking up a leadership role in the organisation of the social networks. Last, parents' **general beliefs and attitudes** around the choice of informal versus formal childcare might also differ, which might be challenging in selecting or combining specific childcare options such as the proposed solution of Families-Share.

The table below summarizes the current barriers and opportunities for adoption of reciprocal child care arrangements through a digital platform:

Table 11: Barriers and opportunities for reciprocal child care arrangements through a digital platform.

| Barriers to adoption | Opportunities for adoption |
|--|---|
| <ul style="list-style-type: none"> • Trust and confidence among parents • The skills and knowledge required to work with an online, digital platform • The cost and set-up of a digital platform • The revenue model of the platform | <ul style="list-style-type: none"> • Higher access to child care, especially for ad-hoc and emergency situations • Connections among families with the same needs (especially interesting for families who cannot rely on intergenerational support) • Flexibility |

2.3 Motivations and barriers for participating in the sharing economy

This chapter reveals some insights about the motivations of people to participate in a sharing economy service.

Based on the performed literature review, it seems that motivations seem to differ according to the following main factors: (1) The type of sector and form of sharing, related to the characteristics of the shared good, (2) The socio-demographic profile of the user, and (3) the technology-dependent motivation with also the technology profile of the user.

These motivations for participating in the sharing economy are discussed in the following paragraphs. For the definitions and more extensive explanations about the sharing economy, we refer to D4.1 “Impact assessment methodology”.

2.3.1 Type of sector and the form of sharing

In a variety of sectors, there are internet-facilitated platforms that enable people to share assets, time, or activities with each other. The assumption is that motivations can differ depending on the type of good you are sharing and its particular characteristics, e.g. it is likely that motivations differ for car sharing versus accommodation sharing, or for meal sharing versus tool sharing. Most scholars in the sharing economy study the motivations of one particular type of a sharing economy service, while others do not make a distinction between the different forms (e.g. Hamari, Sjöklint, & Ukkonen, 2016a).

One of the most used motivation theories to explain the different motivations in the sharing economy is the Self Determination Theory (cfr. Chapter 2.4.1) (Deci & Ryan, 2000). This theory explains that behaviour is driven by either intrinsic motivations or extrinsic motivations. Intrinsic motivations refer to feelings of inherent satisfaction or enjoyment of using a service, or internalized values that represent certain norms. Examples of intrinsic motivations are environmental concern, and the act of sharing to bring people together and stimulate social cohesion in a neighbourhood.

Extrinsic motivations relate to outcomes that are separate from behaviour, such as monetary rewards.

According to Böcker & Meelen (2016), there are three main categories of motivations that can be related to the type of sector and service you are sharing, and which were investigated for four types of sharing services (car sharing, accommodation sharing, meal sharing and tool sharing):

- **Economic motivations (extrinsic):** e.g. price consciousness ; and which seems to be important drivers for accommodation sharing and car sharing (cfr. Möhlmann, 2015)
- **Environmental motivations (intrinsic):** e.g. increased efficiency in the usage of goods, or general environmental consciousness, however, there is no conclusive evidence today that environmental motivations also effects the intention to use the service again
- **Social motivations (intrinsic):** e.g. socializing, making new friends, etc; and with seems to be an important driver for toy library participation whereby both children and parents get to know people and make new friends (Ozanne & Ballantine, 2010). Further, Böcker and Meelen also found that these motivations prevail for meal sharing and tool sharing.

Böcker & Meelen stress that for a certain type of service a particular motivation can be dominant, but that also a combination of different types of motivations can be of importance and that these can vary from person to person. Seen the variety of motivations, the authors also pinpoint that the scaling of the sharing economy can happen very fast, as “there is something in it for anybody” (Böcker & Meelen, 2016, p.37).

Further, Buda (2017) divided sharing economy users into four main groups based on factors affecting participation without any specification of a specific sector or good, but also socio-demographic characteristics and the general attitude of the customer. They found four main groups, labelled as: (1) Enthusiastic frequent users, who are not economically driven, (2) Price-sensitive users, (3) Environmental conscious users and (4) Casual users who rather make usage of the services in case of an attractive offer. Also here, the main drivers for participation were economic benefits, sustainability, usage of the services for enjoyment and fun, and general credibility of the system.

Other authors take a different and more general approach in categorizing main drivers for participating in a sharing economy. For instance, Hawlitschek, Teubner, & Gimpel (2016) identified 24 potential motivations but also impediments for participation in peer-to-peer rental services. They differentiate between users and non users, and also list potential impediments. Based on their literature review and an exploratory survey they identified the following potential motives for peer-to-peer rental services:

Table 12: Drivers and impediments for peer-to-peer rental services (Hawlitschek, Teubner, & Gimpel, 2016)

| Motivations | |
|---|--|
| <ul style="list-style-type: none"> • Anti-capitalism: the idea that sharing is a statement against capitalism • Burden of ownership: the idea that ownership is associated with responsibility and effort • Effort expectancy: the idea that sharing is associated with a lot of effort • Enjoyment in sharing: the idea that it has a value to help other • Hedonic motivation: the idea that sharing is fun • Income: the idea that sharing may generate an (additional) income • Independence through ownership: the idea that sharing reduces independence from others through organisational overhead • Knowledge: the idea that one is familiar with sharing • Lack of trust: the idea that sharing users should not be trusted • Modern lifestyle: the idea that sharing expresses a modern lifestyle • Prestige of ownership: the idea that ownership is associated with social prestige • Privacy: the idea that sharing entails a loss of privacy | <ul style="list-style-type: none"> • Process risk: the idea that sharing involves procedural risks • Product variety: the idea that sharing offers a wide range of different products and services • Quality: the idea that sharing offers a high product quality • Resource scarcity: the idea that resources may not be available when trying to access them through sharing • Sense of belonging: the idea that one feels as part of a sharing community • Social experience: the idea that sharing enables social experience • Social influence: the idea that own's social environment appreciates sharing • Substitutability: the idea that sharing can substitute ownership • Sustainability: the idea that sharing is environmentally friendly • Thriftiness: the idea that sharing may save money • Ubiquitous availability: the idea that sharing allows to access products and services in many places • Uniqueness: the idea that sharing allows to access products/services which are not available elsewhere |

2.3.2 Sharing services among various socio-demographic groups

Apart from the type of sector and the characteristics of the shared good, motivations are also likely to differ among various socio-demographic groups.

The table below provides a summary of socio-demographic variables, and their assumptions towards main drivers for participation in a sharing economy:

| Socio-demographic characteristic | Assumption | Reference |
|-----------------------------------|--|--|
| Age | For sharing economy services with a highly imbedded local character, it is assumed that older age groups have a higher social motivation to join the sharing economy | <u>Cornwell, Laumann, & Schumm, 2008</u> cited in <u>Böcker & Meelen (2016)</u> |
| Gender | It is assumed that woman are more environmentally aware than men, and that environmental motivations might more prevail for woman than men | <u>Diamantopoulos, 1994</u> ; <u>Hellwig, Morhart, Girardin, & Hauser, 2015</u> cited in <u>Böcker & Meelen (2016)</u> |
| Income and education level | It is assumed that environmental motivations prevail for higher incomes and higher educated people , versus economic motivations for lower incomes. This finding is often explained by Maslow's hierarchical needs theory, whereby environmental concern is seen as a higher order need, which is only strived for when basic needs are met. | <u>Shen & Saijo, 2008</u> cited in <u>Böcker & Meelen (2016)</u> |

2.3.3 The technology profile of users

Last, from the literature review, it became also clear that the technology profile of users might influence the participation in a sharing economy service. The usage of web services and mobile application has become ubiquitous and omnipresent. To have a better understanding of sharing behaviour, we also think it is valuable to look at the technology acceptance of these type of technologies. The most important theories to explain technology usage and acceptance are the Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (cfr. Chapter 2.4.2).

According to the study of Buda (2017), people using sharing economy typically belong to the group of internet users who are open to novelties, frequently use applications, and make regular online purchases. Hereby, users found it important that the technology is flexible, has a quick reaction/response, is easy and transparent to use, and has a certain degree of trendiness, credibility, and traceability of actions.

2.4 Theories and models for understanding behaviours

In this chapter, underlying theories for understanding behaviours are described. In particular relevance is the COM-B model that will be used to outline capabilities and opportunities from participating in Families-Share.

2.4.1 COM-B model

The COM-B model was designed to overcome the limitations of existing behaviour change frameworks and aims to provide an efficient method of choosing the type of intervention appropriate to a given behaviour and a given population (S. Michie, van Stralen, & West, 2011). In an extensive review of 19 of these frameworks, Michie, van Stralen, and West (2011) conclude that none of them are comprehensive enough to cover the full range of intervention functions or policies. This judgment is based on three criteria of usefulness: comprehensive coverage of every intervention, coherence and links to an overarching behaviour.

In this context, they developed a new framework to understand behaviour, based on three different criteria (see

[Table 13](#)) : Capability, Opportunity and Motivation, forming the core of what they describe as the “behaviour change wheel”. These criteria are drawn from two entities : first a US consensus meeting of behavioural theorists highlighting three antecedents to any behaviour and second, a principle of US criminal law identifying three constructs that are needed to perform a volitional behaviour : intention to perform or motive; necessary skills or capability ; absence of environmental constraints or opportunity (Michie, van Stralen, & West, 2011).

Table 13: COM-B model components and sub-components

| Components | Definition | Sub-components | Example |
|--------------------|--|----------------------------|--|
| Motivation | Brain processes that energize and direct behaviour. | Reflective processes | Evaluations |
| | | Automatic processes | Emotions, impulses |
| Capability | Individual’s capacity to engage in the activity concerned. | Psychological capabilities | Knowledge, psychological strength, skills, stamina |
| | | Physical capabilities | Physical strength, skills, stamina |
| Opportunity | All factors that lie outside the individual that make the behaviour possible or prompt it. | Physical opportunities | Time, location, resources |
| | | Social opportunities | Cultural norms, social cues |

In what the authors called the “behaviour system” (Michie, van Stralen, & West, 2011, p.4), these three components interact with each other to produce a behaviour which will in return impact the first components (see [Figure 1](#)).

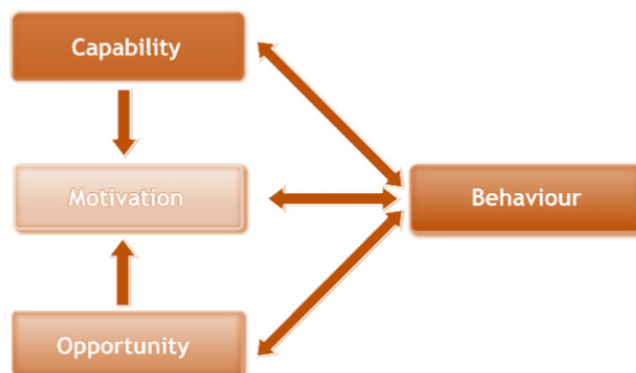


Figure 1: The COM-B system

While these models enables us to understand how behaviour works, it also gives us the key to design behaviour change interventions. Indeed, put into the context of behaviour change, an intervention could target one (or more) components of the system, the task being to know which specific component to target in order to change the intended behaviour (S. Michie et al., 2011). This is why it is essential at this stage to understand the targeted behaviour and the importance of each component in controlling the said behaviour.

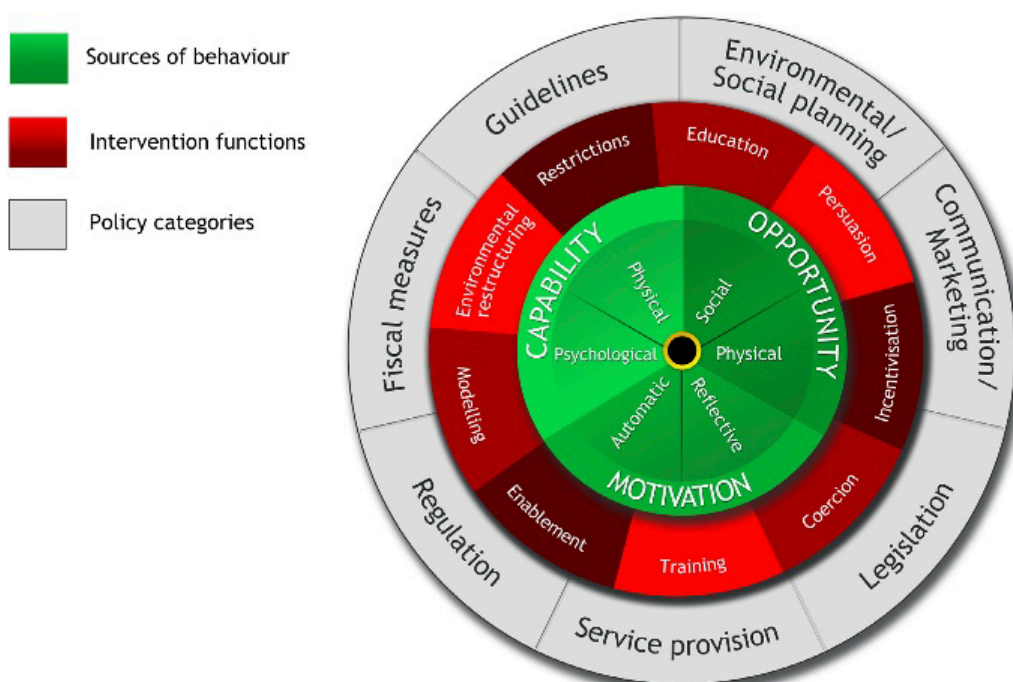


Figure 2: The behaviour change wheel (source : Michie et al., 2011, p. 7)

As can be observed from **Error! Reference source not found.**, the authors place the interventions between the policies and the targeted behaviour but opt for a non-linear, circular model, as components of the models interact with each other. From their review of the existing frameworks, the authors highlight nine intervention functions and seven policy categories (see Table below).

Table 14: Definition of interventions and policies (source : Michie et al., 2011, p. 7)

| Interventions | Definition | Examples |
|-------------------------------|---|--|
| Education | Increasing knowledge or understanding | Providing information to promote healthy eating |
| Persuasion | Using communication to induce positive or negative feelings or stimulate action | Using imagery to motivate increases in physical activity |
| Incentivisation | Creating expectation of reward | Using prize draws to induce attempts to stop smoking |
| Coercion | Creating expectation of punishment or cost | Raising the financial cost to reduce excessive alcohol consumption |
| Training | Imparting skills | Advanced driver training to increase safe driving |
| Restriction | Using rules to reduce the opportunity to engage in the target behaviour (or to increase the target behaviour by reducing the opportunity to engage in competing behaviours) | Prohibiting sales of solvents to people under 18 to reduce use for intoxication |
| Environmental restructuring | Changing the physical or social context | Providing on-screen prompts for GPs to ask about smoking behaviour |
| Modelling | Providing an example for people to aspire to or imitate | Using TV drama scenes involving safe-sex practices to increase condom use |
| Enablement | Increasing means/reducing barriers to increase capability or opportunity ¹ | Behavioural support for smoking cessation, medication for cognitive deficits, surgery to reduce obesity, prostheses to promote physical activity |
| Policies | | |
| Communication/marketing | Using print, electronic, telephonic or broadcast media | Conducting mass media campaigns |
| Guidelines | Creating documents that recommend or mandate practice. This includes all changes to service provision | Producing and disseminating treatment protocols |
| Fiscal | Using the tax system to reduce or increase the financial cost | Increasing duty or increasing anti-smuggling activities |
| Regulation | Establishing rules or principles of behaviour or practice | Establishing voluntary agreements on advertising |
| Legislation | Making or changing laws | Prohibiting sale or use |
| Environmental/social planning | Designing and/or controlling the physical or social environment | Using town planning |
| Service provision | Delivering a service | Establishing support services in workplaces, communities etc. |

To design the most relevant intervention, the authors have created a 3-steps process: first, the behaviour needs to be understood thoroughly. This implies that the targeted problem must be defined in behavioural terms, that a behaviour must then be selected to be the target behaviour and must be defined, and finally that the wanted change must be identified (Michie, Atkins, & West, 2014).

Second, interventions options or “function” must be identified as well as the corresponding policy categories. Once possible interventions have been identified through the COM-B model, the APEASE criteria can be used to choose the one to implement according to the specific context : affordability; practicability; effectiveness and cost-effectiveness; acceptability (by stakeholders); side effects/safety; equity (Michie, West, Campbell, Brown, & Gainforth, 2014). For example, the intervention function “incentivisation” might not be practicable as there might not be an allocated budget. The same APEASE criteria can be used to identify relevant policy categories for each possible intervention (Michie, Atkins, & West, 2014). The particular strength of the COM-B model is to incorporate this context in the decision-making process. Indeed, it makes context the starting point of the intervention design by asking “what conditions internal to individuals and in their social and

physical environmental need to be in place for a specified behavioural target to be achieved” (Michie, van Stralen, & West, 2011, p.9).

Third, content and implementation options have to be identified such as the behaviour change techniques and mode of delivery of the intervention (Michie, Atkins, & West, 2014). The model has been applied to a number of subjects, such as audiology (Barker, Atkins, & de Lusignan, 2016), gestational diabetes (Handley et al., 2015) and medication adherence (Jackson, Eliasson, Barber, & Weinman, 2014), and shows promising results in the identification of the fittest intervention to implement. However, to our knowledge, the model has never been applied to the domain of childcare.

Within the Families-Share project, the COM-B model will be further on used to outline motivations, opportunities and capabilities that are identified during the pilot trials of WP4. For the different type of motivations, we rely on the insights from chapter 2.3 and will validate a limited set of motivations through the behavioural mapping survey. The impact assessment exercises will continue to explore this further into depth. For the opportunities and capabilities, we will look towards the processes and interventions that were implemented during the project, and specifically for the engagement and retention of users.

2.4.2 Self-determination theory

The self-determination theory is a theory on human’s motivation to act which distinguish between two types of motivation, intrinsic and extrinsic (Böcker & Meelen, 2016; Hamari, Sjöklint, & Ukkonen, 2016b). While intrinsic motivation emerge from intrinsic value, inherent satisfaction of the activity and enjoyment, extrinsic motivation is related to external pressure and outcomes separated from the behaviour (Böcker & Meelen, 2016; Hamari et al., 2016b).

The theory starts from the assumption that the human nature is “good” and that “people are naturally inclined to learn, to grow, to assimilate important cultural values, and to connect and contribute to others” (Chirkov, Ryan, & Sheldon, 2011, p. 35). Nevertheless, the theory does not neglect that people are capable of “bad” actions, but sees them as the results of frustration rather than a characteristic of human nature per se.

Later on, Deci and Ryan (2008) have reclassified the motivations into two categories: autonomous and controlled motivation. Autonomous motivation encompass “*both intrinsic motivation and the types of extrinsic motivation in which people have identified with an activity’s value and ideally will have integrated it into their sense of self*” (Deci & Ryan, 2008, p. 182). Controlled motivation include on the other hand “*both external regulation, in which one’s behaviour is a function of external contingencies of reward or punishment, and introjected regulation, in which the regulation of action has been partially internalized*” (Deci & Ryan, 2008, p. 182).

“Our results indicate that intrinsic motivations are a strong determinant of attitude (H1a and H2a not rejected) whereas extrinsic motivations did not reflect positively on attitude (H3a and H4a rejected). For continuous use intentions, however, extrinsic motivations were a more prominent

predictor (H4b not rejected), along with enjoyment from the activity (H2b not rejected)” (Hamari et al., 2016b)

2.4.3 Attitude-behaviour gap / theory of planned behaviour

Attitude has long been seen as a considerable determinant of behaviour (Ajzen, 1991). Nevertheless, it appears that an attitude-behaviour gap has been observed in a multiple of different behaviour such as sustainable tourism (Juvan & Dolnicar, 2014), ethical decision making (Papaoikonomou, Ryan, & Ginieis, 2011), the purchase of organic products (Aschemann-Witzel & Aagaard, 2014; Padel & Foster, 2005) and sharing economy behaviour (Ajzen, 1991, p. 188).

The reason for this phenomenon is plural and varies accordingly to the investigated behaviour: even though an individual might display a high positive attitude towards a specific behaviour, he might not undertake it because his family is disapproving or because of economic limitations. In the scope of sharing economy behaviours such as the ones implied in Families-Share, barriers to behaviour might encompass lack of knowledge and information, lack of access to ICT, lack of offer in the living area, lack of time to implement a new habit, disapproving partner or family members, etc.

In this context, the Theory of planned behaviour might help understand the reason for this observed gap. While the theory positions attitude as a major influence of behaviour as well, it also highlighted why the relation might not be so simple. The Theory of planned behaviour is a model developed by Ajzen and Fishbein in the 70’ which postulates that the intention to perform a behaviour is the main antecedent of the actual behaviour, and that this intention is influenced by three components: the **attitude** toward the behaviour, the **subjective norm** and the **perceived behavioural control** (Ajzen, 1991). As can be deduced from the model (see [Figure 3](#)), attitude, while being an antecedent of the intention, is not its sole determinant.

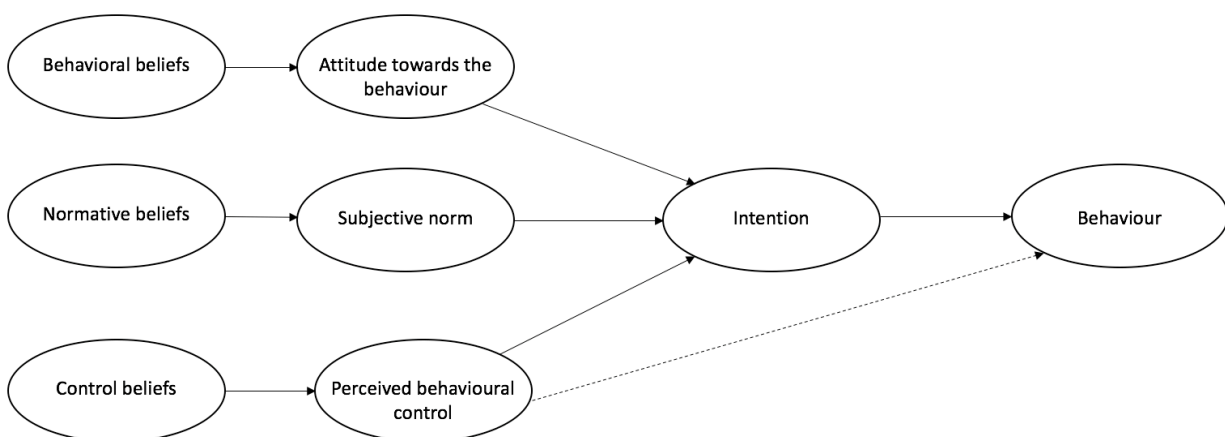


Figure 3: Representation of the Theory of planned behaviour

Playing a great role in the determination of the intention in the construct of subjective norm. The subjective norm is defined by Ajzen as the “*perceived social pressure to perform or not to perform the behaviour*” (1991, p.188). It is complemented by the construct of perceived behavioural control which refers to “*the perceived ease or difficulty of performing the behaviour*” (Ajzen, 1991, p. 188).

This last construct is crucial as it is dual: the perception of the behaviour control will influence the intention one has to perform a specific behaviour while the actual behavioural control will influence the actual specific behaviour. Taking these two constructs into account while investigating a specific behaviour can furnish track to understand an attitude-behaviour gap.

As can be observed from the model of the theory of planned behaviour, belief is an important construct that plays a key role in the determination of a behaviour. Indeed, all three components that have an influence on the intention to undertake a specific behaviour, being attitude, subjective norm and perceived behavioural control, are influenced by their specific beliefs: behavioural beliefs, normative beliefs and control beliefs (Ajzen, 1991). The benefit of taking those beliefs into account is that they allow us to understand the reason why those components (behavioural attitude, subjective norm and perceived behavioural control) play a role in the prediction of the intention to perform a behaviour (Greaves, Zibarras, & Stride, 2013).

It has been demonstrated that the theory of planned behaviour has a great power of prediction, as indicated by Armitage & Conner (2001) in their meta-analysis, explaining on average 27% of the variance of the investigated behaviour. Furthermore, this theory is largely used within the context of pro-environmental behaviour, such as the reduction of food waste (Graham-Rowe, Jessop, & Sparks, 2015), pro-environmental behaviours in the workplace (Greaves, Zibarras & Stride, 2013), recycling (Pakpour, Zeidi, Emamjomeh, Asefzadeh, & Pearson, 2014) as well as the use of public transport (Heath & Gifford, 2002).

Understanding the theory of planned behaviour and how the attitude, subjective norm and perceived behavioural control influence behaviours is fundamental to identify intervention points that have the potential to influence individual behaviours. However, the TPB is not considered effective on its own in the framework of achieving behaviour change (Morris, Marzano, Dandy, & O'Brien, 2012). Indeed, while the theory might be a useful method to identify particular points of leverage (Morris et al., 2012), it does not offer tracks to actually change or influence those points (Hardeman et al., 2002).

3 The survey design

This chapter describes the survey design, with more specific information about the survey structure with the different sets of questions. The customized adaptations for question wording per city lab are also listed, as well as the process of detecting and removing inaccurate or incomplete parts in the data after the collection of responses.

3.1 The survey structure: sets of survey questions

Based upon the collected insights from the literature review about child care and the sharing economy, a survey was designed to construct behaviour profiles of prospective Families-Share users. The goal of the survey was to map current barriers and enablers for organising child care in a formal and informal way, and sharing time, tasks, products or services with others.

For this purpose, a specific survey structure was designed with different sets of questions:

- **Set 1 – Caring for children:** This set of questions asked participants about their current practices and routines of organising child care in a formal or informal way, and builds upon the insights of Chapter 2.1 of this deliverable. The survey logic ensured that only participants having children could fill in the survey, participants without children received a message that they didn't meet the qualifications for completing the survey. Further, the survey logic also ensured that questions about the type of child care service were only asked to parents with children aged between 0 and 12 years old. This age group resembles the target age group of the Families-Share solution. Examples of questions are: type of household, number of children, age of the child(ren), type of child care service per child, frequency of needed child care, type of formal and informal care providers, etc.
- **Set 2 – Sharing the caring:** This set of questions asked participants about their current participation in a sharing-based community, and their motivations to do so (relying on chapter 2.2 of this deliverable). Specific questions were designed to reveal the extent of organised child care arrangements with others, and general (online) sharing practices. Attitude scales were added to reveal intrinsic or extrinsic motivations when sharing services, time or activities with others. Examples of questions are: practicing car-sharing, sharing of playing material, sharing an (online) calendar, experience with accommodation sharing, tool sharing and tasks, etc.
- **Set 3 – The Families-Share solution:** This set of questions was custom-made for the Kortrijk city lab towards the usage of COKIDO, while the other five city labs had general questions about the potential usage of Families-Share. This set of questions was only answered by participants who participated in a former Families-Share activity, in order to avoid response bias. Participants who did not participate in a former Families-Share activity, were automatically sent to the next set of questions. Examples of questions are: Opinion statements about the likeability of Families-Share, its safety and security regulations, its community empowerment, trust, etc.
- **Set 4 - Work/life balance:** This set of questions was specifically designed by FBK, and sent to employees of eight different companies in Italy. Specific questions were designed to know what type of services employees use at the work place, and their level of satisfaction;

Examples of questions are: usage of ironing service, online grocery shopping, discount on car-sharing, event babysitting, etc.

- **Set 5 – Technology usage:** This set of questions was designed to know the extent of current technology usage among the prospective Families-Share users in the city labs. Within set 1 and 2, specific questions were asked about the usage of technology to support the arrangement of child care, or the sharing of products, time or activities with others. Further, another specific attitude scale was added to analyse the technology adoption profile of users based on lead user characteristics. Examples of questions are: Opinion statements about the ease of learnability with digital technology, keenness on trying out digital technology, and general interest in digital technology
- **Set 6 – Socio-demographic characteristics:** The last set of questions was designed to have some background information about the current household situation of the participant. Examples of questions are: gender, age, highest education level, household income, nationality, and employment status.

The survey logic made sure that participants without children would not continue to complete the questionnaire, and also made sure that only relevant info about households with children aged between 0-12 years were collected. In the Figure below, the survey logic is represented in a graphical way for set I and set II of the questionnaire – the other sets of questions only included simple skip logics depending a previous given answer in the survey:

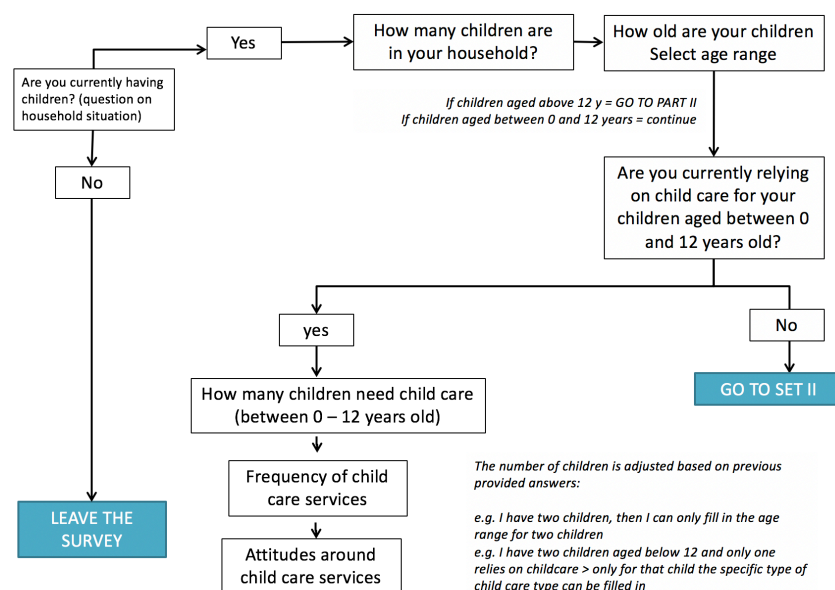


Figure 4: Survey logic for question set I and II.

The survey was designed by imec and was reviewed through a three-step process by the Families-Share pilot partners. The partners gave feedback about the wording of the questions and answer categories, gave suggestions for additional questions and helped to define the survey logic. In the review process, some of the pilot partners also pre-tested the survey with representative users. The survey was programmed for each city lab with a specific fill-in link and provided in English and in the

local language (Dutch, Greek, German, Hungarian or Italian). Some of the pilot partners also requested to include a contact sheet at the end of the survey to collect e-mail addresses for further communication purposes. For this specific objective, a separate privacy statement was included by the pilot partner to give consent for collecting the email address for communication purposes.

The total fill-in time was 20 minutes, and pilot partners had the objective to reach at least 100 full responses. Pilot partners could collect responses from the beginning of November until the end of December 2018. For two pilots (Hamburg and Thessaloniki), the running period was extended until mid-January 2019, in order to offer more time for the minimum required amount of responses.

For the construction of the profiles, preference was given to 5-point Likert scales for opinion and attitude statements, and all questions were obligatory to answer by the participant in order to continue to the next question (except from text entry questions). The construction of the profiles is based upon the relevant set of questions and will result in a 'child care profile', 'sharing economy profile', 'technology usage profile', and 'socio-demographic profile'.

Readers can consult the questionnaire in Annex 1 of this document.

3.2 Contextualization of questions per city lab

In the table below, an overview is provided of which set of questions were present in each questionnaire of all city labs. In total, seven specific survey links were programmed:

Table 15: Overview of sets of questions per city lab partner

| | Bologna | Budapest | Trento | Hamburg | Kortrijk | Thessaloniki | Venice |
|---|---------|----------|--------|---------|----------|--------------|--------|
| Set I: Caring for children | X | X | X | X | X | X | X |
| Set II: Sharing the caring | X | X | X | X | X | X | X |
| Set III: The Families-Share solution | X | X | X | X | | X | X |
| Set III: COKIDO | | | | | X | | |
| Set IV: Work/life balance at work | | | X | | | | |
| Set V: Technology usage | X | X | X | X | X | X | X |
| Set VI: Socio-demographic profile | X | X | X | X | X | X | X |
| Contact sheet | X | | | X | | | X |

It can be seen in the Table above that the questionnaires among the seven city labs did not differ to a large extent. This was a specific requirement for the data analysis in order to being able to compare the data among countries, but also to construct the behaviour profiles in a meaningful way. However, small customized adaptations were made per city lab on specific request of the pilot partner:

Table 16: Customized adaptations per city lab questionnaire.

| City lab | List of customized adaptations |
|---------------------|---|
| Bologna | <ul style="list-style-type: none"> ○ Usage of an online platform for supporting child care activities – list of online initiatives was adjusted (Q36) ○ The employment status ‘self-employed part time’ and ‘self-employed full time’ was merged into one category ‘self-employed full or part-time’ (Q22) |
| Trento | <ul style="list-style-type: none"> ○ Usage of an online platform for supporting child care activities – list of online initiatives was adjusted (Q36) ○ The employment status ‘self-employed part time’ and ‘self-employed full time’ was merged into one category ‘self-employed full or part-time’ (Q22) ○ Income scale was deleted from the questionnaire this was explicitly requested by the stakeholders – HR department – since it is considered a sensitive question) ○ Highest level of education was adopted to local context ○ Set 4 – Work/life balance was added ○ Employment status is split up per organised, and specified per organisation |
| Hamburg | <ul style="list-style-type: none"> ○ Usage of an online platform for supporting child care activities – list of online initiatives was deleted from the questionnaire (Q36) |
| Kortrijk | <ul style="list-style-type: none"> ○ Usage of an online platform for supporting child care activities – list of online initiatives was adjusted (Q36) ○ Set III – COKIDO questions were added |
| Thessaloniki | <ul style="list-style-type: none"> ○ Usage of an online platform for supporting child care activities – list of online initiatives was adjusted (Q36) |
| Venice | <ul style="list-style-type: none"> ○ Usage of an online platform for supporting child care activities – list of online initiatives was adjusted (Q36) ○ The employment status ‘self-employed part time’ and ‘self-employed full time’ was merged into one category ‘self-employed full or part-time’ (Q22) |

3.3 Data cleaning

In advance of the data analysis, inaccurate and incomplete data was deleted from each city lab’s dataset. The running period for each city lab was slightly different, but all survey links were paused for data collection at the end of December. The datasets for each city lab were then downloaded, and records with a completion rate of minimum 75% were kept into the database, others were deleted.

This resulted in the following number of respondents before and after data cleaning, and amount of full responses:

Table 17: Data cleaning per city lab questionnaire.

| | Amount of respondents before data cleaning (N) | Amount of respondents after data cleaning – 75% (N) | Amount of full responses (N) |
|---------------------|--|---|------------------------------|
| Bologna | 117 | 105 | 95 |
| Trento | 154 | 150 | 141 |
| Budapest | 77 | 44 | 42 |
| Hamburg | 8 | 7 | 6 |
| Kortrijk | 107 | 93 | 89 |
| Thessaloniki | 84 | 65 | 62 |
| Venice | 222 | 201 | 193 |
| Total | 769 | 665 | 628 |

After the data cleaning, the seven datasets were merged into one big dataset in SPSS, with a total amount of **665 respondents**. In this way, comparisons can be made between the different city labs, and also general statistics can be provided for all prospective users of Families-Share regardless their location.

For some of the city labs the survey link is still online in order to continue to collect interesting participants for upcoming testing activities. If interested, the online live-results can be consulted through the following links:

Table 18: Real-time results of the city labs: survey link.

| City lab | Survey link – Real-time results: |
|---------------------|---|
| Bologna | https://ql.tc/j3IT9y |
| Budapest | N/A |
| Trento | https://ql.tc/cT6Mnj |
| Kortrijk | https://ql.tc/JP1aQR |
| Thessaloniki | https://ql.tc/guaTs9 |
| Venice | https://ql.tc/mCnMRS |

3.4 Formulated hypotheses based on literature review

Several hypotheses were formulated based upon results and trends found in literature. The hypotheses were investigated for each city lab and for some hypotheses, variables were recoded in order to fit with the conditions of statistical tests. If applicable, the hypothesis mentions the corresponding question number of the survey (See Annex I) between brackets.

The hypotheses were formulated per type of profile:

3.4.1 Child care profile

For the child care profile, it is interesting to investigate the current practices and barriers for organising child care, and in light of the proposed solution by families-Share especially **self-organised child care**.

Therefore, the following hypotheses (H) were formulated for the child care profile:

| Nr. | Sub-indicator | Hypothesis | Assumption |
|-----|-----------------------|---|--|
| H1 | Ethnicity | There is a relationship between the type of used child care service (Q26) and having a migrant background (Q19) | Respondents with a migrant background are more likely to rely on informal child care |
| H2 | Household composition | There is a relationship between the type of used child care service (Q26) and the age of the children (Q5) | There is a tendency for young children (babies and toddlers) to participate in self-organised, and starting from the obligatory school age to shift to formal care |
| H3 | Household composition | There is a relationship between the type of used child care service (Q26) and the amount of children per household that need child care (Q25) | Larger families are more likely to use relative or informal child care arrangements than smaller families |
| H4 | Affordability | There is a relationship between the type of used child care service (Q26) and importance of choosing by cost (Q33_4) | Respondents with a higher rating on the perceived importance of choosing child care by cost rely more on informal care |
| H5 | Income | There is a relationship between the type of used child care service (Q26) and the income of the household (Q23) | Higher income households are more likely to rely on formal child care arrangements |

| | | | |
|------------|-------------------|--|--|
| H6 | Education level | There is a relationship between the type of used child care service (Q26) and the education level of the household (Q21) | Higher educated households are more likely to rely on formal child care arrangements |
| H7 | Employment status | There is a relationship between the type of used child care service (Q26) and the employment status of the mother (Q22) – and gender (Q16) | Mothers employed part-time with young children are more likely to rely on informal child care arrangements |
| H8 | Attitude | There is a relationship between the type of used child care service (Q26) and the attitude “I find it important that my child has close warm relationships with care providers” and the type of childcare (Q33_1) | The higher the score on the attitude statement, the more likely a household will rely on informal care |
| H9 | Attitude | There is a relationship between the type of used child care service (Q26) and the attitude “I believe that my children should be cared for in a home setting ” (Q33_2) | The higher the score on the attitude statement, the more likely a household will rely on informal care |
| H10 | Attitude | There is a relationship between the type of used child care service (Q26) and the attitude “I believe that my children have better educational experience through professional organised child care services” (Q33_3) | The higher the score on the attitude statement, the more likely a household will rely on formal care |

3.4.2 Sharing economy profile

| Nr. | Sub-indicator | Hypothesis | Assumption |
|-----------|---------------------------------------|---|--|
| H1 | Sharing economy – child care items | There is a relationship between the parents who are sharing or borrowing child care items (computed score, Q9) and the score on the motivational statements in Q12 versus those who don't share or borrow child care items | Participants who are sharing or borrowing child care items, have a higher score for particular motivational statements than those who do not share or borrow any child care items |
| H2 | Sharing economy – child care items | There is a relationship between the parents who are sharing or borrowing child care items (computed score, Q9) and certain socio-demographic characteristics as type of household, amount of children, age and income | Participants who are sharing or borrowing child care items have a particular socio-demographic background |
| H3 | Sharing economy – travel arrangements | There is a relationship between the parents who are organising particular travel arrangements for their children (Q7) and the score on the motivational statements in Q12, versus those who don't organise specific travel arrangements | Participants who are organising particular travel arrangements for their children, have a higher score for particular motivational statements than those who don't organise specific travel arrangements |
| H4 | Sharing economy – travel arrangements | There is a relationship between the parents who are organising particular travel arrangements for their children (Q7) and certain socio-demographic characteristics as type of household, amount of children, age and income | Participants who are organising particular travel arrangements for their children have a particular socio-demographic background |

3.4.3 Digital profile

| Nr. | Sub-indicator | Hypothesis | Assumption |
|----------------------|------------------|---|--|
| H1 | Technology usage | There is a relationship between ‘Do you use an online platform for supporting child care ’ (Q36) with the technology profile of the respondent (Q15_1, 2, 3) | Those who can easily work with digital technologies, or who are keen to try it out, or who have a general interest, have a higher rating in the usage of online platforms for child care |
| H2 | Technology usage | There is a relationship between ‘ are you sometimes sharing or borrowing following items ONLINE ’ (Q9) with the technology profile of the respondent (Q15_1, 2, 3) | Those who can easily work with digital technologies, or who are keen to try it out, or who have a general interest, have a higher rating in sharing child care material online |
| H3 | Technology usage | There is a relationship between ‘ usage of online calendar for childcare ’ (Q10) with the technology profile of the respondent (Q15_1, 2, 3) | Those who can easily work with digital technologies, or who are keen to try it out, or who have a general interest, have a higher rating in the usage of an online calendar for child care |
| H4 | Technology usage | There is a relationship between ‘ usage of general sharing services ’ (Q11) with the technology profile of the respondent (Q15_1, 2, 3) | Those who can easily work with digital technologies, or who are keen to try it out, or who have a general interest, have a higher participation rate in using online platforms in support of the sharing economy |
| H5 | Technology usage | There is a relationship between the technology profile of the respondent and (Q15_1, 2, 3) certain socio-demographic characteristics, such as gender, age and education level | Digital technology usage is mostly being used by males, young adults, and highly educated people |
| Secondary hypotheses | | | |
| H6 | Technology usage | There is a relationship between the “ usage of an online calendar for childcare ” (Q10) and amount of children that need child care (Q25) | The more children one household has, the more likely they use a calendar |

4 Behavioural profiles – results

In this chapter, the results are presented for the behaviour profiles of the six city labs. Each profile is presented through general statistics, and then the outcomes for the above-formulated hypotheses are discussed (either approved, or rejected).

4.1 Socio-demographic profile

This section describes the socio-demographic profile of the six city labs.

4.1.1 General statistics

In general, mostly **couples with children** filled in the questionnaire among all the city labs. The number of couples with children in our sample is ranging between 87% and 94.7%; meaning there is a higher representation for this type of household than the EU average of 82.3% (Eurostat, cfr. Chapter 2). From the Eurostat statistics, it was also concluded that the highest proportion of children living with single parents among the Families-Share pilots is in Belgium and Hungary, and the highest percentage of children living with two parents is in Greece. Among the recruited participants in Thessaloniki, we can find the highest percentage of children living with a single parent (10.8%), followed by Kortrijk (8.6%). The three Italian city labs have a very high proportion of couples with children; and are recommended to find **additional single parents** for participating in the Families-Share project.

Table 19: Household composition per city lab (%).

| | Total (N= 665) | Bologna (N=105) | Budapest (N=44) | Trento (N=150) | Kortrijk (N=93) | Thessaloniki (N=65) | Venice (N=201) |
|---------------------------------------|-------------------|--------------------|--------------------|-------------------|--------------------|------------------------|-------------------|
| Couple with children | 92.2 | 92.4 | 88.6 | 94.7 | 90.3 | 87.7 | 94.5 |
| Single adult with children | 6.2 | 5.7 | 4.5 | 4.7 | 8.6 | 10.8 | 5 |
| Other type of household with children | 1.7 | 1.9 | 6.8 | 0.7 | 1.1 | 1.5 | 0.5 |

In the total database, there are **1172 children** among 665 respondents. The overall mean score is **1,75 children per household**, meaning that most respondents have 1 to 2 child(ren). The highest mean score is for Kortrijk, followed by Trento; there is no significant difference in the average amount of children per household among the six city labs.

Table 20: Amount of children per household (%).

| | Bologna (N=105) | Budapest (N=44) | Trento (N=150) | Kortrijk (N=93) | Thessaloniki (N=65) | Venice (N=201) |
|------------|--------------------|--------------------|-------------------|--------------------|------------------------|-------------------|
| Mean score | 1,75 | 1,45 | 1,81 | 1,85 | 1,77 | 1,79 |

Looking at the age distribution of the children, it is clear that among households with multiple children there is an age difference of averagely three years between child 1, 2 and 3. The youngest child in the household is mostly between 1 and 3 years old, the second child is mostly between 4 and 6 years old, and the third child between 7 and 9 years old. Most respondents who filled in the survey have children between **4 and 6 years old**, and then **1 to 3 years old**.

Table 21: Age per child – total database (N= 665)

| | Child 1 (N= 665) | Child 2 (N=405) | Child 3 (N=83) | Child 4 (N=20) |
|---------------------|---------------------|--------------------|-------------------|-------------------|
| Under 1 year | 5,7 | 5,2 | 7,2 | 15 (N=3) |
| 1 - 3 years | 29 (N=193) | 21,7 (N= 88) | 18,1 (N= 15) | 5 (N=1) |
| 4 - 6 years | 26,2 (N= 174) | 32,1 (N= 130) | 15,7 (N=13) | 30 (N=6) |
| 7 - 9 years | 22,3 (N=148) | 20,5(N= 83) | 25,3 (N=21) | 10 (N=2) |
| 10 - 12 years | 12 (N= 80) | 12,3 (N= 50) | 19,3 (N= 16) | 15 (N=3) |
| 13 - 15 years | 2,7 | 5,2 | 8,4 | 5 (N=1) |
| 16 - 18 years | 1,2 | 1,2 | 2,4 | 5 (N=1) |
| Older than 18 years | 0,9 | 1,7 | 3,6 | 15 (N=3) |

In terms of **gender balance**, it is clear that the survey was mostly filled in by **female respondents** (78.9%). There is a clear overrepresentation of females in every city lab, especially in Budapest and Bologna. It is obvious that this topic appeals more to females than males, however, a more gender balanced approach should be pursued by the city labs in order to have an inclusive approach to co-design Families-Share.

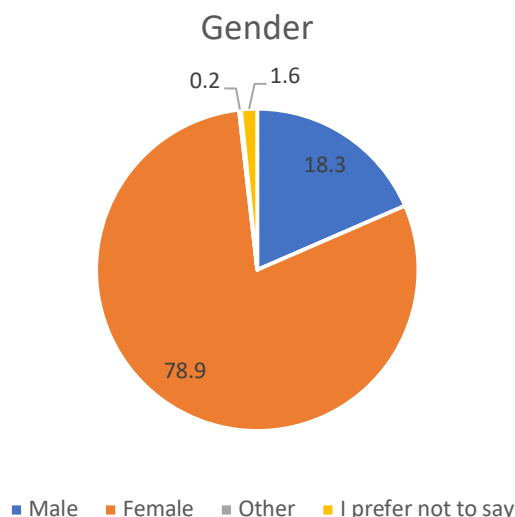


Table 22: Gender balance in the survey sample (%).

| | Total (N=630) | Bologna (N= 94) | Budapest (N= 42) | Trento (N=142) | Kortrijk (N= 90) | Thessaloniki (N=62) | Venice (N= 194) |
|------------------------|------------------|--------------------|---------------------|-------------------|---------------------|------------------------|--------------------|
| Gender (female) | 78.9 | 93.6 | 100 | 54.9 | 78.9 | 82.3 | 84.5 |

The average age of the overall database is **41 years old**. The sample of the city lab of Budapest has the youngest average age (with 81% between 31 and 40 years old) – followed by Kortrijk, and the sample of the city lab of Venice has the oldest average age (53,1% between 41 and 50 years old).

Table 23: Age distribution (%).

| | Total (N=630) | Bologna (N= 94) | Budapest (N= 42) | Trento (N=142) | Kortrijk (N= 90) | Thessaloniki (N=62) | Venice (N= 194) |
|---------------------|------------------|--------------------|---------------------|-------------------|---------------------|------------------------|--------------------|
| 21-30 years | 3 | 5.3 | 2.4 | 1.4 | 4.4 | 8.1 | 1 |
| 31-40 years | 46.8 | 45.7 | 81 | 32.4 | 71.1 | 53.2 | 37.1 |
| 41-50 years | 44.1 | 47.9 | 16.7 | 54.9 | 21.1 | 38.7 | 53.1 |
| >51 years | 6 | 1.1 | 0 | 11.3 | 3.3 | 0 | 8.8 |
| Average age | 41 | 39, 7 | 36,7 | 43,8 | 37,2 | 38,5 | 43 |

In terms of **migrant background**, which was defined in the survey as ‘born abroad’ or ‘born in a different city/region’, we can see that the Budapest city lab has a very diverse sample. 85.7% is having a migrant background, and it seems that the nationalities of those who were born abroad differ widely (e.g. American, British, German, Slovenian, etc.). In all city labs, the primary nationality is native. The sample of the Kortrijk city lab has the highest percentage of people who were born native, while in Bologna there is a high percentage of people who were born in a different region/city and then moved to Bologna. The same applies for Thessaloniki, with 32.3% of participants who were born in a different region and then moved to the city.

Table 24: Migrant background (%).

| | Total (N= 665) | Bologna (N= 94) | Budapest (N= 42) | Trento (N=142) | Kortrijk (N= 89) | Thessaloniki (N=62) | Venice (N= 194) |
|---------------------------|-------------------|--------------------|---------------------|-------------------|---------------------|---|--------------------|
| Native | 62.2 | 44.7 | 14.3 | 67.6 | 92.1 | 53.2 | 67 |
| Migrant | 37.8 | 55.3 | 85.7 | 32.4 | 7.9 | 46.8 | 33 |
| Nationality native | N/A | 96.8% Italians | 26.2% Hungarian | 96.3% Italians | 94.4% Belgians | 90.8% Greeks (and 3.9% Albanian) | 90.2% Italians |

In general, among all city labs, participants are **highly educated**. This is especially the case for Bologna and Venice, with respectively 52.1% and 54.1% having a postgraduate degree. Further, also in Budapest there is large amount of participants that obtained a master’s degree (52.4%). Among the sample of Kortrijk, a lot of people obtained a bachelor degree (37.5%) or master’s degree (31.5%). In Thessaloniki, there is also a high representation of bachelor degrees (37.1%) and postgraduates (37.1%). Among the survey sample in Kortrijk, Thessaloniki and Trento, there is a more diverse spread in terms of highest level of education reached, with more people having a secondary degree.

Table 25: highest level of education completed (%).

| | Total (N= 665) | Bologna (N= 94) | Budapest (N= 42) | Trento (N=141) | Kortrijk (N= 89) | Thessaloniki (N=62) | Venice (N= 194) |
|-----------------------------------|-------------------|--------------------|---------------------|-------------------|---------------------|------------------------|--------------------|
| No schooling completed | 0.3 | 0 | 0 | 0 | 1.1 | 0 | 0.5 |
| Primary school | 0.5 | 0 | 0 | 0 | 3.4 | 0 | 0 |
| Secondary school | 5.4 | 0 | 4.8 | 24.2 | 14.6 | 14.5 | 2.1 |
| Bachelor's degree | 25.2 | 26.6 | 33.3 | 17 | 37.1 | 37.1 | 17.5 |
| Master's degree | 16.4 | 13.8 | 52.4 | 34 | 31.5 | 3.2 | 7.2 |
| Postgraduate degree or equivalent | 37.4 | 52.1 | 9.5 | 16.3 | 6.7 | 37.1 | 54.1 |
| Other degree | 1.9 | 7.4 | 0 | 8.5 | 5.6 | 8.1 | 18.6 |

Most of the respondents in the database are currently **employed full-time**, and especially among the sample in Bologna (52.6%). There is a higher degree of part-time workers among the city lab of Kortrijk (36%), and a higher degree of self-employed workers (part time and full time) among the city lab of Thessaloniki (36.1%). Further, there is also a higher degree of currently unemployed participants among the sample in Thessaloniki – which could explain on average the lower total net income per household.

Table 26: Employment status (%).

| | Bologna (N= 95) | Budapest (N= 42) | Trento (N=141) | Kortrijk (N= 89) | Thessaloniki (N=62) | Venice (N= 194) |
|-------------------------|--------------------|---------------------|-------------------|---------------------|------------------------|--------------------|
| Student | 0 | 0 | N/A | 0 | 0 | 1.6 |
| Full-time work | 52.6 | 28.1 | N/A | 46.1 | 31.1 | 49.2 |
| Part-time work | 17.9 | 14 | N/A | 36 | 8.2 | 24.4 |
| Self-employed full time | 20 | 10.5 | N/A | 12.4 | 24.6 | 14.5 |
| Self-employed part time | | 19.3 | N/A | 1.1 | 11.5 | |
| Full-time homemaker | 1.1 | 17.5 | N/A | 0 | 1.6 | 3.6 |
| Retired | 0 | 0 | N/A | 0 | 0 | 0.5 |
| Currently unemployed | 6.3 | 5.3 | N/A | 2.2 | 21.3 | 4.7 |
| I prefer not to say | 2.1 | 5.3 | N/A | 2.2 | 1.6 | 1.6 |

Last, participants also indicated for their household the total net income scale; but also had the option to not reveal this information by clicking “I prefer not to say” (which was especially the case for respondents in Budapest). Overall, the highest household incomes are among the sample of the Kortrijk city lab, e.g. with 31.5% earning between 3200 – 399 euros and 22.5% more than 4000 euros. This is followed by the city lab of Bologna and Venice. Among the sample of Thessaloniki, most respondents are in the income scale of 800 to 1599 euros. Overall, in the total database, most of the respondents earn between **1600 and 2399 euros**, or **2400 and 3999 euros**.

Table 27: Total net income scale per household.

| Per month | Total (N=486) | Bologna (N= 95) | Budapest (N= 42) | Trento (N=150) | Kortrijk (N= 89) | Thessaloniki (N=61) | Venice (N= 193) |
|--------------------------------|------------------|--------------------|---------------------|-------------------|---------------------|------------------------|--------------------|
| I do not know | 3.9 | 1.1 | 9.5 | N/A | 2.2 | 1.6 | 2.6 |
| I prefer not to say | 15.8 | 16.8 | 26.2 | N/A | 3.4 | 16.4 | 19.2 |
| < 799 euros | 2.1 | 2.1 | 4.8 | N/A | 0 | 8.2 | 0.5 |
| 800 - 1599 euros | 12 | 11.6 | 4.8 | N/A | 5.6 | 34.4 | 11.4 |
| 1600 - 2399 euros | 18.3 | 11.6 | 16.7 | N/A | 15.7 | 24.6 | 21.8 |
| 2400 - 3199 euros | 21.6 | 26.3 | 7.1 | N/A | 15.7 | 11.5 | 28 |
| 3200 - 3999 euros | 14.6 | 22.1 | 11.9 | N/A | 31.5 | 0 | 8.3 |
| > 4000 euros | 10.9 | 8.4 | 16.7 | N/A | 22.5 | 3.3 | 8.3 |
| I receive a replacement income | 0.8 | 0 | 2.4 | N/A | 3.4 | 0 | 0 |

4.2 Child care profile

This section describes the child care profile of the six city labs.

4.2.1 General statistics

In the total database (N=665), all respondents confirmed that their household is currently relying on some form on child care, although not for every child. There are 1172 children in the database of which **1008 children** (86%) between 0 and 12 years old rely on child care.

Parents were asked about how often they rely on regular child care (during standard working hours), irregular child care (outside standard working hours, in the weekend or during holiday periods) and emergency or last-minute child care:

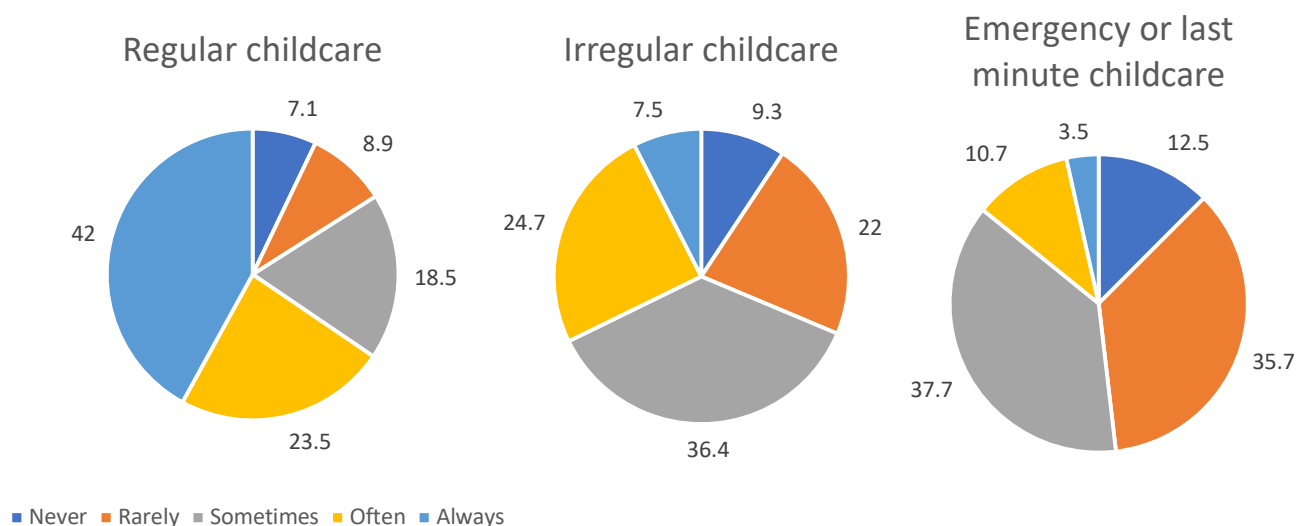


Figure 5: Frequency of need: regular and irregular child care, and last-minute child care (N= 665).

From the graphs above, it is clear that most parents are in need for child care on a structural basis during working hours (92,9%, or 7,1% never), followed by irregular child care (90,7, or 9,3% never) and then emergency child care (87,5%, or 12,5 never). The frequency for regular child care is also the highest, with 42% saying that they need it on a daily basis; while irregular child care is rather sporadic, and emergency child care rather uncommon.

Besides the frequency, it is also interesting to look into detail on which type of child care services parents are relying. In the table below, the division is presented of how many households rely on childcare delivered by professionals, or on self-organised child care or mixed:

Table 28: Distribution of the type of used child care service for households relying on child care between 0 and 12 years old (%).

| | Total | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
|---|-------|---------|----------|--------|----------|--------------|--------|
| Childcare delivered by professionals | 24.4 | 35.2 | 45.5 | 18.7 | 14.9 | 26.2 | 24.9 |
| Self-organised child care or mix | 75.6 | 64.8 | 52.3 | 81.3 | 85.1 | 73.8 | 75.1 |

It can be seen from the table above that in all city labs solely using professionally organized childcare (24.4%) is less preferred than choosing for **self-organised child care or using a mix of both (75.6%)**. The city lab of Trento and Kortrijk have the highest proportion of parents who rely on self-organised care or a mix of both. Budapest has the highest proportion of parents who rely on childcare delivered by professionals.

Of those who are relying on childcare delivered by professionals, we see that they mostly rely on childcare in organized in **day-care centres (or crèches)** and on **before and after care at school**. Participants of Bologna and Budapest seem to rely more frequently on childcare organized in day-care centres, while participants of Kortrijk on a less frequent basis. Family-based child care seems also more popular in Budapest, than in other city labs. On the other hand, survey participants of the Kortrijk city lab rely more frequently on before and after care at school than the other city labs. The table below is based on mean scores, a higher score means a higher frequency need for a particular type of child care service:

Table 29: Frequency need for childcare delivered by professionals – types (Mean scores, 5 point Likert scale: never, rarely, sometimes, often, always)

| | Total (N= 663) | Bologna (N=104) | Budapest (N=44) | Trento (N=150) | Kortrijk (N= 93) | Thessaloniki (N= 64) | Venice (N= 201) |
|---|-------------------|--------------------|--------------------|-------------------|---------------------|-------------------------|--------------------|
| Day-care centre / crèche | 3.37 | 3.72 | 3.86 | 3.45 | 2.19 | 3.31 | 3.53 |
| Family-based child care | 1.34 | 1.31 | 1.82 | 1.30 | 1.38 | 1.77 | 1.14 |
| Child care at home by a professional care taker | 2.11 | 2.51 | 2.33 | 1.63 | 1.82 | 2.41 | 2.28 |
| Before and after care at school | 2.19 | 2.38 | 2.16 | 2.16 | 3.24 | 1.62 | 1.79 |
| Child care at a private community centre | 1.74 | 1.67 | 1.19 | 1.59 | 2.03 | 1.52 | 1.97 |
| Child care at a public community centre | 1.70 | 1.85 | 1.26 | 1.51 | N/A | N/A | 1.90 |

Similarly, we also asked the households on whom they are relying for self-organised child care. The table below provides the mean scores for the frequency need for the involved persons for providing informal care. It seems that parents mostly rely on the **grandparents**, and on **other parents at school** (especially Venice). This is especially the case for respondents of Trento and Thessaloniki, for what concerns the support of grandparents. In Budapest, there seems to be a higher frequency need to rely on babysitters than in the other city labs. Apart from these differences, it seems that there is an equal frequency need for informal provided care by older siblings, relatives, neighbours, friends and nannies. In the literature review, we learnt that intergenerational support is mostly provided in Greece, Italy and Hungary – and which matches with the results for Thessaloniki, Trento, Venice – but not for Budapest.

Also interesting to know, is that 81,8% of the total database relies on informal support for **emergency situations**, 72% for child care provision during **holiday periods** or when the school is closed, 70% for ad-hoc or atypical situations and 54,1% for child care provision before and after school. For emergency situations, parents will mostly ask family members (87,5%) to take care of the children, followed by friends (46%) and babysitters (43%). Only 5,7% says not to rely on anyone else in case of an emergency.

Table 30: Frequency need for self-organised child care – types (Mean scores, 5 point Likert scale: never, rarely, sometimes, often, always)

| | Total (N=662) | Bologna (N=104) | Budapest (N=44) | Trento (N=150) | Kortrijk (N= 93) | Thessaloniki (N= 64) | Venice (N= 201) |
|--------------------------------|------------------|--------------------|--------------------|-------------------|---------------------|-------------------------|--------------------|
| Grandparents | 3.25 | 3.09 | 2.35 | 3.45 | 3.29 | 3.39 | 3.30 |
| Older siblings | 1.47 | 1.5 | 1.28 | 1.53 | 1.43 | 1.47 | 1.44 |
| Other relatives | 1.81 | 1.82 | 1.65 | 1.81 | 1.87 | 1.77 | 1.80 |
| Neighbours | 1.41 | 1.50 | 1.26 | 1.39 | 1.37 | 1.42 | 1.43 |
| Friends | 1.87 | 2.01 | 1.65 | 1.83 | 1.87 | 1.84 | 1.86 |
| Other parents at school | 2.01 | 2.02 | 1.28 | 2.12 | 1.90 | 1.72 | 2.20 |
| Nannies or au pairs | 1.35 | 1.75 | 1.58 | 1.15 | 1.14 | 1.27 | 1.37 |
| Babysitters | 1.79 | 1.81 | 2.51 | 1.69 | 1.94 | 1.53 | 1.72 |

For the arrangement of informal care provision by grandparents, siblings, relatives or others, we see that in most cases **no type of (financial) agreement is being made** (66.1%) - and especially in Thessaloniki. 39.3% has agreed upon a reciprocal arrangement, 15.6% on a financial arrangement, and 8.9% has another type of arrangement (mostly being a gift, or a friendly turn such as doing grocery shopping). Further, we see that a reciprocal arrangement and time credit system is more popular in Kortrijk than in the other city labs, and also the reciprocal arrangement scores very high for Venice. Still, we observe that a minority of parents has made an arrangement based on the principles of the sharing economy, and rather have no arrangement at all. Budapest is the only city lab that relies more often on a financial arrangement, which can be linked to the fact that they rely more on babysitters for informal care provision than other city labs.

Table 31: Type of arrangement for informal care provision (%) – multiple choice question.

| | Total | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
|---------------------------------|-------|---------|----------|--------|----------|--------------|--------|
| A reciprocal arrangement | 39.3 | 27.6 | 23.3 | 33.3 | 36.6 | 15.6 | 37.3 |
| Time credit system | 2.6 | 1.9 | 2.3 | 2.7 | 3.2 | 0 | 1 |
| A financial arrangement | 15.6 | 7.6 | 37.2 | 9.3 | 7.5 | 10.9 | 11.9 |

| | | | | | | | |
|----------------------------------|------|-----|------|------|------|------|------|
| No arrangement | 66.1 | 61 | 44.2 | 54.7 | 59.1 | 73.4 | 50.2 |
| Other type of arrangement | 8.9 | 7.6 | 7 | 7.3 | 6.5 | 4.7 | 5.5 |

Regarding their attitude towards different characteristics of the provided child care (Table below), parents particularly agree that their children should have close and warm relationships with care providers, which is especially true for Kortrijk ($M = 4.58$; $SD = .826$) as well as for Budapest ($M = 4.58$; $SD = .932$). Parents believe that their children should be cared for in a home setting , but also state that they believe that their children have better educational experience through professional child care (especially for Thessaloniki). Their position regarding the fact that their choice of the type of child care is cost driven is quite neutral, with a high standard-deviation (>1), indicating a lack of consensus amongst parents.

Table 32: Attitude scale regarding the characteristics of childcare (on a 5-point Likert scale from "I strongly disagree" = 1 to "I strongly agree" = 5). Average values and standard deviation in parenthesis.

| | Total | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| I find it important that my child(ren) has/have close, warm relationships with care providers | 4.24 (.804) | 4.09 (.925) | 4.58 (.932) | 4.12 (.768) | 4.58 (.596) | 4.22 (.826) | 4.19 (.751) |
| I believe that my child(ren) should be cared for in a home setting | 3.35 (.885) | 3.28 (.818) | 3.23 (.922) | 3.17 (.888) | 3.62 (.977) | 3.94 (.833) | 3.22 (.771) |
| I believe that my child(ren) has/have better educational experience through professional organised child care services | 3.4 (.925) | 3.53 (.945) | 3.51 (1.162) | 3.37 (.883) | 3.06 (.998) | 3.84 (.877) | 3.33 (.796) |
| My choice for the type of child care is mostly cost-driven (4) | 2.94 (1.122) | 3.13 (1.077) | 3.09 (1.169) | 2.64 (1.095) | 2.69 (1.000) | 3.13 (1.148) | 3.04 (1.124) |

The decision-making process for choosing a particular child care service can be driven by many factors these days. Respondents could mark the top three of characteristics that they take into account when choosing a particular child care option. The following characteristics obtained the highest ratings:

Perceived quality of the care (79.2%)

Geographic proximity of the care (51.9%)

Cost of the care (50.7%)

Apart from these main characteristics, it seems that the informal home setting is less important (15.2%) to parents when making a choice for a particular service, as well as the amount of children being cared of (11.6%). The flexibility of the care (42.3%) and similarities in child rearing ideology also obtain a high score. Last, we also asked parents to rate their current satisfaction level with the current chosen childcare, both from their own perspective and from the perspective of their child – and from which we can see that parents are overall quite pleased, and also think their child is satisfied:



Figure 6: Satisfaction level with current arranged child care (mean score, Five point Likert scale: very dissatisfied to very satisfied).

4.2.2 Attitudes towards the Families-Share solution

A certain set of questions in the survey also asked participants about their attitudes towards the usage of the Families-Share solution. In order to avoid answer bias, these questions were only responded by participants of former Families-Share activities, such as co-creation workshops, interviews, awareness raising events, etc. In total, 55 people participated in a former Families-Share activity, or 8.6% of the total database. Their current opinions about the Families-Share solution are reflected in the table below (without the sample of Kortrijk):

Table 33: Attitude statements about the Families-Share solution (N=44) – Five-point Likert scale, ranging from strongly disagree to strongly agree

| | Total |
|---|-------|
| I like the idea of organising childcare in a familiar and informal context as described by Families-Share | 3.89 |
| I think this idea can only be realized through a fair tracking of hours spent by a parent | 3.55 |
| I think the suggested idea of Families-Share is hard to realize in my local school/neighborhood because of safety and insurance regulations | 3.18 |
| I think Families-Share is a great opportunity to connect with people in my neighborhood | 3.73 |
| I have difficulties in trusting other parents who would supervise my children | 2.91 |

It seems that prospective users of the Families-Share solution greatly align with the idea of self-organising child care in a familiar and informal context, and think it is a great opportunity to connect with people in the neighbourhood. They are mostly neutral with having difficulties in trusting other parents for the supervision of their children. The building of trust is something that should be taking into account for the offline track of the engagement strategy.

4.2.3 Attitudes towards the COKIDO solution

32.4% (N=11) of the respondents from the Kortrijk city lab who are familiar with COKIDO (N=33), have already used the online COKIDO app.

The main reasons for parents to use the COKIDO solution seems to be **social**, as 48.5% (N=46) of the respondents indicate that it is because they make contacts and friends with other parents in the neighborhood. This is followed by the fact that it allows them to **save money** (27.3%, N=9), and finally by the fact that different **values of parenting** are shared (21.2%, N=7).

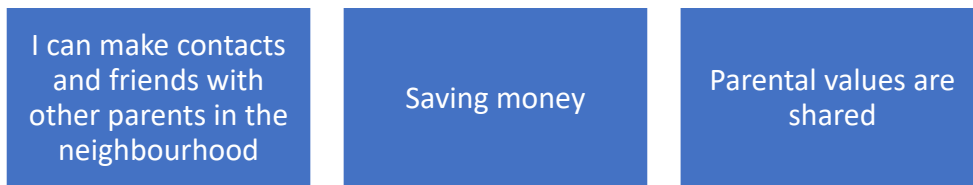


Figure 7: Main reasons for using the COKIDO application

It seems that there is a feeling of **trust** towards other involved parents through the COKIDO approach. Respondents indicate that they somewhat disagree ($M = 2.39$, $SD = .864$) with the fact that it takes time to trust a new parent in the group. Further, they state that they trust other parents with their children ($M = 4.42$, $SD = .561$) as well as in sharing and discussing any issue there might be with their children ($M = 4.55$, $SD = .564$). They also agree with the fact that they are certain that other parents will not do something that doesn't match with their values and beliefs around parenting ($M = 3.94$, $SD = .899$), but are more neutral towards the fact that the group is extremely thorough and careful in making childcare arrangements ($M = 3.70$, $SD = .984$).

In total, 90.9% of the parents who are already using COKIDO state that they will continue using it. Regarding the comments that parents have, most of them relate to the planning which still seems to be hard task, for instance:

- How to deal with parents who have irregular working hours and shifts
- To have the child info sheets in the application
- To have a dedicated communication channel for arranging the agenda in the app

4.2.4 Affirmed hypotheses – child care profile

In the following paragraphs, the affirmative hypotheses of section 3.4.1. are described.

Table 34: Child care profile – hypothesis 1.

| H1: There is a relationship between the type of used child care service (Q26) and having a migrant background (Q19) | | | | | | |
|---|--------------|------------|-------------|------------|--------------|------------|
| | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Chi-Square test per city lab | Sig. (p.016) | NS (p.948) | Sig (p.002) | Sig (.001) | Sig (p.021) | NS (p.213) |

There is a significant difference between the type of used child care service and the migrant background for four in six city labs. Both families with a native background and a migrant background mostly rely on informal care or a mix of both. However, it seems that professional child care is relatively more used by migrant families (58.2% of the formal care users have a migrant background, versus 41.8% native), and that informal or mixed care users are more used by native families (69.5% of informal care users or mix users have a native background, versus 30.5% a migrant background). The hypothesis was not significant for the city lab of Budapest (85.7% of participants have a migrant background), and the city lab of Venice. This result is not matching with previous studies found in literature, whereby it was found that people with a migrant background are more likely to rely on informal care.

Table 35: Child care profile - Hypothesis 2.

| H2: There is a relationship between the type of used child care service (Q26) and the age of the first and second child (Q5_1 and Q5_2) | | | | | | |
|---|------------|---------------|------------|------------|--------------|------------|
| | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Chi-Square test per city lab | NS (p.870) | Sig (P=0.025) | NS (p.762) | NS (p.175) | Sig (p.008) | NS (p.106) |

There is a significant difference between the type of used child care service and the age of the first child for the Budapest city lab and Thessaloniki – and not for the second child in any of the city labs. It seems that for the Budapest city lab, the first child – ageing between 0 and 3 years old – is relatively making more usage of formal child care, while the other age categories (4 – 6 years and older than 7 years) are using informal care or a mix of both. The same applies for the Thessaloniki city lab. In the total dataset, 40% of the children aged between 0 and 3 years old (first child) rely on professional child care, 25.9% on self-organised care and 34.1% on a mix of both. If age increases of the first child, then the usage of informal care or a mix of both increases. The assumption that was thus being made from literature is thus not applying for this specific dataset¹⁰.

¹⁰ Assumption, hypothesis 2: There is a tendency for young children (babies and toddlers) to participate in self-organised, and starting from the obligatory school age to shift to formal care

Table 36: Child care profile – hypothesis 3.

| H3: There is a relationship between the type of used child care service (Q26) and the amount of children per household that need child care (Q25) | | | | | | | |
|---|-----------------|-----------|----------|--------|----------|--------------|-----------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 1.35 | 1.35 | 1.39 | 1.43 | 1.12 | 1.40 |
| | Informal or mix | 1.74 | 1.35 | 1.63 | 1.57 | 1.19 | 1.63 |
| Anova | p-value | p. = .006 | NS | NS | NS | NS | p. = .048 |

There is a significant difference between the type of used child care service and the amount of children per household that need child care for the Bologna city lab and the Venice city lab. The table above shows that the mean score for informal care or mixed care is significantly higher than formal care for Bologna and Venice. The more children there are in a family, the more likely the usage of informal care or a mix of both increases.

Table 37: Child care profile – hypothesis 4.

| H4: There is a relationship between the type of used child care service (Q26) and importance of choosing by cost (Q33_4) | | | | | | | |
|--|-----------------|---------|----------|--------|----------|--------------|--------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 3.11 | 2.90 | 2.50 | 2.64 | 2.59 | 2.96 |
| | Informal or mix | 3.13 | 3.32 | 2.72 | 2.70 | 3.32 | 3.07 |
| Anova | p-value | NS | NS | NS | NS | p. = .023 | NS |

There is a significant different between the type of used child care service and the importance of choosing by cost (mean score) for the Thessaloniki city lab. The mean score for informal care or mixed care is higher than formal care, meaning that within the group of informal care or mixed care the choice for the type of child care is more cost driven.

Table 38: Child care profile – hypothesis 7.

| H7: There is a relationship between the type of used child care service (Q26) and the employment status of the mother (Q22) – and gender (Q16) | | | | | | |
|--|---------|--------------------|--------|-------------|--------------------|--------|
| | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Chi-Square test per city lab | NS | Conditions not met | N/A | Sig (p.003) | Conditions not met | NS |

There is a significant difference between mothers working part-time versus mothers working full-time and the type of used child care service for the participants of the Kortrijk city lab. 90.9% of the mothers who rely on formal child care are working full time, while 58.8% of mothers relying on informal child care or mix are working part time and 41.2% full time. Or: 96,8% of the mothers in the Kortrijk city lab who work part time are relying on informal child care or a mix of both, versus 67.7% of the mothers who are working full time. Our assumption that mothers who are working part-time are more likely to rely on informal care arrangements is thus applicable for the Kortrijk city lab.

Table 39: Child care profile – hypothesis 10.

| H10: There is a relationship between the type of used child care service (Q26) and the attitude “I believe that my children have better educational experience through professional organised child care services” (Q33_3) | | | | | | | |
|--|-----------------|---------|----------|-----------|-----------|--------------|--------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 3.51 | 4.15 | 3.82 | 3.57 | 4.12 | 3.28 |
| | Informal or mix | 3.54 | 2.91 | 3.26 | 2.97 | 3.74 | 3.35 |
| Anova | p-value | NS | p. = .00 | p. = .002 | p. = .038 | NS | NS |

There is a significant difference between the participants who rely on formal or informal (or mix) and their attitude around having better education experience through professional organised child care service for the city lab of Budapest, Trento and Kortrijk. The mean score for the participants who solely rely on formal care is higher than those who rely on informal care (or mix). Our assumption that people are more likely find the educational experience important, the more likely they will rely on formal care is thus applicable for these three city labs.

4.2.5 Rejected hypotheses – child care profile

In the following paragraphs, the rejected hypotheses of section 3.4.1. are described.

Table 40: Child care profile – hypothesis 5.

| H5: There is a relationship between the type of used child care service (Q26) and the income of the household (Q23) | | | | | | | |
|---|-----------------|---------|----------|--------|----------|--------------|--------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 5.87 | 5.54 | - | 6.00 | 4.69 | 5.89 |
| | Informal or mix | 6.04 | 6.69 | - | 6.73 | 4.62 | 5.68 |
| Anova | p-value | NS | NS | - | NS | NS | NS |

There is not a significant difference between the type of child care service, and the income of the household. The assumption that higher income households are more likely to rely on formal child care arrangements is thus not applicable for this dataset.

Table 41: Child care profile – hypothesis 6.

| H6: There is a relationship between the type of used child care service (Q26) and the education level of the household (Q21) | | | | | | | |
|--|-----------------|---------|----------|--------|----------|--------------|--------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 5.36 | 4.70 | 5.32 | 4.00 | 4.47 | 5.51 |
| | Informal or mix | 5.22 | 4.62 | 5.39 | 4.25 | 4.76 | 5.33 |
| Anova | p-value | NS | NS | NS | NS | NS | NS |

There is not a significant difference between the type of child care service, and the education level of the household. The assumption that higher educated households are more likely to rely on formal child care arrangements is thus not applicable for this dataset.

Table 42: Child care profile – hypothesis 8.

| H8: There is a relationship between the type of used child care service (Q26) and the attitude “I find it important that my child has close warm relationships with care providers” and the type of childcare (Q33_1) | | | | | | | |
|---|-----------------|---------|----------|--------|----------|--------------|--------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 4.08 | 4.35 | 4.25 | 4.71 | 4.24 | 4.26 |
| | Informal or mix | 4.09 | 4.77 | 4.09 | 4.56 | 4.21 | 4.17 |
| Anova | p-value | NS | NS | NS | NS | NS | NS |

There is not a significant difference between the type of child care service, and the perceived importance of having close warm relationships between the child and care providers. The assumption that the higher the score on the attitude statement, the more likely a household will rely on informal care is thus not applicable for this dataset.

Table 43: Child care profile – hypothesis 9.

| H9: There is a relationship between the type of used child care service (Q26) and the attitude “I believe that my children should be cared for in a home setting” (Q33_2) | | | | | | | |
|---|-----------------|---------|----------|--------|----------|--------------|--------|
| | | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
| Mean score | Formal | 3.27 | 3.25 | 3.36 | 3.43 | 3.71 | 3.34 |
| | Informal or mix | 3.28 | 3.23 | 3.13 | 3.66 | 4.02 | 3.19 |
| Anova | p-value | NS | NS | NS | NS | NS | NS |

There is not a significant difference between the type of child care service, and the perceived importance of having children being care for in a home setting. The assumption that the higher the score on the attitude statement, the more likely a household will rely on informal care is thus not applicable for this dataset.

4.3 Sharing economy profile

In terms of sharing time, products or activities with other parents for specific child care arrangements, the table below provides a good overview of how arrangements are being set up for **travelling to and from school to home**. The most popular arrangement is **car-sharing** for extra school and leisure activities, followed by car sharing to and to from school. A lot of these type of arrangements are being made among participants of the Kortrijk city lab and Thessaloniki, and especially for car-sharing. Biking to school in group with a supervising parent does not seem to be a popular activity, and the organisation of a walking group to school is around 9% - but more practiced among participants of the Thessaloniki city lab and also in Venice. Most people indicate that they make these arrangements through **WhatsApp** groups with other families of the school, through Facebook groups, or through supported chat channels of the school. Some parents indicate that they find this cumbersome, and that these arrangements are often made last-minute.

Table 44: Childcare arrangements with other parents for travelling to school (%)

| | Total | Bologna (N=105) | Budapest (N=44) | Trento (N=150) | Kortrijk (N=93) | Thessaloniki (N=65) | Venice (N= 201) |
|---|-------|--------------------|--------------------|-------------------|--------------------|------------------------|--------------------|
| Car-sharing to and from school | 10.1 | 9.5 | 6.8 | 10 | 17.2 | 18.5 | 5.5 |
| Car-sharing for extra-school or leisure activities | 19.8 | 16.2 | 11.4 | 23.3 | 26.9 | 30.8 | 14.9 |
| Co-biking | 1.4 | 1 | 0 | 0.7 | 4.3 | 3.1 | 0.5 |
| Walking group to school | 8.7 | 3.8 | 2.3 | 3.3 | 1.1 | 20 | 14.9 |

On the other hand, there is higher degree of parents who are **sharing or borrowing childcare items** with other parents. 80.7% of all participants is sharing or borrowing one childcare item (computed score for all items), while 19.3% does not share anything at all. 44.7% of all participants is sharing or borrowing all the four items that were listed in the survey, and the most popular items to share or borrow are the clothing of the children (72.1%) and other caring material (67.3%).

Sharing or borrowing child care items seems to be very popular among the participants of the Thessaloniki city lab, with high percentages for all the types of childcare items. In contrast, the participants of the Kortrijk city lab are less likely to share or borrowing these types of items; with all percentages being on average lower than the total database.

Table 45: Sharing or borrowing childcare items with other parents (%) (only online, only face to face, and both online and face-to-face)

| | Total | Bologna (N=102) | Budapest (N=43) | Trento (N=146) | Kortrijk (N=93) | Thessaloniki (N=64) | Venice (N= 198) |
|---------------------------------|-------|--------------------|--------------------|-------------------|--------------------|------------------------|--------------------|
| Playing material | 46.6 | 37.3 | 53.5 | 49.3 | 36.6 | 64.1 | 45.5 |
| Clothing of the children | 72.1 | 69.3 | 72.1 | 76 | 61.3 | 76.6 | 74.2 |
| Children books | 59.1 | 51 | 55.8 | 68.5 | 37.6 | 70.3 | 63.1 |
| Other caring material | 67.3 | 69.3 | 60.5 | 74.7 | 54.8 | 76.6 | 65.7 |

Apart from the specific context of sharing time, products or activities within the field of childcare, participants were also questioned about their usage of other and more **general types of services within the sharing economy**. In general, there is not an extensive usage of general sharing economy services among any of the city labs – with the exception of participants of the Budapest city lab. The most popular used sharing services are **accommodation sharing and car sharing** with respectively 10.6% and 14.8% participation rates in the total database. In contrast to the popularity of sharing childcare items among participants in Thessaloniki, there is rather a very low to no usage of other types of services.

Table 46: Usage of general sharing economy services (%) (yes, I used it online)

| | Total (N=648) | Bologna (N=102) | Budapest (N=43) | Trento (N=146) | Kortrijk (N=93) | Thessaloniki (N=64) | Venice (N= 198) |
|------------------------------|------------------|--------------------|--------------------|-------------------|--------------------|------------------------|--------------------|
| Accommodation sharing | 10.6 | 13 | 27.9 | 9.6 | 15.4 | 1.6 | 7.6 |
| Car sharing | 14.8 | 20 | 27.9 | 13.7 | 11 | 0 | 15.2 |
| Meal sharing | 1.2 | 0 | 9.3 | 1.4 | 0 | 0 | 0.5 |
| Tool sharing | 3.2 | 2 | 7 | 1.4 | 12.1 | 3.1 | 0.5 |
| Task, crafts and time | 2.9 | 4 | 4.7 | 2.1 | 4.4 | 1.6 | 1.5 |

The table below provides some initial insights into the different types of motivations of why people are sharing time, products or activities with each other. It seems that the **social motivation** of connecting with others for sharing services, products, time or activities with others prevails, followed by an **economic motivation** to save money. Among the city lab of Budapest and Thessaloniki, the scores are in general higher than the other city labs. For the city lab of Budapest and Kortrijk, it seems that the economic motivation is more important than the social motivation. The perceived risk of participating in a sharing economy is rather perceived as neutral, although higher for the participants of the Bologna and Trento city labs.

Table 47: Attitudes towards the sharing economy (% - Five point Likert scale: Strongly disagree to strongly agree)

| | Total (N=640) | Bologna (N=100) | Budapest (N=43) | Trento (N=146) | Kortrijk (N=91) | Thessaloniki (N=64) | Venice (N= 197) |
|--|------------------|--------------------|--------------------|-------------------|--------------------|------------------------|--------------------|
| To my opinion, sharing services, products, time or activities with others is an expression of a modern lifestyle | 3.67 | 3.69 | 3.90 | 3.59 | 3.60 | 4.06 | 3.59 |
| Sharing services, products, time or activities with others allows me to save money | 3.91 | 3.98 | 4.33 | 3.78 | 4.00 | 4.08 | 3.80 |
| I value the social contact when sharing services, products, time or activities with others | 3.93 | 3.99 | 4.19 | 3.84 | 3.76 | 4.27 | 3.90 |
| I enjoy sharing services, products, time or activities with others | 3.62 | 3.64 | 3.95 | 3.42 | 3.66 | 3.94 | 3.57 |
| Sharing services, products, time or activities with others entails a risk for me | 2.92 | 3.07 | 3.02 | 2.94 | 2.85 | 2.97 | 2.85 |

4.3.1 Affirmed hypotheses – sharing economy profile

In the following paragraphs, the affirmative hypotheses of section 3.4.2. are described.

When looking to parents who are sharing and borrowing child care items (Q9) and those who don't, we see a significant difference in motivational scores on the attitude statements of Q12 for the total database. The mean scores for all items score higher for the group who share or borrow items, versus those who do not. However, there are some differences between the city labs, which are mentioned in the last row of the table below:

Table 48: sharing economy profile – H1

| H1: There is a relationship between the parents who are sharing or borrowing child care items (computed score, Q9) and the score on the motivational statements of Q12 | | | | | | |
|--|----------------------------------|---------------------------------------|---------------------------------|---------------------------------------|-----------------------------|---|
| | | Expression of a modern lifestyle | Sharing allows me to save money | I value the social contact of sharing | I enjoy sharing with others | Sharing entails a risk for me (reversed) |
| Mean score (total database) | Not sharing any child care items | 3.36 | 3.60 | 3.58 | 3.32 | 3.32 |
| | Sharing child care items | 3.75 | 3.99 | 4.01 | 3.69 | 3.69 |
| Anova | p-value (total database) | Sig (p.000) | Sig (p.000) | Sig (p.000) | Sig (p.000) | Sig (p.008) |
| | Not significant | Bologna, Venice, Trento, Thessaloniki | Bologna, Thessaloniki | Bologna, Trento, Thessaloniki | Trento, Thessaloniki | Budapest, Bologna, Venice, Thessaloniki, Kortrijk |

It seems that none of the assumptions are applicable for the Thessaloniki city lab, neither for the Bologna city lab with the exception of “the enjoyment to share”. However, all statements are applicable for the Kortrijk city lab and Budapest. The fourth statement was not deemed significant for any of the city labs if the analysis was run separately.

Table 49: Sharing economy profile – hypothesis 3

| H3: There is a relationship between the parents who are organising particular travel arrangements for their children (Q7) and the score on the motivational statements of Q12 | | Expression of a modern lifestyle | Sharing allows me to save money | I value the social contact of sharing | I enjoy sharing with others | Sharing entails a risk for me (reversed) |
|---|--|----------------------------------|---------------------------------|---------------------------------------|-----------------------------|--|
| Mean score (total database) | Not organizing particular travel arrangement | 3.63 | 3.87 | 3.89 | 3.56 | 3.04 |
| | Organising particular travel arrangements | 3.84 | 4.06 | 4.06 | 3.82 | 3.21 |
| Anova | p-value (total database) | Sig (p.013) | Sig (p.008) | Sig (p.023) | Sig (p.002) | Not significant |
| | Significant | Thessaloniki | / | Trento | Trento | / |

In terms of organising particular travel arrangements to and from school or for leisure activities, we can see from the table above that in the total database there is a significant difference between the parents who organise these activities and does who don't for the different motivational statements. The mean score is always higher among the group who is organising it. However, it must be noted that when we run these specific analyses separately for each city lab, that only for Trento these were found significant.

Table 50: Sharing economy profile – hypothesis 4

| H4: There is a relationship between the parents who are organising particular travel arrangements for their children (Q7) and certain socio-demographic characteristics as type of household, amount of children, age and income | | Type of household | Amount of children | Age | Income |
|--|--|-------------------|---------------------|-----------------|-----------------|
| Chi-square (total database) | Not organizing particular travel arrangement | Not significant | Significant (p.000) | Not significant | Not significant |
| | Organising particular travel arrangements | | | | |

Last, one significant difference was found for the socio-demographic profile for parents who are organising particular travel arrangements to and from school or for leisure activities, versus those who do not. It seems that especially households with 2 or 3 or more children are organising these type of travel arrangements, versus households with only 1 child. The more children you have, the more likely that you will organise these type of travel arrangements.

4.3.2 Rejected hypotheses – sharing economy profile

In the following paragraphs, the rejected hypotheses of section 3.4.2. are described.

Table 51: Sharing economy profile – hypothesis 2.

| H2: There is a relationship between the parents who are sharing or borrowing child care items (computed score, Q9) and certain socio-demographic characteristics as type of household, amount of children, age and income | | | | | |
|---|----------------------------------|-------------------|--------------------|-----------------|-----------------|
| | | Type of household | Amount of children | Age | Income |
| Chi-square (total database) | Not sharing any child care items | Not significant | Not significant | Not significant | Not significant |
| | Sharing child care items | | | | |

There is not a significant difference between parents who are sharing or borrowing child care items versus those who do not share, and their socio-demographic background in terms of type of household, amount of children, age or income.

4.4 Digital profile

In the total database, 32.3% is currently using an **online platform for supporting child care activities**; which is not very high. In Bologna, they are mostly using sitly or ww.care.com; and in the Kortrijk city lab there is a high usage of the online platform of the 'Kinderoppasdienst van de gezinsbond'. In Budapest, they are mostly using 'minimatine.hu'.

Further, 22.2% is using an **online calendar for noting childcare and work-related tasks**. 48.1% is not sharing a calendar within their household, and 29.6% is using a paper calendar. The city lab of Kortrijk (47.3%) and Budapest (27.9%) have the highest degree of participants who are using an online calendar. Examples of the most popular online calendars: Google calendar and Apple Calendar on the iPhone. The participants of the city lab of Bologna, Venice, Trento and Thessaloniki are rather not sharing any calendar within their households.

Table 52: Digital technology usage for child care activities (%)

| | Total | Bologna | Budapest | Trento | Kortrijk | Thessaloniki | Venice |
|---|-------|---------|----------|--------|----------|--------------|--------|
| Usage of a digital platform for supporting child care activities | 32.3 | 21.9 | 47.7 | 10.1 | 30.1 | 7.7 | 4 |
| Usage of an online calendar for noting childcare and work related tasks | 22.2 | 21 | 27.9 | 24.7 | 47.3 | 9.4 | 13.2 |

Besides the usage of particular tools and online platforms for childcare and services within the sharing economy, participants could also **self-rate their skills and interests towards technology usage**. Overall, participants are quite confident that it is easy for them to learn how to work with new technologies (M= 4.35). Further, participants also generally feel that there keen to try out digital technologies (M= 3.96) and are interested in it (M= 3.87). It seems that the participants of Thessaloniki, self-rate their skills on average higher than the other city labs.

Table 53: Ease of learning, adoption and interest in digital technologies (% - Five point Likert scale: Strongly disagree to strongly agree)

| | Total (N=633) | Bologna (N=95) | Budapest (N=42) | Trento (N=142) | Kortrijk (N=91) | Thessaloniki (N=63) | Venice (N= 195) |
|---|---------------|----------------|-----------------|----------------|-----------------|---------------------|-----------------|
| Learning how to work with digital technologies is easy for me | 4.35 | 4.36 | 4.45 | 4.26 | 4.12 | 4.65 | 4.38 |
| I'm keen in trying out digital technologies | 3.96 | 3.97 | 4.38 | 3.93 | 3.72 | 4.54 | 3.82 |
| In general, I'm interested in digital technologies (recoded) | 3.87 | 4.05 | 4.10 | 3.87 | 3.49 | 4.24 | 3.83 |

4.4.1 Affirmed hypotheses – digital profile

In the following paragraphs, the affirmative hypotheses of section 3.4.3. are described.

Table 54: Digital profile – hypothesis 1

| H1: There is a relationship between ‘are you sometimes sharing or borrowing following items ONLINE’ (Q9) with the technology profile of the respondent (Q15_1, 2, 3) | | | | |
|--|---------------------------------|---|---|---|
| | | Learning how to work with digital technologies is easy for me | I’m keen in trying out digital technologies | In general, I’m not so interested in digital technologies |
| Mean score (total database) | Sharing online child care items | 4.39 | 4.01 | 2.06 |
| | Not sharing online | 4.33 | 3.93 | 2.16 |
| Anova | p-value (total database) | Not significant | Not significant | Not significant |
| | Significant for city labs: | Venice | Venice | Venice |

From the table above, we can conclude that those who share or borrow child care items online have a higher score on the digital profile characteristics. For instance, those who share child care items online have higher mean score (4.39) than those who do not share items online (4.33). However, for all these mean scores there was not a significant difference between the groups on the level of the total database, with the exception for the Venice city lab. This means that among recruited participants of the Venice city lab, there is a higher discrepancy between those using online tools for sharing childcare items and their digital skills, versus those who do not use online tools for this particular purpose.

Table 55: Digital profile – hypothesis 2.

| H2: There is a relationship between ‘usage of online calendar for childcare (Q10) with the technology profile of the respondent (Q15_1, 2, 3) | | | | |
|---|--------------------------------|---|---|---|
| | | Learning how to work with digital technologies is easy for me | I’m keen in trying out digital technologies | In general, I’m not so interested in digital technologies |
| Mean score (total database) | Online calendar usage | 4.48 | 4.16 | 1.99 |
| | No usage of an online calendar | 4.31 | 3.90 | 2.17 |
| Anova | p-value (total database) | Significant (p.021) | Significant (p.004) | Not significant (p.114) |
| | Significant for city labs: | Venice, Trento | Venice, Trento | |

Further, we also see that there is a significant difference between those who use an online calendar, versus those who do not and their digital profile characteristics for the Venice and Trento city labs for ‘learning how to work with technologies is easy’ and ‘I’m keen in trying out digital technologies’.

| H3: There is a relationship between 'usage of online calendar for childcare (Q10) with the technology profile of the respondent (Q15_1, 2, 3) | | | | |
|---|---|---|---|---|
| | | Learning how to work with digital technologies is easy for me | I'm keen in trying out digital technologies | In general, I'm not so interested in digital technologies |
| Mean score (total database) | Using online sharing economy services | 4.33 | 3.85 | 2.18 |
| | Not using online sharing economy services | 4.35 | 3.99 | 2.11 |
| Anova | p-value (total database) | Not significant | Not significant | Not significant |
| | Significant for city labs: | | Venice | |

Last, the same logic applies for those who are using general sharing economy services online, versus those who do not and their digital profile characteristic 'I'm keen trying out digital technologies' for the Venice city lab.

4.4.2 Rejected hypotheses – digital profile

In the following paragraphs, the rejected hypotheses of section 3.4.3. are described.

Table 56: Digital profile - Hypothesis 4.

| H4: There is a relationship between the technology profile of the respondent and (Q15_1, 2, 3) certain socio-demographic characteristics, such as gender, age and education level | | | | |
|---|-----------------|---|---|---|
| | | Learning how to work with digital technologies is easy for me | I'm keen in trying out digital technologies | In general, I'm not so interested in digital technologies |
| Chi-square (total database) | Gender | Conditions not met | Conditions not met | Not significant |
| | Age categories | Conditions not met | Conditions not met | Conditions not met |
| | Education level | Conditions not met | Conditions not met | Conditions not met |

The tests for hypothesis 4 could not be performed because the conditions for the Chi-square were not met (minimum expected count should be 1, and max. 20% of the calls count less than five).

Table 57: Digital profile – hypothesis 5.

| H5: There is a relationship between the “usage of an online calendar for childcare (Q10) and amount of children that need child care(Q25) | | |
|---|--------------------------------|-------------------------|
| | | Amount of children |
| Mean score (total database) | Online calendar usage | 1.84 |
| | No usage of an online calendar | 1.75 |
| Anova | p-value (total database) | Not significant (p.237) |
| | Significant for city labs: | None |

Hypothesis 5 is not affirmative – it seems indeed that parents who are using an online calendar are having more children, although this difference is not significant.

4.5 Work/life balance (set 4)

Within the Trento City Lab, a specific set of questions was added as part of the agreement between the Families-Share team in FBK and the Family Audit network. In particular, 8 organizations that are part of Trento Family District were involved. Trento Family District is an inter-organizational association supported by the local government of Trento that aims at creating networks of public and private organizations active in promoting work-life balance policies, increase women participation in the labor market and experiment novel forms of social organizations targeting families' needs. The questions explored through the questionnaire are a follow-up of activities described in D.1.1. (Section 4.2.5) that have the goal of exploring synergies between the work-life balance policies endorsed by the partner organizations and the collaborative approach to childcare proposed by Families-Share project.









The set of questions added to the Families_Share survey was meant to i) map needs and demands of the employees of the Trento Family District network of organizations about current and future policies for harmonizing work, family and personal life; and to ii) explore employees' satisfaction toward policies already deployed in their organization. The questions were elaborated in synergy with the 8 organizations (See Table below). Some of them, in particular those exploring the satisfaction of employees toward services already running in the organizations, were personalized according to the specific needs of each organization.

The new set included the following types of questions:

1. Questions about the **satisfaction** of the work-life policies activated in the organization, for instance, satisfaction toward: tele-working, discount for mobility services (e.g. car-sharing), initiatives for employees children activated for short periods.
2. Questions about needs and demands about policies for harmonizing **work and personal life**. For example, grocery delivered at the workplace, the activation of flexible or "smart" working, discounts for services.
3. Questions about needs and demands about policies for the **care** of older people or people with disabilities. For example, special agreements for errand services for elderly or disabled people, special agreements for home care services, or flextime for family members in need.
4. Questions about needs and demands about policies for **childcare** services, including the Families-Share scenario, and also services such as on-site personalised babysitting, discounted-rate agreements with private daycare centers or agreements with babysitting services.
5. Questions about the employee's perception of the **overall quality** of the policies and/or practices activated by the organization for supporting work-life balance.

Before answering the dedicated set of questions, each respondent reported her/his household status. If the respondent profile matched the Families-Share criterion (parents of children aged 2-16 years old), she/he was asked to fill out the entire Families-Share Behavioural Mapping questionnaire (i.e. items common to all city labs).

Table 58: Organizations involved in the Trento Family District.

| | Organizations | Legal entity | Number of employees |
|---|---------------------------------|---|---------------------|
|  | Fondazione Bruno Kessler | No profit research organization | 577 |
|  | Kaleidoscopio | Private childcare provider | +170 |
|  | Progetto 92 | Private childcare provider | 214 |
|  | Famiglia Cooperativa | Local consumer cooperative | +40 |
|  | APSP Grazioli | Public organization (caregiving and nursing services) | 199 |
|  | FIDIA | Private company (training agency) | +10 |
|  | Fondazione De Marchi | No profit research organization | 25 |
|  | UPIPA | Public organization (social services) | 19 |

A total of 426 employees (43% of target population) responded to the questionnaire (N=229, 53.7% female employees). Among them, 154 were parents with children aged 2 to 16 y.o. and 113 respondents declared to have caregiving responsibilities with older adults or people with disabilities (Figure 8).

Results

426

Responses

40 (SD= 9) Mean age
Min= 18, Max = 63

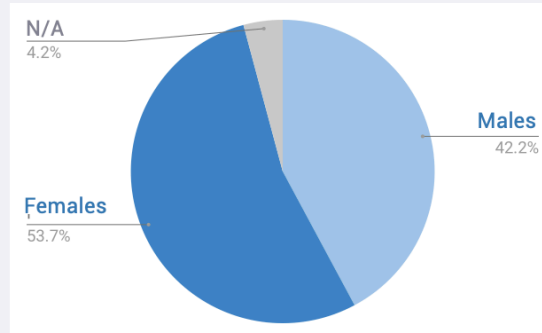


Figure 8: Overview of the responses from the Trento City Lab.

The work/life policies that appealed to large segment of the respondents are reported in Figure 3. Those policies include also interventions for supporting childcare services: from extended parental leave to childcare activities for summer breaks and short holiday periods.

Most expected policies

Balancing Work and Personal life

- Labour flexibility (smart working, remote working)
- Personal well being (Discounts on gyms, wellness centers, tour operators, etc.) and incentives to sustainable mobility

Childcare Services and Activities

- Extended (unpaid) parental leave
- Extended parental leave for male workers
- Recreational /educational activities for children (mostly aged 6 to 10) during summer breaks or for short holiday periods.

Caregiving services

- Leave of absence / flextime for family members in need
- Information help desk for healthcare services

Figure 9: Main policies reported among the respondents.

A total of 154 parents (with children of age between 2 and 16 years old) filled out the questionnaire, responding also to the Families_Share items and contributing to the behavioral mapping. Considering Families-Share activity, Figure 10 shows the level of interest expressed by parent employees from the organizations. Interest was measured with a scale from 1 to 4, with 1 = “Not at all”, 2 = “Slightly”, 3 = “Moderate”, 4 = “Very much”.

Most parents (64 %, N= 70) reported moderate or high interest in the Families-Share scenario. Other services, such as agreements for discount rates for babysitting services, received lower interest among respondents (Figure 11).

Collaborative Childcare

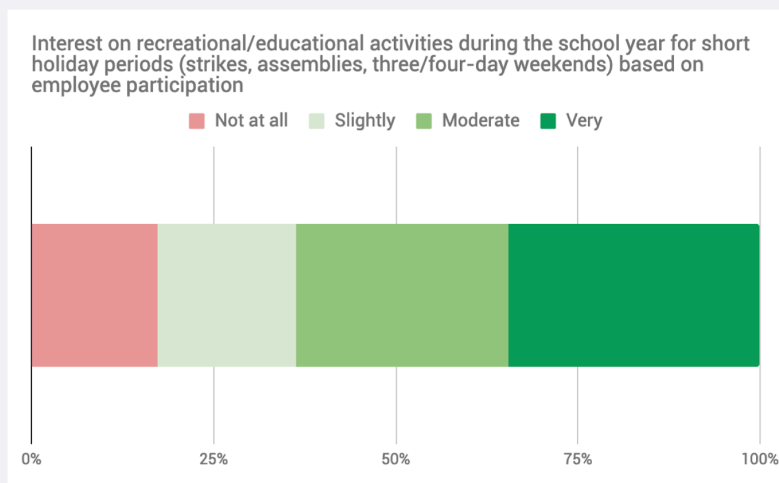


Figure 10: Interest on the activation of collaborative childcare (Families_Share scenario)

Discount rates for babysitting

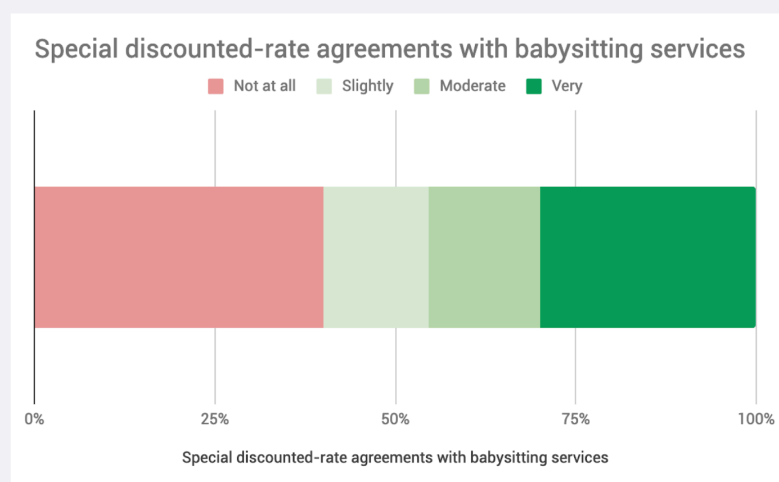


Figure 11: Interest on special discount rates for babysitting services

5 Conclusion

In this section, the conclusions are formulated per type of profile: the child care profile, the sharing economy profile and the technology profile. Further, specific recommendations for the engagement strategy of each city lab are formulated for establishing an inclusive co-creation approach in the Families-Share project, or to reach a higher number of potential users.

The conclusions are formulated based on the results of a “behavioural mapping” survey that was designed by imec, and distributed by the city lab partners between November 2018 and mid January 2019. For each city lab (Bologna, Trento, Budapest, Hamburg, Kortrijk, Thessaloniki and Venice), a specific survey link was provided to collect insights from prospective Families-Share users. After data cleaning, the separate SPSS files were merged into one database with in total **665 respondents** (and 628 full responses). The dataset of Hamburg was not taken into account for the analysis in this deliverable, as the amount of responses was too low to construct behavioural profiles in a meaningful way. Further data collection is currently ongoing for the Hamburg city lab and which will be taken into account for deliverable D4.4 “Perceived behavioural enablers and barriers for up taking the Families_Share solution” (M28). In this report, an update about the behavioural enablers and barriers will also be provided.

5.1 Child care profile – main conclusions

The surveys were mostly filled in by couples with children (ranging between 87% and 94.7% among the city labs), who are highly educated and mostly full-time employed. The average age of the overall database is 41 years old and mostly female respondents filled in the questionnaire (78.9% in the overall database). 62.2% of respondents have a native background, while 37.8% has a migrant background.

Most respondents are currently relying on self-organised care or mixed care (75.6%), and less on solely professional organised care (24.4%). For self-organised care, parents are mostly relying on grandparents or other parents at school; and for which in most cases no type of (financial) arrangement is being made (66.1%). There is only a minority of parents who have made an arrangement based on the principles of the sharing economy (2.6% is applying a time credit system, and 39.3% has a reciprocal arrangement). For professional organised childcare, parents are mostly relying on day-care centres (crèches) and on before and after care at school. Most of the children in the dataset are aged between 4 and 6 years old, followed by 1 to 3 years old. It seems that parents mostly need child care on a structural basis during working hours (92,9%), followed by irregular child care (90,7%) and then emergency child care (87,5%).

5.2 Sharing economy profile – main conclusions

Currently, the most popular sharing arrangement among parents is the sharing or borrowing of child care items. 80.7% of the participants is sharing or borrowing at least one child care item, of which mostly clothing of the children (72.1%) or children books (59.1%). Next, we learnt that shared travel arrangements are less popular, with only 19.8% of the household having arrangements for car-sharing for extra school and leisure activities (19.8%), followed by car sharing to and from school (10.1%).

In general, there is a not an extensive usage of general sharing economy services among any of the city labs, with the exception of the Budapest city lab. In general, the most popular sharing economy services are accommodation sharing and car sharing with respectively 10.6% and 14.8% participation rates in the total database.

Participants indicated that they are mostly motivated to share services, products or time with each other because of social motivations (connecting with others), followed by an economic motivation to save money.

5.3 Digital profile – main conclusions

32.3% is currently using an online platform for supporting child care activities and 22.2% is using an online calendar for noting childcare and work-related tasks. Both usage activities are not very high, and which could mean that there is a big potential for increased usage of technology for supporting child care activities. On the other hand, it could also ask a greater effort in the change of habitual processes and mindset of people. However, overall, participants are quite confident that it is easy for them to learn how to work with new technologies ($M = 4.35$). Further, participants also generally feel that there keen to try out digital technologies ($M = 3.96$) and are interested in it ($M = 3.87$).

5.4 Engagement strategy – recommendations

In the tables below, specific recommendations are specified for realizing an inclusive engagement strategy in the project based on the specific insights collected in the behaviour profiles, or to attract a higher number of potential users in the project. The recommendations are specified on the generic level of the project, and also for each city lab specifically:

Table 59: Recommendations for the engagement strategy on project level.

| Recommendations for the engagement strategy on project level (all city labs) | |
|--|--|
| | <ul style="list-style-type: none"> Gender: All city labs should be pursuing a more gender balanced approach in the co-design activities and usage of the Families-Share solution. The survey was mostly filled in by female respondents, and city labs are recommended to also include fathers in the activities. In future activities, it is also recommended to register whether only the mother or the father participated in the Families-Share activities, or whether they collaborated upon the activities together (if applicable). |
| | |

- **Household composition:** All city labs should be pursuing a diversified approach in reaching out to different types of households (couples with children, single parents with children and other type of households with children). The survey was mostly filled in by couples with children. The city labs are recommended to tailor their communication messages towards single parents and other types of households, and to recruit additional single parents.
- **Social and economic value of Families-Share:** It is recommended that the communication messages of all city labs stress the social values (making contacts and new friends among parents and children) and economic values (saving money) of participating in Families-Share. These two types of motivations score the highest among experienced users of the Kortrijk City Lab. By stressing these values in communication materials, we hope to attract and engage more users.
- **Building of trust:** The engagement strategies of all city labs should include activities and discussion moments for trust building between parents (e.g. an afternoon meet and greet group to talk about child rearing ideology). It seems that parents now are rather neutral towards the idea of other parents taking care of their children. However, we see that once there is a connection and experience among parents, trust scores are higher (cfr. Kortrijk city lab results)
- **Reciprocal arrangements:** The engagement strategies of all city labs should take into account that using a time credit system or practicing a reciprocal arrangement is currently not well known among the participants. It is recommended to explain this fully in the communication messages or to organize a specific session around it with interested parents. To avoid confusion, it should also be clearly communicated what the potential costs involved for organizing child care provision through Families-Share.
- **Sharing travel arrangements:** It seems, the more children there are in one household, the more likely parents arrange shared travel arrangements. City labs have the potential here to formulate specific communication messages to families with multiple children (2 or more) to connect, and share these arrangements through Families-Share.
- **Usage of the Families-share web app and mobile app / digital skills:** It is recommended that all city labs invest in providing tutorial material for explaining prospective users how to learn to use the web app and mobile app. From the results, it became obvious that a difference in the perceived level of digital skills relates to a lower usage of digital technologies (especially for the Venice city lab).

In the table below, specific recommendations are formulated on city lab level:

Table 60: Recommendations for the engagement strategy on city lab level.

| Recommendations for the engagement strategy on city lab level | |
|---|---|
| Bologna | <ul style="list-style-type: none"> • Migrant background: The engagement strategy of the Bologna city lab should take into account that a high percentage of people were born in a different city/region and then moved to Bologna. It might be that this specific group has other types of needs towards child care. We recommend to the community managers to further explore their needs through specific sessions, or conversations around networking with parents in the neighborhood and about parental values. • Amount of children per household: The engagement strategy of the Bologna city lab should take into account that parents with multiple children in the household (2 or more), are more likely to rely on informal care (or mixed care). One can assume here that households with multiple children are more likely to rely on Families-Share for informal child care needs. |
| Budapest | <ul style="list-style-type: none"> • Migrant background: The engagement and community strategy of the Budapest city lab should take into account that the migrant backgrounds of prospective Families-Share users are very diverse. 85.7% of the survey respondents has a migrant background, with very diverse nationalities of people who were born abroad. The communication messages should take possible cultural differences into consideration. We recommend to the community managers to further explore their needs through specific sessions, or conversations around language, cultural and religious values, and parenting. • Self-organized care: The engagement strategy of the Budapest city lab should take into account that currently parents often rely on babysitters for self-organised care, and less on grandparents or other parents at school. Community managers are advised to look at the networking contacts of parents to see if the proposed solution of Families-Share is possible to implement at schools with other parents, or with the support of family members. |
| Trento | <ul style="list-style-type: none"> • Self-organised care: The engagement strategy of the Trento city lab should take the potential of intergenerational support by grandparents into account when introducing the Families-Share solution. Since grandparents are very often involved in the arrangement of self-organised care, they could be potential care providers in the Families-Share solution. |
| Kortrijk | <ul style="list-style-type: none"> • Employment status: There is a significant difference between mothers working part-time versus mothers working full-time and the type of used child care service for the participants of the Kortrijk city lab, which is mostly informal for part-time working mothers. In the engagement strategy, part- |

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| | <p>time working mothers could be a specific target group with tailored communication messages to explain them about the potential of Families-Share. We assume that this group has a higher need to be involved in the project, and needs specific communication and support.</p> <ul style="list-style-type: none"> • Sharing travel arrangements: A lot of prospective users of Families-Share in the Kortrijk city lab are having shared travel arrangements by car to and from school and for leisure activities. Since it is a popular activity, the arrangements of travel could also be one the activities in the pilot trials to test and engage more users. |
| Thessaloniki | <ul style="list-style-type: none"> • Migrant background: The engagement strategy of the Thessaloniki city lab should take into account that a high percentage of people were born in a different city/region and then moved to Thessaloniki. It might be that this specific group has other types of needs towards child care. We recommend to the community managers to further explore their needs through specific sessions, or conversations around language, cultural and religious values, and parenting. • Employment status: The engagement strategy of the Thessaloniki city lab should take the current employment status of prospective users into account. 21.3% of prospective users is currently unemployed, while it also seems that a higher proportion of people are self-employed compared to the other city labs. It might be that these groups have other types of needs towards child care. • Self-organised care: The engagement strategy of the Thessaloniki city lab should take the potential of intergenerational support by grandparents into account when introducing the Families-Share solution. Since grandparents are very often involved in the arrangement of self-organised care, they could be potential care providers in the Families-Share solution. • Economic motivations: The communication messages of the Thessaloniki city lab should highly stress the economic value of participating in Families-Share. From the results, we learnt that the perceived cost is a significant influencer for choosing the type of child care service in Thessaloniki. • Sharing travel arrangements: A lot of prospective users of Families-Share in the Thessaloniki city lab are having shared travel arrangements by car to and from school and for leisure activities, and also a coordinated walking group. Since it is a popular activity, the arrangements of travel could also be one the activities in the pilot trials to test and engage more users. • Sharing child care items: A lot of prospective users of Families-Share in the Thessaloniki city lab are sharing child care items with each other (especially clothing of the children, books and other caring material). Since it is a popular activity, these sharing arrangements could also be one the activities in the pilot trials to test and engage more users. |

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| Venice | <ul style="list-style-type: none"> • Self-organised care: The engagement strategy of the Venice city lab should take the potential of intergenerational support by grandparents into account when introducing the Families-Share solution. Since grandparents are very often involved in the arrangement of self-organised care, they could be potential care providers in the Families-Share solution. • Amount of children per household: The engagement strategy of the Venice city lab should take into account that parents with multiple children in the household, are more likely to rely on informal care (or mixed care). One can assume here that households with multiple children (2 or more) are more likely to rely on Families-Share for informal child care needs. • Digital skills: Among recruited participants of the Venice city lab, there is a higher discrepancy between those using online tools and their self-perceived level of digital skills, versus those who do not use online tools. It is highly recommended that FAQs and supporting material (e.g. tutorials or videos) for the Venice city lab is created, that thoroughly explains how to work with the web app or mobile app. |
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5.5 Barriers and enablers for using Families-Share

In the literature review, different determinants were found that could influence the adoption of the Families-Share solution in terms of barriers and enablers for organising child care and participating in the sharing economy. In the behavioral mapping survey, a selected set of these determinants were already explored for the usage of the COKIDO service among experienced users in the Kortrijk city lab, and for other participants the importance was validated for currently choosing a particular type of child care service. During the upcoming pilot trials, we will have a further exploration if specific parental values, attitudes or beliefs influence the adoption of Families-share (cfr. Table 10, e.g. perceived feeling of safety, stability and familiarity, perceived importance of having close/warm relationships, community bonds, views about child rearing, cognitive and social development), and what certain drivers and impediments are for sharing time and activities for organizing child care (cfr. Table 12, e.g. effort expectancy, enjoyment in sharing, social influence, independence through ownership, etc.).

In the table below, a first version of the COM-B model is described with barriers and enablers found through the behavioural mapping survey. The COM-B is describing the “behavior system” of an individual, with the interaction of three components (capabilities, opportunities and motivations) that produce a certain behavior. In the context of Families-Share, we are looking towards the behavior system of an individual for organising child care, sharing time, tasks, services or products with each other. This COM-B model with barriers and enablers will be further updated through the pilot experiences, and reported in deliverable D4.4 “Perceived behavioural enablers and barriers for up taking the Families_Share solution” (M28).

Table 61: Barriers and enablers for using Families-Share (first version).

| COM-B model for Families-share (first version) | | |
|---|---------|--|
| Capability (referring to physical, or psychological capabilities) | Barrier | <ul style="list-style-type: none"> Digital skills and knowledge of prospective Families-Share users to work with the platform: A potential barrier for the adoption of the Families-Share solution are the current digital skills of parents. The survey results highlighted that the perceived level of skills is linked with the usage of digital technologies: the better one is perceiving his/her digital skills, the more likely one is using digital technologies. Furthermore, there is only a minority of survey respondents currently using digital solutions to support child care activities e.g. a digital platform, or online calendar – which might cause that a learning curve is necessary for learning how to work with digital technology, but also in the adaptation of habitual processes for arranging child care. |
| | Enabler | To be further explored. |

| | | |
|---|---------|---|
| Opportunity (referring to physical or social opportunities) | Barrier | <ul style="list-style-type: none"> • Cultural norms: A potential barrier for the adoption of the Families-Share solution is the difference in cultural norms among the different migrant backgrounds in the city labs. The results showed that people with a migrant background in Bologna, Trento, Kortrijk and Thessaloniki tend to use more professional organised child care services. Community managers of the city labs are advised to explore this more into depth for organising a proper engagement strategy. |
| | Enabler | <ul style="list-style-type: none"> • Intergenerational support of grandparents: A potential enabler for the adoption of the Families-Share is the intergenerational support of grandparents, who could be potential co-playing (grand)parents in the system. The more people are connected and involved, the more chances are created for organising reciprocal childcare. • Cost of the care: A potential enabler for the adoption of the Families-Share solution is the low cost of the care. From the experiences of the Kortrijk city lab, we know that these are much lower than regular child care services, or camping trips during summer. The cost of the care is one of the three main characteristics in the decision-making process of parents for choosing a particular child care service. • Geographic proximity of the care: A potential enabler for the adoption of the Families-Share solution is that child care can be organised at venues where either the parents or the children are already connected (e.g. the school or the company). The location is one of the three main characteristics in the decision-making process of parents for choosing a particular child care service. |
| Motivation (referring to reflective or automatic motivations) | Barrier | <ul style="list-style-type: none"> • Trust creation among parents: The creation of trust might be a potential barrier for the adoption of the Families-Share solution. Parents rather had now a neutral opinion about whether they would have difficulties with other parents supervising their children. However, from the experiences of the Kortrijk city lab we learnt that trust can evolve over time, and that parents trust each other in discussing any issue around values or beliefs. |
| | Enabler | <ul style="list-style-type: none"> • Social connections / social experience / sense of belonging: A potential enabler for the adoption of Families-Share is the opportunity to connect with people in the neighbourhood, and to make new friends. • Economic motivations: A potential enabler for the adoption of Families-Share is the low cost for organising reciprocal child care. |

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| | | <ul style="list-style-type: none"> • Enjoyment of sharing: A potential enabler for the adoption of Families-Share is the enjoyment of sharing products, time or activities with others • Having close, warm relationships with care providers: A potential enabler for the adoption of Families-Share is the informal character. • Expression of a modern lifestyle: A potential enabler for the adoption of Families-Share is the innovative concept of the solution that offers the possibility to customize the setting towards the specific needs of its users |
|--|--|--|

References

- Aassve, A., Arpino, B., & Goisis, A. (2012). Grandparenting and mothers' labour force participation: A comparative analysis using the generations and gender survey. *Demographic Research*, 27, 53–84.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499. <https://doi.org/10.1348/014466601164939>
- Aschemann-Witzel, J., & Aagaard, E. M. N. (2014). Elaborating on the attitude–behaviour gap regarding organic products: young Danish consumers and in-store food choice. *International Journal of Consumer Studies*, 38(5), 550–558. <https://doi.org/10.1111/ijcs.12115>
- Augustine, J. M., Cavanagh, S. E., & Crosnoe, R. (2009). Maternal education, early child care and the reproduction of advantage. *Social Forces*, 88(1), 1–29.
- Barker, F., Atkins, L., & de Lusignan, S. (2016). Applying the COM-B behaviour model and behaviour change wheel to develop an intervention to improve hearing-aid use in adult auditory rehabilitation. *International Journal of Audiology*, 55(sup3), S90–S98. <https://doi.org/10.3109/14992027.2015.1120894>
- Böcker, L., & Meelen, A. a. H. (2016). Sharing for people, planet or profit? Analysing motivations for intended sharing economy participation [Working paper]. Retrieved January 31, 2019, from <http://dspace.library.uu.nl/handle/1874/339511>
- Bowen, G. L., & Neenan, P. A. (1993). Child day care and the employment of AFDC recipients with preschool children. *Journal of Family and Economic Issues*, 14(1), 49–68. <https://doi.org/10.1007/BF01013429>
- Brown-Lyons, M., Robertson, A., Layzer, J. I., Columbia University, & National Center for Children in Poverty. (2001). *Kith and kin-informal care: highlights from recent research*. New York, NY: National Center for Children in Poverty, Mailman School of Public Health, Columbia University.
- Buda, G. (2017). Attitudes and Motivations of Consumers in Sharing Economy, 9.
- Capizzano, J., Adams, G., & Sonenstein, F. (2000). Child Care Arrangements for Children under Five: Variation across States. No. B-7. Assessing the New Federalism: An Urban Institute Program To Assess Changing Social Policies.
- Chirkov, V., Ryan, R., & Sheldon, K. M. (Eds.). (2011). *Human Autonomy in Cross-Cultural Context: Perspectives on the Psychology of Agency, Freedom, and Well-Being*. Dordrecht: Springer Netherlands.
- Cornwell, B., Laumann, E. O., & Schumm, L. P. (2008). The social connectedness of older adults: A national profile. *American Sociological Review*, 73(2), 185–203.
- Coyette, C., Europäische Kommission, & Statistisches Amt. (2015). *Being young in Europe today*. Luxembourg: Publ. Off. of the Europ. Union. Retrieved from <http://dx.doi.org/10.2785/59267>

- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, 49(3), 182–185. <https://doi.org/10.1037/a0012801>
- Diamantopoulos, A. (1994). Modelling with LISREL: A guide for the uninitiated. *Journal of Marketing Management*, 10(1–3), 105–136.
- Emlen, A. C., Koren, P. ., & Schultze, K. . (1999). *From a parent's point of view: Measuring the quality of child care: Final report*. Portland, Oregon, USA: Regional Research Institute for Human Services, Portland State University.
- Galinsky, E. (1994). The Study of Children in Family Child Care and Relative Care. Highlights of Findings.
- Glaser, K., Price, D., Di Gessa, G., Ribe, E., Stuchbury, R., & Tinker, A. (2013). *Grandparenting in Europe: family policy and grandparents' role in providing childcare*. Grandparents plus.
- Graham-Rowe, E., Jessop, D. C., & Sparks, P. (2015). Predicting household food waste reduction using an extended theory of planned behaviour. *Resources, Conservation and Recycling*, 101, 194–202. <https://doi.org/10.1016/j.resconrec.2015.05.020>
- Greaves, M., Zibarras, L. D., & Stride, C. (2013). Using the theory of planned behavior to explore environmental behavioral intentions in the workplace. *Journal of Environmental Psychology*, 34, 109–120. <https://doi.org/10.1016/j.jenvp.2013.02.003>
- Hamari, J., Sjöklint, M., & Ukkonen, A. (2016a). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67(9), 2047–2059.
- Hamari, J., Sjöklint, M., & Ukkonen, A. (2016b). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67(9), 2047–2059. <https://doi.org/10.1002/asi.23552>
- Hand, K. (2005). Mother's views on using formal child care. *Family Matters*, (70), 10.
- Handley, M. A., Harleman, E., Gonzalez-Mendez, E., Stotland, N. E., Althavale, P., Fisher, L., ... Rios, C. (2015). Applying the COM-B model to creation of an IT-enabled health coaching and resource linkage program for low-income Latina moms with recent gestational diabetes: the STAR MAMA program. *Implementation Science*, 11(1). <https://doi.org/10.1186/s13012-016-0426-2>
- Hardeman, W., Johnston, M., Johnston, D., Bonetti, D., Wareham, N., & Kinmonth, A. L. (2002). Application of the Theory of Planned Behaviour in Behaviour Change Interventions: A Systematic Review. *Psychology & Health*, 17(2), 123–158. <https://doi.org/10.1080/08870440290013644a>
- Hawllitschek, F., Teubner, T., & Gimpel, H. (2016). Understanding the Sharing Economy -- Drivers and Impediments for Participation in Peer-to-Peer Rental. In *2016 49th Hawaii International Conference on System Sciences (HICSS)* (pp. 4782–4791). Koloa, HI, USA: IEEE. <https://doi.org/10.1109/HICSS.2016.593>
- Heath, Y., & Gifford, R. (2002). Extending the Theory of Planned Behavior: Predicting the Use of Public Transportation1. *Journal of Applied Social Psychology*, 32(10), 2154–2189. <https://doi.org/10.1111/j.1559-1816.2002.tb02068.x>

- Hellwig, K., Morhart, F., Girardin, F., & Hauser, M. (2015). Exploring different types of sharing: A proposed segmentation of the market for “sharing” businesses. *Psychology & Marketing*, 32(9), 891–906.
- HERTZ, R. (1997). A Typology of Approaches to Child Care: The Centerpiece of Organizing Family Life For Dual-Earner Couples. *Journal of Family Issues*, 18(4), 355–385.
<https://doi.org/10.1177/019251397018004001>
- Jackson, C., Eliasson, L., Barber, N., & Weinman, J. (2014). Applying COM-B to medication adherence: a suggested framework for research and interventions. *European Health Psychologist*, 16(1), 7–17.
- Janta, B. (2014). Caring for children in Europe. How childcare, parental leave and flexible working arrangements interact in Europe. Retrieved from
https://www.rand.org/pubs/research_reports/RR554.html
- Jappens, M., & Van Bavel, J. (2012). Regional family cultures and child care by grandparents in Europe. *Demographic Research*, 27, 85–120.
- Juvan, E., & Dolnicar, S. (2014). The attitude–behaviour gap in sustainable tourism. *Annals of Tourism Research*, 48, 76–95. <https://doi.org/10.1016/j.annals.2014.05.012>
- Michie, S. F., West, R., Campbell, R., Brown, J., & Gainforth, H. (2014). *ABC of behaviour change theories*. Silverback Publishing.
- Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1). <https://doi.org/10.1186/1748-5908-6-42>
- Mills, M., Präg, P., Tsang, F., Begall, K., Derbyshire, J., Kohle, L., ... Hoorens, S. (2014). Use of childcare in the EU Member States and progress towards the Barcelona targets.
- Möhlmann, M. (2015). Collaborative consumption: determinants of satisfaction and the likelihood of using a sharing economy option again. *Journal of Consumer Behaviour*, 14(3), 193–207.
- Morris, J., Marzano, M., Dandy, N., & O’Brien, L. (2012). Theories and models of behaviour and behaviour change. *Forest Research: Surrey, United Kingdom*.
- OECD Family Database. (2016). *PF4.1: Typology of childcare and early education services*. OECD - Social Policy Division - Directorate of Employment, Labour and Social Affairs. Retrieved from <http://www.oecd.org/social/family/PF4-1-Typology-childcare-early-education-services.pdf>
- OECD Family Database. (2018). *PF3.2: Enrolment in childcare and pre-school*. OECD - Social Policy Division - Directorate of Employment, Labour and Social Affairs. Retrieved from http://www.oecd.org/els/soc/PF3_2_Enrolment_childcare_preschool.pdf
- Ozanne, L. K., & Ballantine, P. W. (2010). Sharing as a form of anti-consumption? An examination of toy library users. *Journal of Consumer Behaviour*, 9(6), 485–498.
- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British Food Journal*, 107(8), 606–625.
<https://doi.org/10.1108/00070700510611002>
- Pakpour, A. H., Zeidi, I. M., Emamjomeh, M. M., Asefzadeh, S., & Pearson, H. (2014). Household waste behaviours among a community sample in Iran: An application of the theory of planned behaviour. *Waste Management*, 34(6), 980–986.
<https://doi.org/10.1016/j.wasman.2013.10.028>
- Papaoikonomou, E., Ryan, G., & Ginieis, M. (2011). Towards a Holistic Approach of the Attitude Behaviour Gap in Ethical Consumer Behaviours: Empirical Evidence from Spain.

- International Advances in Economic Research*, 17(1), 77–88.
<https://doi.org/10.1007/s11294-010-9288-6>
- Porter, T. (1998). *Neighborhood Child Care: Family, Friends, and Neighbors Talk about Caring for Other People's Children*. Retrieved from <https://eric.ed.gov/?id=ED425856>
- Rodd, J., & Milikan, J. (1994). Parental perceptions of early childhood services for pre-primary children in Australia. *Early Child Development and Care*, 101(1), 89–100.
<https://doi.org/10.1080/0300443941010109>
- Rutter, J. (2016). *Innovation in child care*. NESTA. Retrieved from
<https://www.nesta.org.uk/report/innovation-in-childcare>
- Rutter, Jill, & Evans, B. (2011). Informal childcare: Choice or chance. *A Literature Review*. London: Daycare Trust.
- Seibel, V., & Hedegaard, T. F. (2017). Migrants' and natives' attitudes to formal childcare in the Netherlands, Denmark and Germany. *Children and Youth Services Review*, 78, 112–121.
<https://doi.org/10.1016/j.chidyouth.2017.05.017>
- Shen, J., & Saijo, T. (2008). Reexamining the relations between socio-demographic characteristics and individual environmental concern: Evidence from Shanghai data. *Journal of Environmental Psychology*, 28(1), 42–50. <https://doi.org/10.1016/j.jenvp.2007.10.003>
- West, J. (1995). Child Care and Early Education Program Participation of Infants, Toddlers, and Preschoolers. Statistics in Brief.

Annex I: Behavioural mapping survey

Dear participant,

Childcare during summer holidays can be quite a difficult arrangement to set up, as perhaps you may know or have experienced. Most families are spending a lot of time in searching for the 'right' childcare choice that also fits with the household budget. Furthermore, you might also be looking for a regular childcare solution that is close to your home and is flexible with working hours.

With the [Families-Share project](#), we would like to explore new ways of how families can better support each other in arranging child care needs, and this through the usage of ICT. The solution under development supports parents to form groups and share tasks, time and skills with each other. The purpose of this questionnaire is to find out how you are currently organising childcare arrangements, and to investigate to what extent you are interested in this proposed solution. The total fill-in time of this survey is approximately 20 minutes, and your answers will be treated anonymously. Further questions about the procedures of this study can be directed to XXX.

Thank you for your time and effort! The Families-Share team

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Set I - Caring for children

We start with some questions about your current household situation and how you are currently organising childcare or day-care. In this questionnaire, we define child care or day care as the care and supervision of your child(ren) during working hours, weekends or (summer) holidays by either a professional care taker, grandparents, other relatives and friends, either paid or provided for free.

(Q3) What is your current household situation?

- ☐ Couple with children (1)
- ☐ Couple without children (2)
- ☐ Single adult with children (3)
- ☐ Single adult without children (4)
- ☐ Other type of household with children (5)
- ☐ Other type of household without children (6)

(Q4) How many children are in your household?

- ☐ 1 (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ More than 5 (6)

(Q5) How old are your children? Please mark the age range for your child(ren):

| | Under 1 year (1) | 1 - 3 years (2) | 4 - 6 years (3) | 7 - 9 years (4) | 10 - 12 years (5) | 13 - 15 years (6) | 16 - 18 years (7) | Older than 18 years (8) |
|---------|---------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|-------------------------------|
| Child X | | | | | | | | |

(Q24) Are you currently relying on childcare or day-care for your child(ren) aged between 0 and 12 years old?

- ☐ Yes, I'm relying on childcare or day-care for my child(ren) (1)
- ☐ No, I do need childcare or day-care for my child(ren) (2)

(Q25) How many of your children aged between 0 and 12 years old currently need childcare or day-care?

- ☐ 1 (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ More than 5 (6)

(Q26) On which type(s) of childcare are you currently relying per child?

In case of multiple children, please indicate the type of child care from youngest to oldest child:

| | Childcare delivered by professionals (crèche, family-based day care, etc.) (1) | Self-organised childcare (care provided by grandparents, babysitters, older siblings, etc.) (2) | A mix of both types (3) |
|---------|---|--|----------------------------|
| Child X | | | |

(Q27) How often do you need ... ? (never, rarely, sometimes, often, always)

- ☐ Regular childcare (during standard working hours) (1)
- ☐ Irregular childcare (outside standard working hours, in the weekend or during holiday periods) (2)
- ☐ Emergency or last minute childcare

(Q28) This question is about childcare delivered by professionals. Please indicate how often you rely on the following child care services: (never, rarely, sometimes, often, always)

- ☐ Child care in an organised day-care centre or crèche (large child care setting with several childcare professionals)
- ☐ Child care in a family-based childcare (usually 1 childcare provider at the childcare professional's own home)
- ☐ Childcare at home by a professional care-taker (e.g. registered babysitter)
- ☐ Before and after care at school
- ☐ Child care at a private community centre
- ☐ Child care at a public community centre

(Q29) This question is about self-organised child care. Please indicate how often you rely on the following persons for caring and supervising your children: (never, rarely, sometimes, often, always)

- ☐ Childcare by grandparents
- ☐ Childcare by siblings
- ☐ Childcare by other relatives
- ☐ Childcare by friends
- ☐ Childcare by other parents from school
- ☐ Childcare by nannies or au pairs
- ☐ Childcare by babysitters

(Q30) In which occasions are you choosing for childcare provided by grandparents, relatives, friends, or others? You can indicate multiple options:

- ☐ For back-up situations when the day-care or crèche is closed (for children between 0-3 years old)
- ☐ For child care provision before and after school
- ☐ For child care provision during holiday periods or when the school is closed (for children above 3 years old)
- ☐ For ad-hoc or atypical situations (e.g. a social activity, atypical work pattern)
- ☐ For emergency situations

(Q31) In case of an unexpected event or emergency situation, who will you ask to take care of your child(ren)? You can indicate multiple options:

- ☐ Nobody
- ☐ Neighbours
- ☐ Colleagues
- ☐ Friends
- ☐ Family members (grandparents, siblings, etc)
- ☐ Babysitter

(Q32) What type of arrangement are you having for the provided childcare by grandparents, relatives, friends or others? You can indicate multiple options:

- ☐ It is a reciprocal arrangement (if you look after your friend's children and, in return, your friends looks after your children without cash exchange)
- ☐ A time credit system is used (a form of exchange system, where one person volunteers to provide childcare and receives a credit, which can be redeemed for an hour of service from another volunteer)
- ☐ A financial arrangement is made
- ☒ No (financial) arrangement is made
- ☐ Other type of arrangement, namely: (open)

(Q33) To what extent do you agree with the following statements about arranging childcare: (strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree)

- ☐ I find it important that my child(ren) has/have close, warm relationships with care providers
- ☐ I believe that my child(ren) should be cared for in a home setting
- ☐ I believe that my child(ren) has/have better educational experience through professional organised child care services
- ☐ My choice for the type of child care is mostly cost-driven

(Q34) Which characteristics do you take into account when choosing a child care option? Please indicate the three most important characteristics:

- ☐ Perceived quality of the care
- ☐ Cost of the care
- ☐ Flexibility of the care
- ☐ Geographic proximity of the care
- ☐ Potential learning capabilities for my child
- ☐ Potential development of social skills for my child
- ☐ Informal home setting
- ☐ The amount of children
- ☐ Similarities in child rearing ideology

(Q35) To what extent are you and your child(ren) satisfied about the current chosen childcare? (Very dissatisfied, dissatisfied, neutral, satisfied, very satisfied)

- ☐ I am personally ...
- ☐ My children are ...

(Q36) Do you use an online platform or application for supporting your child care activities? You can select multiple options:

- ☐ Bsit
- ☐ The COKIDO online application
- ☐ Kinderoppasdienst van de Gezinsbond
- ☐ PlayDay
- ☐ www.care.com
- ☒ I do not use any online platform or application
- ☐ Other digital platform or application, please describe: (open)

(Q7) Set 2 - Sharing the caring In this section, we explore your opinions regarding the sharing of services or products around childcare with others, either online or offline. Are you sharing childcare arrangements with other parents for the following activities? You can indicate multiple options:

- ☐ Car-sharing to and from school
- ☐ Car-sharing for extra-school or leisure activities (e.g. sports, music)
- ☐ Co-biking parent (a parent supervising children from multiple families biking to school)
- ☐ Walking group to school (a parent supervising children from multiple families walking to school)
- ☐ ☒ None of the above

(Q8) Are you using technology for any of the above mentioned childcare arrangements? Please tell us a bit more about it (optional - open)

(Q9) Are you sometimes sharing or borrowing any of the following items, either online or face-to-face with other parents? (Yes, only online ; Yes, only face-to-face ; Yes, both online and face-to-face ; No, not applicable)

- ☐ Playing material (toys, puzzles, games)
- ☐ Clothing of the children
- ☐ Children books
- ☐ Other caring material (baby cots, high chairs, etc.)

(Q10) Are you sharing a calendar within your household for noting childcare and work related tasks?

- ☐ Yes, an online calendar, namely: (open)
- ☐ Yes, a paper calendar at home
- ☐ We do not share a calendar

(Q11) Apart from this specific context we are currently talking about, have you ever used one of the following sharing services online? You can select multiple options: (Yes, I used it ; No, I know it but did not use it before ; I'm not familiar with it)

- ☐ Accommodation sharing (e.g. couchsurfing)
- ☐ Car sharing (e.g. BlaBlaBla car)
- ☐ Meal sharing (e.g. EatWith)
- ☐ Tool sharing (e.g. Peerby)
- ☐ Task, crafts and time (e.g. TaskRabbit)

(Q12) To what extent do you agree with the following statements about the concept of sharing services, products, time or activities (like mentioned above) with others? (strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree)

- ☐ To my opinion, sharing services, products, time or activities with others is an expression of a modern lifestyle
- ☐ Sharing services, products, time or activities with others allows me to save money
- ☐ I value the social contact when sharing services, products, time or activities with others
- ☐ I enjoy sharing services, products, time or activities with others
- ☐ Sharing services, products, time or activities with others entails a risk for me

(Q13) Set 3 - The Families-Share solution

This part includes questions about the Families-Share solution. The Families-Share solution offers a new way of arranging flexible childcare with a group of parents through a digital solution. Through Families-Share, you would be able to connect with other parents from the local school or neighbourhood, and share time, task and skills with each other related to child care activities.

Did you take part in an activity of the Families-Share project this year?

- ☐ Yes, I participated in a Families-Share activity (e.g. co-creation workshop, interview, focus group, or other event)
- ☐ No, I did not participate in a Families-Share activity

(Q14) To what extent do you agree with the following statements about the suggested solution of Families-Share? (strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree)

- ☐ I like the idea of organising childcare in a familiar and informal context as described by Families-Share
- ☐ I think this idea can only be realized through a fair tracking of hours spent by a parent
- ☐ I think the suggested idea of Families-Share is hard to realize in my local school/neighbourhood because of safety and insurance regulations (3)
- ☐ I think Families-Share is a great opportunity to connect with people in my neighbourhood
- ☐ I have difficulties in trusting other parents who would supervise my children

(Q13) Set 4 - Usage of COKIDO

This part contains questions about COKIDO developed by De Stuyverij. If you are not familiar with COKIDO, you will be automatically forwarded to the next questions.

How many times did you already use COKIDO for arranging childcare during holiday periods?

- ☐ 1 time (1)
- ☐ 2 to 3 times (2)
- ☐ 3 to 5 times (3)
- ☐ More than 5 times (4)
- ☐ I'm not familiar with COKIDO (5)

(Q14) Did you already use the online COKIDO application (www.cokido.org) of De Stuyverij?

- ☐ Yes, I already used the online COKIDO application (1)
- ☐ No, I didn't use the online COKIDO application yet (2)

(Q15) What are your main three reasons for organising child care through COKIDO? Please pick three responses:

- ☐ To have quality time with my child as co-playing parent (1)
- ☐ My child(ren) is/are enthusiastic to go (2)
- ☐ To have child care in a familiar and informal context (3)
- ☐ It allows me to save money (4)
- ☐ The children easily make new friends (5)
- ☐ It saves time (6)
- ☐ I make contacts and friends with other parents in the neighbourhood (7)
- ☐ Different values of parenting are shared (8)
- ☐ Other reason, namely: (9)

(Q16) To what extent do you agree with the following statements around trust building with COKIDO: ? (strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree)

- ☐ When I meet a new parent in the group, it takes time for me to trust that person
- ☐ When there is an issue with my child, I trust the other parents in sharing and discussing it with me
- ☐ I think the group is extremely thorough and careful in making child care arrangements
- ☐ I generally trust other parents with my children
- ☐ I am certain that other parents won't do something that doesn't match with my values and beliefs around parenting

(Q17) Will you continue to use COKIDO in the near future for arranging childcare during holiday periods?

- ☐ Yes, I will (1)
- ☐ I'm not certain yet (2)
- ☐ No, I will not (3)

(Q18) Great that you would like to use COKIDO again! Based on your experience, is there anything that you would like to see improved or added?

(open)

(Q19) Can you give us a bit more explanation about why you are not certain yet to use COKIDO again?

(open)

(Q20) Can you tell us a bit more about why you will not continue to use COKIDO?

(open)

(Q15) Set 5 - Some information about yourself

Finally, to place your answers in the right context, we would like to have some background information about you and your current household situation:

To what extent do you agree about the following statements about the usage of digital technologies (e.g. online shopping, online accommodation booking, smartphone usage, etc.)? (strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree)

- ☐ Learning how to work with digital technologies is easy for me
- ☐ I'm keen in trying out digital technologies
- ☐ In general, I'm not so interested in digital technologies

(Q16) What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ I prefer not to say

(Q17) What is your year of birth?

(Q18) What is your nationality? (in case of dual nationality, please pick your primary one)

(Q19) Where are you born?

- ☐ I'm native born here in my region/city
- ☐ I was born in a different region/city
- ☐ I was born here, but one or both parents was born abroad
- ☐ I was born abroad

(Q20) How long are you already living in Belgium?

(Q21) What is the highest level of education you completed?

- ☐ No schooling completed
- ☐ Primary school
- ☐ Secondary school
- ☐ Bachelor's degree or equivalent
- ☐ Master's degree or equivalent
- ☐ Postgraduate degree or equivalent
- ☐ Other degree

(Q22) What is your current employment status?

- ☐ Student
- ☐ Full-time work
- ☐ Part-time work
- ☐ Self-employed full time
- ☐ Self-employed part time

- ☐ Full-time homemaker
- ☐ Retired
- ☐ Currently unemployed
- ☐ I prefer not to say

(Q23) Last, when looking to the following income scales, what is the total net income of your household per month?

- ☐ I do not know
- ☐ I prefer not to say
- ☐ Less than 799 euros per month
- ☐ Between 800 and 1599 euros per month
- ☐ Between 1600 and 2399 euros per month
- ☐ Between 2400 and 3199 euros per month
- ☐ Between 3200 and 3999 euros per month
- ☐ More than 4000 euros per month
- ☐ I receive a replacement income / welfare subsidy