DELIVERABLE REPORT
D2.2.2.
"Social and Cultural Needs"

collaborative project

MASELTOV
Mobile Assistance for Social Inclusion and Empowerment of Immigrants with Persuasive Learning Technologies and Social Network Services

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Lead contractor for this deliverable	**UOC**
Editor	**Cecilia Gordano and Adela Ros (UOC)**
Authors	**Adela Ros, Cecilia Gordano, Daniel Blanche Tarragó and Ana María González Ramos (UOC)**
Quality reviewer	**Lucas Paletta (JR), Mirjana Artukovic (FLU) and Stephanie Schwarz (CURE-ATE)**

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1. EXECUTIVE SUMMARY

The previous deliverable, Deliverable 2.2.1, compiled an extensive literature review that evidenced how immigrants have strongly adopted new information and communication technologies and in particular, mobile phones, both to settle in new countries and manage their transnational lives.

This Deliverable 2.2.2 presents the results of two different and complementary empirically-based studies on mobile phone use by immigrants. The first one offers the results of the affordability study: an exploratory, cross-country, middle-scale quantitative study to determine whether immigrants would be able to afford the MASELTOV mobile application (henceforth MApp), according to both demographic differences and external market factors.

The second part presents a qualitative in-depth analysis, with focus on a specific demographic group and spatio-temporal setting: Spanish-speaking young adult immigrants recently arrived in London. This research aimed to understand how the process of immigrant arrival is experienced from the perspective of mobile phone users.

Both the qualitative and the quantitative research projects constitute complementary sources of information that aim to contribute to a better understanding of immigrants' mobile phone access and use in order to provide some guidelines for two key areas in the design of the MApp: the user requirement analysis (work package WP2) and the exploitation and dissemination strategy (in WP10).

2. THE AFFORDABILITY STUDY: A QUANTITATIVE APPROACH TO DETERMINING IMMIGRANTS' POTENTIAL TO AFFORD THE MASELTOV APP

1.1. INTRODUCTION

Although it is highly expected that most people worldwide will be smartphone users in the near future (ITU 2014), this fact should not be taken for granted as a common feature of homogeneously defined populations, without taking into account the specificities of distinctive groups in society in their particular sociohistorical contexts. Immigrants are a good case in point, since they have quickly adopted mobile phones due to their socio-technical affordances (e.g. ubiquity and reachability) and relatively cheap access costs, as was discussed in the previous DEL 221. In the short term, the rapid changes in the mobile phone industry might also improve the availability of new resources for future immigrants, such as more modern and affordable devices and services customized for specific immigrant needs (Benton 2014; Vila 2013).

Since the first plenary meetings, the MASELTOV consortium has extensively discussed about whether the project's target group would be enough technologically equipped to use the MASELTOV mobile application (henceforth MApp) in the near future. This burning concern translated into the implementation of a specific study – the affordability study – in order to identify whether immigrants would be really able to afford the MApp. This affordability study substituted the initially planned large-scale study on requirement analysis to be developed at the beginning of the project, as described in Task 2.2 in the DOW. This substitution implied that Task 2.2 was developed at a later moment in the calendar of the project and with a smaller (medium) scale. However, it did maintain the general aim and main characteristics of the task, namely, to get a better understanding of potential MApp users through a quantitative approach.

The affordability study is a quantitative piece of research with the aim of providing a general picture of contemporary immigrants' reality in terms of access to and use of smartphones, taking into account influential factors such as differences in users' gender, age, income and educational level, as well as external factors such as telecom market differences in each national context. Thus the affordability study has two parts, each one contributing to different work packages: the first part is presented in this deliverable and focused on immigrant users, as a contribution to WP2 "User requirement and interaction design". The second part relates to WP10 "Dissemination and Exploitation", focusing on the particularities of telecommunications markets trends in each of the national contexts affecting the cities of interest for the MASELTOV project (Spain-Madrid, UK-London and Austria/Vienna-Graz). In particular, this WP10-related affordability study aims at estimating to what extent potential immigrant users do have the financial capabilities to afford the software and hardware requirements of the MApp in each national context, on the basis of the WP2-related affordability study data (e.g. levels of income and monthly expenses on mobile phones).

The first part of the affordability study focuses on users, addressing two key issues (with their corresponding research questions) as follows:

a) Immigrants' access to the technical requirements needed to run the MApp

   Do immigrants access to mobile internet with smartphone?

b) Immigrants' current use of specific MASELTOV-related services
   - *What do immigrants use smartphones for?*
     - *Do immigrants use smartphones for translating texts, finding their way around the city and/or looking for information, among other uses?*

1.2. METHODOLOGY

The affordability study was an exploratory, cross-country and quantitative study that based on statistical analysis with both descriptive and inferential purposes. The former served to outline the target population profile (e.g. how many immigrants have a monthly mobile phone plan?). The latter served to explain mobile phone access and use in terms of classic sociological variables, mainly age, gender, length of stay and monthly income.

The study based on a survey distributed to 248 immigrants in the main cities where the MASELTOV project focuses on: London, Madrid and Graz/Vienna[1]. NGO partners MRC (London), Fundeso (Madrid) and Danaida (Graz) worked as points of entry to the realities of the MASELTOV target users in each city. In this sense, it did not rely on a representative sample but on a group of respondents purposively addressed according to the project' definition of its target users, based on the following criteria:

- Gender: Men and women
- Origin: Third-country nationals
- Native language and place of residence: Arab in Madrid, Turkish in Graz and Spanish in London
- Time of arrival: less than 5 years
- Working age: 18-65

The affordability study was a joint effort of diverse partners within the MASELTOV consortium, each of which assumed different tasks and responsibilities, as detailed in the work calendar presented in the Table below.

[1] Since there were specific difficulties to reach the Turkish-speaking respondents in Graz, the consultation also extended to Vienna. For the same reason, the final sample in Austria also presented slight differences in the distribution of gender (more women) and length of stay (including respondants with more than 5 years of stay).

Table 1. Work calendar of the affordability study Part 1.

Task	Date	Partner in charge
Finalization of questionnaire	December 2013	UOC
Implementation online questionnaire	January 2014	ATE (ex CURE)
Data collection (offline and online)	January-February 2014	MRC, Fundeso and Danaida
Integrated data set available for analysis	March 2014	ATE (ex CURE)
Statistical analysis	July 2014	JR
Reporting	August 2014	UOC
Dliverable 2.2.2	September 2014	UOC

UOC elaborated the questionnaire[2] for the survey in Spanish (for respondents living in London) and translated it into English in order to facilitate its translation and Turkish. The questionnaire consisted of multiple-option questions on the following topics:

- Individual profile (demographic variables).
- Connectivity from the mobile phone.
- Type of mobile phone (smartphone? What kind?).
- Contract with service provider (postpaid/prepaid subscription, flat rate, etc.).
- Monthly expenses on mobile phone use/telecommunications.
- Usage of specific MASELTOV-related services (e.g. navigation, translation and job search, etc.).

NGOs MRC (London), Fundeso (Madrid) and Danaida (Graz) distributed the questionnaires among the target user group and collected the answers in each city from 13th January to 21st February 2014. This process included the possibility of registering the answers in two formats of distribution: online and offline, adapting to the needs of respondents and their relation with each NGO. In Madrid, an Arab-speaking interviewer from Fundeso collected all responses with pen and paper because their target population was more easily reached in this way. However, NGOs based in Graz and London relied on both offline and online formats, after partner ATE (ex CURE) implemented the online version of the questionnaire in Turkish and Spanish for one month. It is important to mention that the online distribution of the questionnaire was always

[2] See Annex A.

accompanied by the contact of a NGO person of reference who offered support in case of doubt and supervised the completion of the task. Respondents were recruited on a voluntary basis and no incentives or rewards were offered for they might end up having negative effects in the recruitment process (Frey and Oberholzer-Gee 1997).

Together with UOC, ATE coordinated the collection of data and provided an integrated data set available for analysis, merging the information from the three cities. The final sample was composed by a total amount of 243 cases[3] as follows: 81 Turkish-speaking persons living in Vienna, Austria (56 women and 25 men), 82 Arab-speaking persons living in Madrid, Spain (39 women and 43 men) and 80 Spanish-speaking persons living in London, UK (40 women and 40 men).

UOC proposed the model for the statistical analysis, consisting of three steps:

1. The first step included
    - Frequency distributions of the whole sample (N= 243) of the dependent variables V11 ("smartphone ownership") and V14 ("mobile internet").
    - Frequency distributions in contingency tables for each question of the questionnaire across each country (V10), with a chi-square ($\chi 2$) test for each table[4].

2. The second step covered a cross-table analysis of each country sub-samples (V10), according to some cross-tabs variables and with a $\chi 2$ test for each table, to establish associations between different variables.

3. The third step consisted of logistic regression models for the dependent variables V11 ("smartphone ownership") and V14 ("mobile internet"). The models should be built for each country (V10) using as independent variables: Gender (V1), Age (V2) Length of stay in the destination country (V5), Education (V6) and Income (V9). In addition, odds ratio coefficients would facilitate the interpretation of the models.

The working hypotheses in this study were based on the literature as well as in previous empirical qualitative research. They are detailed in the following table:

[3] Five cases were eliminated from the original database due to inconsistencies caused by respondents' place of birth (they were young adults born in a European city, thus they were second generations who did not match the MASELTOV target group).

[4] The relatively small sample size implied that significant statistical differences could not always be tested with a $\chi 2$ test (Pearson), therefore for cellcounts less than 5 Fisher's Exact test was used instead.

Table 2. Working hypothesis to explain mobile affordability.

Determinants of mobile affordability (mobile phone, smartphone, mobile internet)	
Independent Variables	***Hypotheses***
Gender (V1)	Men have higher possibilities that women to have a smartphone
Age (V2)	Age decreases affordability
Language (V4)	Some cultural origins lead to higher usage of smartphone than others
Length of stay in the destination country (V5)	The longer the residence in the country, the higher the probability to have a smartphone
Education (V6)	The higher the education level, the higher the probability to have a smartphone
Income (V9)	The higher the economic level, the higher the probability to have a smartphone
Place of residence (V10)	Some countries of residence lead to higher probabilities of having a smartphone

JR executed the statistical analysis, relying on software *SAS 9.3* (frequency distributions) and *R* (logistic regression).

1.3. RESULTS[5]

Most of the respondents surveyed (78%) were aged between 25 and 54 and had lived in each of the cities where they were contacted for less than 5 years. Regarding their educational profile, most informants have achieved the basic educational level, having completed primary education (19%), secondary education (21%) and college (24%). In the extremes of the spectrum, we find that only a 3% of survey respondents had no formal education at all and that only 4% had got a post-graduate degree, though 14% had a University degree.[6]

Regarding monthly income, Figure 1 shows that the great majority of respondents earned less than 2000 £/€,[7] what outlines a population profile with quite limited resources to afford a decent living in the European capital cities.

[5] The quantitative results show slight variations in the total amount of respondents in each city due to uneven response rates across questions, since not all informants answered all the questions.

[6] It is worth mentioning that the sample in Madrid had more highly-educated respondents than the respondents from the other cities involved in the study, so that 21 out of the 35 University graduated informants and all of the 4 post-graduated ones where contacted in that city.

[7] For the sake of clarity and in order to avoid decimal numbers, we did not consider currency conversions in the questionnaires and kept the same amounts for Euros and Pounds.

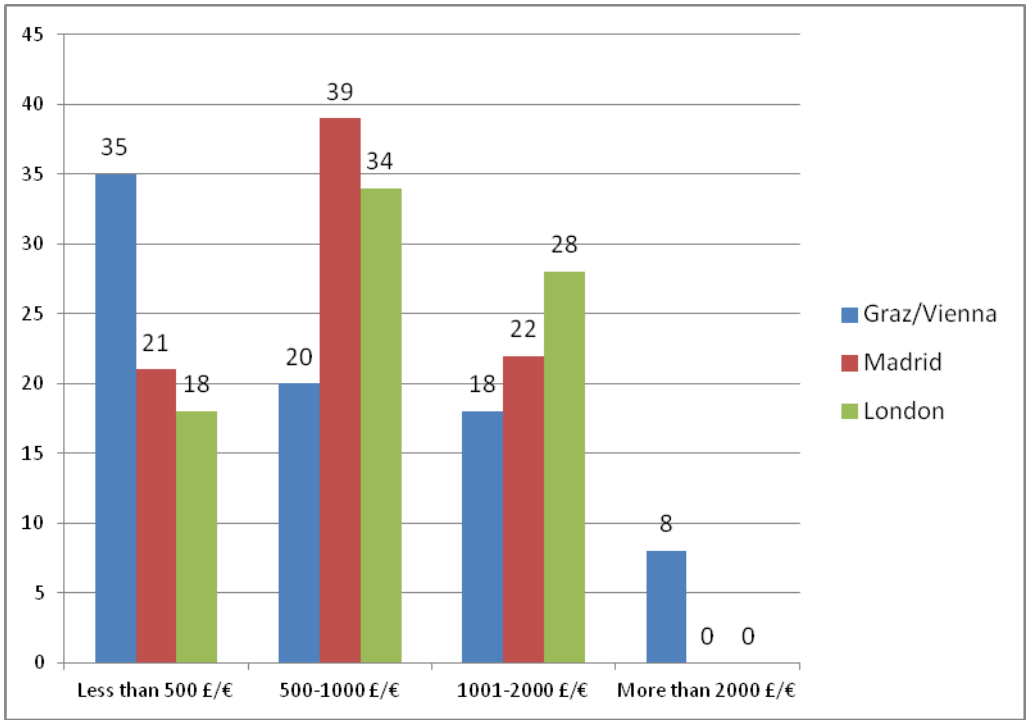


Figure 1. Approximately, how much do you earn per month? (Frequencies) (N=234).[8]

Despite having limited economic resources, respondents were not deprived of modern mobile devices. Results evidenced that a great proportion of respondents owned a smartphone, as shown in Figure 2. This fact confirms the high penetration of these mobile devices in the immigrant population under study.

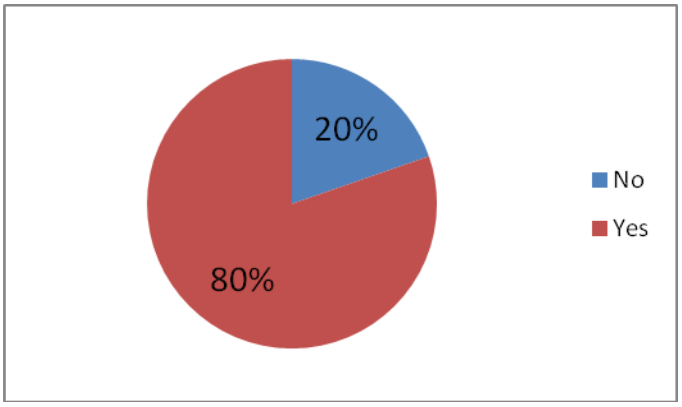


Figure 2. Ownership of smartphones among immigrants (Percentage) (N=234).

[8] Informants earning more than 2000€ were only 8 people living in Austria, most of whom had been living there for more than 5 years.

There were no big differences in smartphone ownership between cities of residence, except from the case of Graz, where there was a higher proportion of respondents without one, as shown in Figure 3.

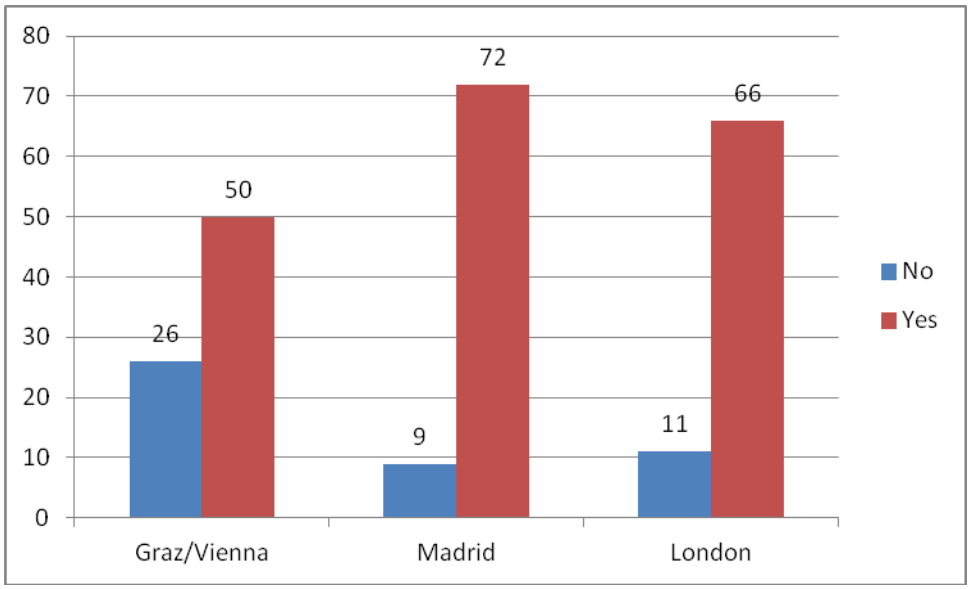


Figure 3. Immigrants with smartphone according to city of residence (Frequencies) (N=234).

However, this difference did not repeat in the case of mobile phone ownership, a device most informants had, independently of their city of residence. In general, we can conclude that mobile devices are relatively affordable for users. However, it is also worth considering the reasons that the very few informants who did not have any mobile phone gave for their situation. They amounted for 9 out of a universe of n=243. One person (in Graz) could not afford it, 6 informants said they did not need it (4 in Graz and 2 in London), and two did not know how to use it (one in Madrid and one in London).

Although smartphones were widespread among informants in the three cities of enquiry, mobile phones are still the most common device immigrants have, especially for Turkish-speaking immigrants in Graz/Vienna. The causes for this phenomenon are multiple[9] but we can outline some of them by taking into account other questions. First, we asked the 20% of respondents of the whole sample who did not have a smartphone what their main reasons for not having one were. Figure 4 summarizes the answers of these 46 observations, according to their city of residence.

[9] Among the multiple causes for having mobile phones but no Smartphones, there are national markets' particular features, as it is explored in the second part of the affordability study related to WP 10.

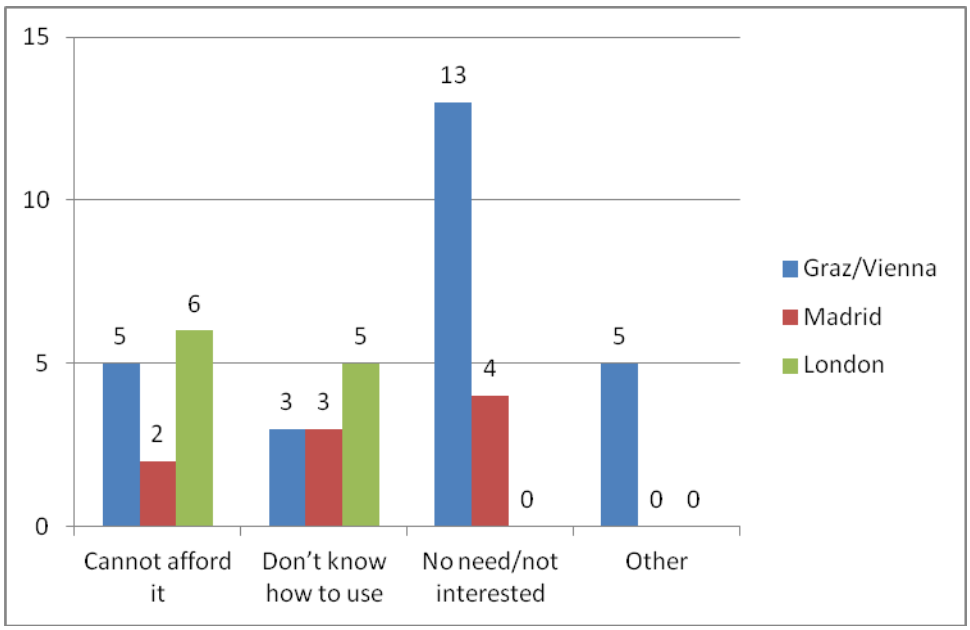


Figure 4. What is the main reason you don't own a smartphone? (Frequencies).

Some people could not afford smartphones in their budget and others did not know how to use them. However, in Graz/Vienna, there were much more people who answered that they "do not need" or that they are "not interested" in having a smartphone. On the one hand, the high number of "No need/not interested" answers repeated across other questions in the information collected in Graz/Vienna, what might indicate not a particular significance here but a more general trend in answering the questionnaire. On the other hand, informants from Graz/Vienna presented a significantly high number of people who shared the smartphone with others, as summarized in the Figure 5 below. This suggests that since in this particular context smartphones are not used as individual devices but in a joint way with someone else (probably a close relative or friend), there is a lower perception of its need (see Figure 4 above) in comparison with the other city-based respondents. The causes, however, escape the scope of the current study.

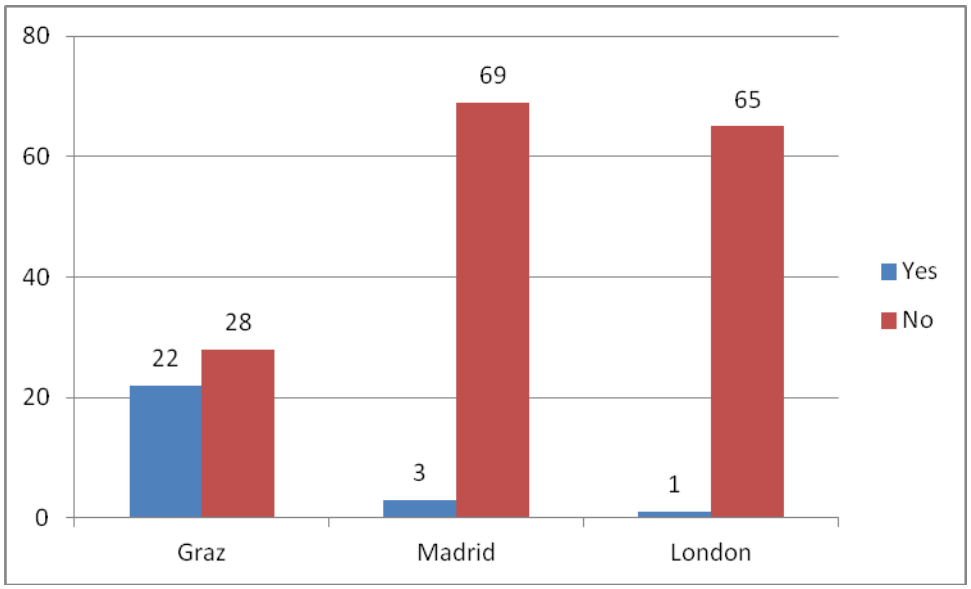


Figure 5. Do you usually share a smartphone with other persons? (E.g. with family, friends, etc.) (Frequencies).

Regarding the subscriptions that immigrant informants had with telecom service providers, monthly subscriptions (55%) slightly exceeded prepaid ones (45%). Differences between countries were not very outstanding, except from the case of Austria, where monthly subscribers almost doubled prepaid ones.[10] This distinction between prepaid and post-paid subscriptions is important for the future development of the MApp because it will impact on future users' experiences. Monthly subscribers must afford a fixed expense per month (which requires a minimum economic stability) but they often get better deals, including more convenient call rates per minute and unlimited data plans that give them the freedom to use, download and update their apps anytime. By contrast, prepaid subscribers have more limited user experiences and would be more exposed to miss services that require permanent internet connections and/or consume big amounts of data.

[10] Again, this will be explored in the second part of the affordability study related to WP 10.

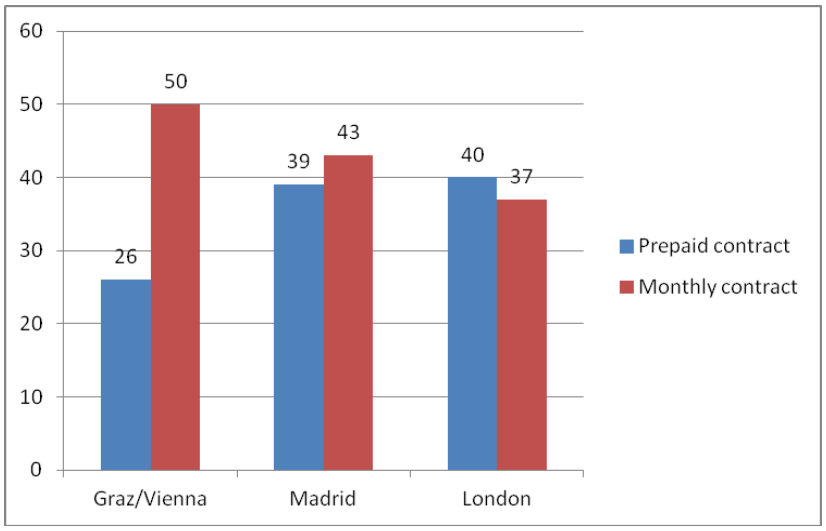


Figure 6. What kind of mobile contract do you currently have (with your network provider)? (Frequencies).

The major proportion of people who owned a smartphone (80%), repeats in the access to mobile internet subscription (n=188). The 20% who did not access mobile internet gave different reasons for it, especially the inability to afford these services, as shown in the following Figure.

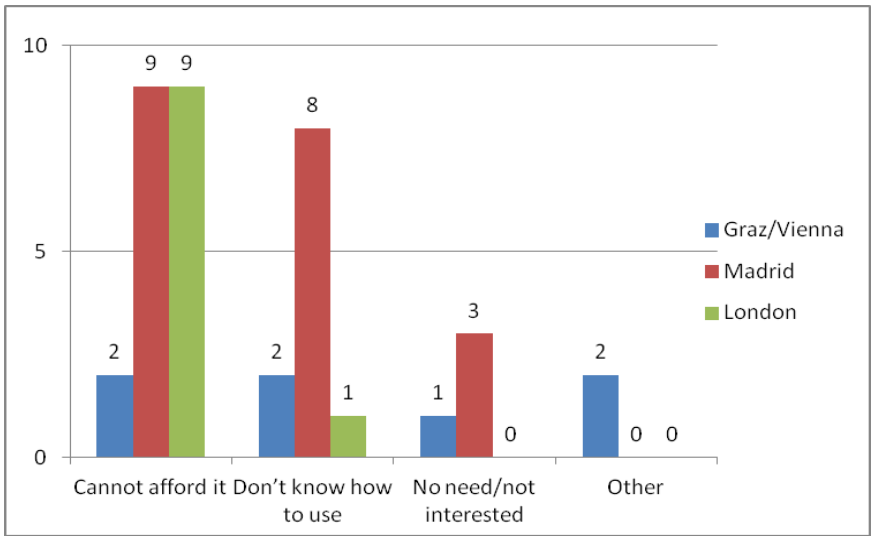


Figure 7. What is the main reason you don't have access to internet from your mobile phone? (Frequencies) (n=37).

From the 38 respondents who did not have a mobile internet subscription, 35 of them relied on free internet Wi-Fi connection, especially those living in Madrid (n=21) and London (n=10). In the light of these results, Madrid seems to be the city where people

have more problems to afford a mobile internet subscription and depend on sporadic Wi-Fi connections. In Vienna, there were only four Wi-Fi users. This might have to do with the preference for monthly subscriptions, much higher in comparison with prepaid ones (as shown in Figure 6), that allow users to access quite good and often unlimited data plans. In all, it is still surprising that in Vienna, where respondents had the lowest incomes per month (see Figure 1 above), there were the highest number of monthly subscriptions (see Figure 6) and the lowest number of responses involving the inability to afford internet mobile (see Figure 7).

Regarding mobile applications (apps), a 94% of respondents had downloaded one but only 41% had paid for it, while a 58% had not paid anything. When informants had spent some money on apps, this was at minimum costs, as shown in the Figure below. On the one hand, this result confirms users' preferences to try free apps. On the other hand, it also shows that quite an important percentage of respondents have also paid something for an app they considered it was worthy. This might leave an open door to consider the business model of the MApp, since both options – paid and free – would arouse interest among potential users.

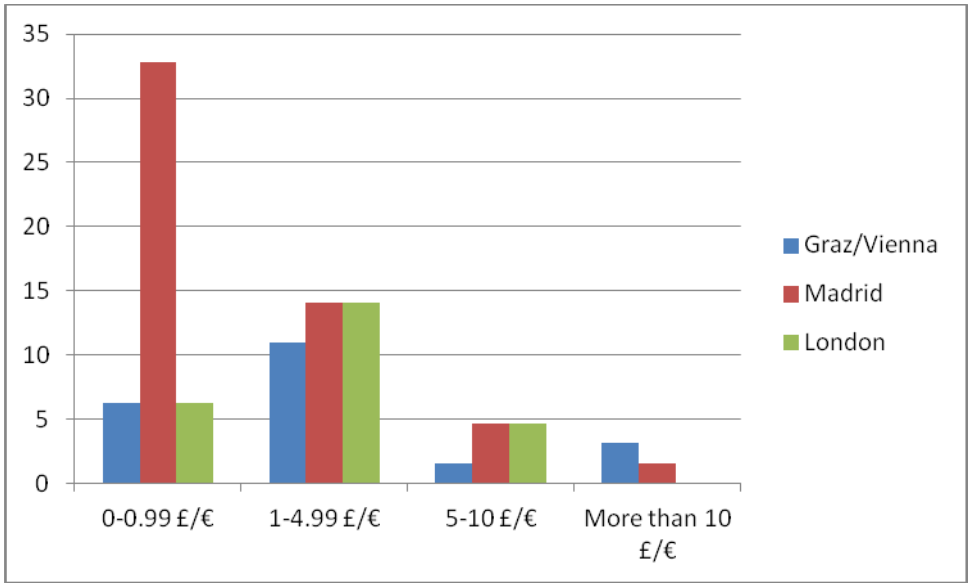


Figure 8. What is the maximum amount of money you paid for an application? (Frequencies).

Regarding the use of the mobile phone for different MASELTOV-related services, we can conclude that people are already using them quite intensively, though in a fragmented way. This means that the MApp will offer widely accepted services integrated in one same tool. The two most popular uses were related to social network sites (83%) and making pictures (82%). Other uses were less widespread (between 63% and 72%) but there was a clear intention of experiencing them (between 15% and 36%). That is the case of searching for various kinds of information (addresses, transportation and public services), as shown in the following table.[11]

[11] Since there were no significant differences between countries, we present the final percentage of all three countries.

Table 3. Have you ever used your mobile phone for any of the following activities? (%)

	YES	**NO** (and don´t want to)	**NO,** BUT WOULD like to	**Don't know**
Check social network sites (Facebook, Twitter, etc.)	83%	7%	9%	2%
Make pictures	82	9	6	3
Search for addresses	72	9	15	4
Translate words you did not understand	69	7	19	6
Search for information on transportation	67	9	17	7
Search for information on public services (e.g. health, employment, education)	63	9	20	9
Learn a language	48	9	36	7

It is worth mentioning the relatively low percentage of informants who were already using their mobile phones to learn a foreign language and their willingness to do it. This suggests potential users' strong predisposition to adopt mobile-assisted language learning tools, what constitutes a good opportunity for the MApp to match this need.

Regarding the variables that might help explain the usage of a mobile device, the logistic regression models for each city yielded different results.[12] In the case of Graz/Vienna, the age and education of the interviewees (in that order of importance) seem to explain in about 25% the variance in the usage of these devices. Odds ratio points that as age increases, odds of having a mobile device decreases; whereas the opposite happens when the level of education increases. Concerning Madrid, the most important variables seem to be level of education and level of income (in that order). Both variables can explain up to 39% of the variance of the model, which combined with other statistics, seems to be a better fit for this case. Likewise, as educational level increases, chances of having a mobile device increases too (education seems to increase much more this likelihood than in the case of Graz/Vienna); but the level of income shows to be more influential at chances of having a mobile device: by every increase in the level of income, the likelihood of having a mobile device increases strongly.[13] As for the case of London, the variables that better (and significantly) help to predict

[12] See Annex B.

mobile device tenure are age and level of income (in that order), which help explain 37% of the variance of the model (which is a fairly moderate fit).[14] As in the previous two cases, as age decreases, the odds of having a mobile device increases; whereas as level of income increases, so do the odds (in this case, level of income shows to be more determinant than in the case of Madrid as for tenure of a mobile device).

Regarding to mobile internet subscriptions, results yielded the significancy of more variables than for the tenure of a mobile device.[15] Graz/Vienna did not meet the minimum criteria for a logistic regression, so no model testing could be carried out for this case. Regarding Madrid, level of income, age, and length of duration in the host country play a significant role in predicting internet subscirption (in that order, being level of income specially significant). Odds of subscribing to mobile internet increase strongly the longer interviewees have been living in the host country: by every increase in their length of stay, odds rise up to 9.81. At a lower degree, the more educated the interviewee is, the greater the odds of having an internet subscription. Lastly, and in a weaker degree, the younger the person, the greater are the odds. Regarding London, the model shows to be very weak since there are relatively many missing cases, which yields innacurate and flawed results. Gender, age, and level of income appear to be relevant variables in predicting internet subscription for mobile phones, but as in the previous analysis, only level of income and age remain to be significant. Nonetheless, this model shows to be quite weak, suggesting the realization of further research in the furute for this particular variable and city. However, it should be noted that these interpretations, regarding subscription to internet for a mobile phone, should be considered with caution as the amount of missing cases is relatively high (which in fact left Graz/Vienna out of any analysis).

Finally, as for smartphone tenure, the model (which applies to all three countries) yields age and level of education as the most relevant and significant predictors (in that order).[16] Also, whether the interviewee lives in Madrid or in London shows to be a significant predictor (although at a much lesser degree than age and level of education).
An interesting overall result for all models and outcome variables is that gender shows to be not a likely predictor of usage of neither mobile devices, nor mobile internet, nor smartphones. All the other considered predictor variables showed to have a significant influence in the different models and cities, which is never the case of gender.

To sum up, there was not a unique statistical model for each country, since in each one there were different explanatory variables. The logistic regression analysis served to confirm as well as reject the initial hypothesis in this study, as shown in the table below.

[15] See Annex C.

[16] See Annex D.

Table 4. Determinants of mobile affordability (mobile phone, smartphone, mobile internet).

Independent Variables	***Hypotheses***
Gender (V1)	Men have higher possibilities that women to have a smartphone --> *No. There seems to be no significant difference between men and womenin this regard.*
Age (V2)	Age decreases affordability --> *Yes. There is a significantly negative coefficient in the model that confirms that elder people have more difficulties to afford their mobile devices and services.*
Language (V4)	Some cultural origins lead to higher usage of smartphones than others --> *The realisations of variable V4 (Language) are concentrated in one category dependend on the city of residence. So it makes no sense to include this variable into the models. Based on this data situation we are not able to answer this question.*
Length of stay in the destination country (V5)	The longer the residence in the country, the higher the probability to have a smartphone --> *No. No significant influence of duration.*
Education (V6)	The higher the education level, the higher the probability to have a smartphone --> *Correct, there is a significantly positive coefficient in the model.*
Income (V9)	The higher the economic level, the higher the probability to have a smartphone -->*It is city specific: in Vienna there is no significant influence of income. In Madrid and London: the higher the income the higher the posibility to own a Smartphone.*
Place of residence (V10)	Some countries of residence lead to higher probabilities of having a smartphone --> *Yes, for example respondents living in London had a significant higher probability of having a smartphone than those living in Vienna and Madrid.*

1.4. CONCLUSIONS

The first part of the current deliverable presented the first part of the affordability study, focused on immigrants' reality in terms of access to and use of smartphones, as a contribution to WP2 on "User requirement and interaction design".
After surveying 248 immigrants in the main cities of interest for the MASELTOV project − London, Madrid and Graz/Vienna – it is possible to state that a vast majority of respondents is currently able to afford the basic technical requirements to run the MApp, namely, a smartphone with access to mobile internet. Indeed despite having quite limited economic resources, a 80% of respondents were not deprived of investing in modern mobile devices and mobile connectivity.

However, it is also worth considering the reasons that the 20% who did not access these services gave for their situation as well as the differences between the analyzed groups in their respective cities of destination. The reasons for not having a smartphone and/or mobile internet connection varied across cultural groups and their respective cities of destination, but it was remarkable that in the case of mobile internet the main reason was, for all informants, their inability to afford such service. This indicates that many people within the target user group are still using mobile devices in a basic way, for

traditional telecommunication services such as making/receiving phone calls and messages. In this context, Wi-Fi connections proved to be an important resource in the light of limited (prepaid) or absent mobile internet subscriptions among users.

The logistic regression models evidenced that there were not significant differences between men and women in the tenure of smartphones and mobile internet connections. However, access to these technical requirements necessary to run the MApp was limited by two main variables: age and level of education. In particular in Madrid, but also extensive to London and Graz/Vienna, the youngest and the better educated immigrants had higher probabilities of having a smartphone with mobile internet.

Regarding uses, informants were intensively using their mobile devices for checking social network sites, make pictures and search for addresses. To a lesser extent, they also used them for making translations and looking for information more generally. Interestingly, the less used services were also marked as the most aspirational ones, namely the most desired ones to be used in the near future ("No, but I would like to"), in particular the mobile language learning service.

In general, there was not a unique statistical model for each city, since in each one there were different explanatory variables. There are probably other relevant factors involved in explaining immigrants' experiences with mobile technologies, related to the characteristics of each national market, some of which will be considered in the second part of this affordability study.

Apart from the specificities in each city of destination, immigrants' experiences with mobile devices in a new society are highly conditioned by the particularities of their cultural backgrounds. The second part of this deliverable offers a qualitative analysis of the case of Spanish-speaking young adults arriving in London that proves to be complementary to the borader, quantitative approach of the affordability study.

3. UNDERSTANDING IMMIGRANTS' MOBILE PHONE USE AT ARRIVAL: A QUALITATIVE APPROACH

2.1. JUSTIFICATION AND AIMS

At the turn of the century, there are two important processes converging in contemporary societies: geographical mobility and digitally mediated interactions. Increasing numbers of people are living in a country different from the one they were born (Castles and Miller 2003) and they rely on a vast array of informational and communication technologies to plan their trips, settle in new places and keep bonds across borders.

In this context, UOC designed a qualitative research project in order to understand how the process of arrival is experienced from the perspective of immigrants as mobile phone users. In accordance with the MASELTOV interests, UOC research focused on a specific demographic group and spatio-temporal setting: Spanish-speaking young adult immigrants recently arrived in London. The main research question addressed *how do*

young adult Spanish-speaking immigrants use mobile technologies at their arrival in London? The answer implies covering issues related to the purposes of mobile communication, users' strategies and choices, their usage patterns as well as the difficulties and opportunities they face on arrival in a new society.

This research study also covered research a set of sub-questions, organized according to three thematic blocks as follows:

a) Purposes

- What do young adult immigrants generally use their mobile phone for?
- Have the current mobile phone uses changed substantially in comparison with their use in societies of origin?

b) Strategies

- Do they keep multiple numbers from different countries?
- Do they keep the same mobile equipment?
- How do they choose the telecom provider and type of subscription?
- How do they afford the costs or mobile technologies?

c) Usage patterns

- How do they use mobile technologies for basic arrival needs such as orientation, community building, information search and language learning?
- Are mobile technologies used in mobility moments (i.e. transportation, away from home)?
- Are mobile applications frequently used? Which mobile applications are preferred and why? Which ones are already being used?

The main hypothesis in this research project is that contemporary experiences of immigration are highly influenced by technologically advanced practices, which in turn also change the ways of arriving in new places. In this context, the moment of arrival is defined as the first two years in the process of immigration. As a second hypothesis, this research project argues that different social experiences and backgrounds shape different ways of dealing with mobile phone use on arrival. This means that the various intersections of cultural origin, migratory culture, social class, and gender configure different experiences of mobile phone use on arrival. In addition, our third hypothesis is that age influences the way immigrants use their mobile phone as a tool at their arrival: while young people are early adopters of technology and constitute a particularly interesting group of users to grasp up-to-date perceptions, uses and experiences with the latest technological devices (Livingstone 2002; Oksman 2005), older arriving immigrants have more difficulties to understand how the use of technologies should be organized and articulated at their arrival.

Target user group

This study focused on Spanish-speaking, Latin American-born immigrants for two main reasons. First, they are one of the target user groups of the MASELTOV project. Secondly, since we aimed to grasp empirical evidences of immigrants arriving to a new society, we selected a quite widespread case occurring at the moment of doing the fieldwork in the second half of 2013: Spanish-speaking, Latin American-born people arriving in the city of London after residing some years in Spain, until the economic downturn forced them to move again. By the time this research project was conducted, it was not common to find Spanish-speaking, Third-country national immigrants recently arriving in European cities due to restrictive immigration policies aimed at closing the borders and avoiding the arrival of immigrants from outside the European Union (Geddes 2003). Thus most Latin American immigrants were re-migrants coming from Spain - as Spanish citizens with a Spanish passport - taking advantage of the intra-European mobility regime.

Latin Americans have been described as "an emergent community in London" (Block 2008) and "an under-studied yet increasingly important 'new [im]migrant group' in the UK" (McIlwaine 2010). However, their real dimensions as one of the most relevant immigrant groups in London have not been acknowledged due to "shortcomings in the way official statistics are collected" (McIlwaine, Cock, and Linneker 2011:7), including the difficulties to count those Latin Americans who have entered the UK with the Spanish nationality. Recent data has estimated that there were "113,500 Latin Americans in London in 2008 that includes regular, irregular and second generation groups. This makes Latin Americans a significant part of the city's population, comparable in size to other large migrant and ethnic groups such as the Polish" (McIlwaine, Cock, and Linneker 2011:7). The same report estimated that "61% of the UK Latin American population resides in London" and that most people of the two most numerous Latin American origins in the UK came from Spain: "almost three-quarters of Ecuadorians and half of Colombians who had resided elsewhere before travelling to the UK had previously lived in Spain" (McIlwaine, Cock, and Linneker 2011:43). For this reason, in the sample of this research work, Ecuadorians and Colombians were especially addressed.

Crisis and remigration

Historically, political and economic crises have had enormous impacts on migration flows (Koser 2010; Bevelander and Petersson 2014). Economic and political crises have often worked as push factors for immigrants, causing people to move abroad in search of better opportunities.

After living for some years in Spain and becoming quite well integrated into Spanish society and institutions, many Latin American-born immigrants found themselves specially affected by the direct and indirect consequences of the economic crisis. Thus they had to move to another country in an effort to overcome the increasing difficulties to afford a living in Spain, turning migration into their active response to their failed expectations to achieve stability and a good quality of life there.

Many young adults' contemporary arrival in London was directly linked to the difficulties they faced in Spain as a consequence of harsh structural conditions and the lack of future perspectives, for being both immigrants and young. This is particularly

evident in the labour market, where as immigrants, they usually get precarious jobs in the informal economy (often underpaid and hardly regulated) or they are negatively affected by unemployment rates. For instance, in 2011, foreign people´s unemployment rate in Spain was 35.76% while natives had an unemployment rate 13 points below that (INE 2012a). If differentiated by nationality, Moroccan people were the group most affected by unemployment, followed by Colombians and Ecuadorians (Roig and Recaño-Valverde 2012:263).
Young adult immigrants are also affected by one of the highest youth unemployment rates in Europe: 56.5% (Eurostat 2013). As a consequence, many young people living in Spain (both Spanish-born and nationalized) are moving abroad in search of new opportunities, or have the intention of doing so (González Ferrer 2013; Rodríguez San Julián 2014). According to official data, in 2012 a 7,6% more of Spaniards emigrated in comparison with 2011 and their main destinations were first Ecuador, then United Kingdom, France and Germany (INE 2012b).

Apart from escaping from hopeless scenarios, people usually have a multiplicity of reasons to move, beyond the economic (King 2002), many of which are personal goals and individual projects, more easily achieved in a dynamic and vigorous city such as London. As the context of arrival, London can be defined as a global city with an outstanding performance as a financial, cultural and technological hub, ranked among Europe's 10 smartest cities (Cross Innovation 2013). It is a highly digitalized city at all levels, evidenced in the national strategy of the British government to have a wide coverage of online public services, a burgeoning ICTs start-up cluster in east London for private entrepreneurs and a "95% public Wi-Fi coverage" (BBC 2012), to name just a few examples. London is also well known for the multicultural profile of its population. Having a long history as an immigrant city, it continues to be a favourite destination for numerous people travelling from all over the world. According to the last census, "it had about 3 million foreign-born residents in 2011 (about 37% of the total London population and 40% of the total foreign-born population of England and Wales)" (Krausova and Vargas-Silva 2013).

2.2. METHODOLOGY

Research techniques:
The current research project drew on a qualitative methodology mix. The fieldwork was held in London, in three stages during July, September and October 2013 and it combined 25 semi-structured interviews with participant observation in relevant sites of arrival, as listed below:

- Commercial public areas in North London, where many Latin American young immigrants gather (Figure 9)
- the Migrants Resource Centre (MRC), a well-known NGO committed to advise newcomers in London and partner in the MASELTOV consortium (Figure 10)
- "Casa Ecuatoriana" in London, a building depending on the Ecuadorian consulate that offers various administrative services as well as English

courses and a room with six laptops with internet connection that anybody can access for free and unlimited time (Figure 11)

- A hostel located in the area of Notting Hill, famous for being one of the favourite places for first arrival of many Spanish-speaking immigrants (Figure 12)

Figure 9. Colombian bar in "Pueblito Paisa", a Latin American mall in Tottenham.

Figure 10. Migrants Resource Centre, Pimlico.

Figure 12. Casa Ecuatoriana, King's Cross – St.Pancras.

Figure 11. A hostel in the city of London.

Interviewees were contacted in these observation sites and asked to refer us to other potential informants through snowball sampling. They were informed about the project and signed the corresponding consent form, in accordance with the MASELTOV Ethics Manual (DEL 1.4) and European research standards. Apart from interviews and participant observation, we complemented the data collection with a casual accompaniment of one informant, from the airport to an agency dedicated to get accomodation, job interviews and/or English courses to recently arrived Spanish-speaking immigrants. We also interviewed providers of various key services at moments of arrival, mainly: MRC staff, the hostel desk clerk, shop assistants and waiters who were in touch daily with Latin Americans recently arrived in London.
Semi-structured interviews were held with 25 Spanish-speaking persons aged between 18 and 45 years, who had arrived in the British capital less than two years before the interview.

Our informants:
20 informants were born in a Spanish-speaking Latin American country - mainly Ecuador (11), Colombia (6), Venezuela (1), Perú (1) and Paraguay (1) – and they have taken advantage of their European entitlements to move freely across the continent.

The other five informants were born in Spain and constituted a *contrast group* in order to explore how different socio-economic and cultural backgrounds affect the ways in which technology is used as a social resource at the arrival moment. Although these two roughly defined groups had diverse socioeconomic profiles, motivations and expectations, their physical mobility was highly influenced and accompanied by digital resources, platforms and practices.

Arrival and its methodological challenges:
In immigrants' experiences, the moment of recent arrival offers some methodological challenges for researchers since it is both ephemeral and difficult to grasp. But it is also the perfect spatial setting to understand on the spot the most urgent needs and coping strategies that people have once they step on a new country.

While immigration presupposes "taking up residence for a certain minimum period" (Castles 2000: 270) in the society of arrival, people's patterns of mobility are usually much more complex and include various directions and temporalities in which "often the intention (to emigrate for good, or to return sooner or later) is quite different from the outcome" (King 2002: 93). This means that the patterns, motivations and futures of mobility are difficult to fully grasp in the narratives of recently arrived informants, which are plausible to quickly switch in a short period of time.

Next section presents a summary of informants' accounts that constitute the main findings of this research work. It evidences a wide range of situations of first arrival based on the multiplicity of motivations to migrate and the different socio-economic resources each people had, but also some similiarities, such as immigrants' few preparations and spontaneous decisions to migrate.

2.3. RESULTS

2.3.1. Going to London with multiple motivations, different resources and few preparations

Most informants expressed that their main motivations to move to London were related to economic needs and lack of employment, since they were undergoing difficult situations in the place where they lived before (Spain). Despite the predominance of economic difficulties, this was not the only motivation to migrate and, in some cases, it served as a springboard to accomplish other projects, such as learning English or having a different experience abroad in a city that apparently offers a dynamic labour market and plenty of chances to ascend the social ladder. However, people´s expectations did not always meet reality and one important factor in determining each one's future was the availability of economic, social and cultural resources.

In terms of economic resources, there were diverse situations among informants: most of them had their own savings and sometimes counted on their parents' financial support to cover their daily expenses; in other cases, informants had to economically support other family members, namely parents, children and siblings scattered between their country of origin, Spain and London. In all cases, interviewees complained about the excessively high costs of living in London and highlighted the efforts they made to live with little money, for example, by sharing accomodation.

In terms of social resources, understood in the sense of "social capital",[17] informants often tried to contact somebody at the destination place before arriving there, so they could get some support during the first period of their stay. There were very few cases in which informants arrived alone, without having previous social contacts in London. The most outstanding case is a Colombian boy who did not know anybody in London. After a bad experience travelling on his own to the USA, he decided to hire the services of an agency dedicated to get accomodation, job interviews and /or English courses to recently arrived Latin American Spaniards. These kinds of services offered by the private sector and customized for Spanish-speaking people in London seem to be burgeoning and profitable in times of high demand, as shown by various recently set-up websites that target potential customers already in Spain.[18] In terms of cultural resources, previous education constituted a differential feature to get a good quality job. However, English language skills were essential to succeed in London and proved to be a major barrier for informants, no matter their educational level.[19]

Most informants did not have a good command of the English language and very few were able to understand and speak it fluently. This was the main barrier to successfully settle in London and in particular, to access good quality jobs, independently of their diferent educational levels. All informants expressed their interest in learning or improving their English knowledge but they also found it difficult to balance their scarce incomes, long working days and spare time to enrol in formal training or courses. A Colombian woman (32), who moved to London with her 8 year-old daughter just two months before the interview, expressed the difficulties she had to learn English in a formal and systematic way: "I haven't been able to start studying because of time, the girl and everything... well, it´s quite impossible right now". Like many other informants, she had a full-time job in the service sector and not much time to study, but owned a smartphone that served multiple purposes, including translating words from English to Spanish and viceverse.

There were numerous examples of how ICTs in general and smartphones in particular, proved particularly useful to support immigrants with solving the challenges they faced when moving from country, including language learning and translations. Next sections

[17] "Social capital stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes 1998).

[18] Some examples are http://trabajareninglaterra.org, www.thelondondream.com and http://www.londonworkexperience.com

[19] See Annex E for a detailed list of informants' profiles in terms of educational level, English level and occupation before and after immigration.

are dedicated to analyze in more depth the role ICTs play in the process of immigration, distinguishing between two key moments: departure from the country of origin and arrival to the new country.

2.3.2. ICTs and departure: the preparation of immigration plans

Both for being young adults in crisis times and for becoming immigrants, the informants in this study faced multiple uncertainties in their everyday lives. Many times, the process of immigration was marked by spontaneous decisions and little preparation, but in all cases, ICT played a key role to support the different immigrants' strategies. In this sense, interviewees' accounts revealed that their migratory projects were marked by at least two sets of ICT-related decisions that could start well before departure and continue during the moments of arrival and settlement: technological equipment and information access.

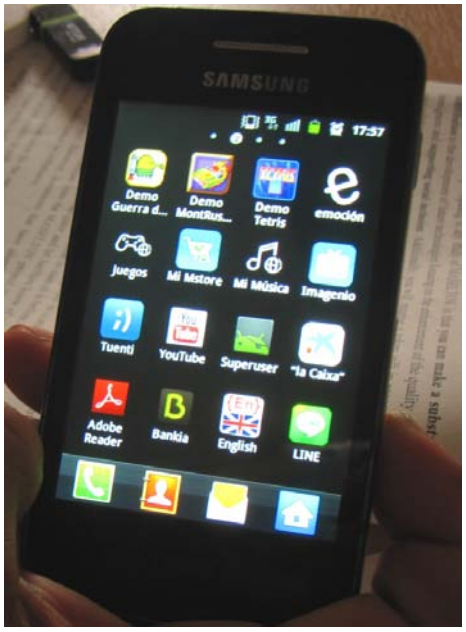
Dealing with technological uncertainties

Decisions on technological equipment required immigrants to choose which technological devices they would take with them from origin and which ones they would acquire in the new destination, if any. Almost all informants arrived with a mobile phone in their pockets and were quiet well technologically equipped on their arrival in London, as summarized in Table 5.

Table 5. Technological equipment of Spanish-speaking immigrants in London.

		Spanish –speaking immigrants in London (n=25)	
		Latin American-born (n=20)	Spanish-born (n=5)
Technological equipment	smartphone	19	4
	pay -as-you-go	12	3
	monthly plan	6	2
	internet at home	17	5
	mobile internet	16	4
	computer/Laptop/tablet	18	4

In most cases, they took "Spanish" smartphones to London, which usually had two main destinies: either they "became" British through a usually prepaid subscription with a British provider or they remained as eventual points of internet connection through Wi-Fi networks at jobs, accommodation places and public spaces. In the last case, it was not unusual to find informants who had two mobile devices: the smartphone for connecting to Wi-Fi and another one, usually a feature mobile phone, with a British mobile phone number to be contacted mainly for job-related issues, as shown in the third photo below.



a.Lara's British smartphone (21, Colombia)

b. Alex's Spanish smartphone (31, Spain)

c.Jorge's Spanish smartphone for Wifi connectivity and British feature phone. (25, Ecuador)

Figure 13. **Examples of mobile phone tenure among three Spanish-speaking informants in London.**

If the smartphone broke, was lost or stolen, informants kept on using the feature one with the hope that, in the near future, they could get another one. In many cases, they could not buy a new device immediately due to economic constraints so they had to "survive" with limited phone calls and SMS, even if they felt quite isolated or disconnected from their peer group who actively used online/mobile communication, as various informants revealed.

Immigration required that each person adjusted their technological environment to the process of moving from one country to another one. This adjustment led to what we identified as "technological uncertainties", a situation related to ensuring the availability of digital resources and services on arrival to a new country with its particular scenario of telecommunication providers, market rules, prices and plans. Technological uncertainites arise when international immigrants move from one country to another, and they need to take several decisions as users of technology, mainly regarding which

ICT devices to take, which ones to buy on arrival and how to use each of them in the new society. Although all informants were already well technologically equipped in Spain – they had personal computers and mobile devices with internet connection –, in London many found themselves in a position of technological disadvantage or partial disconnection, in which basic features such as internet access or even a mobile phone were not always available. This could mean a real handicapp in a highly informatized society such as the London one, in which job applications and public offices usually rely on electronic communications. The technological possibilities of recently arrived immigrants could be drastically reduced in the process of moving between countries due to the initially limited resources and the need to re-start a life elsewhere. Some informants had left their personal computers in Spain but in London they realized how much they needed them, in particular if they lacked internet mobile.

The resolution of technological uncertainties after arrival is highly related to informants' personal contexts and future plans. In this sense, technological uncertainties can be interpreted as indicators of the plans and expectations to settle temporarily or more definitely in destination. For instance, the type of subscription chosen (prepaid or post-paid), whether to keep or to get rid of the Spanish mobile phone number and/or subscription once being in London, and whether to keep the Spanish telecom service, namely, to have it working normally or turn it off momentarily.

Some informants, who had kept active their Spanish mobile phone service in London, showed some concern on the high costs of using it in the British territory.[20] This worsened if having a prepaid subscription, as a Paraguayan woman (27) said. She had two Spanish smartphones with pay-as-you-go plans because she cherished the freedom to use each device with different SIM cards, independently of the national provider: "I´ve always had [a mobile phone with] a prepaid card and it´s better, because this way I can take it anywhere I want. When I go to my house [in Paraguay] I take it too and it works because I put another SIM card."

Immigrants consider prepaid plans as more appropriated for their needs when moving from one country to another one, giving them more freedom and independence during their geographical moves, which can have multiple patterns in time (e.g. more ore less temporary) and space (e.g. back and forth routes).

In Spain, almost all informants used to have postpaid plans, which are convenient for intensive use of the services and require a minimum stay in the territory covered by the service provider. However, once in London, most informants started with a pay-as-you-go plan that ensured them a basic connectivity for a minimum cost. Then, once they felt more economically stable, they would choose a monthly plan that, as many of them said, was quite accessible in London as these excerpts evidence:

[20] However, this might be well over in the near future, since by the time of this report is being written, new European policies promise to abolish roaming, the expensive charges for using the mobile network abroad (Garside 2014).

- "here [in London] it´s very easy, they [companies] give you the cell phone and a quite good contract" (woman, 21, Colombian)

- "the good thing about London is that communication is cheaper, for example, we pay £33, right? And we have 2000 minutes and unlimited internet" (couple, Spain)

Accessing relevant information on arrival

ICTs played a key role for immigrants in mobilizing useful resources on arrival, such as accesing to relevant information and instant communication through computers and mobile devices, in particular mobile phones and smartphones. Although ICT devices, uses, practices and purposes are often mixed, multi-modal and convergent (Jenkins 2004) we can roughly distinguish three main uses in our informants' accounts, as shown in the following table.

Table 6. Technological uses, purposes and means.

uses	purposes	means
Information access	for the practicalities of arrival (e.g. jobs search, accomodation, etc.)	official websites, forum, blogs, Google maps, Google translator, mobile phone calls
	News	national and local newspaper sites, social network sites
Communication	with close people (family, partners and close friends)	mobile phone calls and SMS, Skype, Whatsapp, Facebook, email
	with acquintances and casual others (neighbours, friends, employers, etc.)	mobile phone calls and SMS, social network sites
Entertainment	music, series, films, reading, etc.	social network sites, websites

Decisions on information access involved whether immigrants searched for information related to the place of destination before travelling there or just on arrival, as well as what information was the most meaningful and which sources the most trustful. In any case, both issues were influenced by immigrants' planned (or expected) length of stay abroad as well as degree of plannification of their migratory projects.

We found most informants envisioned their stay in London as temporary. This temporariness, however, varied between interviewees according to their motivations to migrate and the extent to which they have defined a specific goal to be accomplished in the new city (e.g. learning English and/or earning money).

Different interviewees' strategies could be located in a spectrum that goes from careful plannification to spontaneous improvisation. Careful plannification involved taking action *before* departure. For instance, regarding technological equipment, most

informants who had a smartphone in Spain cancelled their subscription with the Spanish provider and unlocked the device before travelling to London in order to have the freedom to use it there with a British provider.

While extensive planification of the trip was not common among informants, there were some exceptions, including some planning related to upgrading their technological equipment before travelling as a necessary tool for their new lives in London. Thus Isaias (28, Spain) used to have a feature phone in his home country: "[it was] a Nokia dumbphone, super old one… but I had it for a lot of years, and it was just for messages and that´s it. And for *toques*" (missed calls). He defined himself as "quite anti-technological" but decided to invest in a smartphone before travelling to London, as a way to face the uncertainties of his future and the difficulties of settling in a new country through ensuring himself a good connectivity:

> *I´ve become aware of my situation… you never knows where you will end up being (…) Well, you know that at least with a smartphone you're connected anytime (…) I know that I´ll have some problems, well, with this [smarphone] at least I have a relief. At least I earn some money, I don´t need to be looking for telephone booths, I don´t have to be worried about credits, [I know] that anytime for any purpose, I can have anything I want, I can tell anybody whatever I need to.*

His words evidence the importance of staying connected and of being always reachable, a concern shared by most informants who had to continue their family and social lives, despite being physically far away.

Regarding the collection of information on the place of destination, some informants did extensive online research before moving, in order to choose their destination, estimate their monthly budget or learn some useful phrases in English. Others looked for basic information such as how to get cheap accomodation, the National Insurance Number[21] and job offers. The most common sources of information were web forums, blogs and social network sites which content was provided in Spanish by other Spanish-speaking immigrants who had the experience before. Public services websites were less popular, mainly because they were only in English and few people could read them on their own.

Although having previous information about the place of destination is often necessary and desirable, many informants recognized they had not looked for it in advance. Most informants simply relied on their contacts on arrival (e.g. friends and/or relatives already living in London) who could guide them in their way through the new society, including issues such as how the public transport system works or what mobile phone company has the best data plans.

In some situations of apparent loneliness and disconnection (e.g. when contacts were absent, online resources not easily available, and/or English a communicative barrier),

[21] The *National Insurance Number* is given to those citizens with "the right to work or study in the UK" to be part of the British social security system (UK Government 2014).

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informants would look for assistance among Spanish-speaking peers, as Jorge's (25, Ecuador) account evidences below: "(…) the first day it was tough. Then, well, next day I could intuit [the way back home] (…) I was lucky to find a boy –I think he was Venezuelan–, he helped me to get my bearings". This example evidences the importance of ethnic communities as key sources of useful information on arrival

2.4. CONCLUSIONS

This report focused on Latin American-born young adult immigrants' experiences of recent arrival in London, with a particular interest in their mobile phone use. Arrival to a new society is a moment full of uncertainties in all spheres of life, as evidenced in informants with different profiles who, however, shared common experiences of feeling excited about the future but also lost and disoriented, missing family and friends and facing economic constraints. In all cases, ICTs played a key role before and after arrival, helping immigrants to mobilize useful resources on arrival such as accesing relevant information and instant communication through computers and mobile devices. Most informants, however, did not look for information on the place of detination in advance, but relied on their contacts on arrival (e.g. friends and/or relatives already living in London) who could guide them their way through the new society,

Besides providing useful information and communication resources on arrival, digital technologies also generated what we called "technological uncertainties", including which ICT devices to take, which ones to buy on arrival and how to use each of them in the new society. Although all informants were already well technologically equipped in Spain – they had personal computers and mobile devices with internet connection –, in London, many found themselves in a position of technological disadvantage or partial disconnection, in which basic features such as internet access or even a mobile phone were not always available.

In general, mobile phones and smartphones were the most popular devices informants brought with them from Spain. Their use, however, did not stand alone but in combination with other digital resources such as laptops and even tablets, all devices that allow for digital convergence.

In this complex scenario, there is a period of indefinition, exploration or just precaution, in which immigrants live in an in-between situation, dealing with various telecom service providers, plans and devices across two or more countries. It was not unusual to find informants who had two mobile devices: the smartphone for connecting to Wifi and another one, usually a feature mobile phone, with a British mobile phone number and pay-as-you go plan (prepaid subscription) to be contacted mainly for job-related issues.

Results suggest that the experience of immigration tends to downgrade immigrants' technological resources in the first moment, since moving from one country to another one makes them to assume more risks and renounce to basic comfort items. However, this is an initial moment that can last for a few weeks or months, and then it generally improves because good connectivity is a basic need for immigrants and soon becomes a priority.

Apart from using mobile phones for the practicalities of arrival, these devices also become key resources to maintain family bonds and keep in touch with friends located in societies of origin and other parts of the globe. In particular, Whatsapp emerged as the most popular mobile application to keep in "perpetual contact" (Katz and Aakhus 2002) with close family members and friends living in Spain, Latin America, the United Kindom or elsewhere.

In particular, this report highlights the big barrier that language constitutes for people to rapidly accomodate to the life dynamics in London and the great predisposition informants expressed towards learning English. However, most of them also found it difficult to balance their scarce incomes, long working days and spare time to enrol in formal training or courses, a drawback that mobile language learning tools could compensate.

Mobile apps are already part of informants' everyday life and there is a predisposition to use and try apps for different purposes. However, informants tended to download and use free apps. In this sense, informants can be defined as mobile app *users*, but not *buyers*. Many of them were already using their smartphones for various of the purposes considered by the MASELTOV application, although they did it in a dispersed, non integrated way (this will be one of the Mapp innovations).

4. CONCLUDING REMARKS AND RECOMMENDATIONS

The empirical evidence collected through both the quantitative and qualitative research projects presented in this DEL offered a comprehensive and nuanced collection of data that allows MASELTOV partners to be closer to the target user group. This final section aims to sumarize the conclusions of the two projects in order to outline the most pertinent issues and recommendations accordingly. It is structured aroun three key areas: "user requirements", "services" and "exploitation and dissemination strategy".

User requirements

The importance and widespread use of mobile devices and mobile connectivity for diverse immigrants in the European cities under study (London, Madrid and Graz/Vienna) was confirmed by qualitative and quantitative results. Despite economic constrains and low incomes, immigrants invest in these technologies because they perceive them as very necessary in their migratory processes. There is still a minoritatian group of immigrants who cannot access mobile internet on a regular basis, either because they cannot afford unlimited data plans when recently arrived or they do not know how to use it, among other reasons. Some of them rely on sporadic Wifi connections, while others have a limited data traffic. **RECOMMENDATION: For this reason, we think that the MApp should be sensitive towards all immigrants and make special efforts to offer them the possibility of using as many services as possible without requiring a continuous internet connection.**

Services

Language barriers in a foreign country limit immigrants' real chances to improve their socio-cultural, economic and political rights as well as to fully contribute to the society of destination. Various interviewees who participated in the qualitative study in London

expressed their frustration for not understanding English nor having time or money to afford formal courses, and how this negatively affected their job searches and possibilities to improve salaries and working conditions. The quantitative study showed that most informants used their mobile devices to translate words but most did not use it to actually learn the new language in more systematic ways, though a high percentage said they "would like to" do it. **RECOMMENDATION: This finding confirms the high expectations informants have with regard to overcoming language barriers through mobile applications. Although this might be interpreted as part of a more general optimism towards technological novelties in contemporary societies, MASELTOV should take advantage of this predisposition** predisposition to adopt mobile-assisted language learning tools, **and continue to invest efforts in providing resources to match this need.**

Exploitation and dissemination strategy

The quantitative study conducted in the three cities of interest for the project showed that there was not a unique statistical model for the three of them, since in each city there were different explanatory variables. There are multiple relevant factors involved in explaining immigrants' experiences with mobile technologies related to the the specificities in each city of destination (e.g. the characteristics of each national market) and the particularities of immigrants' cultural backgrounds. **RECOMMENDATION: The MASELTOV project should always bear in mind the heterogeneity and diversity inherent to its target user group and its exploitation strategy should be adapted accordingly in each case (e.g. considering cultural origin and culture of destination).**

While the qualitative results showed young adults in London did not pay for mobile apps but only downloaded free ones, the quantitative results, which covered a broader spectrum of profiles, suggested that users were also keen on paying little money for Mapps. **RECOMMENDATION: Regarding the MApp exploitation strategy, we think both options – paid and free – would arouse interest among potential users. However, since most recently arrived immigrants usually face multiple economic contrains, precarity and uncertainties in their lives, we suggest the MApp should not charge users, at least at the beginning of its dissemination.**

The qualitative study evidenced that already settled immigrants are key sources of information for newly arrived ones, including technological issues (e.g. for choosing a telecom provider). **RECOMMENDATION: MASELTOV should take "ethnic enclaves" and already settled immigrants into account in the exploitation and dissemination strategy.**

Regarding the use of the mobile phone for different MASELTOV-related services, we can conclude that immigrants are already using them quite intensively, though in a fragmented way. This means that the MApp will offer widely accepted services integrated in one same tool. **RECOMMENDATION: The dissemination of the MApp should emphasize what is new and really different about it in comparison with other already existing services (such as Google Maps or Google translator).**

5. ANNEX

4.1. Annex A: Questionnaire for the affordability study

YOUR MOBILE PHONE &YOU. ***You are invited to collaborate*** *in a European research project that aims at* ***supporting immigrants*** *in establishing life in a new country. The MASELTOV project develops specific applications for* ***smart phones*** *focused on facilitating recently arrived immigrants with access to useful information, language learning and social networks. We kindly request your voluntary participation in this research study by* ***answering this brief and anonymous questionnaire*** *on your own experience as a mobile phone user. You can make a substantial contribution to the development of future technologies applied to* ***the enhancement of the quality of life of immigrants*** *and support social inclusion!* ***PLEASE ANSWER THE QUESTIONS IN NUMERICAL ORDER, EXCEPT WHERE INSTRUCTED TO DO OTHERWISE.***

A. ABOUT YOU

1. Gender: □ Woman □ Man

2. Your age _____

3. Country of birth _____

4. What is your mother tongue?
□ Spanish □ Turkish □ Arab □ Other

5. How long have you lived in the country you currently live in?

□ Less than 1 year □ 1 to 5 years □ More than 5 years

6. What is your educational level? (Please, select ONE)

□ No formal education
□ Primary education
□ Secondary education, compulsory education
□ Post-secondary or college education
□ Vocational diploma (but not university degree)
□ University degree
□ Post-graduate and Master's degree
□ Doctorate/PhD

B. ABOUT YOUR MOBILE PHONE

7. Do you own a mobile phone?

☐ Yes Go to 9.

☐ No Go to 8.

8. What is the main reason you don't own or have access to a mobile phone? (Please select ONE)

☐ Cannot afford it
☐ Don't know how to use it
☐ No need/not interested
☐ No time/too busy
☐ I have a disability that prevents me from using it
☐ Other

Go to 22.

9. Do you own a Smartphone?

☐ Yes Go to 10.

☐ No Go to 11.

10. What is the operating system of your Smartphone?

☐ Android
☐ iOS (iPhone)
☐ Other
☐ I don't know

Go to 12.

11. What is the main reason you don't own a Smartphone? (Please select ONE)

☐ Cannot afford it
☐ Don't know how to use it
☐ No need/not interested
☐ No time/too busy
☐ I have a disability that prevents me from using it
☐ Other

Go to 19.

12. Do you usually share a Smartphone with other persons? (e.g. with family, friends, etc.)

☐ Yes

☐ No

13. Do you have an internet subscription for your mobile phone?

☐ Yes Go to 16.

☐ No

14. What is the main reason you don't have access to internet from your mobile phone? (Please select ONE)

☐ Cannot afford it
☐ Don't know how to use it
☐ No need/not interested
☐ No time/too busy
☐ I have a disability that prevents me from using it
☐ Other

15. Do you use free internet wifi connection?

☐ Yes

☐ No

Go to 19.

16. Have you downloaded apps in your mobile?

☐ Yes

☐ No Go to 19.

17. Did you pay for any of the applications?

☐ Yes

☐ No Go to 19.

18. What is the maximum amount of money you paid for an application?

☐ 0-0.99 €

☐ 1-4.99 €

☐ 5-10 €

☐ More than 10 €

19. What kind of mobile contract do you currently have (with your network provider)?

☐ Prepaid

☐ Monthly contract

20. Have you ever used your mobile phone for any of the following activities?

	YES	NO (and don't want to)	NO, BUT WOULD like to	Don't know
a. check social network sites (Facebook, Twitter, etc.)	☐	☐	☐	☐
b. search for addresses	☐	☐	☐	☐
c. search for information on transportation	☐	☐	☐	☐
d. search for information on public services (e.g. health, employment, education)	☐	☐	☐	☐
e. translate words you did not understand	☐	☐	☐	☐
f. learn a language	☐	☐	☐	☐
g. make pictures	☐	☐	☐	☐

21. Approximately, how much do you spend on your mobile phone monthly?

☐ 0-10 € ☐ 11-30 € ☐ 31-50 € ☐ More than 50€

22. Approximately, how much do you earn per month?

☐ Less than 500€ ☐ 500-1000 € ☐ 1000-2000 € ☐ More than 2000 €

23. Finally, where (city, country) do you live now? _____

Thank you very much for your participation!!

4.2 Annex B. Logistic Regression Models of tenure smartphone by immigrants in Graz/Vienna, Madrid and London

Annex B.1. Logistic Regression Model for Graz/Vienna

```
             Estimate Std. Error z value Pr(>|z|)
(Intercept)  2.30018    1.50423   1.529  0.12623
v_2         -0.11116    0.04078  -2.726  0.00641 **
v_6c         0.61446    0.24830   2.475  0.01334 *

    Null deviance: 97.648  on 75  degrees of freedom
Residual deviance: 73.393  on 73  degrees of freedom
  (5 observations deleted due to missingness)
AIC: 79.393
```

Odds Ratios & Confidence Intervalls

```
                   OR     2.5 %      97.5 %
(Intercept) 9.9760083 0.5628648 229.7794857
v_2         0.8947936 0.8183702   0.9629193
v_6c        1.8486526 1.1777603   3.1675506
```

Pseudo R^2

```
mcFadden R2= 0.2483896
```

ChiSquare(Deviance,df)

```
p-value = 0.4650
```

Annex B.2. Logistic Regression Model for Madrid

```
            Estimate Std. Error z value Pr(>|z|)
(Intercept)  -4.8322     1.9398  -2.491  0.01274 *
v_6c          1.0709     0.3444   3.109  0.00188 **
v_9c          1.6250     0.7661   2.121  0.03391 *

    Null deviance: 56.511  on 80  degrees of freedom
Residual deviance: 34.749  on 78  degrees of freedom
  (1 observation deleted due to missingness)
AIC: 40.749
```

Odds Ratios & Confidence Intervalls

```
                     OR        2.5 %     97.5 %
(Intercept) 0.007969009 8.998282e-05  0.2277739
v_6c        2.918136565 1.620419e+00  6.5312825
v_9c        5.078319809 1.307817e+00 28.5531033
```

Pseudo R^2

```
mcFadden R2= 0.3850991
```

ChiSquare(Deviance,df)

p-value = 0.9999

Annex B.3. Logistic Regression Model for London

```
            Estimate Std. Error z value Pr(>|z|)
(Intercept)  3.62310    1.37855   2.628 0.008584 **
v_2         -0.15495    0.04177  -3.710 0.000207 ***
v_9c         1.86431    0.67816   2.749 0.005977 **

    Null deviance: 63.158  on 76  degrees of freedom
Residual deviance: 40.082  on 74  degrees of freedom
  (3 observations deleted due to missingness)
AIC: 46.082
```

Odds Ratios & Confidence Intervalls

```
                    OR     2.5 %      97.5 %
(Intercept) 37.4535927 3.1469632 800.9301441
v_2          0.8564558 0.7782036   0.9209886
v_9c         6.4515032 1.9460974  30.0810221
```

Pseudo R^2

```
mcFadden R2= 0.3653622
```

ChiSquare(Deviance,df)

p-value = 0.9995

4.3. Annex C. Logistic Regression Models of immigrants' accsess to mobile internet in Madrid and London

Annex C.1. Logistic Regression Model of immigrants' accsess to mobile internet in Madrid

```
             Estimate Std. Error z value Pr(>|z|)
(Intercept) -4.44379    2.23048  -1.992 0.046337 *
v_2         -0.08594    0.03977  -2.161 0.030695 *
v_5c         2.28438    1.06576   2.143 0.032079 *
v_9c         1.92199    0.56339   3.411 0.000646 ***

    Null deviance: 86.924  on 71  degrees of freedom
Residual deviance: 58.681  on 68  degrees of freedom
  (10 observations deleted due to missingness)
AIC: 66.681
```

Odds Ratios & Confidence Intervalls

```
                    OR        2.5 %      97.5 %
(Intercept) 0.01175128 7.150655e-05   0.5954419
v_2         0.91765090 8.398420e-01   0.9875143
v_5c        9.81956764 1.386391e+00 104.8903197
v_9c        6.83451381 2.503589e+00  23.5447715
```

Pseudo R^2

```
mcFadden R2= 0.3249085
```

ChiSquare(Deviance,df)

```
p-value = 0,7825
```

Annex C.2. Logistic Regression Model of immigrants' accsess to mobile internet in London

```
                          Estimate Std. Error z value Pr(>|z|)
(Intercept)                4.04387    2.34305   1.726   0.0844 .
factor(v_1label)Woman     -3.34781    2.98783  -1.120   0.2625
v_2                       -0.16814    0.09192  -1.829   0.0674 .
v_9c                       1.07890    0.57920   1.863   0.0625 .
factor(v_1label)Woman:v_2  0.13879    0.09882   1.404   0.1602

    Null deviance: 56.143  on 65  degrees of freedom
Residual deviance: 49.975  on 61  degrees of freedom
  (14 observations deleted due to missingness)
AIC: 59.975
```

Odds Ratios & Confidence Intervalls

```
                                  OR        2.5 %       97.5 %
(Intercept)               57.0467577 0.7492707399 1.002885e+04
factor(v_1label)Woman      0.0351614 0.0000607761 9.741174e+00
v_2                        0.8452320 0.6867996052 9.974429e-01
v_9c                       2.9414336 1.0075405925 1.022253e+01
factor(v_1label)Woman:v_2  1.1488800 0.9570589167 1.425744e+00
```

Pseudo R^2

```
mcFadden R2= 0.1098626
```

ChiSquare(Deviance,df)

```
p-value = 0,8423497
```

4.4. Annex D. Logistic Regression Model for response smartphone (V14)

```
                        Estimate Std. Error z value Pr(>|z|)
(Intercept)              1.44715    1.27077   1.139 0.254786
factor(v_1label)Woman    0.09266    0.42591   0.218 0.827776
v_2                     -0.10027    0.02199  -4.559 5.13e-06 ***
v_5c                     0.14646    0.40886   0.358 0.720183
v_6c                     0.64497    0.17292   3.730 0.000192 ***

factor(v_10label)Spain   1.33681    0.62910   2.125 0.033590 *

factor(v_10label)UK      1.25285    0.59661   2.100 0.035733 *


    Null deviance: 231.95  on 233  degrees of freedom

Residual deviance: 161.94  on 227  degrees of freedom

  (9 observations deleted due to missingness)
AIC: 175.94

OR & Confidence Intervalls
                               OR     2.5 %     97.5 %
(Intercept)             4.2509802 0.3591161 54.1484495
factor(v_1label)Woman   1.0970869 0.4743760  2.5500637
v_2                     0.9045887 0.8647366  0.9431162
v_5c                    1.1577269 0.5128641  2.5826908
v_6c                    1.9059305 1.3871530  2.7461455
factor(v_10label)Spain  3.8068985 1.1268153 13.6009748
factor(v_10label)UK     3.5003176 1.1072501 11.7275841
```

4.5. Annex E. Informants' profile in the qualitative study.

name (fictious)	age	place of birth	last completed education	occupation in Spain	current occupation in London	level of English
Ana	32	Colombia	Secondary education	waitress, flyerer	waitress	low
Maria	19	Ecuador	Secondary education	student	cleaner and student	low
Belén	35	Ecuador	Secondary education	nurse, then laundry employee	cleaner	low
César	23	Colombia	Post-secondary non-tertiary education	studying	looking for a job	medium/high
Darío	46	Colombia	University (PhD Medicine)	doctor	doctor	high
Felipe	19	Ecuador	Secondary education	student and weekend job with his uncle (workman)	first cleaner, now receptionist and studying English	medium
Judith	33	Venezuela	Post-secondary non-tertiary education	waiter	waitress	low
Joaquín	31	Ecuador	Secondary education	various (waiter, construction sector)	three jobs (restaurant and other)	low
Jorge	25	Ecuador	Post-secondary non-tertiary education	various (waiter, construction sector)	looking for a job	low
Javier	28	Ecuador	Secondary education	employee in a bakery	handyman, cleaner	medium/low
Lara	21	Colombia	Secondary education	student and employee in a leisure park	market shop assistant, cleaner and study	medium/low
Milena	35	Colombia	Secondary education	n/d	waitress	low
Marcos	23	Ecuador	University	student - summer job as kitchen porter	kitchen porter	meduim/high
Pilar	25	Ecuador	University	shop assistant and student	clothes shop assistant	low
Roberto	19	Ecuador	Secondary education	waiter, extra in advertising	cleaner	low
Rosana	27	Paraguay	Primary education	cleaning and nanny	visitiing a friend, learning English	low
Soledad	29	Colombia	Secondary education	restaurant manager	burger bar, hostel and clothes shop assistant	low
Elena	19	Ecuador	Secondary education	student	cleaner and student	medium
Vicente	27	Peru	Secondary education	salesperson, waiter, computer technician and student	volunteer at hostel	meduim/high
Wilson	45	Ecuador	Primary education	construction worker	cleaner	low
Alex	34	Spain	Post-secondary non-tertiary education	marble worker, bakery, waiter (no contract)	volunteer at hostel	low

Isaias	28	Spain	University	technician, then unemployed	catering	high
Irina	24	Spain	University	community manager	waitress	medium/high
Lucas	30	Spain	Post-secondary non-tertiary education (FP)	carpenter	looking for a job	medium/high
Yvonne	31	Spain	University	junior biologist	waitress and private teacher	high

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