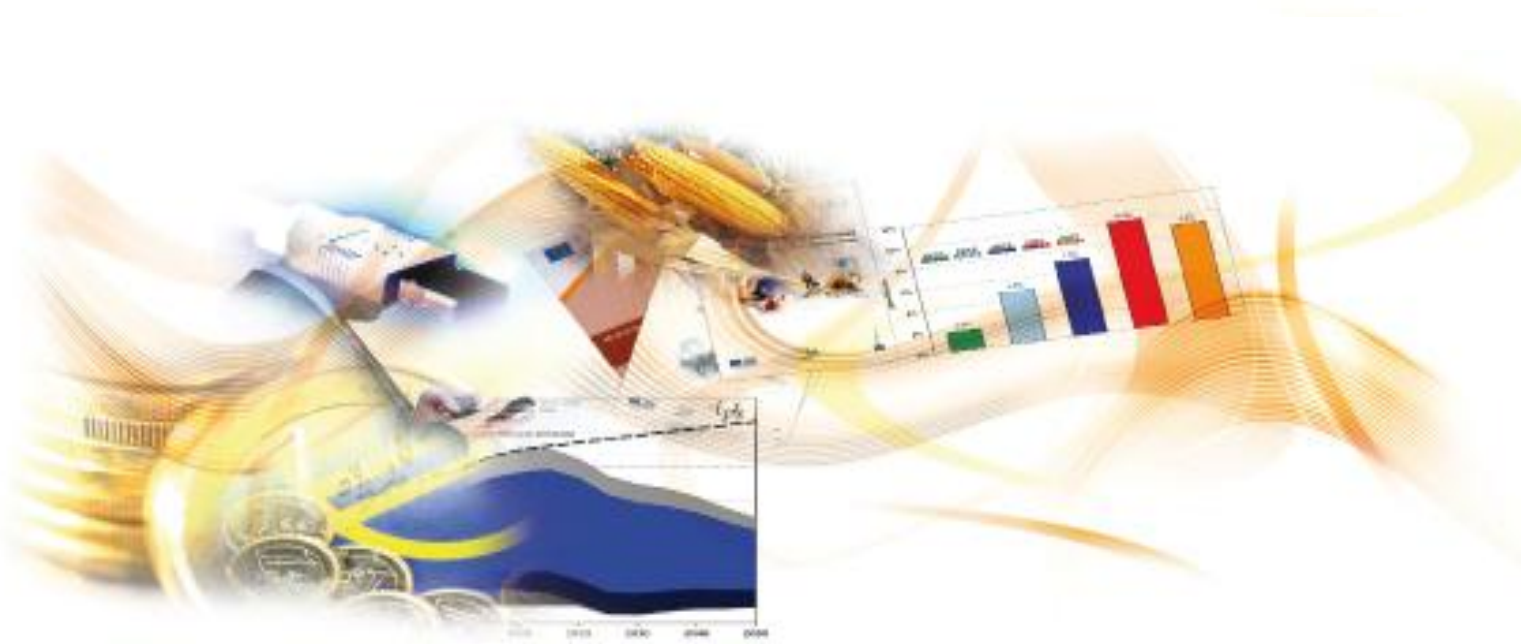


## JRC TECHNICAL REPORTS



# ICT for the Employability and Integration of Immigrants in the European Union

*Results from a Survey in  
Three Member States*

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2015

Report EUR 27352 EN

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JRC93960

EUR 27352 EN

ISBN 978-92-79-49580-9 (PDF)

ISSN 1831-9424 (online)

doi:10.2791/271816

Luxembourg: Publications Office of the European Union, 2015

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**Abstract**

This report presents the findings of a survey on the role played by Information and Communication Technologies (ICT) in supporting the employability and integration of immigrants in Europe. 1,500 immigrants in 3 Member States (Bulgaria, the Netherlands, and Spain) were interviewed face-to-face from the end of 2012 to mid-2013 to identify their ICT skills, access and usage. These interviews aimed to identify the role of ICT for their employability and integration in the host country and comparing connected and non-connected migrants. The statistical analysis carried out in this survey revealed that migrants differed in ICT usage, employability and integration in the 3 countries surveyed. Moreover, age, education, employment status, and type of occupation were clear sources of digital inequalities. The findings point to the implications for policies that aim to take advantage of the potential offered by immigration in the European Union, such as digital inclusion policies address specific groups of migrants (older and unemployed), supporting public libraries and other forms of public access, promoting digital skills, and migrant integration policies to raise awareness about how the Internet can help migrants to become more actively engaged in society.

## Acknowledgements

We would like to thank the authors: Rosa Dalet (Bloc de Ideas), Francisco Lupiañez and Cristiano Codagnone (Tech4i2), and the following experts who revised and commented on draft versions of this report and made very valuable recommendations to improve it:

- David Reichel, International Centre for Migration Policy Development (Austria).
- Melissa Siegel, Maastricht University (The Netherlands).
- Juan Carlos Andreo, Universidad Pablo De Olavide (Spain).

We are also grateful to the following experts for their recommendations. They, together with the authors and the 3 experts mentioned above, participated in the JRC-IPTS Validation Workshop of this survey on 4 July 2013 in Brussels:

- Roger Campdepadrós, University of Girona (Spain).
- Adela Ros, Universitat Oberta De Catalunya (Spain).
- Rossalina Latcheva, Fundamental Rights Agency, EU-Midis (Austria).
- Stefano Kluzer, independent expert (Italy).
- Neda Deneva, Independent Network of Labour Migration and Integration Experts (LINET) (Bulgaria).
- Femke De Keulenaer, Gallup (Belgium).
- Thomas Huddleston, Migration Policy Group, Immigrant Citizen Survey (Belgium).
- Juan Pelegrin, DG Connect (Luxembourg)- Policy Officer of this project
- Maj Gustafsson, DG HOME (Belgium)
- Graeme Roberston, DG EAC (Belgium)

## Preface

This report presents the findings of a survey on the role played by Information and Communication Technologies (ICT) in supporting the employability and integration of immigrants in Europe. It was carried out through an Administrative Arrangement between the Institute for Prospective Technological Studies of the Joint Research Centre (JRC) and the Directorate General for Communications Networks, Content and Technology. 1,500 immigrants in 3 Member States were interviewed face-to-face from the end of 2012 to mid-2013 to identify their ICT skills, access and usage, with the aim to identify the role of ICT for their employability and integration in the host country and comparing connected and non-connected migrants.

Concretely, the specific objectives of the study were:

1. To conduct a survey in at least 3 EU MS to identify ICT skills, access and usages by migrants in order to cover their needs and foster their socioeconomic integration;
2. To analyse the survey data in order to perform cross national comparisons, socio-demographic and socio-economic and migration profiles and for testing hypothesis and relations between variables.
3. To provide analysis and evidence to support either digital inclusion policy initiatives or policy initiatives / actions on the integration of migrants through ICT, including eServices from public administrations, ICT driven initiatives coordinated by Third Sector Organizations, bottom up initiatives launched directly by migrants, or models of ICT based entrepreneurship.
4. To elaborate and document the methodology to conduct the survey, in order to enable it to become longitudinal over time and/or to be realized across all EU MS.

Through this survey, we expected to increase the knowledge in:

- a) Communication patterns of migrants enabled by the new technologies, in terms of with whom, how frequently, about what, through which services the communication is developed using ICTs.
- b) Differences within the migrants sub-categories in terms socio-demographic variables: country of origin, educational level and stages in the migratory trajectories (newcomers, recent legal residents, well settled, individuals of immigrant descent that are now citizens of Europe, etc).
- c) The patterns of skills, access and use that support their socio-economic integration.

The study has produced the following reports

- Lupiañez, F., Codagnone, C. and Dalet, R. (2015) ICT for the employability and integration of immigrants in the European Union: **Methodological Final Report of a survey in three Member States**. Carretero, S. and Centeno, C. (eds). JRC-IPTS: Luxembourg: Publications Office of the European Union
- Lupiañez, F., Codagnone, C. and Dalet, R. (2015) ICT for the employability and integration of immigrants in the European Union: **Results from a survey in three Member States**. Carretero, S. and Centeno, C. (eds). JRC-IPTS: Luxembourg: Publications Office of the European Union.
- Reichel, D., Siegel, M. and Andreo, J.C. (2015) ICT for the employability and integration of immigrants in the European Union: **a qualitative analysis of a survey in Bulgaria, the Netherlands and Spain**, Carretero, S. and Centeno, C. (eds), JRC-IPTS: Luxembourg: Publications Office of the European Union

The website of the project is available at the following link:

[http://is.jrc.ec.europa.eu/pages/EAP/eInclusion/IEM\\_Ictegra.html](http://is.jrc.ec.europa.eu/pages/EAP/eInclusion/IEM_Ictegra.html)

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## Executive summary

The EU 2020 strategy recognises that immigration could foster European economic activity. As stressed in the Digital Agenda for Europe (2010), digital inclusion can give migrants the appropriate skills to facilitate their employability and integration into the Member States. Nevertheless, few studies have focused on the relationships between digital inclusion and integration and employability of migrants, and those available have been carried out at qualitative level with small samples. They do not give researchers and policy makers clear conclusions on which to base action to promote the digital inclusion of migrants.

As part of their research strategy on ICT for employability and inclusion, JRC IPTS and DG CNECT have therefore carried out a **quantitative study** to support the design of digital inclusion and migrant integration policies, using information and communication technologies (ICTs). For this purpose, ICT skills, access and usages by migrants and the relation between digital inclusion and integration and employability levels have been analysed. The study also aimed to elaborate and document the methodology used to conduct the survey, in order to make it longitudinal over time and/or suitable for use in all EU Member States.

In order to pursue this aim, a survey was carried out in three countries, representative of different immigration histories (Bulgaria, the Netherlands, and Spain). A total of 1,653 individuals formally defined as Third Country Nationals (TCNs) were interviewed about their digital access, use and skills, and their employability and integration levels. Univariate and bivariate statistical analysis were performed and composite indexes through the application of factor analysis were constructed. Correlation and regression analyses were also carried out, in order to understand the patterns of digital inclusion of the migrants interviewed, and the relationships between their levels of digital inclusion and their employability and integration in their host country.

The **main findings** of the study are as follows:

- **Migrants have higher or similar levels of ICT use and skills, are more connected** than the general population, and are **more frequent digital users** on average.
- **Internet adoption and ICT skills are higher among the recently-arrived migrants** (less than 3 years in the host country) than they are among the more settled migrants (more than 10 years in the host country), suggesting that ICT and digital media are more important in the initial settlement phase.
- **Migrants use ICTs mostly for information and communication purposes.** Their use of ICTs is low for social participation and employment seeking purposes - lower than that of the general population. Their use of ICTs for learning and education purposes is also low, in line with that of the general population.
- **Age, educational level, and employment status shape the level of inequalities in digital inclusion within the immigrant population:**
  - younger, highly-educated migrants, who are students or employed (as professionals and technicians rather than manual workers) use the Internet more and for more purposes than individuals who are over 55 years of age, or who have lower educational levels, or are unemployed (or employed performing manual work).
- **Being connected matters for migrants as it helps them to be more employable and integrated:**
  - Younger and more highly-educated migrants have higher levels of Internet adoption and ICT skills, are more employable, and to some extent, better integrated.
  - Internet adoption, after controlling for age and education, is positively related to both employability and integration. Employability is also positively related to integration.

These findings point to the following implications for **policies that aim** to take advantage of the potential offered by immigration in the European Union:

- **Digital inclusion policies should address specific groups of migrants** such as those who are **older and unemployed**. These groups are especially at risk of being left behind in terms of digital inclusion, and this affects their economic and social inclusion.
- Policy measures which **support public libraries and other forms of public access** should be continued and especially targeted to the more digitally-excluded groups of migrants. These measures could be complemented with others that provide coaching and mentoring for basic digital skills.
- Digital skills also need to be provided to **promote the use of Internet for learning, and employment purposes**. This could be done by **mainstreaming ICT in educational policy**, and also as part of **ICT for employability policies**, which could target migrants who are either unemployed or who work as manual workers.
- **Migrant integration policies** could **raise awareness** about **how the Internet, especially social media, can help migrants** to become more actively engaged in social, civic and political terms.

**We suggest that further and stronger statistical analysis be carried out** in order to:

- a) Confirm and refine the preliminary findings of our correlation and regression analyses. Concretely, Structural Equation Models could confirm the specific relationships between internet adoption and integration and employability, controlling for the effects of socio-demographic variables;
- b) Explore and disentangle country and nationality group effects from individual level effects, through the construction of a composite index of "connectedness", using a Multilevel Analysis (MLA) of Variance for this and for the employability composite indexes.



# 1. Context and objectives

## 1.1 Policy context

Information and Communication Technology (ICT), as a mere instrumental channel and as digital media, pervade contemporary societies. They offer new means and forms of interaction in the labour market, social participation and integration, and also for building anew or re-shaping cultural and social identities. Especially when used as digital media, ICT can be seen as similar to 'cultural goods'. In education, for instance, historical evidence shows that, as access became universal, new forms of social differentiation and inequalities emerged (Codagnone and Kluzer 2011, 14-15; Kluzer and Codagnone 2012, 190-191). Abandoning the simplistic concept of the digital divide in terms of having or not having access, several authors brought to light the more complex world of 'digital inequalities' that are related to people's different capacities to appropriate ICT and use them for purposes conducive to desirable economic, social, cultural, and political outcomes (Bonfadelli 2002; Bonfadelli 2005; DiMaggio et al. 2004; DiMaggio et al. 2001; Hargittai 2002, 2007; Norris 2001; van Dijk 2005; Codagnone 2009).<sup>1</sup> Our everyday lives are increasingly entangled in activities and relations enabled by digital media. Being digitally excluded is therefore a potential new source of social exclusion (or conversely of inclusion) from relevant networks and social relations, jobs and leisure opportunities, and from informed participation in the public debate. This contention can be further appreciated if we fully grasp the fact that today digital means or lack thereof, are shaped and at the same time shape those '*functionings*' that are the main source of social exclusion or inclusion.<sup>2</sup>

These general considerations on the importance of digital media in general bear evident relevance for the more specific situation of immigrants and individuals of immigrant descent, in whatever form one wants to look at them (third country nationals, migrants, transnational communities, diasporas, ethnic minorities). Digital media can be used as a tool when initially undertaking the migration adventure, and for maintaining ties with the homeland. They are also a potential source of broadly-defined social inclusion or exclusion in the host societies (in the labour market, at schools, in the forms of social and political participation, in leisure and entertainment activities, etc.) for those who end up settling there. In this domain digital inclusion or exclusion is studied and discussed in terms of 'integration' and the extent to which digital media are used as a support to individuals' social capital for either bonding (with the co-ethnic community in the host society or with the homeland) or bridging (interaction and integration with host society institutions and socio-economic mechanisms).

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<sup>1</sup> From the perspective of the history of the social sciences and research this change of focus from a rudimentary look simply at having access or not is a natural and expected trend. It is sufficient to look at this history to find many fields where initially researchers looked dichotomously at access to broadly defined cultural goods and then moved to more sophisticated analysis as basic access became more widespread. In the field of education in the USA (Collins 1979), just to provide one example, initial analyses focused on attendance and graduation by different social groups, to then widen the analysis to additional parameters (inequality in access to college-preparatory tracks and elite universities, or variations among different kinds of children in class size, school resources, or the availability of advanced placement).

<sup>2</sup> The concepts of relative capacities and functionings are evidently taken from the seminal work of Amartya Sen (2000). As we argued in greater details elsewhere (Codagnone 2009; Codagnone and Kluzer 2011), The inclusion or exclusion of individuals and groups within society is shaped by their relative 'functionings', namely their relative capability to function and achieve desirable outcomes such as for instance finding a job. These relative "functionings", depending on individuals' possession of resources and on their social relations, at the same time shape and are shaped by the digital means possessed by them. If one is in a condition of poor functioning this will reduce digital means, which in turn will result in missed opportunities compared to others. Adopting the perspective of 'relative functioning' reinforces the view that what matters the most is not simply lack or presence of access, but rather the relative differences in use and the related capabilities to extract benefits and outcomes from it. Therefore, the lack of capabilities to use ICT as a new mean of social relation and participation is a source of additional deprivations that could add to capability deprivation for those already in a socially less favourable situation. Third, it is evident that digital inequalities produce a form of exclusion that is not intrinsically distasteful but that has very clear instrumental importance: those who are not digitally active and proficient may not be excluding themselves, but they are denied the many benefits of digital inclusion that will be discussed in next section. For specific empirical application of Sen perspective to the appropriation of ICT and its effect on social capital see for instance Tschudin et al (2012).

Launched in 2005 following the revised Lisbon Agenda, the policy framework 'i2010: A European Information Society for Growth and Employment' (European Commission 2005) has clearly placed the broader concept of digital inclusion among the strategic goals within EU policies for the information society. It focusses on various potential forms of inequalities rather than on the crude distinction of the digital divide<sup>3</sup>. Building on this, the 2006 Ministerial Declaration adopted in Riga defined digital inclusion as meaning "both inclusive ICT and the use of ICT to achieve wider inclusion objectives". It identified, as one of its six priorities, the promotion of cultural diversity in Europe by "improving the possibilities for economic and social participation and integration, creativity and entrepreneurship of immigrants and minorities by stimulating their participation in the information society".<sup>4</sup> These policy elements, for digital inclusion in general and immigrants and ethnic minorities in particular, were further reinforced in the 2007 Commission Communication on eInclusion (European Commission 2007). Since then, European policies for digital inclusion have underscored the importance of reducing the gaps in ICT usage and of promoting their effective use to overcome exclusion, improve economic performance, employment opportunities, quality of life, social participation and cohesion. These policies have focussed on the participation of all individuals and communities in all aspects of the Information Society and also on the needs of specific groups: i.e. the elderly, the disabled, young people and migrants.

The European EU2020 strategy (European Commission 2010b) has renewed the Lisbon Strategy's emphasis on both growth and cohesion objectives. It has also added new elements that reflect the particular moment in history in which we live. Growth must be smart and sustainable and should cope with the grand societal challenges that have come to the fore since the start of the crisis in 2007. These societal challenges include, among others, coping with the ageing population and its implications, increasing the proportion of the population that is active in the labour market (European activity levels are, for instance, lower than in the US and Japan), upgrading human capital and skills, tackling the unemployment problem (especially youth unemployment). It is worth quoting the EU2020 strategy on the topic of employment level: "*The employment rate of the population aged 20-64 should increase from the current 69% to at least 75%, including through the greater involvement of women, older workers and the better integration of migrants in the work force*" (European Commission 2010b, 8).

Indeed, the broadly-defined migrant population is a sizeable component of the total EU population and represents both a potential source of socio-economic energy and cultural diversity (young and active segment) and a challenge (low skilled and/or unemployed segment). According to the Commission Staff Working Paper (European Commission 2011a) –accompanying the 2011 Communication on a EU Agenda for the integration of third-country migrants (European Commission 2011b) – in the period 2000-2005, third-country nationals at EU level accounted for more than a quarter of the overall rise in employment and for 21% of the average GDP growth in the EU15. In the context of a shrinking and ageing labour force, several Eurostat analyses point out that more sustained immigration flows are likely and necessary (Eurostat 2010, 2011; Ramb 2007). IPTS research in this respect has underscored, for instance, the important role that migrants play as caregivers in facing the challenges of an ageing society (Kluzer, Redecker, and Centeno 2010). Other studies, however, also show that whereas the average qualification level for immigrants tends to be higher than that of the host country populations (OECD 2011), migrant workers often do not find work commensurate with their qualification level (Dustmann and Preston 2012; Huddleston and Tjaden 2012).<sup>5</sup> In the impact assessment accompanying the 2008 Communication

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<sup>3</sup> This can be seen clearly in the paper of the eEurope advisory group on eInclusion (Kaplan 2005), which provided the evidence and conceptual elaboration support for the subsequent formulation of the inclusion pillar of i2010 and of the other policy policies declaration and communication that followed such as the Riga Declaration of 2006 and the eInclusion Communication of 2007 (European Commission 2007).

<sup>4</sup> Available at: [http://ec.europa.eu/information\\_society/events/ict\\_riga\\_2006/doc/declaration\\_riga.pdf](http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf). See page 4, § 23 and § 24.

<sup>5</sup> The Immigrant Citizens Survey, carried out in 15 cities 64 in seven EU countries, 65 drawing together information on 300-400 completed interviews with first generation immigrants who are (or were) non-EU citizens) holding legal immigration status and residing in the country for more than one year, found that 25-33% of immigrants felt over-qualified for their jobs (Huddleston and Dag Tjarden, 2012). Despite the adoption in 2006 by the European Parliament of EU Directive 2005/36/EC establishing a European Qualifications Framework, the recognition of migrant workers

on a European Common Integration Policy (European Commission 2008b) it is stressed that: *“In order to cope with these skills and labour shortages, harnessing the unused employment potential among third-country nationals is a key priority. Indeed, in many countries, the unemployment rate of non- EU-nationals is almost twice as high for non-EU nationals (17%) as for EU nationals (9%) and sometimes three times higher than those for native-born”*(European Commission 2008a, 13). The same document shows that the situation differs widely between Member States and two groupings emerge: a) in the new immigration countries (Italy, Greece, Portugal and Spain) and the new post 2004 Member States, third country migrants have higher employment rates than EU born; b) in old Member States the reverse is true.<sup>7</sup> The earlier mentioned 2011 Communication on the integration of third-country migrants lists as the most pressing challenges: a) the prevailing low employment levels of migrants, especially for migrant women; b) rising unemployment and high levels of 'over-qualification'; c) increasing risks of social exclusion; d) gaps in educational achievement; e) public concerns about the lack of integration of migrants (European Commission 2011b, 3). The earlier cited accompanying document to the 2011 Communication reports that: *“People born outside the EU tend to have fewer employment opportunities than those born in the EU and they often face cultural and linguistic barriers to working. They also face more obstacles on the labour market than people moving between Member States. The average employment rate of those born outside the EU aged 20-64 was 6.7 percentage points lower than that of those born inside the EU in 2009. The gap has widened fast during the crisis (4.7 in 2008). For third-country nationals aged 20-64 the employment level was 11.4 percentage points lower than that of EU nationals in 2009. This gap was even more pronounced among women aged 20-64 (employment rate of 49.7% among female third-country nationals compared to 63% for EU female nationals)”* (European Commission 2011a, 13).

The EU2020 strategy emphasises the importance of digital skills for digital inclusion in general, and the immigrant population in particular. A digitally-skilled population can drive modernisation and increase productivity. Providing digital skills to ever wider segments of the population is a key way of fostering digital inclusion as workers with digital skills are more likely to be employed (Codagnone 2009; Green et al. 2013a, 2013b), and when employed, they tend to earn higher wages (DiMaggio and Bonikowski 2008). Since digital skills tend to be global and less specific to national qualification systems, possessing them can help migrants overcome the challenge of getting their qualifications recognised. Moreover, possessing digital skills is also a way of improving host country language skills and of supporting children’s education (Codagnone and Kluzer 2011; Codagnone and Maya-Jariego 2014). Lack of time and language skills are reported by immigrants as factors which limit their social participation. ICT could alleviate this limitation as they can be used in any place, at any time and they also offer learning possibilities (Garrido et al. 2010).

In view of the above, it is evident in ICT policies that the key references for digital inclusion in general and with respect to immigrants are represented by Pillar 6 on Digital Literacy of the Digital Agenda for Europe (European Commission 2010a). This study, in fact, aims to contribute evidence for policy making specifically to this Digital Agenda objective. In addition, given the horizontal nature of the topic, it will provide input for the EU2020 strategy’s broader priorities such as those cited in the terms of reference and reported below:

- To promote internet access and take-up by all European citizens, especially through actions in support of digital literacy and accessibility (flagship initiative: Digital Agenda for Europe);
- To help migrants to better integrate themselves into the workforce (flagship initiative: European Platform against Poverty);

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skills remain a major challenges due to the substantial differences existing between the training and qualifications systems of sending and receiving countries

<sup>6</sup> This is the case in Austria, Belgium, Finland, France, Luxembourg, the Netherlands and Sweden.

<sup>7</sup> In countries, like Belgium, Denmark, Finland, the Netherlands, Poland and Sweden, the employment rate differential to natives is more than 15 percentage points and the difference between employment rates for recent migrants and natives is even more marked, particularly in Austria, Belgium, Finland, France, the Netherlands and Sweden (all with gaps of more than 20 percentage points)

- To modernise labour markets by facilitating labour mobility and the development of people's skills throughout their working lives with a view to increasing labour participation and better matching labour supply and demand (flagship initiative: An Agenda for New Skills and Jobs);
- To promote the recognition of non-formal and informal learning (flagship initiative: Youth on the Move).

It is worth pointing out that the Commission's integration policy also underscores the importance of ICT and digital inclusion. For instance, the following statement was taken from the earlier-cited 2011 document accompanying the communication on an agenda for the integration of third country migrants: *"While digital access and skills are crucial, successful digital inclusion measures are the ones that focus digital literacy acquisition in a problem oriented and purposeful context that supports integration, i.e., focusing for example on skills development and language acquisition, job finding, access to health information and services, and information and access to legal rights and public services"* (European Commission 2011a, 27).

## 1.2 Research context

We selectively summarise here the findings from several recent reviews on the state of the art of the literature on ICT and immigrants. These reviews considered theoretical and conceptual contributions, qualitative studies, quantitative surveys, and official statistics (Codagnone and Kluzer 2011; Codagnone and Maya-Jariego 2014; Kluzer 2013; Kluzer and Codagnone 2012). As regards the well-known methodological challenges and shortcomings of quantitative surveys and official statistics, we only cite them in passing in this paragraph for they are addressed in more detail chapter 2 and annex I.

Both ICT and immigration are multi-faceted phenomena, which touch on many different areas. When combined, they can be seen from countless different perspectives. ICT, being a General Purpose Technology, produces outcomes only when combined with complementary factors (institutional, organisational, socio-economic, etc.) that take different forms in the very many domains that one may want to study (labour market, education, leisure and cultural, social network, political participation). The immigrant communities can be studied with respect to the same numerous domains and from various angles (the individuals or the community, social and cultural identity, resources, etc.). It goes without saying that neither this very selective and brief review, nor the data from our survey, can address this complexity exhaustively. We will limit our review to three key themes that are sufficient to establish our context of reference against which we will present the objectives of this study and the various steps leading to this final report.

The first theme concerns a strand of literature based mostly on theoretical constructions and/or qualitative research into the interplay between digital media and immigration from the perspective of transnationalism and diasporas. Digital media are seen as amplifying and re-shaping existing patterns of media usage by immigrants to manage transnational ties and mobility where interconnection should be considered to be a radically new element of contemporary mobility (Levitt, DeWind, and Vertovec 2003). Digital media allow immigrants to make decisions and transnationally arrange all the main events of life such as weddings and funerals (Mazzucato, Kabki, and Smith 2006). They can also be used to deal with everyday life concerns of close relatives at home (e.g. migrant mothers checking school achievements and homework of their children in their home countries). High transnational and local mobility are enabled by digital media that, according to (Vertovec 2007), make it easier for migrants to find useful information and maintain social contact. Studies of diasporas show the increasing importance of imagination and virtuality in the definition of collective memberships (Brah 1996; Cohen 1997; Safran 1991), which are evidently amplified by digital media functionalities. The sense of ethnic belonging is a fundamental factor in diasporas because it generates empathy and solidarity with co-ethnic members wherever they settle. The growth of online content/services in the homelands feeds such needs. The structural features of the migration phenomenon (transnationalism, mobility, diasporas dynamic) matched with the new functionalities offered by digital media has led some scholars to talk of a transformation of the nature of immigration centred on the new figure of the *'connected'*

(Diminescu 2008) or '*interconnected*' migrant (Ros 2010). Contrary to common stereotypes, members of diasporas are described as intensive users of digital media (Guiral and Le Corvec 2006). Digital media also play a role in the double challenge of forming and shaping new cultural and social identities that help migrants adapt to new societies and at the same time remain in contact with the homeland.

This last point brings us to the second theme that focuses on the relation between use and appropriation of digital media and two forms of social capital: bonding and bridging. Social capital can be defined as '*the ability of actors to secure benefits by virtue of membership in social networks and other social structures*' (Portes 1998). In a certain sociological tradition, there is a clear 'preference' for the bridging type of social capital which comprises 'weak' and instrumental ties, as opposed to strong ties heavily loaded culturally and socially with reciprocity (of obligations). According to Portes and Sensenbrenner (1993), for instance, it is not possible to see only the benefits of socially-embedded behaviours, without considering their cost and risks. These are the potential negative facets of social capital in, for example, deviant organisations, or in close-knit communities imposing their rules on individuals who do not conform. Strong ties with co-ethnics, the argument goes, are a source of social support which also favours economic action, but they can at the same time be constraining factors that reduce interaction with the host society and limit integration. Bridging instrumental ties are well known to provide a means of getting a job (Bayer, Ross, and Topa 2005; Borghans, Weel, and Weinberg 2006; Granovetter 1973) and digital media have been shown to effectively support this way of accessing the labour market (Zinnbauer 2007). On the other hand, there is another side of social capital which concerns the level of collaboration, trust, and sense of identity that characterise a community as a whole (Putnam 2000). In this respect, the bonding relations that digital media may support with co-ethnics or with the homeland need not have only '*segregating*' effects. They could actually help build a solid identity within diaspora communities enabling them to better bridge and integrate with the host societies. It is, thus, possible to go beyond the dichotomous view that digital media have either bonding or bridging effects. This theme was studied, mainly through in-depth case studies in four countries, as part of the first project on the impact of access to, and use of, ICT on the integration of Immigrant and Ethnic Minorities (IEM) that IPTS launched in 2009. This study concluded that both bonding and bridging effects could be observed (Codagnone and Kluzer 2011). A subsequent IPTS study on social computing and IEM (Diminescu, Jacomy, and Renault 2010), albeit from a different perspective, suggests that digital media can foster a bottom-up form of integration, which occurs through informal hospitality and is linked to social networking processes between migrants and members of the host society. This type of integration, the authors claim, brings to the fore a different form of social capital they call 'sponsorship' or 'working' social capital, for which Web 2.0 is seemingly an important supportive media. An analysis of ethnographic studies conducted on immigrant communities and their use of digital media in Almeria (Eastern Andalusia) also concludes that bonding and bridging effects of digital media are not incompatible (Codagnone and Maya-Jariego 2014).

The above discussions remain, however, at the level of insightful theoretical and conceptual elaborations backed in some cases by well-designed qualitative research. However, the depth and internal validity of this research is obtained at the price of limited external validity, that is to say limited generalizability of findings. The third theme we consider is, therefore, that of quantitative survey research that tries to explore some of the issues discussed above by gathering data from larger and more representative samples. These studies also address the first basic question of whether or not immigrant populations and/or ethnic minorities show marked differences compared to the host populations when it comes to access to, and use of, ICT. We have reviewed in particular depth these quantitative studies elsewhere (Codagnone and Kluzer 2011; Kluzer and Codagnone 2012), and recently an updated review has been produced that also looked at the newly available Eurostat Data (Kluzer 2013). To the best of our knowledge for what concerns Europe the following review (though brief) captures all the available knowledge about quantitative surveys on ICT use by immigrant populations (and, only in the case of the UK surveys, ethnic minorities).

In the UK, three surveys are available on, as they are called there, ethnic minority groups [DfES

(Department for Education and Skills) 2003; Ofcom (Office of Communications) 2007, 2008]. The main results are that: a) access to mobile phones and the Internet among the surveyed groups is similar or even higher than among the UK population; b) group differences exist, but decrease when younger age groups are considered, implying that ethnicity does not seem to be the main factor; c) socio-economic and cultural factors have been found to be rather more important in shaping differences in usage patterns (breadth of media use, length of time spent online, simultaneous consumption, etc.) but not in access; and d) members of ethnic minorities used Internet for job search more than the UK population. It must be stressed, however, that the first survey of 2003 was conducted in deprived areas and provides a less optimistic picture: *“to some extent ethnicity also emerged as a factor in its own right, for on average in some key aspects South Asian and black groups emerge as disadvantaged, particularly South Asian (Muslim) women”* (DfES 2003, xvii).

In **Germany**, a survey of about 3,000 individuals covering several immigrant groups found that take-up of mobile phones and computers was higher among the immigrants (compared to the German population), while daily usage of the Internet was slightly higher among German nationals (Simon 2007). The survey also found that, especially among Turks, the number of regular Internet users decreases significantly with age whereas it increases among those born in Germany and those who have mastered the language.

Since 2004 in **Spain**, the National Statistics Institute (INE) has added to the annual ICT in household survey<sup>8</sup>—which is the national side of the Eurostat survey—a question about nationality and, thus, provide data on Third Country Nationals (henceforth also simply TCNs). This is a general population survey with a large representative sample which shows that, in 2011, TCNs amounted to 6.7% of the sample. TCNs in Spain show a higher percentage of regular Internet users compared to Spaniards and they use the Internet more for some specific purposes. For instance, as in the UK, the Internet for job search is used more by the immigrant population than by Spaniards. Naturally, TCNs is a broader category than strictly defined immigrants (see chapter 2), but the results of the INE surveys are fully aligned to those of a survey conducted in Catalonia (Spain) that captured in more detail the respondents’ nationalities.<sup>9</sup>

In the **Netherlands**, a survey of 3,500 individuals (including Turks, Moroccans, Surinamese and Antilleans) shows at aggregate level a slightly lower level of Internet usage among the immigrants compared to Dutch nationals (van den Broek and Keuzenkamp 2008). The survey also shows that, when considering each group separately, there are gaps explained by age, educational level, and knowledge of the Dutch language. The authors conclude that ethnicity only marginally explains differences across the groups when controlling statistically for age, education, and knowledge of Dutch.

Finally, in **Ireland** a very small survey (65 Poles and 65 Philipinos) found very high usage of Internet, PC, and mobile phones (all at around 90%) that characterise the respondents as much more connected than the Irish population (Komito and Bates 2011).

Finally, we have a quick look at the new data now available from Eurostat and that are analysed in more details in Kluzer (2013). In the annual panel survey that Eurostat conducts on *ICT Usage in Households and by Individuals* starting from 2010, the option of requesting the nationality and the country of birth was introduced and then in 2012 it was made compulsory. So, it is now possible to query the Eurostat database to obtain data on Internet usage and frequency of use by nationality and country of birth. This can be done, however, by simply contrasting nationals with TCNs, without getting more granular information on the different nationalities. Data are available for only a few countries and are still not fully reliable as changes from 2010 to 2012 (especially when they indicate a decrease) are sometimes difficult to interpret. Using the distinction between connected (individuals who have used Internet in the last 3 months) and non-connected (all others, from those who have never used it to those who use it much less frequently and have not used it in the three

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<sup>8</sup> The database from the ICT in Household Survey can be queried at:

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft25%2Fp450&file=inebase&N=&L=0>

<sup>9</sup> The survey, performed in 2006 but reported in a later publication (Ros 2010) confirms the high ICT adoption rates by some immigrant groups.

months prior to the survey) the Eurostat data show that in 2012, 74% of individuals was connected whereas among TCNs it was 70%. Among connected individuals, 95% and 94% individuals and TCNs are regular Internet users, respectively. Taking the data at face value and remembering that data is available for a limited number of countries, it seems that in 2012 a much greater increase in the numbers of connected people occurred among the TCN (+9 percentage points over 2011) compared to all individuals (+3 points). On average, therefore, the differences between the national and TCN groups are fading away. There are many differences among the various countries that are beyond the scope of our discussion and that are reviewed in detail in Kluzer (2013). However, it is worth pointing out that in 2012 the proportion of connected among TCNs is noticeably higher than it is among nationals in Bulgaria (78% versus 52%) and slightly higher in Spain (71% versus 70%), whereas it is lower in the Netherlands (93% versus 100%).

Certainly we cannot draw any generalised conclusions from the data presented above because the underlying samples are different: a) in the UK, ethnic minorities (including British citizens) were surveyed; b) in Spain and in the Eurostat figures, the data are about TNCs, gathered by the general population survey which includes a question about nationality; c) in between these two extremes, we have the German and Dutch surveys that probably captured populations that are closer to the ideal-typical definition of immigrants (meaning less focussed on ethnic minorities). As anticipated, we discuss these issues in more detail in chapter 2. Having clarified the limitations deriving from the differences in the samples, we nonetheless find some convergent findings. First, access to ICTs by broadly-defined immigrants is similar to access by the host population. In this respect there is convergence between ad hoc immigrant surveys and general population surveys capturing TCN (i.e. for the Netherlands we find lower adoption rates compared to the Dutch both in the ad hoc survey cited above and in the Eurostat data). Second, within and between (i.e. both between different immigrant groups and between these and the host population) group differences emerge when it comes to breadth and purpose of usage. These differences are explained mostly by age, education, knowledge of the language, and by other socio-economic characteristics. Third, ethnicity as such does not seem to be a determining factor when controlling for other variables, either when looking at differences compared to the host population or when looking at differences between the various immigrant groups. We must stress, however, that the only exception to this is the UK 2003 survey, which was conducted in deprived areas and which concluded that ethnicity matters. There is no doubt that surveying the most deprived segments of the immigrant population as opposed to the general immigrant population may produce very different results. As we show later, however, the most deprived segments are also those that are the most difficult to reach.

### **1.3 Study objectives and background**

In view of the policy and research context described above, the overall objective of the study is to support the policy making process with evidence from a quantitative survey on broadly-defined immigrants. Immigrants are defined here according to the target population of EU immigration integration policies as defined in Annex 1 (section Target population) as "Third country nationals". Based on the definition agreed by European regulations, "Third-country nationals" are residents of a EU27 Member State who do not have the citizenship of any EU27 Member State. Therefore, only migrants who are not currently citizens of a EU27 Member State (even if they are applying for citizenship) were considered. This includes only first generation migrants who are not currently citizens of a EU27 Member State (even if they are applying for citizenship), and not second-generation migrants, as they would most probably be citizens of the surveyed country.

Previous research conducted by IPTS on this topic had focused mostly on ICT initiatives addressing their needs (supply side) or, when focussing on the immigrants themselves, they did so only with qualitative data build from very small and non-representative samples. More specifically, the objectives of the study "ICT to support everyday life integration of migrants" are:

1. To conduct a survey in at least 3 EU Member States to identify ICT skills, access and usages by migrants in order to cover their needs and foster their socioeconomic integration.

2. To analyse the survey data in order to perform cross national comparisons, socio-demographic and socio-economic and migration profiles and for testing hypotheses and relations between variables.
3. To provide analysis and evidence to support digital inclusion policy initiatives or policy initiatives / actions on the integration of migrants through ICT, including eServices from public administrations, ICT-driven initiatives coordinated by Third Sector Organizations, bottom up initiatives launched directly by migrants, or models of ICT-based entrepreneurship.
4. To elaborate and document the methodology to conduct the survey, in order to enable it to become longitudinal over time and/or to be carried out across all EU Member States.

The results of this study should provide a better understanding of:

- a. Patterns of migrant communication enabled by the new technologies, in terms of with whom, how frequently, about what, through which services the communication is developed using ICTs.
- b. Differences within the migrant sub-categories in terms of socio-demographic variables: country of origin, educational level and stages in the migratory trajectories (newcomers, recent legal residents, well settled, individuals of immigrant descent who are now European citizens, etc.).
- c. Patterns of skills, access and use that support their socio-economic integration.

Therefore, the research objective, evidently instrumental to the policy one, is to obtain data on immigrants ICT skills, access, usage and explore how they differ with respect to broad socio-economic and other personal characteristics. This exploration aims to extract insights into their needs and into any gaps in digital and social inclusion, which can be used to support policy measures. This evidence includes, among other things, the following expected results:

- a. Patterns of skills, access and use that support socio-economic integration;
- b. An analysis of the purpose of using ICT and of communication patterns;
- c. A preliminary and exploratory understanding of differences among migrants in terms socio-demographic variables.

In order to pursue the above objectives and achieve the expected results, a survey was carried out in three countries (Bulgaria, the Netherlands, and Spain). A total of 1,653 individuals were interviewed. These included formally defined Third Country Nationals (TCNs), who were, in their majority, newly-arrived migrants and more settled immigrants from the largest groups of TCNs present in the three countries.

This report has three further chapters and four annexes, the contents of which are briefly summarised below:

- In **Chapter 2**, we present a very high level and selective description of the design and the analysis performed. The readers can find a fully transparent account of the design in annex 1, and a more developed version in the final methodological report<sup>10</sup>, which covers the full methodological set up of the study, including: target, coverage and sampling procedure; questionnaire design; dissemination strategy and the statistical analysis performed. The final version (in English) of the questionnaire that was used to gather the data;
- **Chapter 3** illustrates the main findings obtained from descriptive and inferential analysis covering the following themes measured in our questionnaire:
  - Characteristics of the surveyed population;
  - Information and Communication Technology (access, use, purpose of use, skills, etc.);

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<sup>10</sup> Lupiañez, F.; Codagnone, C. and Dalet, R. (2015) ICT for the Employability and Integration of Immigrants in the European Union: Final Methodological Report of a Survey in Three Member States. Carretero, S. and Centeno, C. (eds) JRC-IPTS: Luxembourg: Publications Office of the European Union



- Employability;
- Integration.

More elaborated analysis are provided in annexes 3 to 7

- In **Chapter 4**, the findings are discussed with respect to their implications for the research and policy context, and some preliminary and general policy indications are presented.

## 2. Methodology

In this chapter the methodology followed in the study is summarized, concretely the selection of the sample, the variables measured and the questionnaire used, as well as the analysis performed. For more details about the methodology, we provided complete methodological information in **Annex 1** of this report and in the methodological report of this study<sup>11</sup>.

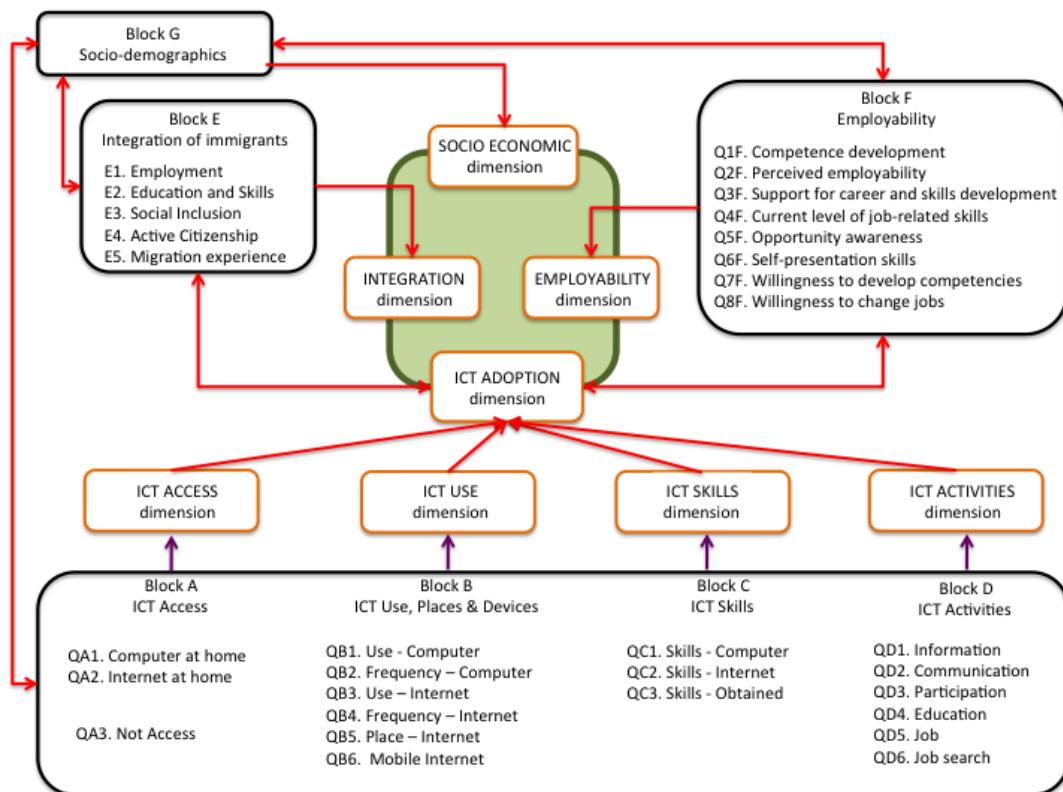
Regarding the **sample**, a total of 1,653 third country nationals were selected in three Member States, in order to include countries with different migration history. The three countries were selected to include one country of old immigration (the Netherlands, n=512), one country of new immigration (Spain, n=624) and one new Member State (Bulgaria, n=512), and depending on the availability of data in European statistics to cover the quotas established of age, citizenship and internet use. The sample included both newly-arrived migrants and more settled immigrants from the largest Third Country Nationals (TCN) groups in the three countries. The sample was selected using a **disproportional stratified sampling** to ensure both representativeness (in terms of geographic origin and random selection of participants in each quota) and statistical significance.

An ad-hoc **questionnaire** was designed to measure **variables** of digital inclusion, employability and integration as well as socio-demographic variables. This questionnaire was constructed based on previous studies and questionnaires used in official European surveys (such as Eurostat – for more details see the methodological report mentioned or annex 1). The final questionnaire is available in **Annex 2**. The logic behind its construction and all its components are explained in Annex 1. Moreover, the results table and graphics always report the formulation of the question from which the data are obtained and their matching with the questionnaire is straightforward. Hence, we only provide a very brief account of the questionnaire below. We can see in the figure the various blocks of the questionnaire put in relation with the key variables and dimension of the framework of analysis of the study.

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<sup>11</sup> Lupiañez, F.; Codagnone, C. and Dalet, R. (2015) ICT for the Employability and Integration of Immigrants in the European Union: Final Methodological Report of a Survey in Three Member States. Carretero, S. and Centeno, C. (eds) JRC-IPTS: Luxembourg: Publications Office of the European Union

**Figure 1: Framework of analysis and questionnaire design**



We list below the seven blocks and add some brief comments:

- Block A: ICT access.
- Block B: ICT Use, Places and Devices.
- Block C: ICT skills.
- Block D: ICT Activities.
- Block E: Integration of Immigrants:
  - E1. Employment,
  - E2. Education and Skills,
  - E3. Social Inclusion,
  - E4. Active citizenship,
  - E5. Migration Experience.
- Block F: Employability.
- Block G: Socio-demographics.

The questionnaire was **translated** into ten different languages so that it covered all the nationalities from the sample. During the pilot study, the translated questionnaires in all 10 languages were tested on 20 respondents in order to detect comprehension issues or inappropriate questions due to cultural attitudes. Due to the characteristics of the target group, the dissemination strategy and data collection put special emphasis on the interviewer selection and training process. **Face-to-face survey** procedures and specific participant recruitment strategies were developed, considering different contact points depending on the characteristics of the target.

Descriptive univariate (frequencies) and bivariate statistical **analysis** (chi-square test and analysis of residuals, and correlations) as well as multivariate statistical analysis (factor analysis, construction of composite indexes, and regression analysis) were carried out in order to describe and understand the ICT access, use and skills of immigrants, their employability and integration as

well as the relationships between their digital access and skills and their level of employability and integration. The following actions were undertaken to carry out these analysis, and should be considered when interpreting the results:

- *Socio-demographic analysis* were carried out with the total population surveyed (N=1653) and the country sub-samples (n=624 in Spain; n=517 in Bulgaria and n=512 in the Netherlands).
- *Information and Communication Technology* includes a sub-sample of individuals (n=333) who do not have access to the Internet at home (Question A2). The distribution of these individuals by country is as follows: 196 in Spain; 80 in Bulgaria and 57 in the Netherlands. Then, these individuals were asked the reasons for not having access to the Internet at home. (Question A3).
- *Two categorical variables have been constructed 'Connected' and 'Non-connected'*, following the definition of EUROSTAT, to compare both groups in employability and integration. EUROSTAT defines connected as those individuals who have accessed the Internet at least once within the last 3 months before the survey, and the "non-connected" individuals as those who have not accessed the Internet at least once during that period (or not ever). To develop this variable, first, all individuals (N=1653) were asked when they last used a computer (Question B1).

<b>B1. When did you last use a computer (at home, at work or any other place)?</b>	
(any type: desktop, laptop, netbook, tablet, excluding smart phone)	
1. Within the last 3 months	(GO TO B2)
2. Between 3 months and a year ago	(GO TO B3)
3. More than 1 year ago	(GO TO B3)
4. Never used one	(GO TO E1)

Individuals who replied that they never used the Internet (n=155) were not asked about items related to ICT (Block A – D). Therefore, the sub-sample of Internet users is n=1498 distributed by country as follows: Spain n=582; Bulgaria n=423 and the Netherlands n=493. Internet users (n=1498) were asked when they last used it:

<b>B3. When did you last use the Internet?</b> (via any device, desktop, portable or handheld, including mobile or smart phones)	
1. Within the last 3 months	(GO TO QB4)
2. Between 3 months and a year ago	(GO TO QC1)
3. More than 1 year ago	(GO TO QC1)
4. Never used one	(GO TO QE1)

Individuals who replied that they have used the Internet within the last three months were considered as Connected (n=1307). These individuals were asked about frequency of use within the last three months. The remaining individuals were considered as Non-connected (n=191). Connected individuals are distributed by country as follow: Spain n=447; Bulgaria n=400 and the Netherlands n=460.

- *Employability and Integration* analysis were carried out with the total population surveyed (N=1,653) and the country sub-samples (n=624 in Spain; n=517 in Bulgaria and n=512 in the Netherlands).

### 3. Findings

This chapter contains the main findings of the study on:

- **Descriptive data about:**
  - Socio-demographic characteristics of the sample.
  - Access and usage and purpose of use of ICT.
  - Employability: competence development; current level of job-related skills; perceived employability; willingness to develop new competences; opportunity awareness and self-presentation; and training.
  - Integration: labour market; social inclusion; c active citizenship; and migration experience.
- **Results of the bivariate and multivariate statistical analysis** on the:
  - Composite indexes stating differences among connected and non-connected migrants in: IT skills, Internet skills, Internet adoption, employability, and integration variables.
  - Correlation and regression analysis to describe the relationships between digital inclusion variables, employability and integration.

A complete elaboration of the results is systematically available for the readers in annexes from 3 to 7.

#### 3.1 Sample socio-demographic characterisation

In this section are summarized the most important socio-demographic characteristics of the sample studied. We provide in **Annex 3** a more detail analysis of these characteristics.

Regarding **gender, age and nationality**, the 54% of the TCNs are males, with the 66% aged between 25-54 years old, the 26% 16 to 24 years old, and the rest (the 8%) between 55 and 74 years old. The distribution of gender and age is quite similar among the countries. Just in the Netherlands we can find a higher percentage of the women than men (51% vs 49%). For nationalities, and according to the sample strategy:

- In Spain, TCNs are mainly from Morocco (23%), Pakistan (21%) and Latin America (34%);
- In Bulgaria, Russia (26%), Macedonia (24%), Turkey (24%) and Former CEE countries (26%) are those countries where TCNs comes from more frequently.
- For The Netherlands, TCNs informed to be mostly from China (20%), Turkey (20%), United States (20%), and Asia (20%).

For **marital status and availability of children**, the sample is split almost in half between unmarried (48%) and married (43%) with smaller percentages of divorced (6%) or widowed (3%). Almost half of the individuals (45%) have children. The distribution by country is homogeneous reflecting that around 60% of the individuals surveyed in the three countries are 25-54 years old.

In terms of **household composition**, around the 80% of the sample is approximately equally distributed in households composed by 1 (25%), 2 (21%), 3 (19%), and 4 (21%) people. In the case of the Netherlands, 42% of the individuals stated that they live alone (next table). This percentage is lower in the case of Bulgaria (30%) and Spain (6%).

Data on **educational levels** informed that 9% of the respondents stated that they have primary education or no formal education; 62% of them have at least post-secondary education and 29% tertiary education. The Netherlands has the highest level of highly educated TCNs.

Regarding the respondents' current **employment situation**, approximately, 30% of TCNs are employed full-time in the three countries. Spain has the highest rate of unemployed TCNs, the Bulgarian sample includes the highest proportion of students, and the Netherlands has the highest proportion of individuals employed full-time.

Most important characteristics of employment situation are the following:

- Unemployed individuals looking for a job were asked how long they had been out of work: 13% of them had been unemployed less than 3 months; 28% between 3 months and 1 year and 59% of them more than 1 year. Spain and Bulgaria have the highest rate of this type of unemployed, 63% and 62% respectively.
- The current occupation of the employed respondents (including whether they are in full time or part-time work, are self-employed or students with part-time jobs). Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson) is the most frequent category of current occupation selected by TCNs (34% of the individuals: 45% Spain; 35% Bulgaria and 21% the Netherlands).

The **household monthly income** reported by the TCNs informed that 20% of households pay in between 500 and 1,000 euros per month, 17% between 500 and 1,000 euros/month, and 13% between 1,500 and 2,000 euros /month

Finally we report the main reasons that our respondents gave for **their decision to migrate to the EU**. Agreement with the statement that 'Work' was a reason to migrate is at 50%, followed by 'Study' (37%) and 'Join the family' (31%). A minority of respondents selected 'Political or humanitarian reasons' (5%) or 'Medical or Health reasons' (4%). In the case of Spain, Work was selected by 73% of the respondents while in Bulgaria 44% of them selected as a reason Study. In the Netherlands, the distribution of respondents is more homogeneous.

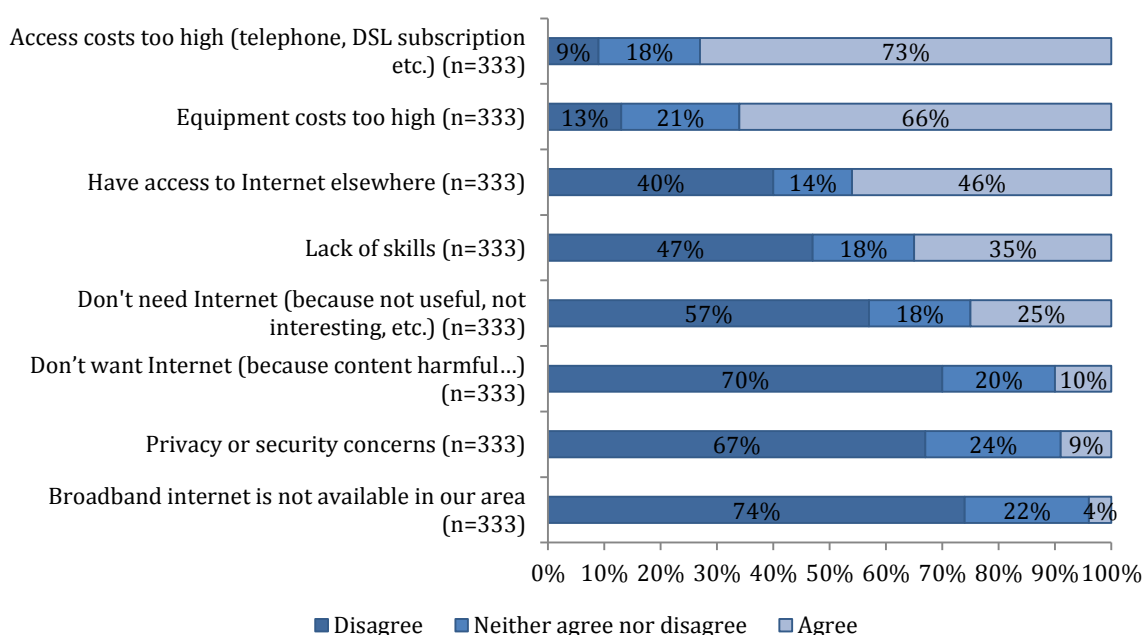
## 3.2 Information and Communication Technologies

In this section the most important findings on the access and use to ICT as well as digital skills are summarized. A complete analysis of these variables is provided in **Annex 4**.

### 3.2.1 Access and use of Information and Communication Technology

Most of the interviewed TCNs have **access to a computer** (83%) and **to the Internet at home** (80%). Individuals who do not have access to the Internet at home (n=333) were asked to select the reasons for not having it. The main reasons reported were: a) access costs too high; b) equipment costs too high; and c) Have access to the Internet elsewhere.

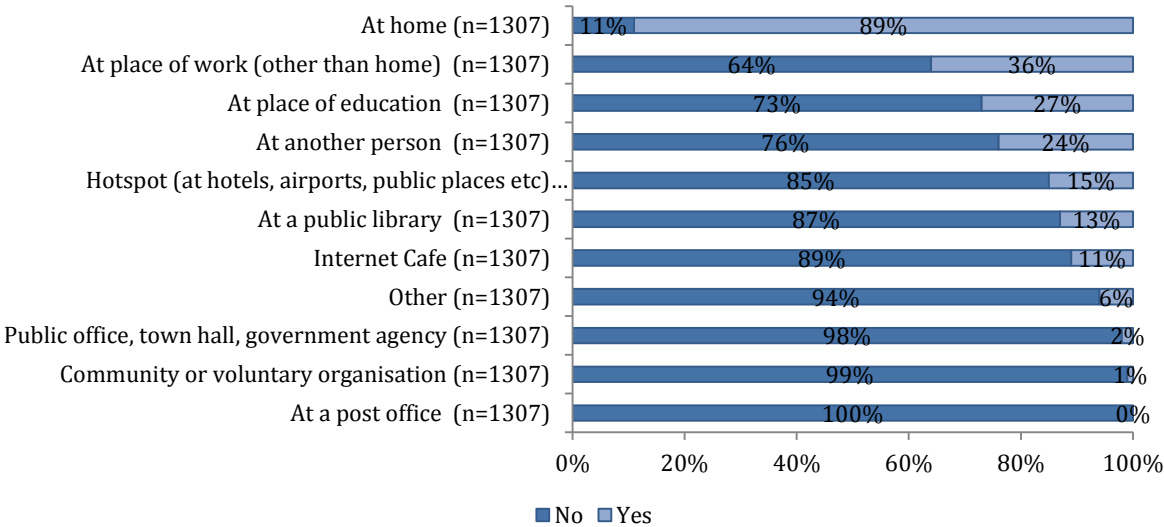
**Figure 2: Reasons for not having access to the Internet at home**



Regarding **frequency of use**, 84% of the respondents stated that they last **used a computer** within the last three months, being higher for TCNs than for the general population for these 3 countries (73%). On average, 83% of individuals who have used a computer within the last 3 months do so every day or almost every, this percentage is HIGHER a than in the general population of these 3 countries (79%). Moreover, most of the individuals surveyed have used the Internet within the last 3 months (87%), being also higher than the frequency for the general population of these 3 countries (73%). The same results emerged in the case of TCNs frequency of use of internet within the last three months, with a higher percentage of daily users in the last three months among TCNs compared to general population (79%).

For **place of access**, 89% of TCNs stated that they have used internet at home; 36% at work; 27% where they study; 15% at a hotspot and 13% at a public library (Figure 3).

**Figure 3: Where have you used the Internet in the last 3 months (using a computer or any other means)?**



The analysis of **mobile access**, shows that more than half of the respondents (55%) who used the Internet within the last three months use mobile phones (or smart phones) to access the Internet and 38% use a portable computer when away from their home or work place. These percentages of use of mobile devices and portable computer are higher among TCNs than the general population of the three countries (28% and 46%, respectively).

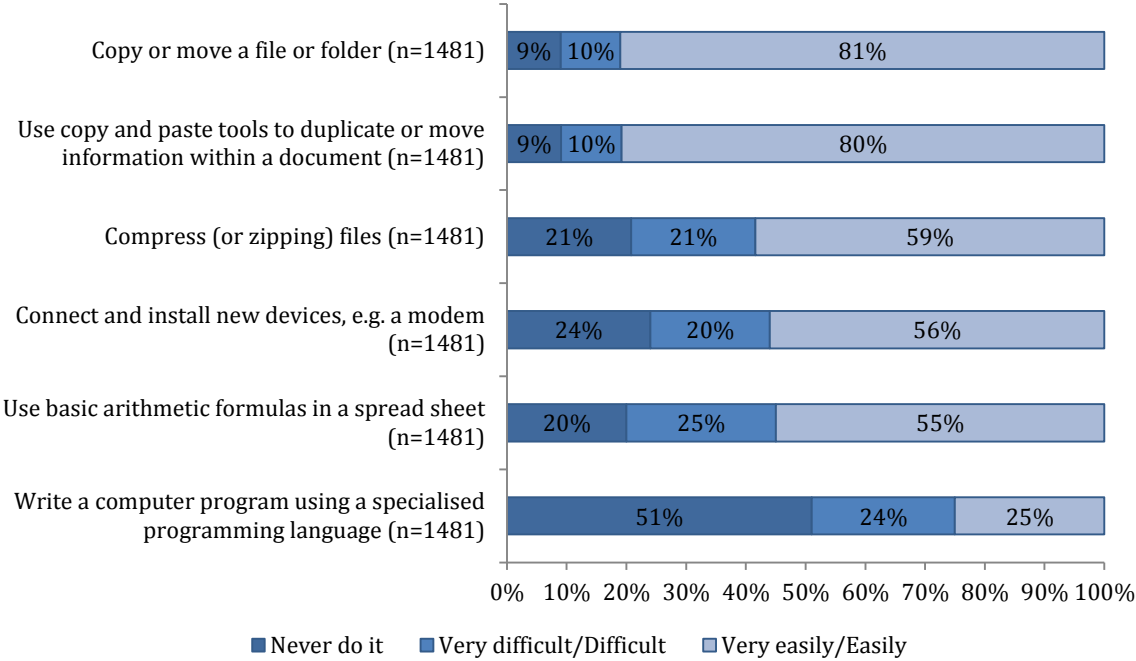
**Table 1: Do you use any of the following mobile devices to access the Internet away from home or work? (MULTIPLE ANSWER - READ LIST)**

	No		Yes	
	n	%	n	%
Mobile phone (or smart phone)	591	45%	716	55%
Portable computer (e.g. laptop, tablet)	810	62%	497	38%
Other devices	1291	99%	16	1%

### 3.3.2 ICT skills

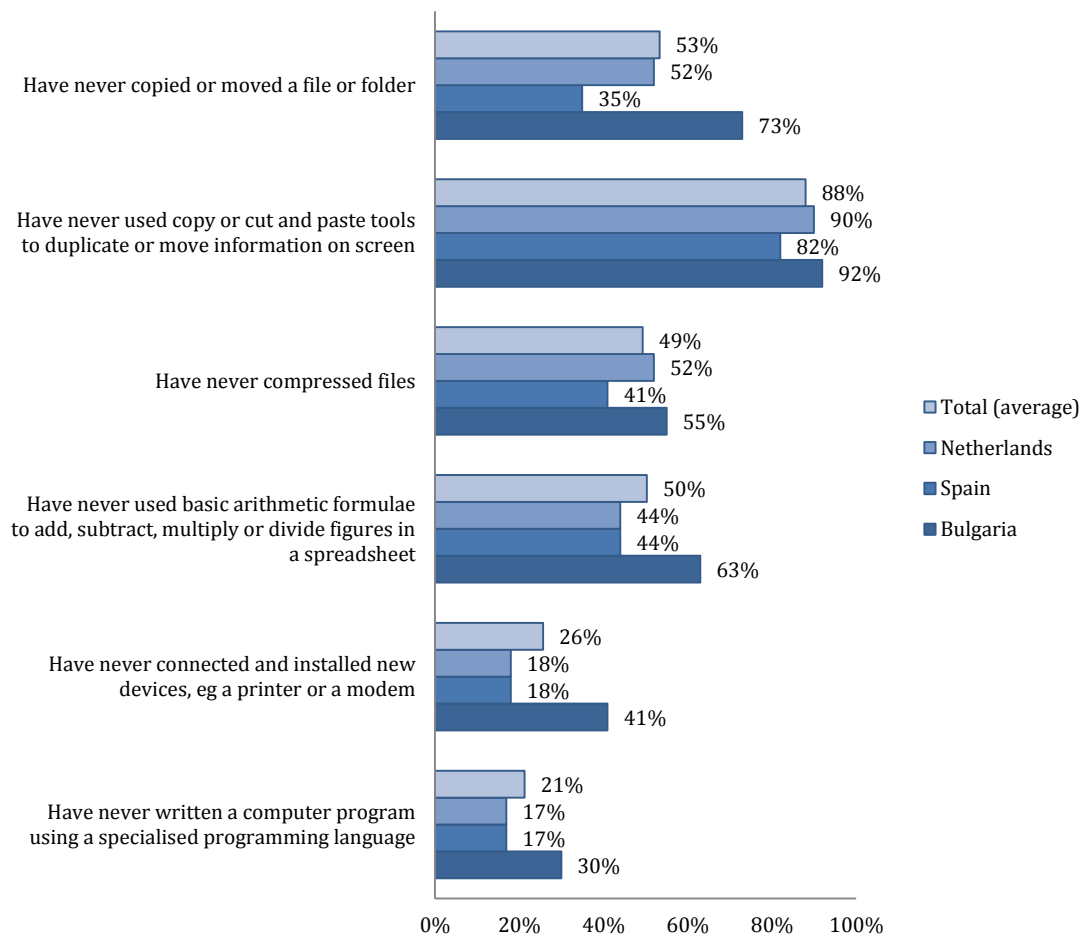
Regarding **computer skills**, the following figure displays the results: 51% of the individuals have never written a program using a specialised programming language; 24% have never connected and installed new devices and 21% have never compressed files. On the other hand, more than half of the respondents considered using basic arithmetic formulas in a spread sheet easy or very easy and more than 75% of the respondents consider Copy and Paste tasks as easy or very easy. When we compared with the general population of the 3 countries surveyed by Eurostat, the results reveal that TCNs who have used a computer could be considered as more skilled than individuals who have used a computer from the general population (figure 5).

**Figure 4: Which of the following are you able to do using a COMPUTER?**





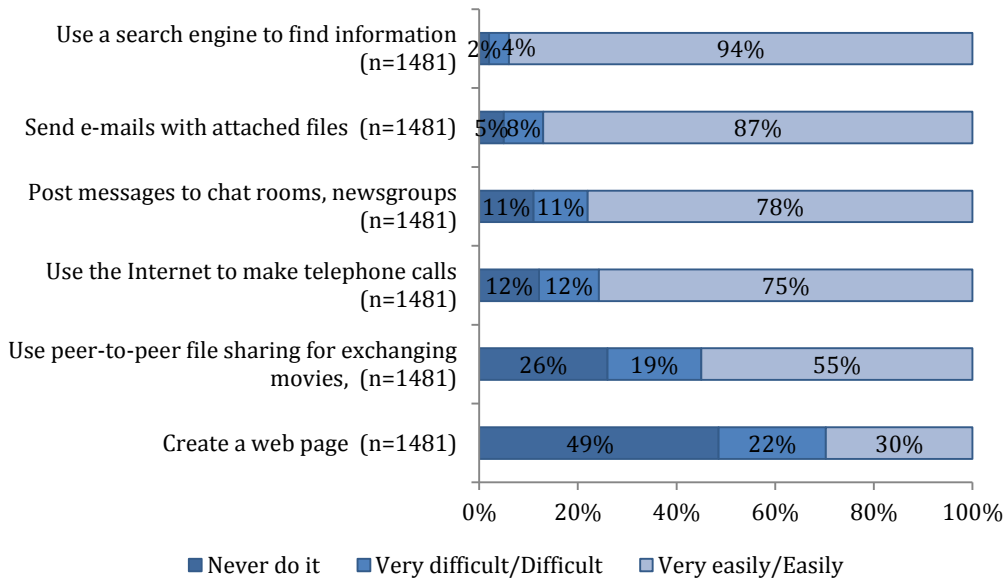
**Figure 5: Which of the following are you not able to do using a COMPUTER? EUROSTAT**



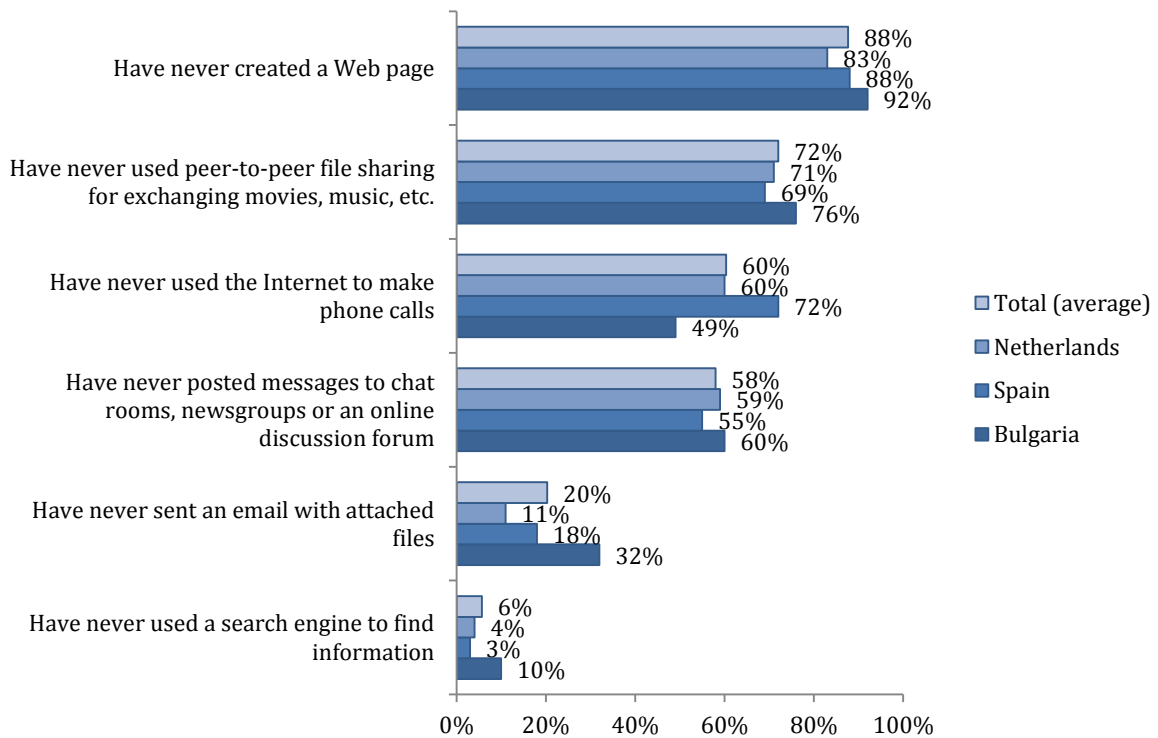
Source: EUROSTAT isoc\_sk\_cskl\_i, 2012

For **internet skills**, almost half of the respondents (48%) have never created a web page and 26% have never used peer-to-peer file sharing. However, the rest of the tasks are considered as easy or very easy by almost 80% of the respondents. When we compare our results with Eurostat data, again we can confirm that TCNs who used the Internet could be considered as more Internet skilled than the general Internet users in their countries (Figure 7).

**Figure 6: Which of the following are you able to do using the INTERNET?**



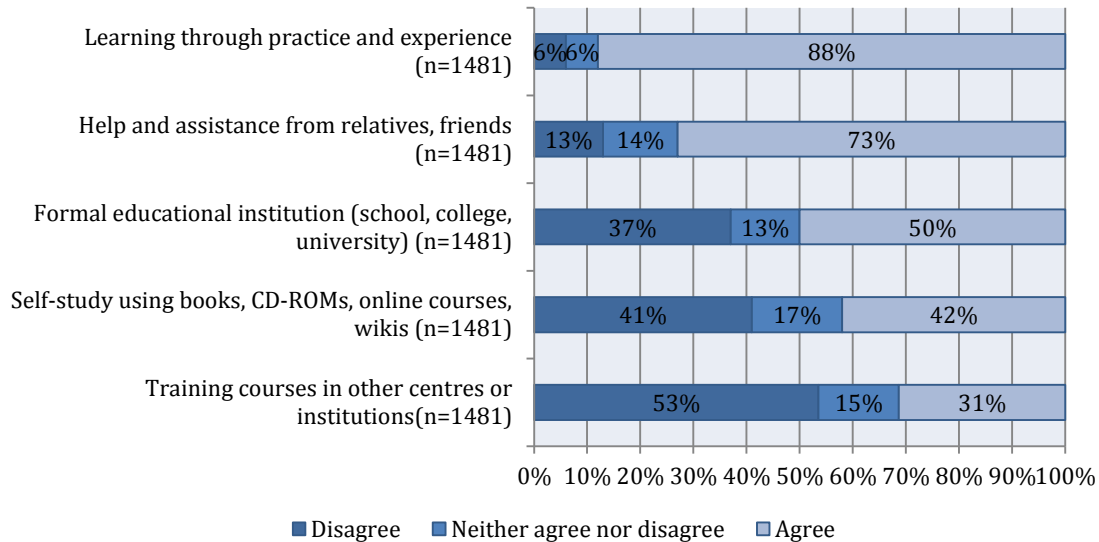
**Figure 7: Which of the following are you not able to do using the INTERNET? EUROSTAT**



Source: EUROSTAT isoc\_sk\_iskl\_i, 2011

Regarding both **computer and Internet skills adoption**, the following figures emphasise the social and informal way of how third country nationals adopt these technologies: Learning through practice and experience (88% Totally agree/agree) and Help and assistance from relatives, friends, or colleagues (73% Totally agree/ agree) were the most common ways to obtain computer and Internet skills. On the contrary, training courses, self-studying and formal education were reported (Totally agree/agree) by 14%, 21% and 30% respectively.

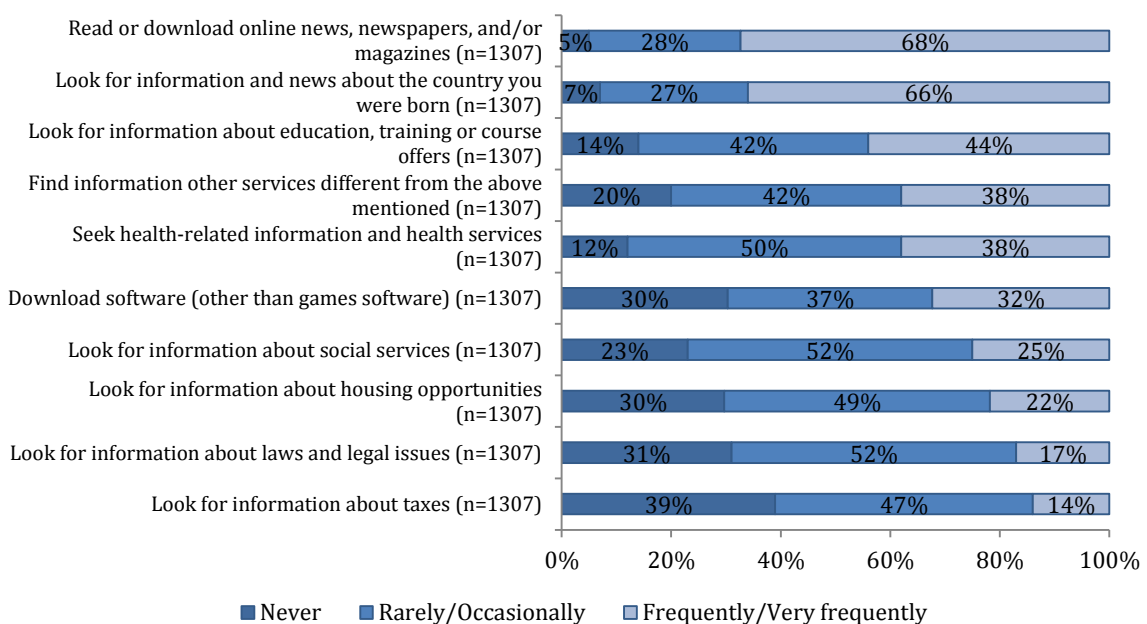
**Figure 8: How did you obtain your computer and Internet skills?**



### 3.3.3 Purpose of usage

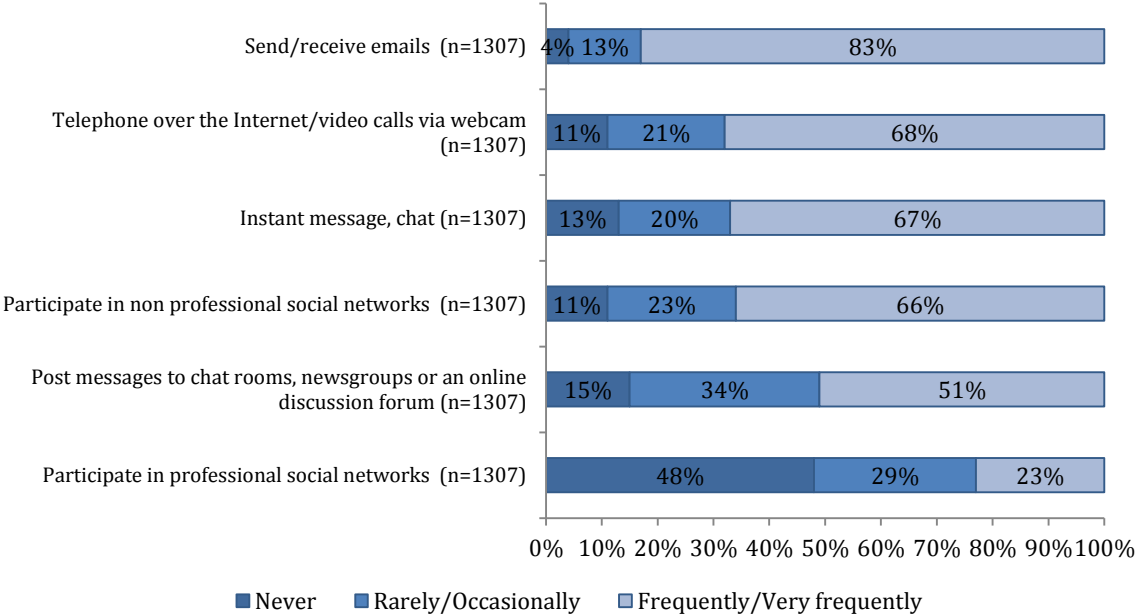
In terms of **digital use for information purpose**, almost 70% of TCNs reports using frequent or very frequently the internet to remain connected with the homeland (66%) and to read newspapers and magazines online (67%). We see lower percentages for topics such as laws, taxes, health matters.

**Figure 9: Have you used the Internet for the following INFORMATION purposes in the last 3 months?**



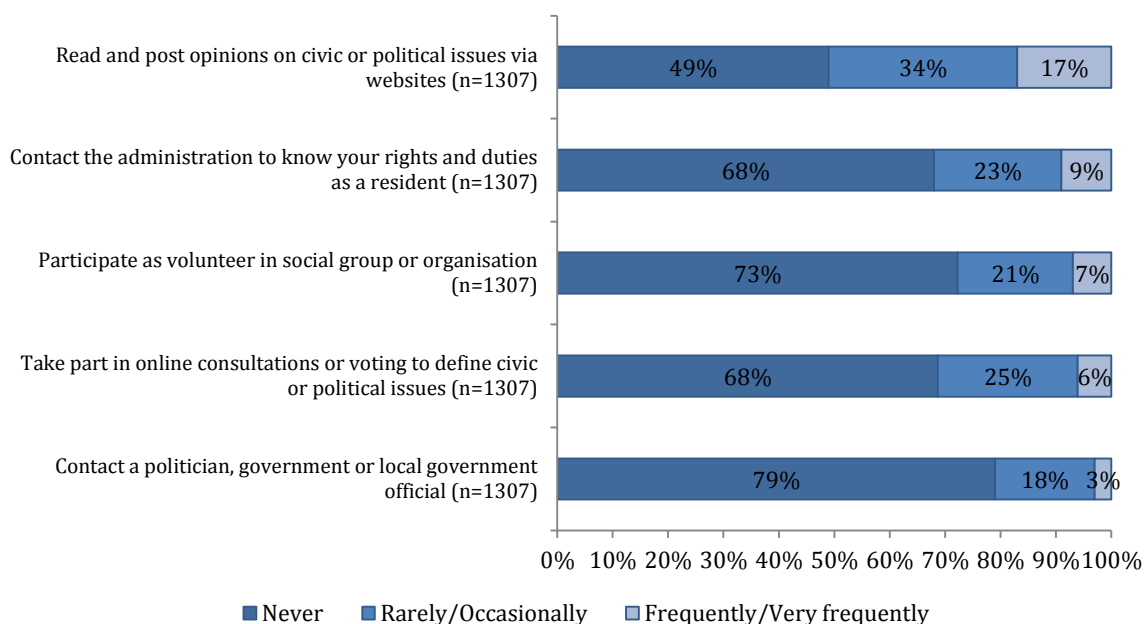
When we asked TCNS for their use of ICT for **communication purpose**, almost half of the respondents informed that they have used the Internet very frequently in the last 3 months to Telephone over the Internet/video calls via webcam (45%); to Participate in non-professional social networks, such as Facebook, twitter, etc., creating user profile, posting messages, uploading content or other contributions (43%) and to Chat, Instant message (43%). Comparing the use of the Internet for communication in our sample with data reported by Eurostat for the entire population in the three countries, usage in these domains appear higher among the surveyed TCNs as compared to the entire population in the three countries; for example 87% has never participated in social networks.

**Figure 10: Have you used the Internet for the following COMMUNICATION purposes in the last 3 months?**



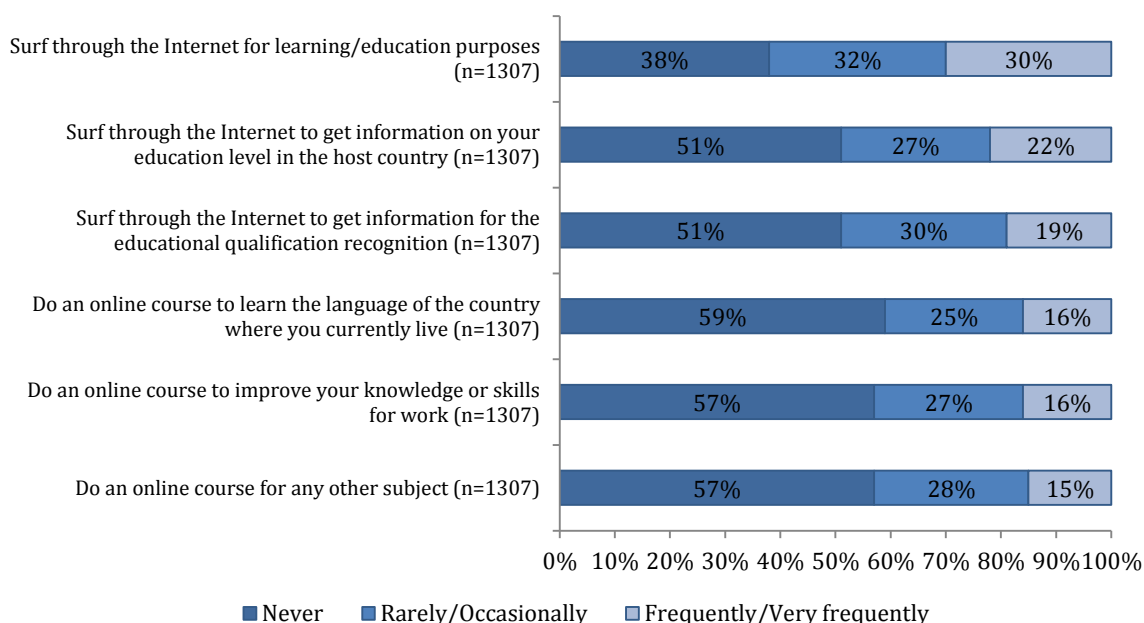
Regarding use of ICTs for **social participation**, by far these activities are less reported: 79% of the individuals have never used the Internet to Contact a politician, government or local government official; 73% of them never Participate as volunteer in social group or organisation and 68% never Contact the administration to know your rights and duties as a resident. On the contrary 51% reported that in the last 3 months they have Read and post opinions on civic or political issues via websites (e.g. blogs, social networks, etc.). In this case, comparison with Eurostat data for the entire population shows that percentages among TCNs are lower as compared to all individuals. For instance in our sample at aggregate level only 51% read or post opinions on civic or political issues, whereas from the Eurostat data this percentages is 77% (averaging Eurostat data for the three countries). Taking part to online consultations has been reported by only 32% of respondents in our sample, whereas among the entire population using Eurostat data this percentage is 85%.

**Figure 11: Have you used the Internet for the following PARTICIPATION activities in the last 3 months?**



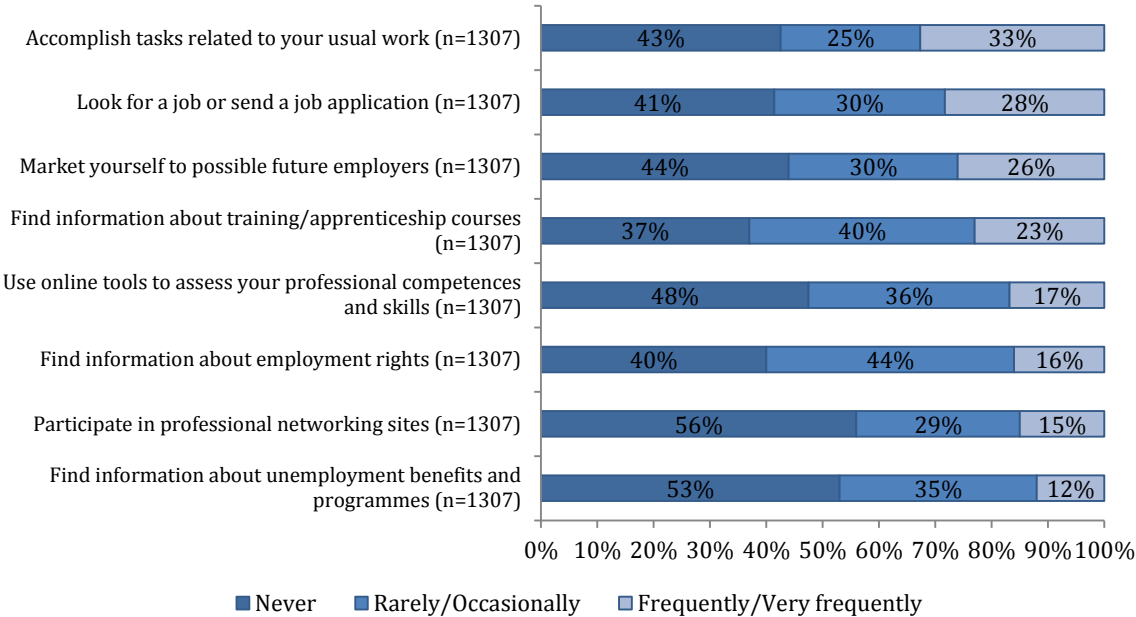
For the cases of use of ICTS for **Learning/ Education purposes**, approximately more than a half of the individuals surveyed have never used the Internet to carry out activities related with Learning / Education with the exception of generic Surf through the Internet for learning/education purposes (improve your language skills, etc.). Comparing the use of the Internet for Learning and Education in our sample with data reported by Eurostat for the entire population in the three countries, seems that usage in this domain appear higher among the surveyed TCNs as compared to the entire population in the three countries. For example, among the general population of these 3 countries, 93% of them have never used internet for doing an online course, and around the 50% have never use internet for training and education (56%) and for looking for information about courses (52%).

**Figure 12: Have you used the Internet for the following LEARNING/EDUCATION activities in the last 3 months?**



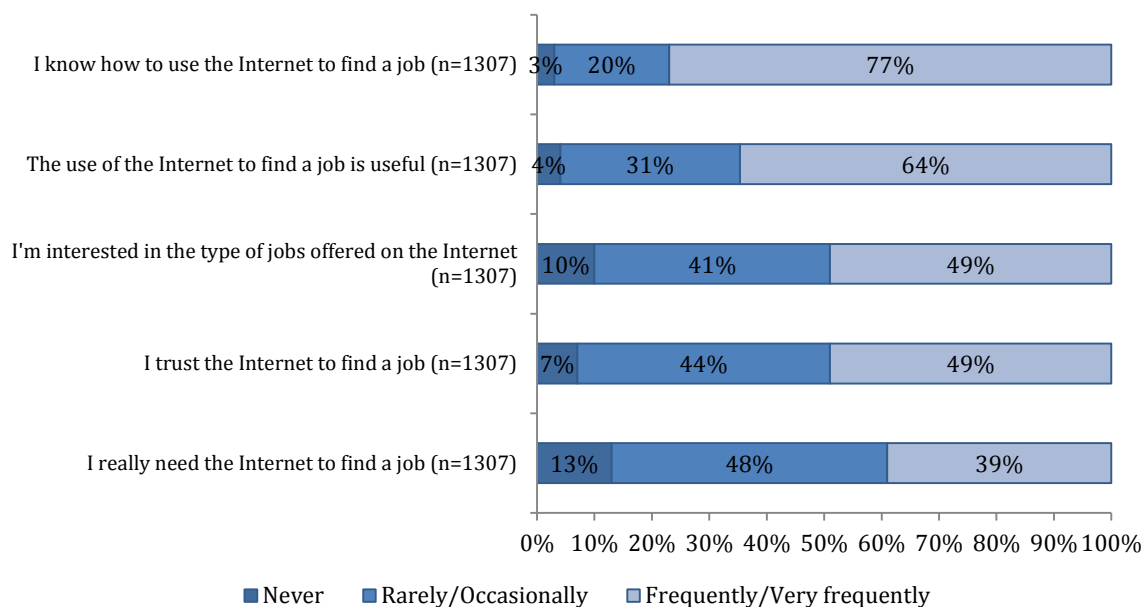
In the case of use of ICTs for **professional life and job search**, figure 13 displays respondents' use of the Internet in their **professional lives**. More than 50% of the individuals stated that in the last 3 months they have looked for a job or send a job application; that they have found information about employment rights; and that they have used online tools to assess their professional competences and skills. Compared to data for the all population (Eurostat data) our sample shows a much lower percentage of individuals using professional networking sites (44% versus 87%) and a lower percentage of individuals using the Internet to look for a job and sending an application (59% versus 77%)

**Figure 13: Have you used the Internet for the following activities in your PROFESSIONAL LIFE in the last 3 months?**



Individuals were also asked to what extent they agree with the following statements related with the use of the **internet for job search**: 39% of the individuals stated (totally agree) that they know how to use the Internet to find a job; 59% of them stated (totally agree - agree) that they trust the Internet to find a job; and 64% (totally agree - agree) consider it useful to find a job. Eurostat data does not contain any of those items and so the comparison is not possible.

**Figure 14: To what extent do you agree with the following statements related with the use of the Internet for job search?**



Summarising the results of these sections reveals that TCNs show very high percentages and a level of adoption very close to the population as a whole. However, adoption of the Internet for social participation, for learning and education, and for job-related purposes for all three countries is higher among the general population than among the TCNs in our sample.

### 3.4 Employability

We summarise here the main findings for employability. We highlight the results for each variable for the sample as a whole, as well as those that compared the groups of connected and non-connected TCNS in each of the items of the variables that have showed significant differences in the statistical analysis. We elaborate more detailed and extended results in Annex 5.

Regarding **competence development** (Figure 15), approximately half of the TCNs stated that their employers provide them opportunities for responsibility in the work task (53%); possibilities to apply their skills in a variety of context (46%) and interesting work (43%). However, just a third of the participants recognised that their employers offer them possibility of a career in the organisation (29%) or possibilities of developing a wide range of skills (39%).

**Figure 15: Competence development**

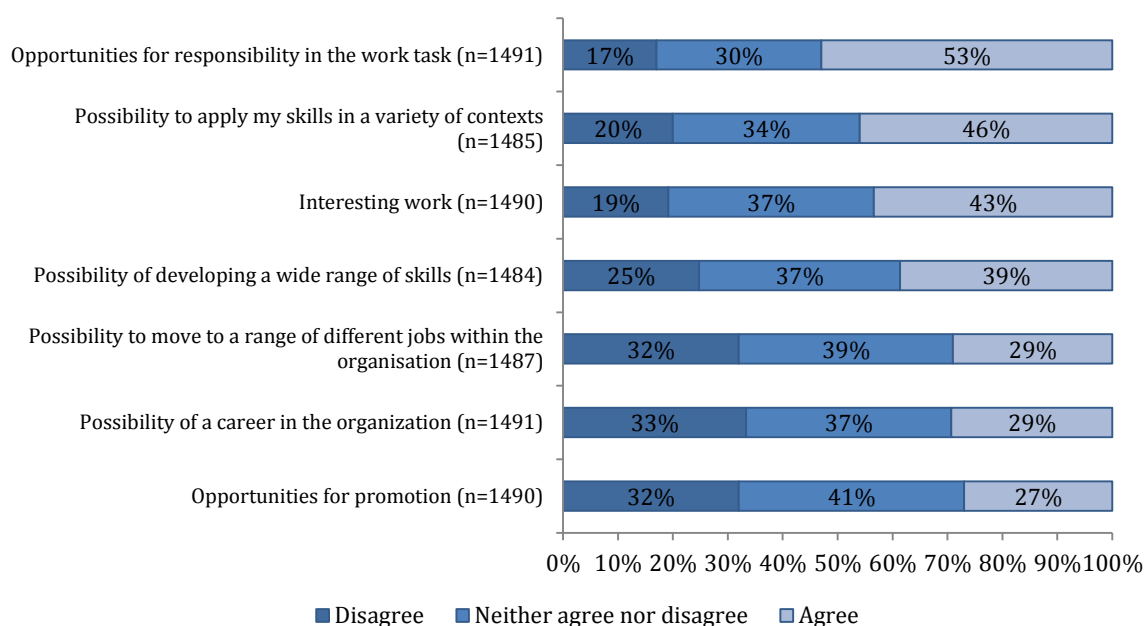


Table 2 show the results obtained when we looked at the differences in competence development between connected and non-connected TCNs:

**Table 2: Significant differences among connected and non-connected in competence development. % and n**

		Connected		Total
		No	Yes	
<b>Possibility to apply my skills in a variety of contexts</b>				
Totally disagree / Disagree	Count	104	198	302
	%	33.1%	16.8%	20.3%
<b>Possibility of a career in the organization</b>				
Totally agree / Agree	Count	40	397	437
	%	12.7%	33.7%	29.3%
<b>Opportunities for promotion</b>				
Totally agree / Agree	Count	42	366	408
	%	13.4%	31.2%	27.4%
<b>Possibility of developing a wide range of skills</b>				
Totally agree / Agree	Count	56	516	572
	%	17.9%	44.1%	38.5%
<b>Opportunities for responsibility in the work task</b>				
Totally agree / Agree	Count	105	683	788
	%	33.4%	58.1%	52.9%
<b>Interesting work</b>				
Totally agree / Agree	Count	82	561	643
	%	26.1%	47.9%	43.3%
<b>Possibility to move to a range of different jobs within the organisation</b>				
Totally disagree / Disagree	Count	139	345	484
	%	44.3%	29.3%	32.5%

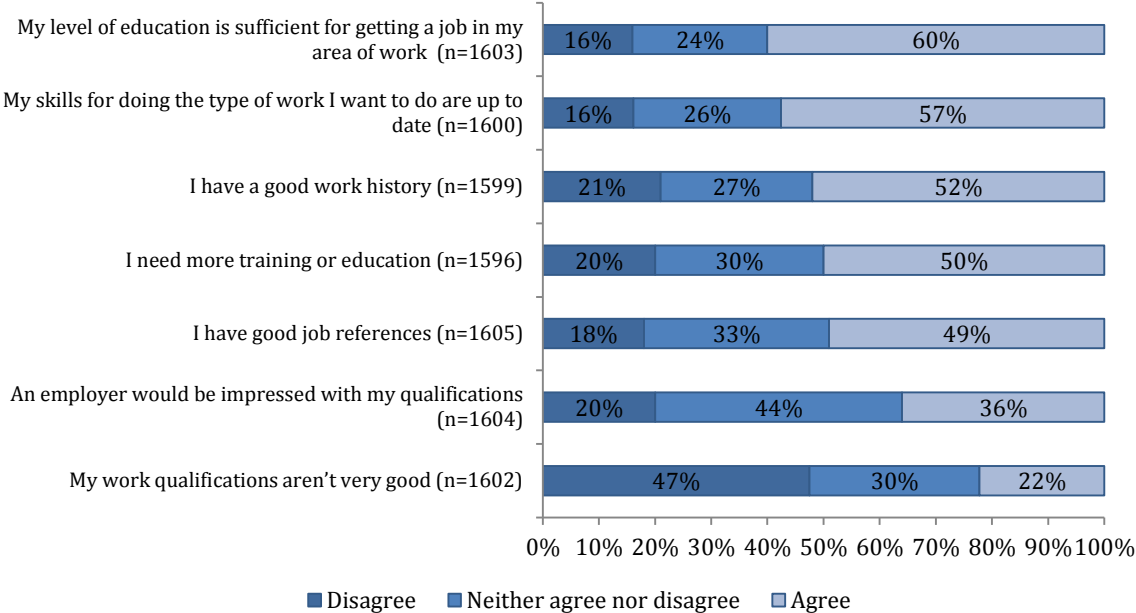


The data on the table above indicated that connected and non-connected are significantly different in all the items related with competence development. Concretely, we saw that compared to non-connected TCNs, connected TCNs are significantly more likely to:

- Receive from their employers the possibility to develop their competences: 33.1% of Non-Connected TCNs disagree with the sentence “my employer provides me with the possibility to apply my skills in a variety of contexts while just 16.8% of Connected TCNs disagree with it.
- Perceive that their employer offers them the Possibility of a career in the organization: 33.7% of them agree with this sentence while just 12.7% of Non-Connected do so.
- Perceive opportunities for promotion (31.2% agree) than Non-Connected (13.4% agree).
- Agree (44.1%) with their possibility of developing a wide range of skills offered by their employer than Non-Connected (17.9% agree).
- Be offered opportunities for responsibility in the work task (58.1% agree) than Non-Connected TCNs (33.4%).
- Develop interesting work (47.9% agree) than Non-Connected TCNs (26.1% agree).
- Perceive possibility to move to a range of different jobs within the organisation offered by their employer (44.3% disagree) than Connected TCNs (29.3% disagree).

In relation with **current level of job related skills** (Figure 16), more than half of the TCNs claimed that their level of education was sufficient for getting a job in his/her area of work (60% agree) and almost half of them stated that they have good job references (49% agree) and 57% claimed that their skills are updated to develop the type of work they are doing (57% agree). Moreover, just 16% consider that their level of education is not sufficient for getting a job in their areas of work and 18% stated that they do not have good job references.

**Figure 16: Current level of job-related skills**



Analysis comparing connected and non-connected TCNs in current level of job related skills also showed that both groups are significantly different in almost all the items (table 3).

**Table 3: Significant differences among connected and non-connected in current level of job-related skills. % and n**

		Connected		Total
		No	Yes	
<b>My level of education is sufficient for getting a job in my area of work</b>				
Totally agree / Agree	Count	148	816	964
	%	44.3%	64.3%	60.1%
<b>My skills for doing the type of work I want to do are up to date</b>				
Totally agree / Agree	Count	150	766	916
	%	44.8%	60.6%	57.2%
<b>An employer would be impressed with my qualifications</b>				
Totally agree / Agree	Count	80	498	578
	%	23.9%	39.2%	36.0%
<b>My work qualifications aren't very good</b>				
Totally agree / Agree	Count	59	294	353
	%	17.6%	23.2%	22.0%
<b>I have good job references</b>				
Totally agree / Agree	Count	138	654	792
	%	41.2%	51.5%	49.3%

Concretely, the results in the table above show us that compared to non-connected TCNs, connected TCNs are significantly more likely to:

- Claim that their level of education is sufficient for getting a job in their area of work (64.3% agree) than Non-Connected (44.3% agree)
- State that their skills for doing the type of work they want to do are up to (60.6% agree) compared to non-connected (44.8%).
- Be more confident about their qualifications than Non-Connected: 39.2% of Connected stated that their employer would be impressed with their qualifications while just 23.9% of non-Connected agrees with this sentence.
- Be slightly more critical with their qualifications than Non-Connected: 23.2% of Connected agree that their qualifications are not very good while just 17.6% of non-connected agree with this sentence.
- To claim that they have good job references (51.5% agree) than Non-Connected (41.2%).

**Perceived employability** refers to opportunities on the internal and/or external labour market. Analysis of this variable showed that 36% of the individuals are confident (agree) that they would find another job if they started searching. Nevertheless, 31% of the individuals also claimed that it would be difficult for them to find new employment when leaving the organization. Finally, 45% neither agree nor disagree about the opportunity to find a job of equal value.

**Figure 17: Perceived employability**

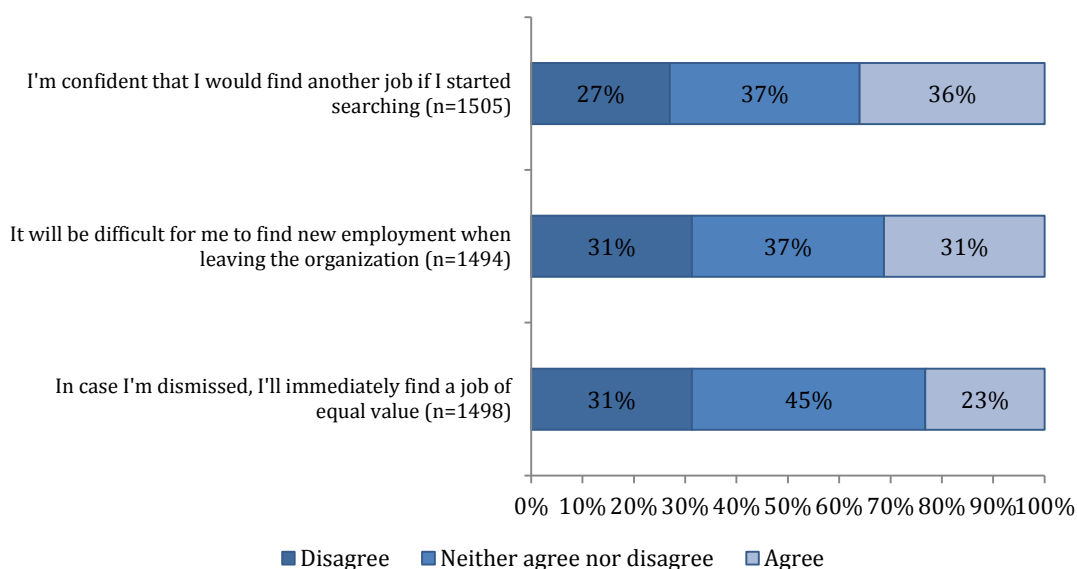


Table 4 show the results obtained when we looked at the differences between connected and non-connected TCNs in perceived employability:

**Table 4: Significant differences among connected and non-connected in perceived employability. % and n**

		Connected		Total
		No	Yes	
<b>I'm confident that I would find another job if I started searching</b>				
Totally agree / Agree	Count	60	482	542
	%	18.6%	40.8%	36.0%
<b>In case I'm dismissed, I'll immediately find a job of equal value</b>				
Totally agree / Agree	Count	55	295	350
	%	17.0%	25.1%	23.4%

Concretely, the results in the table above show us that compared to non-connected TCNs, connected TCNs are significantly more likely to:

- to be confident that they would find another job if they started (40.8% agree) than Non-Connected TCNs (18.6% agree)
- to be confident about their possibilities of immediately finding a job of equal value if they are dismissed (25.1% agree) than Non-Connected (17.0% agree)

The results on the analysis of **willingness to develop new competencies** reveal that 76% of the respondents stated (agree) that they find it important to develop themselves in a broad sense, in order to be able to perform different task activities or jobs within the organization. Moreover, 73% of them (agree) claimed that they are prepared to change their work activities if the organisation required it. Moreover, 71% of them (agree) claimed that they are prepared to change their work activities if the organisation required it.

**Figure 18: Willingness to develop new competences**

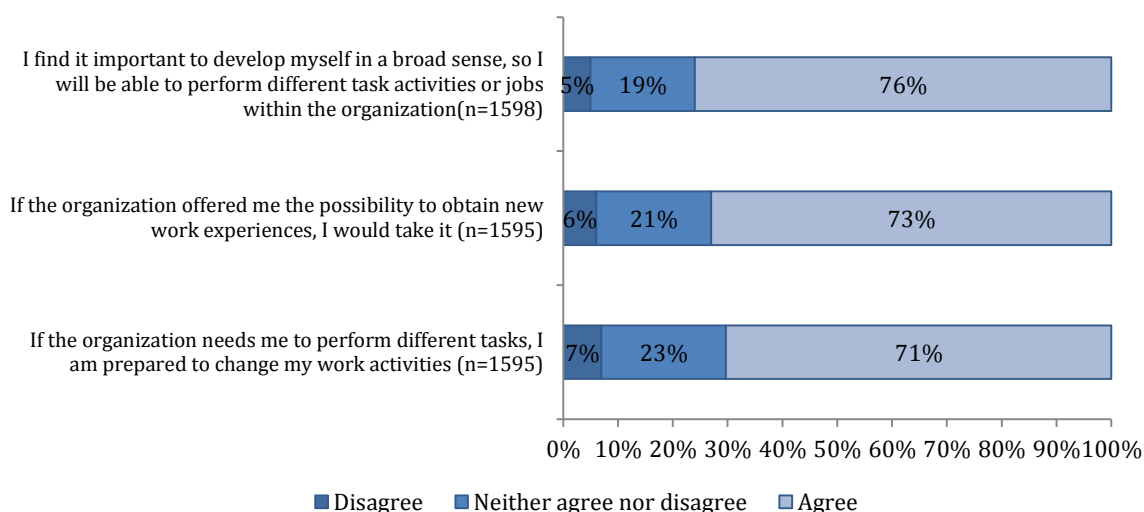


Table 5 show the results obtained when we looked at the differences in willingness to develop new competencies between connected and non-connected TCNs::

**Table 5: Significant differences among connected and non-connected to develop new competences. % and n**

		Connected		Total
		No	Yes	
<b>I find it important to develop myself in a broad sense, so I will be able to perform different task activities or jobs within the organization</b>				
Totally agree / Agree	Count	201	1012	1213
	%	58.9%	80.5%	75.9%
<b>If the organization needs me to perform different tasks, I am prepared to change my work activities</b>				
Totally agree / Agree	Count	213	910	1123
	%	62.6%	72.5%	70.4%
<b>If the organization offered me the possibility to obtain new work experiences, I would take it</b>				
Totally agree / Agree	Count	219	947	1166
	%	64.4%	75.5%	73.1%

Data in the table above indicated that connected and non-connected TCNs are significantly different in all the items related with willingness to develop new competencies. Concretely, we saw that compared to non-connected TCNs, connected TCNs are significantly more likely to:

- Develop new competencies: 80.5% of Connected TCNs find it important (agree) to develop themselves in a broad sense, in order to be able to perform different task activities or jobs within the organization. This percentage is 58.9% in the case of Non Connected.
- Perform different tasks and change work activities (72.5% agree) than non-connected (62.6% agree).
- Take opportunities to obtain new work experiences if the organization offered them (75.5% agree) than non-connected (64.4% agree).

Regarding the analysis of **willingness to change jobs** almost 50% of the participants stated (agree) that they are willing to start another job and 42% claimed (agree) that in case of organizational change, they would prefer to stay in the current department.

**Figure 19: Willingness to change job**

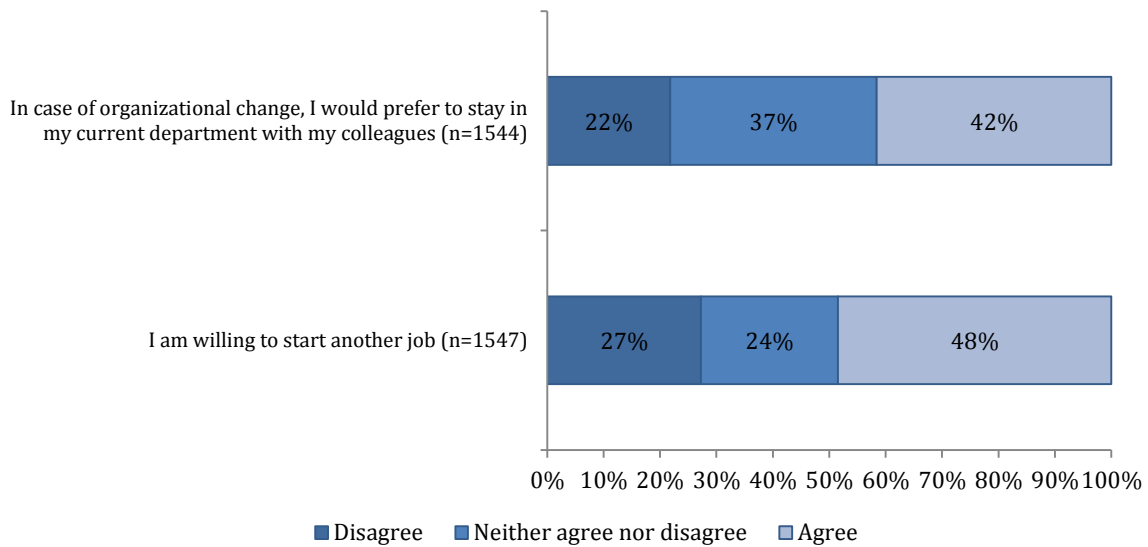


Table 6 show the results obtained when we looked at the differences between connected and non-connected TCNs in willingness to start another job.

**Table 6: Significant differences among connected and non-connected in willingness to start another job % and n**

		Connected		Total
		No	Yes	
<b>I am willing to start another job</b>				
Totally disagree / Disagree	Count	121	305	426
	%	35.9%	25.2%	27.5%
<b>In case of organizational change, I would prefer to stay in my current department with my colleagues</b>				
Totally disagree / Disagree	Count	92	238	330
	%	27.4%	19.7%	21.4%

Concretely, the results in the table above show us that non-connected TCNs are significantly less likely to be willing to start a job or to stay in their current department with their colleagues in case of organizational change (35.9% disagree vs 25.2% disagree; 27.4% vs 19.7%; respectively).

The results for **opportunity awareness and self-presentation skills** showed that more than 60% of the participants stated that they are able to convince potential employers or project partners of their competencies (64%) and do not find it difficult to prove their capabilities to others (67%). Moreover, more than 80% of the TCNs interviewed are aware of their interests and skills.

**Figure 20: Opportunity awareness and self-presentation skill**

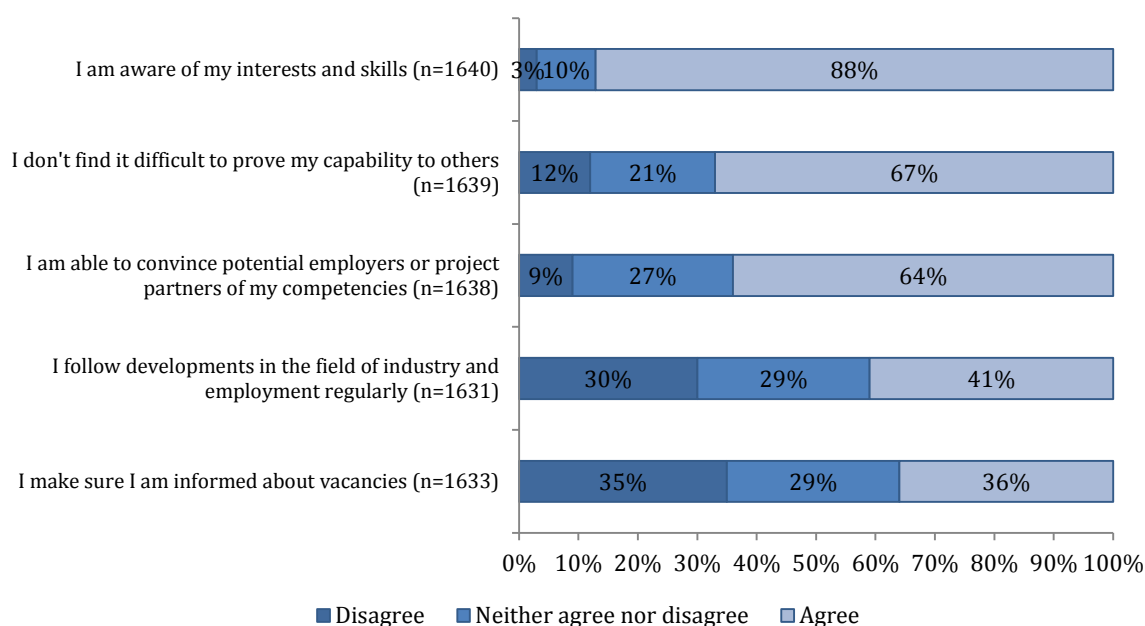


Table 7 show the results obtained when we looked at the differences between connected and non-connected TCNs in opportunity awareness and self-presentation skills.

**Table 7: Significant differences among connected and non-connected in opportunity awareness and self-presentation skills % and n**

		Connected		Total
		No	Yes	
<b>I follow developments in the field of industry and employment</b>				
Totally agree / Agree	Count	88	575	663
	%	25.7%	44.6%	40.6%
<b>I make sure I am informed about vacancies</b>				
Totally agree / Agree	Count	88	504	592
	%	25.7%	39.0%	36.3%
<b>I am aware of my interests and skills</b>				
Totally agree / Agree	Count	276	1157	1433
	%	80.0%	89.3%	87.4%
<b>I am able to convince potential employers or project partners of my competencies</b>				
Totally agree / Agree	Count	169	883	1052
	%	49.0%	68.3%	64.2%

The results by connected and non-connected in table 7 reveals that, compared with non-connected TCNs, Connected TCNs: are statistically more likely to:

- Follow the developments in the field of industry and employment where they work. (44.6% agree) than non-connected (25.7% agree)
- Be aware about the opportunities in the labour market: 39.0% of Connected stated (agree) that they make sure they are informed about vacancies versus 25.7% of non-connected.
- Be aware of their own interest and skills (89.3% agree) than non-connected (80.0% agree).

- Be confident and that they can convince potential employers or project partners about one's competencies (68.3%) than non-connected (49%).

Regarding **training** supported by current employer (or past employer if they are unemployed) during the past 12 months, only a minority of TCNs have been trained. Just 16% of the respondents stated that they have received Training in job-related skills; 8% of them have received Training in generic skills and just 5% have received Leadership training.

**Figure 21: Have you participated in training supported by your current employer (or past employer in case you are unemployed) during the past 12 months?**

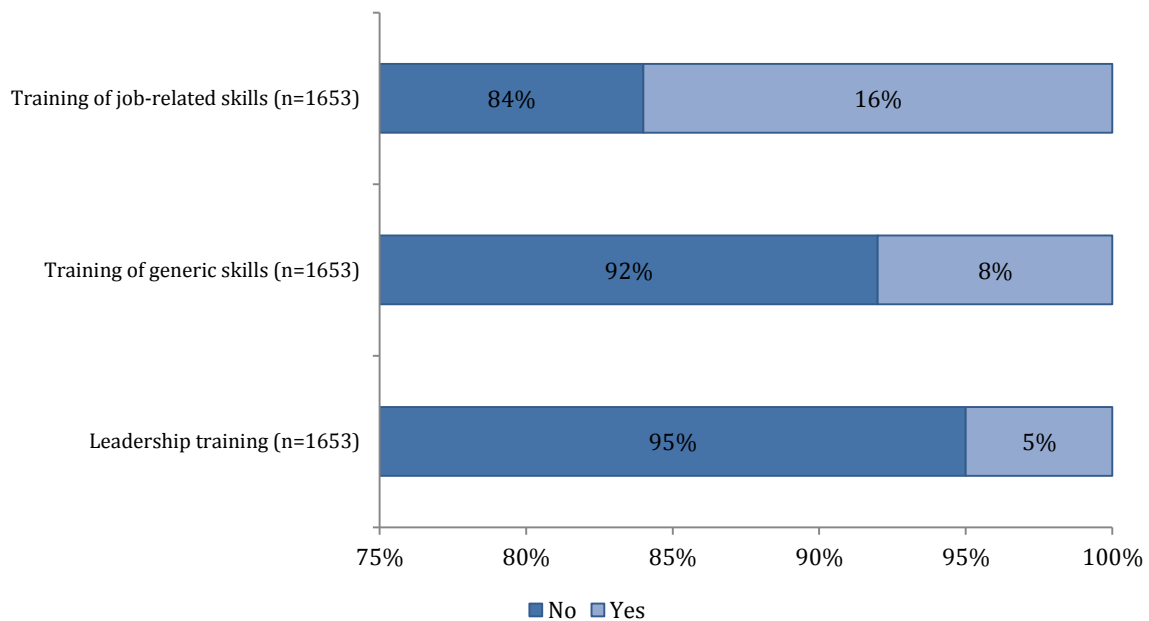


Table 8 show us the results obtained when we looked at the differences between connected and non-connected TCNs in training.

**Table 8: Significant differences among connected and non-connected in training % and n**

		Connected		Total
		No	Yes	
<b>Training of job-related skills</b>				
Yes	Count	32	226	258
	%	9.2%	17.3%	15.6%
<b>Training of generic skills</b>				
Yes	Count	13	117	130
	%	3.8%	9%	7.9%
<b>Leadership training</b>				
Yes	Count	8	74	82
	%	2.3%	5.7%	5.0%

The results by connected and non-connected in table above 8 reveals that, among those who were trained, connected TCNs: are statistically more likely to:

- Participate in training activities of job-related skills supported by their employers (17.3% agree) than non-connected (9.2%).
- Receive training in generic skills (9.0% agree) than non-connected (3.8% agree).
- Receive in leadership training (2.3% agree) than non-connected (5.7% agree).

To sum up, these data show us that, on one side, socio-demographic factors such as age, educational level, and employment status are clear sources of differentiation of employability: In this sense that:

- a) middle-aged individuals show higher employability than younger and older individuals;
- b) respondents with tertiary education seem more employable than less educated respondents;
- c) the employed show higher employability compared to the unemployed; and that
- d) students also have a relatively higher level of employability;
- e) professionals and technicians seem to be more employable than respondents who are employed in broadly-defined manual work..

On the other side, connected migrants informed to have a statistically significant higher level of employability than the non-connected migrants.

### 3.5 Integration

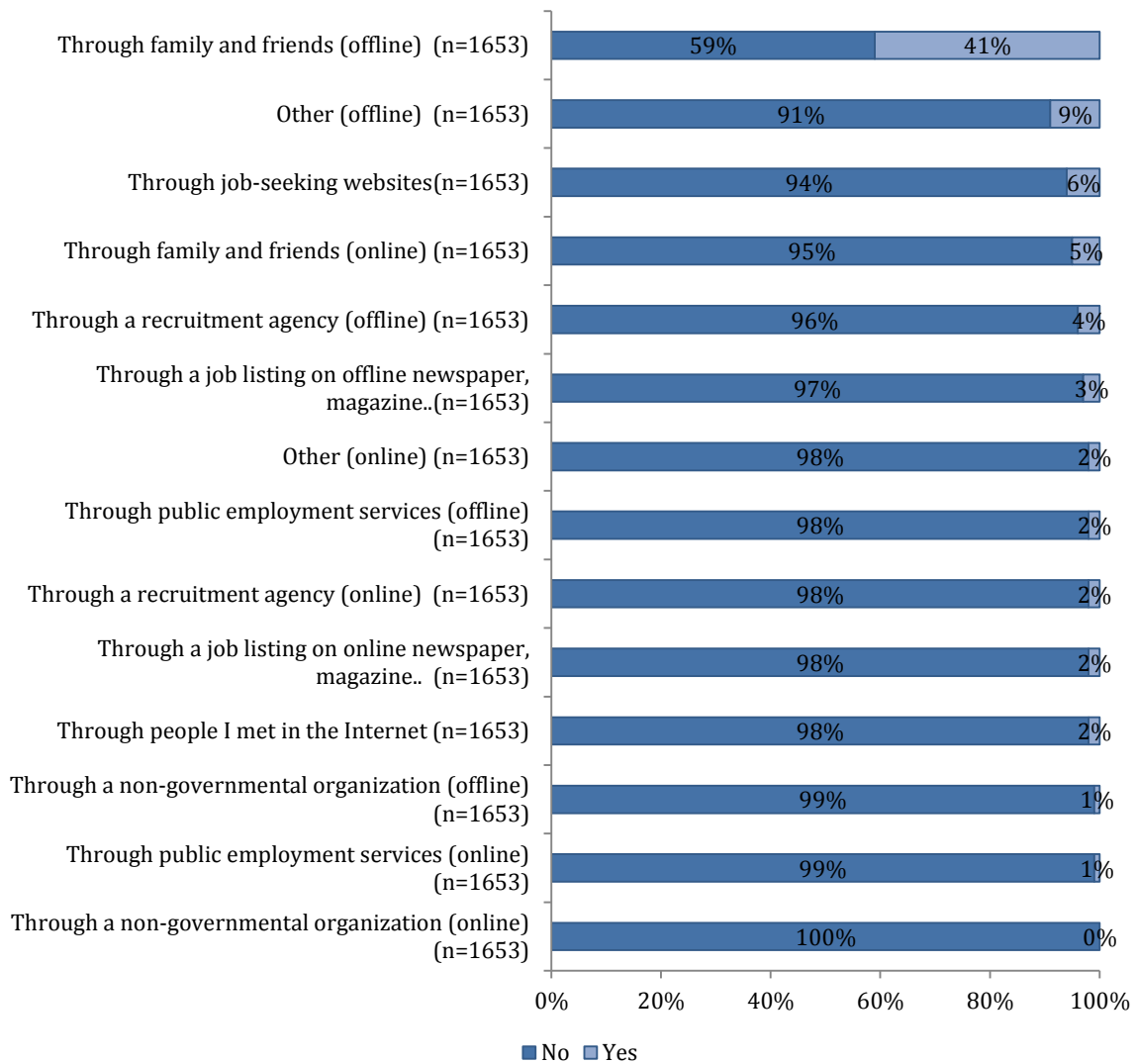
We summarise here the main findings for integration. We report the results for each variable for the sample as a whole, as well as those that compared the groups of connected and non-connected TCNS in each of the items of the variables that have showed significant differences in the statistical analysis. We elaborate more detailed and extended results in Annex 6.

Regarding **integration in the labour market**, we found that:

- Almost half the TCNs in the labour market (47%) claimed that *their jobs matched their skills and training*. 22% stated that their jobs match their skills but not in the area for which they were trained and 31% answered that their jobs do not require the skills and training that they have.
- All TCNs surveyed were asked whether their *educational qualifications were recognized* in the country where they currently live. 50% of them stated that their qualifications were recognized at equivalent level; 7% at a lower level, and the 43% of them informed that their education diplomas were not recognised in the current host country.
- Moreover, we found that participants got jobs mainly through family and friends (41%). Other channels are used by less than 6% of the individuals.



**Figure 22: How did you arrange/get your current or last job in this country?**



- 77% of third country nationals have taken courses to improve their knowledge or skills for work, while 23% have not taken any course to do this.
- Moreover, they assessed that language of the host country (84%) of the individuals and sense of initiative and entrepreneurship (81%) was the two most relevant skills of nine rated as relevant to improve their work situation.

**Figure 23: How much do you think that the following skills have helped you / can help you to improve your work situation?**

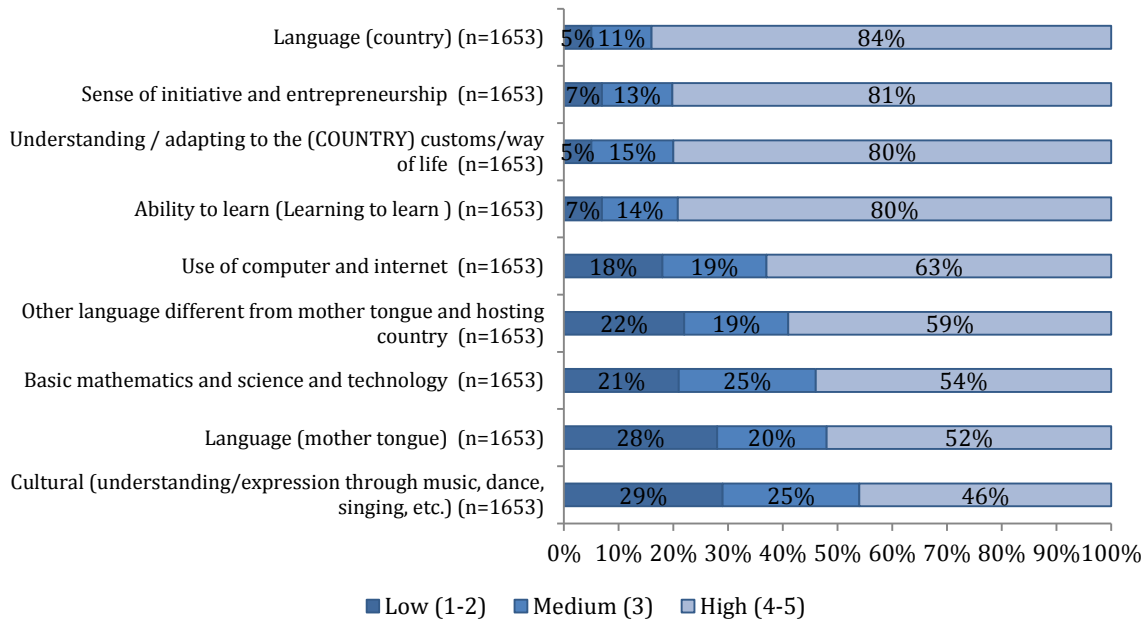


Table 9 showed the **main differences on integration to the labour market of the host country between connected and non-connected:**

**Table 9: Differences between connected and non-connected in integration to the labour market. N and %**

		Connected		Total
		No	Yes	
<b>Educational qualification recognized in the country where you currently live</b>				
Yes, equivalent	Count	72	689	761
	%	23.5%	56.5%	49.8%
<b>How did you arrange/get your current or last job in this country</b>				
<i>Through family and friends (offline)</i>				
Yes	Count	192	493	685
	%	55.5%	37.7%	41.4%
<i>Through family and friends (online)</i>				
Yes	Count	4	84	88
	%	1.2%	6.4%	5.3%
<i>Through job-seeking websites</i>				
Yes	Count	1	91	92
	%	.3%	7.0%	5.6%
<b>During the last 12 months, have you taken any course to improve your knowledge or skills for work?</b>				
Yes	Count	43	324	367
	%	12.8%	25.4%	22.8%
<b>To take courses to improve their knowledge or skills for work.</b>				
Yes	Count	43	324	367
	%	12.8%	25.4%	22.8%
<b>Have you taken any courses to learn the language of the country where you currently live?</b>				
Yes	Count	101	536	637
	%	29.4%	41.9%	39.2%
<b>How much do you think that the following skills have helped you / can help you to improve your work situation?</b>				
<i>Language (mother tongue)</i>				
High (4-5)	Count	158	710	868
	%	45.7%	54.3%	52.5%
<i>Language (country)</i>				
High (4-5)	Count	280	1121	1401
	%	80.9%	85.8%	84.8%
<i>Other language different from mother tongue and hosting country</i>				
High (4-5)	Count	147	821	968
	%	42.5%	62.8%	58.6%
<i>Basic mathematics and science and technology</i>				
High (4-5)	Count	143	759	902
	%	41.3%	58.1%	54.6%
<i>Use of computer and internet</i>				
High (4-5)	Count	86	952	1038
	%	24.9%	72.8%	62.8%
<i>Use of computer and internet</i>				
High (4-5)	Count	86	952	1038
	%	24.9%	72.8%	62.8%
<i>Ability to learn (Learning to learn )</i>				
High (4-5)	Count	211	1103	1314
	%	61.0%	84.4%	79.5%
<i>Understanding / adapting to the host country customs/way of life</i>				
High (4-5)	Count	238	1074	1312
	%	68.8%	82.2%	79.4%
<i>Sense of initiative and entrepreneurship</i>				
	Count	234	1094	1328
	%	67.6%	83.7%	80.3%

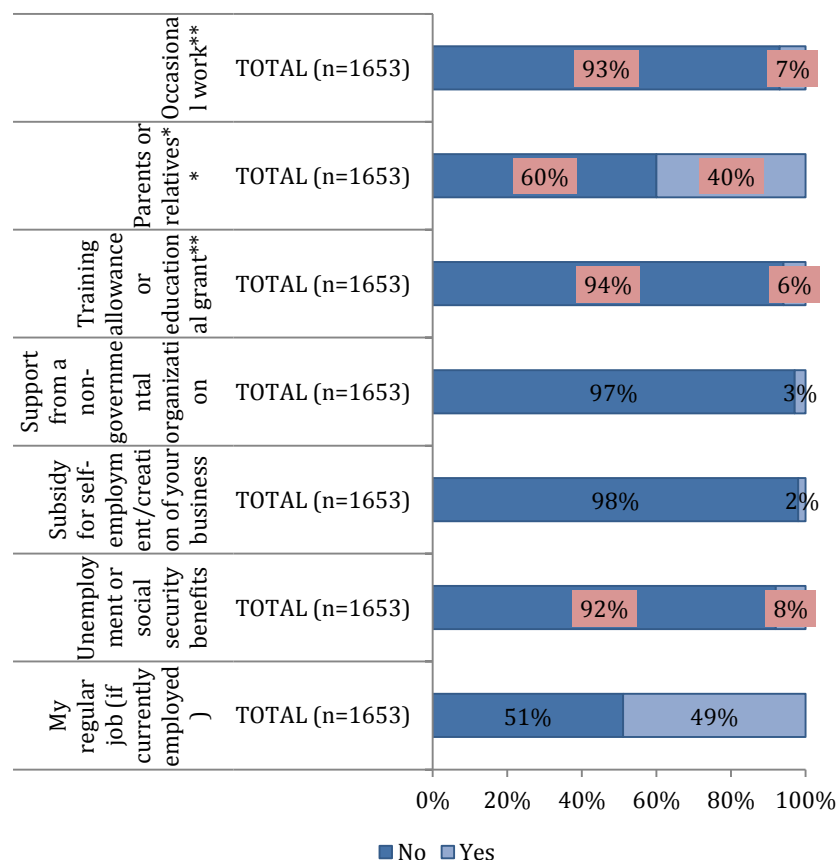
Based on the results of the table above, we saw that connected TCNs are more likely than non-connected to:

- Have an equivalent level of education qualification recognized (56.5% vs 23.5%).
- Get a job through family and friends through online connections (6.4% vs 1.2%) and through job-seeking websites (7.0% vs 0.3%). The non-connected TCNs are more likely to arrange/get jobs through family and friends (offline) than Connected TCNs (37.7% vs 55.5%)
- Take courses to improve their knowledge or skills for work (25.4% vs 12.8%).
- To participate in learning the language of the country (41.9% vs 29.4%).
- Think that the following skills improve their work situation: their mother tongue (54.3% vs 45.7%), to know the language of the country (85.8% vs 80.9%) and of other countries (62.8% vs 42.5%), basic mathematics and science and technology (58.1% vs 41.3%), use of computer and internet (72.8% vs 24.9%), ability to learn (Learning to learn – 84.4% vs 61.0%-, understanding / adapting to the host country customs/way of life – 82.2% vs 68.8%-, and the sense of initiative and entrepreneurship – 83.7% vs 67.6% - , cultural (understanding/expression through music, dance, singing, etc.).

In relation with **social inclusion**, we found that:

- Almost a half of third country nationals stated that their regular jobs are the main source of income while 40% said their parents or relatives are the main source.

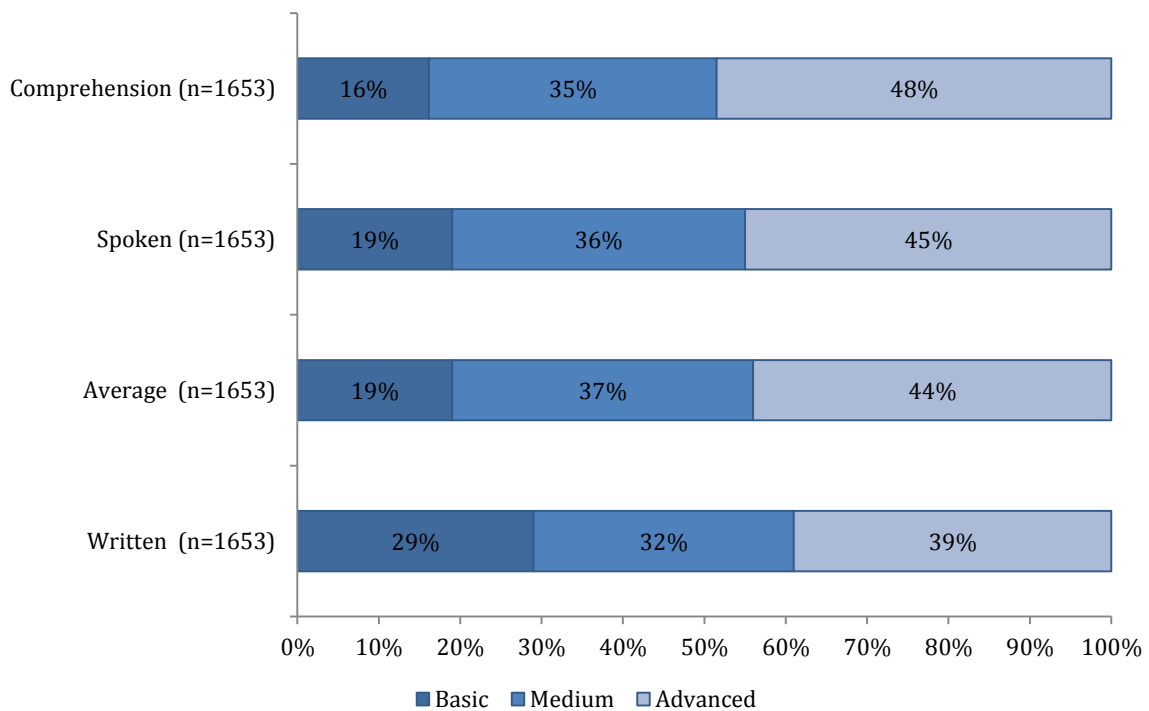
**Figure 24: What are the main sources of income in your family, including yours?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

- 44% of the individuals surveyed said they are coping on their present income; 28% of them stated that they are living very comfortably or comfortably and the same percentage declared they find it difficult.
- Knowledge of the language is considered as one of the main drivers of social inclusion. Almost half the participants rated their comprehension (48%) and spoken level (45%) as Advanced. Written level is reported as Advanced by 39% of the TCNs. However, almost 50% of the respondents consider their knowledge of the language to be advanced. However, there are differences between countries in all the dimensions identified.

**Figure 25: In the country where you currently live, how would you rate your knowledge of the language in the following areas?**



- On average 40% of the individuals claimed that they are informed or very well-informed about different aspects of living in the country where they are currently: 50% of the respondents stated that they are well-informed about health services; 47% also said they were well informed about education; 35% about housing and job opportunities, and around 30% about social services, employment rights, taxes and legal issues.

**Figure 26: How well informed are you about different living aspects of the country where you currently live?**

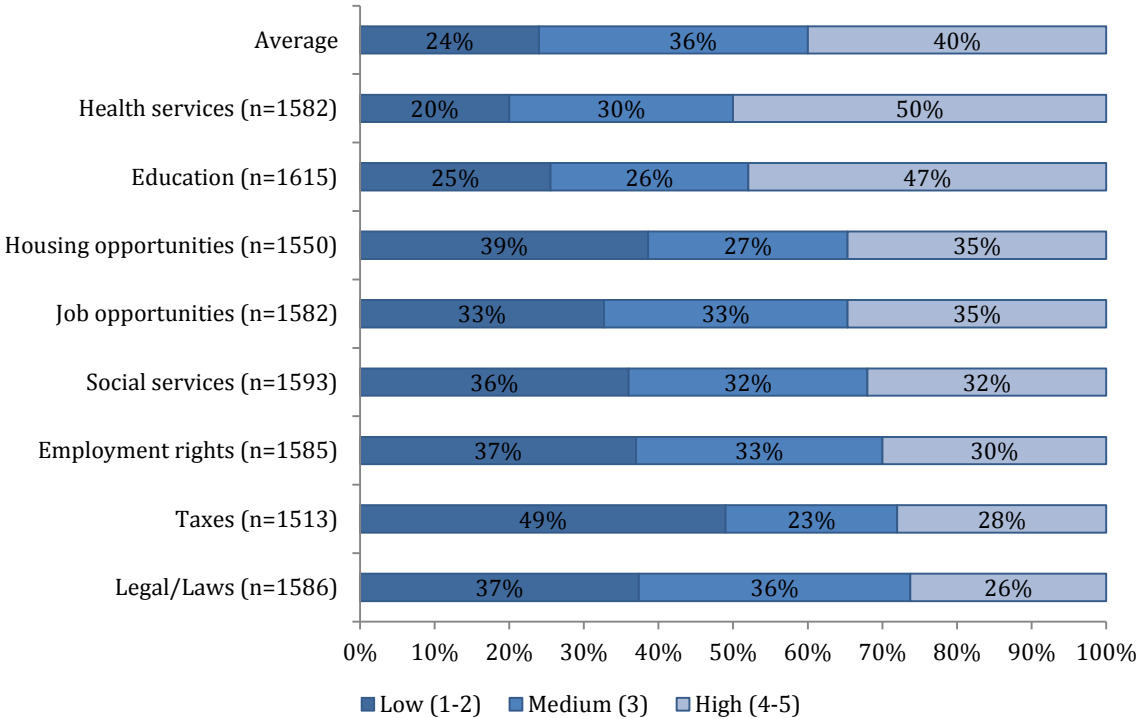


Table 10 showed the main differences on social inclusion in the host country between connected and non-connected:

**Table 10: Differences between connected and non-connected in social inclusion to the labour market. N and %**

		Connected		Total
		No	Yes	
<b>What are the main sources of income in your family, including yours?</b>				
<i>My regular job (if currently employed)</i>				
Yes	Count	144	666	810
	%	41.6%	51.0%	49.0%
<i>Unemployment or social security benefits</i>				
Yes	Count	53	76	129
	%	15.3%	5.8%	7.8%
<i>Training allowance or educational grant</i>				
Yes	Count	3	95	98
	%	.9%	7.3%	5.9%
<i>Parents or relatives</i>				
Yes	Count	117	542	659
	%	33.8%	41.5%	39.9%
<i>Occasional work</i>				
Yes	Count	11	98	109
	%	3.2%	7.5%	6.6%
<b>Which of the following best describe how you feel about your household's income nowadays?</b>				
Comfortably on present income	Count	50	389	439
	%	15.2%	30.8%	27.6%
<b>In the country where you currently live, how would you rate your knowledge of the language?</b>				
Advance	Count	92	630	722
	%	26.6%	48.2%	43.7%
<b>How well informed are you about different living aspects of the country where you currently live?</b>				
High	Count	80	505	585
	%	27.6%	43.5%	40.3%

Based on the results of the table above, we saw that connected TCNs are more likely than non-connected to:

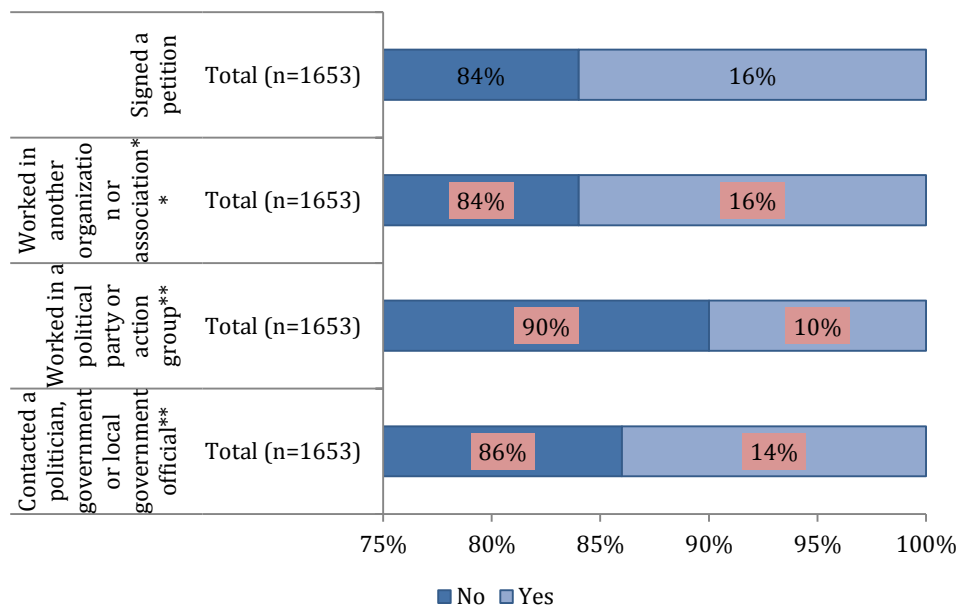
- Have their regular jobs as their main source of income (51.0% vs 41.6%) and are less likely to claim unemployment or social security benefits (5.8% vs 15.3%).
- Live comfortably (30.8% vs 15.2%)
- Have an advanced level of language knowledge (48.2% vs. 26.6%).
- Be better informed about different aspects of living in the country where they are currently than Non-Connected (43.5% vs 27.6%).

Regarding **active citizenship**, the analysis showed that:

- Only the 15% of total respondents participate in participate in social group or organization.
- Regarding their participation in the last local and/or national elections in those cases where they were able to participate: only a 10% of individuals surveyed voted in the last election (individuals surveyed in Bulgaria do not have the right to vote).

Moreover, more than 80% of the respondents have never carried out any of the political activities in the country where they live.

**Figure 27: During the last 12 months, have you done any of the following political activities in the country where you currently live?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Table 11 showed **the main differences on active citizenship in the host country between connected and non-connected:**

**Table 11: Differences between connected and non-connected in active citizenship. N and %**

		Connected		Total
		No	Yes	
<b>Do you volunteer/participate in any social group or organization?</b>				
Yes	Count	28	212	240
	%	8.3%	16.5%	14.8%
<b>Did you vote in the last local and/or national elections?</b>				
Yes	Count	12	152	164
	%	3.5%	12.1%	10.3%
<b>During the last 12 months, have you done any of the following political activities in the country where you currently live?</b>				
<i>Contacted a politician, government or local government official</i>				
Yes	Count	17	212	229
	%	4.9%	16.2%	13.9%
<i>Worked in a political party or action group</i>				
Yes	Count	11	162	173
	%	3.2%	12.4%	10.5%
<i>Worked in another organization or association</i>				
Yes	Count	14	245	259
	%	4.0%	18.7%	15.7%
<i>Signed a petition</i>				
Yes	Count	20	247	267
	%	5.8%	18.9%	16.2%

Based on the results of the table above, we saw that connected TCNs are more likely than non-connected to:

- Participate in social groups (16.5% vs 8.3%).
- Vote in last local and/or national elections (12.1% vs 3.5%).
- Contact online a politician, government or local government (16.2% vs 4.9%)
- Work in a political party or action group (12.4% vs 3.2%), or another organisation or association (18.7%).
- Sign a petition (18.9% vs 5.8%).

Summarising, these results informed that regarding the integration of the third country nationals: , they find some difficulties in getting their qualifications fully recognized in their host country, they mostly find jobs through family and friends; very few have taken training courses to improve and develop their competences; and they have a very low civic and political participation. Moreover, in general, connected migrants showed better results in the different components of integration than non-connected ones.



## 3.6 Main results of the multivariate statistical analysis

We present in this section the main and only significant results of the multivariate analysis. For these analyses:

- We created 5 composite indexes through factorial analysis in order to explain in a unique indicator: IT skills, internet skills, internet adoption, employability, and integration, respectively. In this sense, factorial analysis is a statistical technique of data reduction used to explain correlations among observed variable with a fewer number of non-observed variables called factors. Factors resulted of each variables were compared for each socio-demographic variable using analysis of variance (ANOVA). For the specific cases of employability, the groups of connected and non-connected were also compared on these two variables with ANOVA.
- Moreover, we carried out correlation analysis among these composite indexes in order to find linear relationships among them, as well as regression analysis to understand which combinations of these variables is related with employability and integration, respectively, after controlling the influence of socio-demographic variables (age and education).

We provide with more detail on the analysis and the results in annex 7.

### 3.6.1 Composite indexes

Regarding the **IT and internet skills composite indexes**, the factorial analysis showed that the eight items can be reduced to two latent variables that can be named as '**Basic skills**' and as '**Advanced skills**'. The analysis of variance (ANOVA), that compares these factors by demographic barriers, shows a number of important and statistically significant findings:

- IT and internet skills are a clear function of age: younger people have a higher IT and internet skills composite index than older people and the differences are statistically significant.
- The higher the educational level, the higher the level of IT and internet skills are: the composite indexes are highest for individuals with tertiary education and these differences are statistically significant.
- IT and internet skills are a clear function of employment/activity: the composite indexes are highest for individuals who are either employed, self-employed, or students and are lowest among the unemployed and the homemakers, and these differences are statistically significant.
- Knowledge and service workers have higher IT and internet skills: the IT and internet skills composite indexes are higher, for instance, among professionals and technicians than they are among manual workers, and these difference are statistically significant.

Regarding **Internet adoption composite index and characterization**, the factorial analysis yields seven statistically significant and conceptually meaningful factors that summarise more than 30 base level variables. These factors are:

- Education;
- Participation;
- Job search;
- Information seeking;
- Communication;
- Professional life socially-oriented;
- Professional life self-oriented.

These factors were grouped into the Internet adoption composite index capturing to what extent individuals use the Internet in their daily lives. This index ranges from 1 (representing migrants with the lowest level of Internet adoption) to 5 (representing the Networked migrants).

The ANOVA showed that:

- Traditional factors explain digital inequalities: age and education for which we find statistically significant differences. Younger and more highly-educated individuals are more likely to be 'Networked migrants'.
- Employment status shows statistically significant differences: the employed, self-employed, and the students have higher Internet adoption than other groups
- Professionals and technicians have the highest scores while skilled agricultural, craft and related trade workers, as well as plant and machine operators or assemblers have the lowest scores. The differences are statistically significant.

For the **employability composite index and characterization**, through factor analysis, we extracted from the 30 items measuring employability five statistically significant and conceptually meaningful factors.

- Competence development
- Current level of job-related skills
- Willingness to develop new competences and self-presentation awareness
- Willingness to change jobs and opportunity awareness
- 'Perceived employability'

All these factors were included in the 'Employability composite index' using as weights 'Explained variance' divided by the total variance of the factors. Factors and composite index are normalised from 1 to 5 where 1 represents the lowest level of employability and 5 represents the highest level of employability.

The ANOVA showed that:

- Middle-aged individuals are more likely to score higher in the employability index than younger and older individuals.
- Participants with tertiary education are more likely to score higher than less educated individuals.
- Students working part time and full time workers obtained the highest scores.
- By occupation, professionals and technicians are positioned at the top of the employability index.
- Connected migrants have a statistically significant higher level of employability as compared to the non-connected migrants.

In the case of **integration**, the items contained in the integration block of our questionnaire were so many and so disparate that factor analysis could not effectively reduce and summarise the data. Hence, it was not possible to construct a synthetic composite index for integration. Instead of this, we analysed the bivariate relationship between each integration items and the previous four composite indexes. These analyses showed that individuals who are more integrated show higher levels for all the four composite indexes. More concretely:

- Regarding integration in the *labour market*, results showed that:
  - Individuals who reported that their skills matched their skills and jobs significantly showed a higher level of employability than those who reported that their current job did not require the skills they possess.
  - Individuals who have their educational qualifications recognised in the host country significantly informed of having better IT and internet skills, internet adoption and employability than those with lower level or no recognition of their educational qualification in the host country.
- In terms of *social inclusion*, we can see that:

- Individuals reporting they live comfortably on their current income significantly informed of having better IT and internet skills, internet adoption and employability than the rest of the groups that informed living comfortably to finding very difficult to live with their present income.
- Individuals with more advanced level of knowledge of the language of the host country showed a better level of employability than those with medium or basic level of knowledge of the language.
- Those who reported to be more informed about the country where they live informed of having better IT and internet skills, internet adoption and employability than the rest of the groups less informed about these living aspects of the host country.
- Regarding *active citizenship*, those who volunteer or participate in social groups or organisations informed of having better IT and internet skills, internet adoption and employability than those who do not participate in any social group or organization.
- For *migration experience*, more recent migrants seem to be better skilled in terms of both IT and Internet and showed higher Internet penetration than individuals who have been living in the host country for more than 10 years.

### 3.6.2 Correlation and regression analysis

Correlation and regression analysis were carried out to study the relationships between the main dimensions of our study: Computer and Internet skills composite indexes; Internet adoption composite index; Employability composite index, and Integration.

As we can see in the table below, the **correlation analysis** shows a correlation between Computer skills, Internet skills, and Internet adoption. What is important is that Internet adoption, IT skills, and Internet skills are significantly correlated, although in a weak way, with the Employability Index and with Integration (well-being) of migrants. We note here that for the specific case of integration, as we explained above, as we could not construct a synthetic composite index for integration, we decided to use in the correlation analysis the variable measuring respondents' perception about their income measured by this question and the related items: We chose this variable to measure integration in terms of self-perceived well-being.

**Table 12: Correlation among dimensions**

	1	2	3	4	5
1. Computer skills Composite Index	1				
2. Internet skills Composite Index	.736**	1			
3. Internet adoption Composite Index	.488**	.482**	1		
4. Employability Composite Index	.347**	.321**	.386**	1	
5. Integration – (well-being)	.248**	.218**	.183**	.206**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

We also carried out a linear **regression analysis** to understand which if internet adoption and employability predict together Integration (well-being), controlling age and education. . The regression model turned to be statistically significant, revealing that Internet adoption and Employability is positively related with integration, as well as education and slightly and negatively related with age.

**Table 13: Linear regression analysis - Integration as dependent variable**

Independent variables	Standardized Coefficients - B	t	Sig.
Internet adoption Composite Index	.088	2.631	.009
Employability Composite Index	.097	2.991	.003
Education level	.201	6.369	.000
Age	-.080	-2.659	.008

We also carried out another liner regression to understand if internet adoption and language of the country (related with integration) predict together employability, controlling age and education. The regression model showed that educational level, average level of the language and internet adoption is positively related with employability of the individuals.

**Table 14: Liner regression analysis – Employability as dependent variable**

Independent variables	Standardized Coefficients - B	t	Sig.
Education level	.178	6.257	.000
Age	.033	1.183	.237
Average level of language knowledge	.187	6.864	.000
Internet adoption Composite Index	.337	11.749	.000

It is worth pointing out that Internet adoption is significantly related with both integration and employability of migrants.

## 4. Discussion and conclusions

In this final chapter, we first recall the key findings (Section 4.1), and we then we conclude with a few general considerations on their policy implications (Section 4.2).

In summing up the key findings, we largely refer to the characterisation of the four composite indexes, to the mapping of integration variables against these indexes, and to the results of the correlation and regression analyses. This is quite natural since the multivariate analysis better summarises the same data that we first presented in terms of univariate and bivariate statistics. We use some of the latter to a lesser degree to compare our TCNs to the general population (referring to the triangulation between our survey data and Eurostat data) and to look selectively at some of the descriptive differences between the connected and non-connected with respect to employability and integration.

Regarding all the findings we recall once more that in §2.2 we clearly define the limitations of our sample, not so much at aggregate level, but in terms of countries and nationality group differences.

### 4.1 Summing up key findings

Regarding **ICT access, use, adoption and skills**, we have seen that, first, TCNs show very high percentages and a level of adoption very close to the population as a whole in the three countries. However, adoption of the Internet for social participation, for learning and education, and for job-related purposes for all three countries is higher among the general population than among the TCNs in our sample. Also this finding is in line with those reported in §1.2 showing that when we move from basic access and use to more specific uses the picture becomes more nuanced and the position of immigrants more differentiated in terms of their different indicators (the characterisation of the Internet Adoption composite index further confirms this).

Second, looking at the composite index of Internet Adoption, it is quite evident that age, education, employment status, and type of occupation are clear sources of digital inclusion inequalities. The younger, more highly-educated, who are students or employed (as professionals and technicians rather than manual workers) use the Internet more and for more purposes and are closer to the ideal-type of the 'interconnected migrant' than individuals who are over 55 years of age, with lower educational levels, unemployed (or employed performing manual work). These findings are even more compelling since they are measured by a synthetic index that perfectly and granularly captures the difference in level and purpose of usage. Thus, they accord with the more recent literature that has abandoned the simplistic dichotomy between using or not using the Internet, to look at emerging differentiation among those who use it. In this respect, the differences in the composite index of Internet adoption are more statistically significant and more theoretically relevant than any of the findings that emerge when comparing the connected and non-connected using the Eurostat definition.

Third, analysis shows that Internet adoption is correlated in statistically significant ways with both employability and integration (as a proxy measured by the well-being variable). Furthermore, the regression analysis show unequivocally that, even controlling for age and education, Internet adoption has positive and statistically significant impacts on both employability and integration. In other words, more Internet adoption seems to be positively related with employability and integration.

Finally, the findings related to both computer and Internet skills mirror exactly what we reported above for access, use, and adoption. In this sense, correlation analysis showed that these three variables are significantly correlated among them.

Regarding the findings on **employability**, the analysis have shown us that, first, age and educational level, and employment status are clear sources of differentiation in terms of employability: a) middle-aged individuals show higher employability than younger and older individuals; b) respondents with tertiary education seem more employable than less educated respondents; c) somewhat tautologically, the employed show higher employability compared to the unemployed; d) students also have a relatively higher level of employability; e) professionals and technicians seem to be more employable than respondents who are employed in broadly-defined manual work..

Second, it is noteworthy that connected migrants have a statistically significant higher level of employability than the non-connected migrants.

Third, there is a statistically significant correlation between the employability composite index and Internet adoption, computer skills, and Internet skills.

Fourth, the regression model including both Internet adoption and the employability index, controlling for age and education, shows that both variables have a positive and statistically significant effect on integration.

For integration, we found that at descriptive level. that:

- immigrants face in getting their qualifications fully recognised in their host country;
- Our TCNs mostly find jobs through family and friends;
- Very few have taken training courses to improve and develop their competences;
- Our respondents seem to have a good level in the language where they live, although as we show later, differences among profiles cast doubts on the objectivity of this self-assessment;
- As for civic and political participation, the data seem to show that this is still very low.

Inferential analysis showed that in general, respondents who are more integrated show higher levels of employability, computer skills, Internet skills, and Internet adoption:

## 4.2 Policy considerations

This study has uncovered findings ranging from wide themes to more specific aspects, that could inform future policies. We list those that seem to us the most relevant.

1. It is clear that an enduring process is at work which is creating digital inclusion inequalities. Policy interventions targeted at those segments of the immigrant population that seem to have fewer digital resources are needed. Policy should tackle not only the differences among the connected, but also between them and the non-connected. The elderly and unemployed immigrants are at risk of being left behind in terms of digital inclusion and this affects in turn their economic and social inclusion.
2. The policy measures supporting public libraries and other forms of public access, though not innovative, seem to be very well suited to these segments. They need to be continued and more specifically targeted at these groups. These measures could be integrated by coaching and mentoring to provide basic digital skills, since it emerges that some segments of the immigrant population that lack skills are not capable of obtaining them through informal channels. Moreover, we have shown that Internet adoption and ICT skills have impacts on both employability and integration, so supporting measures like these seems even more important.
3. Much still needs to be done in terms of providing digital skills to the above mentioned target groups and particularly to the less connected and less socially-included segments of the immigrant population. The Internet for learning and educational purposes is less used by immigrants in general and is particularly little used by some specific segments. These same target groups have also made little use of training courses in general. This gap offers a very big opportunity to increase digital skills and, at the same time, improve immigrant human capital in general. This would be done by mainstreaming ICT in educational policy.

4. Very specific ICT for employability policy should target those immigrants who are either unemployed or who work as manual workers. The fact that they search for jobs mainly through family and friends is not per se a gap, but if it is taken with how they use Internet, it shows a lack of awareness and confidence. A well-crafted and targeted policy could be the solution.
5. In terms of ICT policy to increase social integration and active participation, the findings do not provide us with clear cut gaps directions to take, but it is evident that immigrants need to have their awareness raised of how the Internet and especially social media could help them to become more actively engaged in social, civic and political terms.
6. Finally, we suggest further analysis of the data in the following ways: a) corroborate and refine the preliminary findings of our correlation and regression analyses; and b) explore and disentangle country and nationality group effects from individual level effects.

First, correlation and regression analyses have produced some interesting and promising results which show that Internet adoption has an impact on integration and employability, but also that the latter has an impact on integration. Multiple regression analysis does not allow us to test the simultaneous interactions of different independent variables, but rather it tests them one at a time, while controlling for the others. Therefore we do not yet know what impact on integration the interaction between Internet adoption and employability will have. We may want to do a mediation analysis and assess whether there are direct or indirect (mediated) causal links between these three variables and between them and other variables. This kind of analysis requires the application of a Structural Equation Model which tries out different specifications. For instance, the employability index could be considered as the dependent variables and all other indexes and variables as independent ones. Alternatively, Internet adoption could be the dependent variable. A third possibility would be to model integration as the dependent variable. This kind of causal statistics model could uncover the key variable which impacts directly and indirectly on the level of dependent variable in the three specifications. Eventually, it could produce the single causal model that best fits the data we gathered on TCNs. The results would be of interest not only for digital inclusion, but also for employment and integration policies, since the impact of variables that fall into the policy remit of the latter may be uncovered.

The second type of analysis worth pursuing has to do with the country differences that we have addressed with great caution throughout this report. For instance, it was found that for some more advanced activities, the use of ICT by Third Country Nationals is higher in the Netherlands. There are country differences in terms of both ICT and employability. Here, for further analysis we suggest constructing a composite index of connectedness and applying a Multilevel Analysis of Variance to this composite index and to the employability composite index in order to disentangle the country and the nationality group effects from individual level effects. As explained, Multilevel Analysis of Variance would enable us to consider both individuals as such, and individuals nested into a particular nationality and country. Thus, we could find out the variance between the two composite indexes that is explained by respondents being in one country, or belonging to a nationality group, or simply by their individual characteristics.

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## 5. Annex I: Design and Methodology

### 5.1 Target, coverage and sampling

#### 5.1.1 Target population

“Third-Country Nationals” (TCNs) aged from 16 to 74 years old were selected as the target population of this ICTEGRA survey, as being the focus group for European migrant integration policies. TCNs are defined by European regulations,<sup>12</sup> such as residents of a EU27 Member State who do not have the citizenship of any EU27 Member State. Therefore, only first generation migrants who are not currently citizens of a EU27 Member State (even if they are applying for citizenship) were considered, leaving aside second-generation migrants as they would probably already be citizens of the surveyed country.

To identify this target population and define the quotas in the sample, the following official statistics from EUROSTAT were selected:

1. Immigration by sex, age group and citizenship [migr\_imm1ctz] from International Migration Flows survey:  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_imm1ctz&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_imm1ctz&lang=en)<sup>13</sup>
2. Individuals - Internet use in last 3 months [isoc\_ci\_ifp\_iu] from ICT Usage in Households and by Individuals survey:  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc\\_ci\\_ifp\\_iu&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_ci_ifp_iu&lang=en)<sup>14</sup>

The first source was used to select the top nationality groups in the three countries, and the second source shaped the quotas by connected and non-connected, and also by country.

The first source provides statistics containing the following indicators: immigration/emigration flow into/out of the reporting country during the reference year by sex, age (group), citizenship, country of birth, or the migrants' previous/next country of residence. The EU migration aggregate is calculated as the sum of the inflows and outflows reported by each Member State from/to countries outside the EU. The reported cases of unknown country of origin/destination are left aside and are not included in the calculation. A comparison of the nationality groups in the migration flows<sup>15</sup> with those in the stock data<sup>16</sup> for the three selected countries shows that the largest groups are the same. Hence, for our purpose, which was simply to identify and select the largest groups of TCNs in the three countries in order to set our sample quotas, it made no difference whether we used flows or stock data. Though using stock data may be a more usual choice, the decision to use

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<sup>12</sup> The following definitions were used to defined TCNs in this study:

European Parliament and Council Regulation (EC) No 862/2007 on Community statistics on migration and international protection and repealing Council Regulation (EEC) No 311/76 on the compilation of statistics on foreign workers.

European Commission Regulation (EU) No 216/2010 implementing Regulation (EC) No 862/2007 of the European Parliament and of the Council on Community statistics on migration and international protection, as regards the definitions of categories of the reasons for the residence permits.

European Commission Regulation (EU) No 351/2010 implementing Regulation (EC) No 862/2007 of the European Parliament and of the Council on Community statistics on migration and international protection as regards the definitions of the categories of the groups of country of birth, groups of country of previous usual residence, groups of country of next usual residence and groups of citizenship.

<sup>13</sup> EUROSTAT provides the explanatory test (metadata) of this variable at International migration flows. Reference Metadata in Euro SDMX Metadata Structure (ESMS) Compiling agency: Eurostat, the statistical office of the European Union [http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/EN/migr\\_flow\\_esms.htm](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/migr_flow_esms.htm)

<sup>14</sup> EUROSTAT provides the explanatory test (metadata) of this variable at ICT usage in households and by individuals. Reference Metadata in Euro SDMX Metadata Structure (ESMS) Compiling agency: Eurostat, the statistical office of the European Union [http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/EN/isoc\\_bde15c\\_esms.htm](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/isoc_bde15c_esms.htm)

<sup>15</sup> Immigration by sex, age group and citizenship [migr\_imm1ctz] from International Migration Flows survey [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_imm1ctz&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_imm1ctz&lang=en).

<sup>16</sup> [migr\_pop1ctz] from Population by citizenship and by country of birth" variable (Immigration by sex, age group and citizenship [migr\_pop1ctz] from Population by citizenship and by country of birth [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_pop1ctz&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_pop1ctz&lang=en))

flow data was made in order to ensure a more reliable picture of first generation migrants citizens of any EU27 Member State. In any case, for the definition of our sample nationality quotas this choice has been equivalent to using stock data because the largest groups are the same in both flows and stock statistics in all three selected countries.. This choice does not represent a problem in terms of the reliability; validity; replicability and representativeness of the study, so long as the same research design and target group (TCNs) is applied.

The second source comprised questions related to ICT usage at household level and individual level. These indicators were broken down according to different variables, one of which was "nationals from a non-EU country".

These EUROSTAT indicators allowed us to define the target population and ensure the representativeness of the sample concerning:

- Diversity among the Third Country Nationals (country of origin/citizenship).
- ICT skills: "connected" versus "non-connected" migrants. Connected migrants are defined by EUROSTAT as individuals who have accessed the Internet at least once within the last 3 months before the survey, and the "non-connected" migrants are those who have not accessed the Internet during that period.
- Age groups (young, middle aged, elderly).

The following two indicators were selected to target the population and to ensure representativeness of the sample:

1. "Third-Country Nationals" by the age group and citizenship variable<sup>17</sup> was selected to tackle immigration by age groups and citizenship from EUROSTAT'S International Migration Flows survey. This variable gave information on:
  - The total number of immigrants ("Third-Country Nationals") in the countries of the study.
  - The total number of immigrants ("Third-Country Nationals") in the countries of the study by age group.
  - The breakdown of immigrants by citizenship (non EU citizenship).
2. Individuals who have used the Internet in the past 3 months.<sup>18</sup> This variable gave information on: the number of non-EU state nationals in the countries of this study who have used the Internet in the past 3 months. The immigrants who have not used it are considered to be "Non-Connected" and those who have used it are considered to be "Connected". Unfortunately, nationals of non-EU states were grouped into one category without specifying their citizenship.

### 5.1.2 Geographical coverage

As EUROSTAT databases did not have data for indicators (1) and (2) for the following countries: Austria, the United Kingdom, Ireland, Italy and Romania, the Netherlands, Spain and Bulgaria were selected for the study. Moreover, this selection fulfilled the conditions of migration history mentioned in Section 1:

- Countries representing clear-cut distinct ideal-types in terms of immigration history:
  - **The Netherlands:** A "traditional immigration country" where migratory flows date back to the 1950s. These flows started as a result of both "guest-workers" and "post-colonisation" phenomena.

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<sup>17</sup> EUROSTAT migr\_imm1ctz variable gathered from International Migration Flows survey [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_imm1ctz&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_imm1ctz&lang=en)

<sup>18</sup> EUROSTAT isoc\_ci\_ifp\_iu variable gathered from ICT usage in households and by individuals survey [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc\\_ci\\_ifp\\_iu&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_ci_ifp_iu&lang=en)

- **Spain:** A “new immigration country” like Italy or Portugal, where between the late 1970s and early 1980s, immigrants outnumbered emigrants. A large number of these immigrants worked in the informal economy due to Spain's structural characteristics. Large numbers of these often non-documented immigrants have benefited from successive “regularisation” waves.
- **Bulgaria:** A “transit migration” country due to the proximity of former Soviet Union territories, it is the first stop of many migrants entering the EU from the East on their way to Western European countries. It is also a destination country for some ethnic minorities.
  - A geographical balance within the EU27: North, South, East, and West.
  - A balanced cultural and geographical diversity.

### 5.1.3 Sampling

Given the objectives (see Section 1) and the target population of the study (see Section 2.1), **disproportional stratified sampling**<sup>19</sup> was used to ensure the representativeness of the target population in terms of geographic origin., selecting the most representative nationalities and assigning a quota (generally n=100) to each stratum to make the results from that stratum statistically significant (with an acceptable error margin of maximum  $\pm 10\%$ ). Finally, a mix of rural, semi-rural, and urban areas was also taken into account in the geographical split.

In order to reach the target population and avoid non-responses, a Centre Sampling Method was followed.<sup>20</sup> To apply this method, the local area under investigation was considered, and we assumed that the universe of TCNs present at the time of the survey was made up of N units. To approach these N units, we extracted the TCNs using the disproportional stratified sampling method. Moreover, we assume that each of these individuals has some relationship with K aggregation centres or gathering places located in the area (see Section 4.3). Some examples are: tele-centres; Internet cafés; money transfer offices (e.g. Western Union); diplomatic offices (Consulates, Embassies, Country Information Offices); local businesses (grocery shops, hairdressers, butchers shops, etc.); farms and fields in rural areas where agricultural work is performed; social services and charity offices; cultural associations (e.g. folklore clubs).

The following sections present the target and the sampling procedure by country, using the latest available published data.

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<sup>19</sup> Stratified sampling is a probability sampling procedure in which the target population is first separated into mutually exclusive, homogeneous segments (strata), and then a simple random sample is selected from each segment (stratum). The samples selected from the various strata are then combined into a single sample. This sampling procedure is sometimes referred to as “quota random sampling.” This sampling approach is used when a small yet very important stratum in the population of interest might not be well represented in a survey if other sampling approaches were used.

<sup>20</sup> Blangiardo, G. 2008. The centre sampling technique in surveys on foreign migrants: The balance of a multi-year experience. United Nations Statistical Commission and Eurostat Working Paper.  
Mecatti, F. 2004. Centre sampling: a strategy for surveying difficult-to-sample populations. Paper read at Statistics Canada Symposium ‘Innovative methods for surveying difficult to reach populations’, at Ottawa.

## Spain

Table 15 shows the population of third country nationals in Spain, with breakdowns by age and citizenship obtained from the Migration Flows Survey, and internet usage gathered from the ICT Usage in Households and by Individuals Survey.

**Table 15: Target population in Spain**

	Population	%
<b>Total</b>	1,080,107	9.13*
<b>By Age Group 16-74</b>	<b>919,862</b>	<b>100.00</b>
16-24 years old	241,881	26.30
25-54 years old	623,826	67.81
55-74 years old	54,155	5.89
<b>By citizenship</b>	<b>272,355</b>	<b>100.00</b>
Morocco	43,929	16.13
Pakistan	21,756	7.99
Colombia	19,875	7.30
Ecuador	14,599	5.36
China (including Hong Kong)	14,532	5.34
Paraguay	12,198	4.48
Brazil	12,023	4.41
Peru	11,287	4.14
Dominican Republic	8,856	3.25
Bolivia	8,692	3.19
Argentina	8,236	3.02
Venezuela	8,083	2.97
Russia	7,614	2.80
Cuba	7,002	2.57
<b>By Internet Usage**</b>	<b>4,214,258</b>	<b>100.00</b>
Connected	2,907,838	69.00
Non-connected	1,306,420	31.00

Source: Eurostat, 2010 (\* TOTAL individuals non - EU citizenship (% population); \*\* isoc\_ci\_ifp\_iu)

Based on the target population displayed in Table 15 and following the **disproportional stratified sampling method mentioned above**, the 500 third country nationals for Spain in the following groups: are distributed as followed

- Moroccans,
- Pakistanis,
- Latin Americans,
- Others (Asians + Africans).

The first two citizenship groups are the largest. The other two groups are made up of Latin Americans and Others (Asians and Africans). Table 2 shows the sampling errors (overall and by

quotas), calculated for a probability no greater than 95.5% and for the least desired context (i.e. maximum indeterminate probability p=q=50% for the reference population).<sup>21</sup>

**Table 16: Sampling distribution for Spain: age, citizenship and Internet usage**

	Sample	Error
<b>By Age Group 16-74</b>	<b>500</b>	<b>± 0.045</b>
16-24 years old	132	± 0.087
25-54 years old	339	± 0.054
55-74 years old	29	± 0.186
<b>By citizenship</b>	<b>500</b>	<b>± 0.045</b>
Morocco	100	± 0.100
Pakistan	100	± 0.100
Latin America	200	± 0.071
Others (Asia + Africa)	100	± 0.100
<b>By Internet Usage**</b>	<b>500</b>	<b>± 0.045</b>
Connected	345	± 0.054
Non-connected	155	± 0.080

Source: author produced

The following table shows the comparison between flows and stocks in Spain. A comparison between the nationality groups from the migration flows and stock data for the selected countries show that the largest groups are the same.

<sup>21</sup> The sampling error is the error caused by observing a sample instead of the whole population. The sampling error can be found by subtracting the value of a parameter from the value of a statistic and is calculated with the formula given below:

$$e = \sqrt{\frac{(Z^2 \times p \times q) \times (N-n)}{(N-1) \times n}}$$

Where:

e = Sampling error

Z= Confidence level. The value for selected alpha level of .0225 in each tail = 2. The value of Z is set to 2, representing a confidence level of 95.5%. We want the highest accuracy possible, with the smallest sample size. This confidence level gives us the best trade-off between these two goals.

The expected scenario is maximum indetermination (p=q=50) where:

p= The conversion rate we expect (estimate of the true conversion rate in the population)

q= The conversion rate we don't expect

N= Total population

n= Proposed sample

These sampling errors, in fact, determine the statistical reliability of the sample and, consequently, it is necessary to take them into consideration. These errors are in line with the statistical criteria that validate the sample design and, the sample being representative and reliable, it is possible to extrapolate the study results to the target population group in the selected countries.

**Table 17: Sampling distribution for Spain comparing flows and stocks**

CITIZEN	Spain Stock migr_pop1ctz 2010	CITIZEN	Spain Flow migr_imm1ctz 2010	CITIZEN	Sample
Morocco	761,161	Morocco	43,929	Morocco	100
Ecuador	399,379	Pakistan	21,756	Pakistan	100
Colombia	288,839	Colombia	19,875	Latin America	200
Bolivia	213,263	Ecuador	14,599	Others (Asia + Africa)	100
China (including Hong Kong)	160,412	China (including Hong Kong)	14,532		
Peru	138,144	Brazil	12,023		
Paraguay	79,434	Dominican Republic	8,856		
Pakistan	66,759	Bolivia	8,692		
Algeria	59,354	Argentina	8,236		
Senegal	58,129	Venezuela	8,083		
Venezuela	57,200	Russia	7,614		
Cuba	52,059	Cuba	7,002		
Russia	48,399				
Uruguay	46,145				
Chile	43,482				

Source: author produced based on EUROSTAT

The total sample was distributed in the 4 regions (“Comunidades Autónomas”) where most of these immigrant communities live: Comunidad de Madrid, Catalunya, Comunitat Valenciana and Andalucía, based on the National Institute of Statistics (INE) latest available data.<sup>22</sup>

**Table 18: Geographic sample distribution for Spain**

Citizenship (country/region)	Total Spain	Madrid	Catalunya	Valencia	Andalusia
Morocco	<b>100</b>	17	46	14	23
Pakistan	<b>100</b>	5	75	15	5
Latin America	<b>200</b>	80	65	31	24
Other (Asia + Africa)	<b>100</b>	27	41	17	15
<b>TOTAL</b>	<b>500</b>	<b>129</b>	<b>227</b>	<b>77</b>	<b>67</b>

Source: author produced.

<sup>22</sup> See data at: <http://www.ine.es/jaxi/tabla.do?type=pcaxis&path=/t20/e245/p08/l0/&file=04005.px>

## The Netherlands

Table 19 displays the target population in the Netherlands, with breakdowns by age and citizenship obtained from the Migration Flows Survey, and the internet usage gathered from the ICT Usage in Households and by Individuals Survey.

**Table 19: Target population in the Netherlands**

NETHERLANDS	Population	%
<b>Total</b>	16,655,799	0.82*
<b>By Age Group 16-74</b>	<b>119,400</b>	<b>100.00</b>
16-24 years old	37,645	31.53
25-54 years old	79,075	66.23
55-74 years old	2,680	2.24
<b>By citizenship</b>	<b>131,949</b>	<b>100</b>
China (including Hong Kong)	3,822	2.90
Turkey	3,049	2.31
United States	2,718	2.06
India	2,699	2.05
Morocco	1,478	1.12
Suriname	1,014	0.77
Brazil	988	0.75
<b>By Internet Usage**</b>	<b>1,419,477</b>	<b>100</b>
Connected	1,277,529	90
Non-connected	141,948	10

Source: Eurostat, 2010 (\* TOTAL individuals non - EU citizenship (% population); \*\* isoc\_ci\_ifp\_iu)

Following the criteria applied in Spain, Table 20 presents the sample distribution by age group, citizenship and Internet usage for the Netherlands in such a way that a margin error of  $\pm 0.10$  was achieved. The smaller but diverse migrants groups were grouped in order to provide more statistical significance. The "Other" segment was composed mostly of citizens from African states.

**Table 20: Sampling distribution for the Netherlands: age, citizenship and Internet usage**

	Sample	Error
<b>By Age Group 16-74</b>	<b>500</b>	<b><math>\pm 0.045</math></b>
16-24 years old	158	$\pm 0.055$
25-54 years old	331	$\pm 0.302$
55-74 years old	11	$\pm 0.045$
<b>By citizenship</b>	<b>500</b>	<b><math>\pm 0.045</math></b>
China (including Hong Kong)	100	$\pm 0.100$
Turkey	100	$\pm 0.100$
United States	100	$\pm 0.100$
Asia	100	$\pm 0.100$
Other	100	$\pm 0.100$
<b>By Internet Usage**</b>	<b>500</b>	<b><math>\pm 0.045</math></b>
Connected	450	$\pm 0.047$
Non-connected	50	$\pm 0.141$

Source: author produced.



The following table shows the comparison between flows and stocks in the Netherlands. A comparison between nationality groups from the migration flows and stock data for the selected countries shows that the largest groups are the same.

**Table 21: Sampling distribution for the Netherlands comparing flows and stocks**

CITIZEN	NL Stock migr_pop1ctz 2009	CITIZEN	Spain Flow migr_imm1ctz 2009	CITIZEN	Sampl e
China (including Hong Kong)	3822	Turkey	92698	China (including Hong Kong)	100
Turkey	3049	Morocco	70801	Turkey	100
United States	2718	China (including Hong Kong)	18121	United States	100
India	2699	United States	14861	Asia	100
Morocco	1478	Indonesia	11565	Other	100
Suriname	1014	India	8033		
Brazil	988	Suriname	6958		
		Thailand	5904		
		Japan	5782		
		Brazil	4978		

Source: author produced based on EUROSTAT

The table above also shows sampling errors (overall and by quotas), calculated for a probability no greater than 95.5% and for the least desired context. The total sample was distributed in the 4 main urban areas, plus selected rural areas and provincial cities where immigrant groups live. It was based on the most updated data from the "CBS" (Centraal Bureau van de Statistiek).<sup>23</sup>

**Table 22: Geographic sample distribution for the Netherlands**

Citizenship (country/region)	Total	Amsterdam	Rotterdam	The Hague	Utrecht	Other cities	Rural areas
China (incl. Hong Kong)	<b>100</b>	20	20	20	10	20	20
Turkey	<b>100</b>	18	23	13	12	16	18
United States	<b>100</b>	22	17	17	13	22	9
Asia	<b>100</b>	20	20	20	13	15	12
Other	<b>100</b>	20	20	17	13	15	15
<b>TOTAL</b>	<b>500</b>	<b>100</b>	<b>100</b>	<b>87</b>	<b>61</b>	<b>88</b>	<b>64</b>

Source: author produced.

<sup>23</sup> Centraal Bureau van de Statistiek at: <http://statline.cbs.nl/StatWeb/dome/?LA=NL>

## Bulgaria

Table 23 shows the target population for Bulgaria

**Table 23: Target population in Bulgaria**

	Population	%
<b>Total</b>	7,369,431	0,001*
<b>By Age Group 16-74</b>	<b>80</b>	<b>100.00</b>
16-24 years old	15	18.75
25-54 years old	54	67.50
55-74 years old	11	13.75
<b>By Nationality</b>	<b>80</b>	<b>100.00</b>
Russia	18	22.50
Turkey	18	22.50
Macedonia FYR	18	22.50
Moldova	7	8.75
Ukraine	6	7.50
Armenia	3	3.75
Lebanon	3	3.75
Canada	2	2.50
Serbia	2	2.50
<b>By Internet Usage**</b>	<b>54,554</b>	<b>100.00</b>
Connected	42,007	77.00
Non-connected	12,547	23.00

Source: Eurostat, 2010 (\* TOTAL individuals non - EU citizenship (% population); \*\* isoc\_ci\_ifp\_iu)

Following the criteria applied in Spain and the Netherlands, the sample of third country nationals (n=500) was distributed in 4 statistically significant groups (n=125): Russians, citizens from the Former Yugoslav Republic of Macedonia, Turks and a cluster of citizens from ex-Soviet Republics and Communist countries ("Former CEE countries"), such as Ukrainians, Moldavians, Armenians, Azerbaijanis, and Kazakhstanis, Serbians and Albanians. These groups allowed us to reach an error margin smaller than  $\pm 0.10$ , providing us with more statistical significance. The table below also shows sampling errors (overall and by quotas), calculated for a probability no greater than 95.5% and for the least desired context.

**Table 24: Sample for Bulgaria by age, country of origin and Internet usage**

	Sample	Error
<b>By Age Group 16-74</b>	<b>500</b>	<b>± 0.045</b>
16-24 years old	92	± 0.104
25-54 years old	340	± 0.054
55-74 years old	68	± 0.121
<b>By Nationality/Region</b>	<b>500</b>	<b>± 0.045</b>
Russia	125	± 0.089
Macedonia (FYR)	125	± 0.089
Turkey	125	± 0.089
Former CEE countries	125	± 0.089
<b>By Internet Usage</b>	<b>500</b>	<b>± 0.045</b>
Connected	385	± 0.051
Non-connected	115	± 0.093

Source: author produced

The following table shows the comparison between flows and stocks in the case of the Bulgaria. A comparison between the nationality groups from the migration flows and stock data for the selected countries show that the largest groups are the same.

**Table 25: Sampling distribution for Bulgaria comparing flows and stocks**

CITIZEN	BG Stock migr_pop1ctz 2008	CITIZEN	BG Flow migr_imm1ctz 2008	CITIZEN	Sample
Russia	8952	Russia	18	Russia	125
Ukraine	2158	Turkey	18	Macedonia (FYR)	125
Armenia	1431	Macedonia FYR	18	Turkey	125
Macedonia (FYR)	1373	Moldova	7	Former CEE countries	125
Turkey	952	Ukraine	6		
Moldova	782	Armenia	3		
Syria	630	Lebanon	3		
Poland	553	Canada	2		
China (including Hong Kong)	464	Serbia	2		

Source: author produced based on EUROSTAT

The total sample was distributed in the 5 main urban areas, plus selected rural areas and provincial cities where some immigrant groups live. This geographic distribution was based on data from the National Statistical Institute.<sup>24</sup>

<sup>24</sup> See data at: [http://statlib.nsi.bg:8181/isisbgstat/ssp/fulltext.asp?content=/FullT/FulltOpen/P\\_22\\_2011\\_SRB.pdf](http://statlib.nsi.bg:8181/isisbgstat/ssp/fulltext.asp?content=/FullT/FulltOpen/P_22_2011_SRB.pdf)

**Table 26: Geographic sample distribution for Bulgaria**

Citizenship (country/region)	Total	Sofia	Plovdiv	Varna	Burgas	Ruse	Other cities	Rural
Russia	<b>125</b>	27	25	19	19	7	10	18
Macedonia (FYR)	<b>125</b>	28	25	19	19	8	8	18
Turkey	<b>125</b>	52	19	19	14	9	5	7
Former CEE countries	<b>125</b>	42	19	19	18	11	9	7
<b>TOTAL</b>	<b>500</b>	<b>149</b>	<b>88</b>	<b>76</b>	<b>70</b>	<b>35</b>	<b>32</b>	<b>50</b>

Source: author produced

#### **5.1.4 Final sample surveyed**

During the fieldwork process, carried out during April and May 2013, more interviews than expected were performed with members of the target population. We increased the number of third country nationals surveyed while keeping the proposed sample distribution. The following sections report the final sample surveyed by country.

## Spain

Table 27 summarises the fieldwork process and the final population surveyed in Spain. As explained in Section 2.3.1., respondents were selected from areas in which a large number of immigrants lived.

**Table 27: Spain fieldwork progress and final population surveyed**

SPAIN	Sample	02-abr	09-abr	16-abr	23-abr	30-abr	07-may	14-may
<b>By Age Group</b>	<b>500</b>	<b>12</b>	<b>70</b>	<b>244</b>	<b>343</b>	<b>442</b>	<b>592</b>	<b>624</b>
16-24 years old	132	3	9	47	98	101	162	166
25-54 years old	339	9	58	184	226	316	397	422
55-74 years old	29	0	3	13	19	25	33	36
<b>By Nationality/Region</b>	<b>500</b>	<b>12</b>	<b>70</b>	<b>244</b>	<b>343</b>	<b>442</b>	<b>592</b>	<b>624</b>
Morocco	100	3	13	60	78	90	130	141
Pakistan	100	0	10	66	82	90	125	129
Latin America	200	8	35	60	119	169	208	219
Other (Asia + Africa)	100	1	12	58	64	93	129	135
<b>By Internet Usage</b>	<b>500</b>	<b>12</b>	<b>70</b>	<b>244</b>	<b>343</b>	<b>442</b>	<b>592</b>	<b>624</b>
Connected	345	12	66	205	294	379	510	447
Non-connected	155	0	4	39	49	63	82	177

Finally, Table 28 shows the final geographical sample distribution and Table 29 shows the final sample surveyed and errors.

**Table 28: Geographic sample distribution for Spain**

Citizenship (country/region)	Total Spain	Madrid	Catalunya	Valencia	Andalusia
Morocco	141	24	77	17	23
Pakistan	129	5	100	19	5
Latin America	219	84	75	36	24
Other (Asia + Africa)	135	28	69	22	16
<b>TOTAL</b>	<b>624</b>	<b>141</b>	<b>321</b>	<b>94</b>	<b>68</b>

Source: author produced

**Table 29: Final sample for Spain by age, country of origin and Internet usage**

	n	errors
<b>By Age Group 16-74 y.o.</b>	<b>624</b>	± 0,040
16-24 years old	166	± 0,078
25-54 years old	422	± 0,049
55-74 years old	36	± 0,167
<b>By Citizenship</b>	<b>624</b>	± 0,040
Morocco	141	± 0,084
Pakistan	129	± 0,088
Latin America	219	± 0,068
Other (Asia + Africa)	135	± 0,086
<b>By Internet Usage</b>	<b>624</b>	± 0,040
Connected	447	± 0,047
Non-connected	177	± 0,075

Source: author produced

## The Netherlands

Table 30 displays the fieldwork progress and the final population surveyed in the Netherlands.

**Table 30: The Netherlands fieldwork progress**

THE NETHERLANDS	Sample	02-abr	09-abr	16-abr	23-abr	30-abr	07-may	14-may
<b>By Age Group</b>	<b>500</b>	<b>31</b>	<b>64</b>	<b>104</b>	<b>255</b>	<b>379</b>	<b>429</b>	<b>512</b>
16-24 years old	158	7	17	32	68	103	129	160
25-54 years old	331	24	46	71	182	263	285	332
55-74 years old	11	0	1	1	5	13	15	20
<b>By citizenship</b>	<b>500</b>	<b>31</b>	<b>64</b>	<b>104</b>	<b>255</b>	<b>379</b>	<b>429</b>	<b>512</b>
China (incl.HK)	100	4	9	16	26	42	63	107
Turkey	100	7	15	23	100	100	102	103
United States	100	3	7	13	27	37	64	100
Asia	100	8	14	25	33	100	100	100
Other	100	9	19	27	69	100	100	102
<b>By Internet Usage</b>	<b>500</b>	<b>31</b>	<b>64</b>	<b>104</b>	<b>255</b>	<b>379</b>	<b>429</b>	<b>512</b>
Connected	450	31	64	102	248	331	381	461
Non-connected	50	0	0	2	7	48	48	51

Source: author produced

The following tables displays the final geographical sample distribution and the sample surveyed with errors.

**Table 31: Geographic sample distribution for the Netherlands**

Citizenship (country/region)	Total NL	Amsterdam	Rotterdam	Den Haag	Utrecht	Ov.Stad	Platteland
China	107	19	41	4	8	18	17
Turkey	103	13	33	30	5	13	9
United States	100	46	16	15	12	3	8
Asia	100	9	11	14	4	45	17
Other NL	102	16	32	9	4	30	11
<b>TOTAL</b>	<b>512</b>	<b>103</b>	<b>133</b>	<b>72</b>	<b>33</b>	<b>109</b>	<b>62</b>

Source: author produced

**Table 32: Final sample for the Netherlands by age, country of origin and Internet usage**

	n	errors
By Age Group 16-74 y.o.	<b>512</b>	± 0,044
<b>16-24 years old</b>	160	± 0,079
<b>25-54 years old</b>	332	± 0,055
<b>55-74 years old</b>	20	± 0,224
By citizenship	<b>512</b>	± 0,044
<b>China (incl.HK)</b>	107	± 0,097
<b>Turkey</b>	103	± 0,099
<b>United States</b>	100	± 0,100
<b>Asia</b>	100	± 0,100
<b>Other</b>	102	± 0,099
By Internet Usage	<b>512</b>	± 0,044
<b>Connected</b>	461	± 0,047
<b>Non-connected</b>	51	± 0,140

Source: author produced

## Bulgaria

Table 33 shows the fieldwork progress and the final population surveyed in the Bulgaria.

**Table 33: Bulgaria fieldwork progress**

BULGARIA	Sample	02-abr	09-abr	16-abr	23-abr	30-abr	07-may	14-may
<b>By Age Group</b>	<b>500</b>	<b>34</b>	<b>76</b>	<b>167</b>	<b>312</b>	<b>440</b>	<b>490</b>	<b>517</b>
<b>16-24 years old</b>	92	30	38	82	92	95	102	102
<b>25-54 years old</b>	340	2	34	62	187	300	313	340
<b>55-74 years old</b>	68	2	4	23	33	45	75	75
<b>By citizenship</b>	<b>500</b>	<b>34</b>	<b>76</b>	<b>167</b>	<b>312</b>	<b>440</b>	<b>490</b>	<b>517</b>
<b>Russia</b>	125	14	20	45	80	120	125	131
<b>Macedonia (FYR)</b>	125	7	10	19	47	99	115	125
<b>Turkey</b>	125	8	23	55	94	120	125	126
<b>Former CEE countries</b>	125	5	23	48	91	101	125	135
<b>By Internet Usage</b>	<b>500</b>	<b>34</b>	<b>76</b>	<b>167</b>	<b>312</b>	<b>440</b>	<b>490</b>	<b>517</b>
<b>Connected</b>	385	31	72	140	260	350	387	400
<b>Non-connected</b>	115	3	4	27	52	90	103	117

Source: author produced

The following tables displays the final geographical sample distribution and the sample surveyed with errors.

**Table 34: Final sample for Bulgaria by age, country of origin and Internet usage**

	n	errors
<b>By Age Group 16-74 y.o.</b>	<b>517</b>	± 0,044
16-24 years old	102	± 0,099
25-54 years old	340	± 0,054
55-74 years old	75	± 0,115
<b>By citizenship</b>	<b>517</b>	± 0,044
Russia	131	± 0,087
Macedonia (FYR)	125	± 0,089
Turkey	126	± 0,089
Former CEE countries	135	± 0,086
<b>By Internet Usage</b>	<b>517</b>	± 0,044
Connected	400	± 0,050
Non-connected	117	± 0,092

Source: author produced



**Table 35: Geographic sample distribution for Bulgaria**

	Total	Sofia	Plovdiv	Varna	Burgas	Ruse	Other cities	Rural
Russia	131	32	20	20	18	7	18	16
Macedonia	125	34	20	10	19	0	35	7
Turkey	126	59	21	19	13	9	5	0
Former CEE countries	135	39	19	17	17	10	11	22
<b>Total</b>	<b>517</b>	<b>164</b>	<b>80</b>	<b>66</b>	<b>67</b>	<b>26</b>	<b>69</b>	<b>45</b>

Source: author produced

## 5.2 Analytical framework and questionnaire design

### 5.2.1 Dimensions of the study

No specific analytical framework, which could link ICT, integration of immigrants, inclusion policies and employability and on which we could base the questionnaire, emerged from a review of the best knowledge available.<sup>25</sup> To overcome this lack, we developed the questionnaire in several blocks of questions covering the main dimensions of the study:<sup>26</sup>

- Block A: Access to ICT,
- Block B: ICT utilisation: use, places and devices,
- Block C: ICT skills,
- Block D: ICT utilisation - activities,
- Block E: Integration of immigrants,
- Block F: Employability,
- Block G: Socio-demographics.

These blocks were supported by the recent literature review carried out by IPTS and were designed taking into account Van Dijk (2005) Causal and Sequential Model of Digital Technology Access by individuals in Contemporary Societies.<sup>27</sup> This author stated that categorical inequalities in society produce an unequal distribution of resources which in turn causes unequal access to digital technologies. This brings about unequal participation in society which reinforces categorical inequalities and unequal distribution of resources. The term 'access' goes beyond broadband connectivity and refers to four stages:

- Motivation access (motivation to use digital technologies),
- Material or physical access (possession of computers and Internet connections or permission to use them and their contents),
- Skills access (possession of digital skills: operational, informational and strategic),

<sup>25</sup> Recently IPTS has published two reports reviewing the literature about these topics: Green, A., de Hoyos, M., Barnes, S.A., Owen, D., Baldauf, B., Behle, H. (2013). Literature review on Employability, Inclusion and ICT, Report 1: The Concept of Employability with Specific focus on Young People, Older Workers and Migrants. European Commission. Joint Research Centre. Institute for Prospective Technological Studies and de Hoyos, Green, A., Barnes, S.A., Behle, H., Baldauf, B and Owen, D. Literature review on Employability, Inclusion and ICT, Report 2: ICT and Employability. European Commission. Joint Research Centre. Institute for Prospective Technological Studies

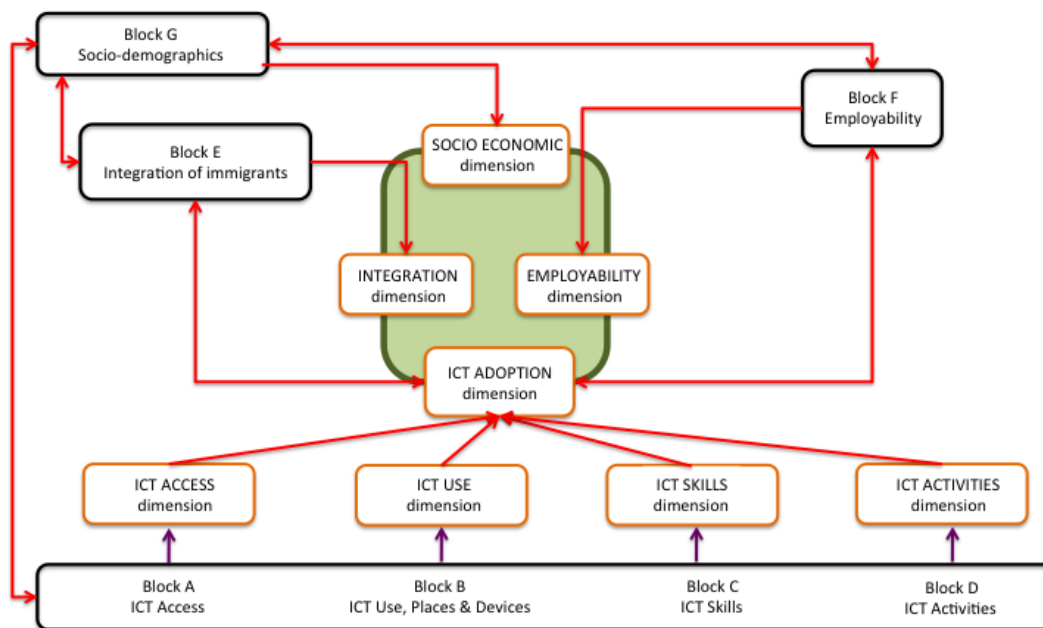
<sup>26</sup> The justification for each block was linked to the objectives of the study as follows. The first four blocks would allow us to tackle the communication patterns enabled by new technologies (Objective 1) and also understand the patterns in terms of skills, access and use of ICT (Objective 3). The last three blocks would allow us to cover the differences in terms of socio-demographic characteristics of third country nationals, including how these characteristics shape the integration and employability of third country nationals

<sup>27</sup> Van Dijk, J. A. (2005). The deepening divide: Inequality in the information society. Sage.

- Usage access (number and diversity of applications, usage time).

The following figure embeds the Causal and Sequential Model of Digital Technology Access with the objectives of this study. **Socio-demographic** variables (e.g. education, employment status...) shape the socio economic position of third country nationals within a country, causing different **integration** and **employability** patterns among them. Moreover, socio-demographic variables also facilitate or inhibit access to digital technologies (**ICT adoption dimension**). Different levels of ICT adoption will foster or hamper integration and employability and affect the socio economic position of third country nationals. It is worth pointing out that access to digital technologies is composed not only of ICT access (Block A) but also ICT use, places and devices (Block B); ICT skills (Block C) and ICT activities (Block D).

**Figure 28: Framework of analysis and questionnaire design**



## 5.2.2 Questionnaire design

Most of the items used to develop the questionnaire were supported either by official statistics or by scientific literature. The **first 4 blocks (Blocks A-D)**, which refer to ICT, are based on EUROSTAT's Community Survey on ICT Usage in Households and by Individuals.<sup>28</sup> **Block E, Integration of immigrants**, is divided into 5 domains: employment; education and skills; social inclusion; active citizenship and migration experience. These domains correspond to the policy areas for immigrant integration agreed in the Zaragoza Declaration on Integration.<sup>29</sup> The questions were mainly supported by:

- ESS Round 5: European Social Survey Round 5 Data (2010);
- Garrido, M., Rissola, G., Rastrelli, M., Diaz, A., & Ruiz, J. (2010) Immigrant women, e-skills and employability in Europe: The case of Hungary, Italy, the Netherlands, Romania, and Spain. Seattle: Technology and Social Change Group, University of Washington.
- Komito, Lee, Bates, Jessica (2011). Migrants' information practices and use of social media in Ireland: networks and community. Presented at iConference 2011.

<sup>28</sup> EUROSTAT Community survey on ICT usage in households and by individuals [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Community\\_survey\\_on\\_ICT\\_usage\\_in\\_households\\_and\\_by\\_individuals](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Community_survey_on_ICT_usage_in_households_and_by_individuals)

<sup>29</sup> The Zaragoza Declaration was adopted in April 2010 by EU Ministers responsible for immigrant integration issues, and approved at the Justice and Home Affairs Council on 3-4 June 2010. Available at [http://ec.europa.eu/ewsi/UDRW/images/items/doc/13055\\_519941744.pdf](http://ec.europa.eu/ewsi/UDRW/images/items/doc/13055_519941744.pdf)

Even though Block E contains some items related to individual employability, such as employment and education and skills; and contextual items concerning employability, such as social inclusion; active citizenship and migration experience, we added a specific block to capture the **employability dimension (Block F)**.

The concept of employability<sup>30</sup> is intrinsic to the act of international migration. Employability is fundamental to successful (labour) migration, because of the importance of employment as a source of income.<sup>31</sup> The inclusion of Block F allowed us to deal with the complex relationship between employability and migration and explore its effect on integration of third country nationals.<sup>32</sup> Wittekind et al. (2009)<sup>33</sup> reviewed the employability literature and concluded that the following dimensions cover this phenomenon.<sup>34</sup>

- Competence development,
- Perceived employability,
- Support for career and skills development,
- Current level of job-related skills,
- Opportunity awareness,
- Self-presentation skills,
- Willingness to develop competencies,
- Willingness to change jobs.

Finally, **Block G tackled socio-demographic** variables based on the EUROSTAT model, so as to cover the individual factors and circumstances.

Table 36 summarises the different blocks of the questionnaire and the main sources used.<sup>35</sup>

**Table 36: Questionnaire sources**

Block A	Adapted from European Union survey on ICT usage in households and by individuals 2013 Eurostat Model Questionnaire (version 3.2)
Block B	Adapted from European Union survey on ICT usage in households and by individuals 2013 Eurostat Model Questionnaire (version 3.2)
Block C	Adapted from European Union survey on ICT usage in households and by individuals 2013 Eurostat Model Questionnaire (version 3.2)
Block D	Adapted from European Union survey on ICT usage in households and by individuals 2013 Eurostat Model Questionnaire (version 3.2)
Block E	Adapted from: <ul style="list-style-type: none"> <li>• ESS Round 5: European Social Survey Round 5 Data (2010);</li> <li>• Garrido, M., Rissola, G., Rastrelli, M., Diaz, A., &amp; Ruiz, J. (2010) Immigrant women, e-skills &amp; employability in Europe: The case of Hungary, Italy, the Netherlands, Romania, and Spain. Seattle: Technology &amp; Social Change Group, University of Washington.</li> <li>• Komito, Lee, Bates, Jessica (2011). Migrants' information practices and use of social media in Ireland: networks and community. Presented at iConference 2011</li> </ul>
Block F	Adapted from Wittekind, A., Raeder, S., & Grote, G. (2009). A longitudinal study of determinants of perceived employability. <i>Journal of Organizational Behavior</i> , 31(4), 566-586
Block G	Adapted from European Union survey on ICT usage in households and by individuals 2013 Eurostat Model Questionnaire (version 3.2)

<sup>30</sup> See Annex 1 The concept of employability

<sup>31</sup> Williams AM. (2009) Employability and international migration: Theoretical perspectives. In: MacKay S (ed.) *Refugees, Recent Migrants and Employment, Challenging Barriers and Exploring Pathways*. Oxford: Routledge, pp. 23-34.

<sup>32</sup> Green, A., de Hoyos, M., Barnes, S.A., Owen, D., Baldauf, B., Behle, H. (2013). Literature review on Employability, Inclusion and ICT, Report 1: The Concept of Employability with Specific focus on Young People, Older Workers and Migrants. European Commission. Joint Research Centre. Institute for Prospective Technological Studies

<sup>33</sup> Wittekind, A., Raeder, S., & Grote, G. (2009). A longitudinal study of determinants of perceived employability. *Journal of Organizational Behavior*, 31(4), 566-586.

<sup>34</sup> This instrument with all the questions included in the rest of the blocks, especially Block E, could be easily mapped with the extensive list of indicators collected in the Revised employability framework published by IPTS<sup>25</sup>

<sup>35</sup> See Annex 2 Final questionnaire in English

### 5.2.3 Translation of the questionnaire

Considering the countries surveyed and the immigrant communities interviewed, it was decided to translate the questionnaire in English into the following 9 languages:

1. Bulgarian
2. Dutch
3. Spanish
4. Russian
5. Indonesian
6. Turkish
7. French
8. Arabic
9. Chinese

There were no translations for those linguistic minorities that were under-represented in the sample. Due to cost-effectiveness and logistical considerations, only respondents who showed a clear understanding of one of the 10 languages qualified for the interview. The following table shows the main minority groups targeted and the questionnaire language that was used.

**Table 37: Questionnaire translations for main target groups**

Country	Target Citizenship	Q'aire Language (if not official language)	Observations
<b>Bulgaria</b>	Russian	Russian	Official language of Russia
	Macedonia (FYR)	Russian	Lingua franca during Communism + linguistic proximity (Slavic)
	Turkey	Turkish	Official language of Turkey
	Former CEE countries	Russian	Lingua franca during Communism + linguistic proximity (Slavic)
<b>The Netherlands</b>	China	Chinese	Simplified Chinese (official language/script of PRC)
	Turkish	Turkish	Official language of Turkey
	United States	English	Official language of USA
	Asian	English	Especially for South Asians
	Other (African)	English or French	Ex-colonial languages
<b>Spain</b>	Morocco	Arabic or French	Standard Classic Arabic (if they can read Arabic)
	Pakistan	English	Ex-colonial language
	Latin America	Spanish	Official language of most LA countries
	Other: Asia + Africa	Chinese, English or French	Chinese only for Chinese citizens (incl. HK & Taiwan), English or French based on colonial history

Source: authors' elaboration

The English questionnaire was translated into the 9 languages using the back-translation method<sup>36</sup> combined with a monolingual test. This method allowed us to detect and correct discrepancies between source and target language versions.

For languages that were similar to each other (such as those belonging to the North-Slavic, South-Slavic or Latin linguistic groups), there was only one translation per linguistic family due to mutual comprehension.

It is important to point out that there are many regional languages in Morocco. Therefore, interviewers of Moroccan origin (where possible) were used to read the questions according to Moroccan speech (i.e., no other Middle-Eastern interviewers were used, given their different way of speaking Arabic).

The Chinese language has a variety of forms, which are not always mutually understandable.. Therefore, interviews with Chinese citizens were conducted in the following order of priority:

1. Official language of the country if respondents were clearly proficient in it.
2. Mandarin Chinese (orally) if both interviewer and respondent spoke and understood it.
3. Written Chinese (self-completion) if respondents did not understand Mandarin or interviewer did not speak it.

#### **5.2.4 Piloting**

A pilot study was conducted in each country with 20 respondents in order to detect comprehension issues or inappropriate questions due to cultural attitudes (see the methodological report for details<sup>37</sup>).

The aggregated results of each country's pilot are presented in the following subsections by country, and include:

1. Number of interviews conducted,
2. Citizenship of respondents,
3. Languages in which the questionnaire was tested in that country,
4. Location where the pilot interviews took place,
5. Questionnaire length (average, minimum and maximum),
6. Proficiency of questionnaire language by respondent (average value),
7. Density perception of questionnaire by respondents (average value).

In addition, we highlighted any rejection and comprehension issues that were identified by at least 2 respondents in that specific country (so as to avoid individual bias in such a small sample) along with suggestions on how to improve some of them.

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<sup>36</sup> The back-translation method works as follows. First, a qualified translator carried out the translation of the survey from the source language into the target language. Second, another professional translator translated the target language version back into the source language. Third, both source language versions were compared. Finally, the target language version was tested amongst monolingual subjects.

<sup>37</sup> Lupiañez, F.; Codagnone, C. and Dalet, R. (2015) ICT for the Employability and Integration of Immigrants in the European Union: Final Methodological Report of a Survey in Three Member States. Carretero, S. and Centeno, C. (eds) JRC-IPTS: Luxembourg: Publications Office of the European Union.

## Spain

The following table summarises the technical information of the pilot test in Spain:

**Table 38: Pilot test report Spain**

Number of interviews:	20
Origins (citizenships):	Morocco, Colombia, Venezuela, Bolivia, Argentina, China, Pakistan
Languages piloted:	Spanish, Arabic, Chinese, English, French
Location(s):	Barcelona
Questionnaire duration:	Average: 41 minutes (min.25, max. 62)
Language proficiency:	“Good” (scale: 1 excellent/native...5 poor/no knowledge)
Questionnaire density:	“Somewhat dense” (scale: 1 too dense...4 very smooth)

Rejection issues detected in Spain:

- Individuals with low ICT skills felt embarrassed and even overwhelmed when asked very detailed ICT-related questions, as they did not always understand the terminology or they realized they did not know how to do most things.
- Individuals with low educational level had trouble understanding most of the questionnaire wording (even if the questionnaire was in their mother tongue) and asked for the interview to be stopped midway, when they saw slow progress.
- Income questions were sometimes rejected due to cultural attitudes about financial status disclosure. Having to average irregular income flows also created confusion. Finally it may have been embarrassing for some people to say they fell into the lowest income brackets.

Comprehension issues detected in Spain:

- Some Moroccan respondents could not read Arabic (they could speak it and understand it) and preferred Spanish or French (in cases where the interviewer did not speak Moroccan Arabic).
- The skipping logic was corrected in QB3, because in cases where the respondent hadn't used internet in the last year, it should have skipped to the next block (C1 instead of B5).
- In some questions (e.g. B5 or B6), it was not clear for the interviewers whether the answers should be spontaneous or prompted (“DO NOT READ” or “READ LIST” should be included in the instructions).
- Block D referred to the last 3 months, so those who answered 2 or 3 in B3 should not have answered this section.
- In D6, statements in the negative form caused confusion (e.g., “I do not agree that I am not aware of...”), thus they should be avoided in matrix questions.
- It was advised that additional showcards be created to help respondents in complex questions such as for QE1.1 and especially QE2.1.

- QE2.1 was hard to understand for respondents where their education system was very different from the Spanish one. The ISCED coding didn't help and introduced further confusion (it should be removed).
- In Catalonia, the “language of the country” was an ambiguous reference, as several respondents interpreted it as the Catalan language instead of the Spanish language (e.g. E2.4)
- In QG9, the word “household” (translated as “hogar”) was ambiguous for some respondents, as they did not know if it referred to a family unit (their relatives) or to a housing unit (which they might share with other people who are not relatives).

## The Netherlands

The following table summarises the technical information on the pilot test in the Netherlands:

**Table 39: Pilot test report – the Netherlands**

Number of interviews:	20
Origins (citizenships):	Morocco, China, Turkey, Indonesia, Eritrea, Suriname
Languages piloted:	Dutch, Arabic, Chinese, Turkish, Indonesian
Location(s):	Rotterdam
Questionnaire duration:	Average: 28 minutes (min.20, max. 35)
Language proficiency:	1.8 “Good” <i>(scale: 1 excellent/native...5 poor/no knowledge)</i>
Questionnaire density:	2.0 “Somewhat dense” <i>(scale: 1 too dense...4 very smooth)</i>

Interviewers reported that the questionnaire took less time to complete in the Netherlands than it did in Spain and Bulgaria due to greater accuracy in measuring the actual time of interviewing (neither the initial explanation nor the closing remarks were counted). In addition, a higher value was given to the interviewees’ time (the interviewer avoided unnecessary talking and social pleasantries). There were also a larger number of bi-lingual interviewers (who could easily shift from one language to another and help respondents when they hesitated).

Rejection issues detected in the Netherlands:

- All questions that were not directly related to the Internet were seen as suspicious, especially by the Chinese, who seemed to have a hard time understanding first the purpose of the study and then some of the questions.
- Some respondents were suspicious because they thought that the questionnaire was about internet, but they then thought it was an excuse to ask about other more sensitive issues.
- Several respondents of Middle Eastern origin thought that all political activity questions (such as QE4.2) were an excuse to identify potential “terrorists”.
- Some respondents were very reluctant to specify their monthly income, so interviewers suggested that fewer (wider) income brackets, instead of the current 12 brackets (too complex), should be used.

Comprehension issues detected in the Netherlands:

- The question numbering was too complex (e.g. “QG4a2”) both for interviewers and respondents (particularly the self-completes), who claimed they wasted too much time finding the correct question when asked to skip.
- Respondents who used a laptop at home with no wireless connection were not clear about what they should answer in QB6.
- In some grids, respondents should have been given the option to answer “I don’t know” (e.g. in Block D). Respondents tended to use the “No/Never” column.
- QE1.1 item 7, it wasn’t clear what “Housework” means: it was interpreted either as household work at your own home or a cleaning job somewhere else. The former should have been considered as being unemployed.
- In QE2.1 “HBO” education in the Netherlands (that many respondents have) did not seem to fall into any of the categories in QE2.1.
- Similarly, in QE2.1 some respondents had trouble finding the equivalent of their home country educational qualifications in the list of Dutch qualifications.
- The “cultural” item 9 in QE2.5 was not really understood as a professional integration factor.
- QG4 seems confusing, as there needs to be a logical skip to QG5 once QG4a1 has been answered.
- QG5 seems very complex and respondents and interviewers had found it difficult to interpret/read it. It should be simplified.

## Bulgaria

The following table summarises the technical information of the pilot test in the Netherlands:

**Table 40: Pilot test report Bulgaria**

Number of interviews:	20
Origins (citizenships):	Russia, Ukraine, Moldova, Serbia, Turkey
Languages piloted:	Bulgarian, Russian
Location(s):	Sofia
Questionnaire duration:	Average: 42 minutes (min.30, max. 60)
Language proficiency:	1.8 “Good” <i>(scale: 1 excellent/native...5 poor/no knowledge)</i>
Questionnaire density:	2.9 “Just fine” <i>(scale: 1 too dense...4 very smooth)</i>

Rejection issues detected in Bulgaria:

- Migrants from Slavic countries understood and spoke Bulgarian relatively well, so they preferred to do the interview orally in Bulgarian, instead of reading it in their own language..
- Questions related to political issues (such as QE4.2) seemed inappropriate to some respondents, as they considered them to be “personal issues”.



- Students who had never had a job thought questions about employment (QF1, F2, F3 and F8) were inappropriate.
- Some respondents refused to answer the income question (Q6), even though it was adapted to Bulgarian currency and salaries (lower than NL and ES).

Comprehension issues detected in Bulgaria:

- In the Russian questionnaire, two terms were corrected:
  - In S5, the word „окрестности“ was replaced by “провинция”,
  - In QA3\_6, the word „приватностью“ was replaced by „конфиденциальностью“,
- In QB2, the item “Never” sounded strange as there is a filter in QB1.
- Education questions caused some interpretation issues and needed additional explanation by interviewers (such as QE2.2 item 1 about “equivalent level”).
- Question QE5.1 regarding the “arrival in the EU” caused confusion due to the fact that Bulgaria only recently entered the EU (2007) and some immigrants arrived in Bulgaria many years prior to that.

### 5.2.5 Lessons learned and final questionnaire proposal

The main lessons learned and suggested improvements were:

1. The questionnaire was excessively long; we were advised to reduce it to an average of 25 minutes across countries/languages.
2. The political question related to active citizenship had to be adjusted in order to capture this dimension avoiding without asking questions about issues that could be considered as sensitive by the respondents.
3. The SNS block had to be removed. There were nonetheless several other questions related to SNS for professional and leisure purposes.
4. All questions had to be phrased in the affirmative mode in order to avoid confusions caused by double negatives.
5. Educational level questions had to be adapted to the host country using the terminology and categorization that most respondents understood.
6. And once the final questionnaire was approved, all items were re-coded to facilitate data processing.

Based on the pilot results, the questionnaire was refined with the minor changes highlighted to ensure greater comprehension and shorter interview duration. These changes include (1) slightly more explanation of the aims of the survey and the funder; (2) better codification of items; (3) better explanation of the filters and questions for the interviewer; (4) clarifications and rewording of some items; (5) detailed classification of educational levels and (6) some clarifications related to country specifics such as languages in Spain and the vote in Bulgaria.

All these changes were implemented first in the English questionnaire (see Annex 2) and then applied to other language questionnaires (see methodological report).

## 5.3 Dissemination strategy and data collection

Dissemination comprised three main steps:

1. A selection and training process was carried out in order to recruit interviewer candidates who excelled in personal communication skills, and had a good knowledge of etiquette, strong linguistic ability, empathy, accuracy, attention to detail, persuasion, time management and above

all, multi-cultural sensitivity. To reinforce these skills, all interviewers underwent a general training.

2. The face-to-face procedure was established before, during and after the interview to homogenise the data collection process.
3. Finally, different recruitment strategies were established in each country to tackle the differences between each of the target sub-groups.

The coordination of the dissemination strategy and data collection in the three countries was performed by Block de Ideas. This company also carried out the fieldwork in Spain while in Bulgaria and the Netherlands the fieldwork was carried out by ASmart and TransCity Diversity (see methodological report). All the companies involved in the project emphasised the importance of high quality standards and work ethics during all these steps.

### **5.3.1 Interviewer selection and training**

The interviewer selection process was structured as follows:

- CV reception (spontaneous candidacies or advertised positions),
- CV evaluation and screening,
- Initial phone contact,
- Secondary screening based on phone conversation,
- Face-to-face in-depth interview at our premises,
- Job offer and conditions explanation,
- Initial training on market research and company policies,
- Trial period (first market research study),
- Performance evaluation and contracting decision,
- Additional training and mentoring.

Candidates with prior experience in survey research, customer service or other activities with strong interpersonal communication skills, were given preference, as were candidates who had volunteered or done some type of community work previously.

The interviewer selection process, from the reception of the application to the selection, lasted between 5-7 days, as all applications were reviewed closely.

The personal features sought when hiring interviewers were the following:

- Inter-cultural sensitivity,
- Higher education (even if not completed),
- Intermediate-high cultural level,
- Speech clarity and neutral accent,
- Appropriate voice pitch and intonation,
- Empathy,
- Objectivity,
- Seriousness,
- Commitment,
- Attention to detail,
- Accuracy,
- Synthetic ability,
- Computer literacy.

For this specific study, given the sensitive nature of the target, interviewers were screened to determine if they had a good knowledge of the main immigration groups' customs, cultural, and linguistic differences. Where possible, members of these communities had some degree of affinity with them (such as having volunteered in schools or community centres in neighbourhoods where they are prevalent) were hired. All interviewers underwent a general training lasting around 45 minutes, covering the following topics:

- Overview on market research: main uses and methodologies,

- Basic principles of personal data protection regulations (national and European),
- Occupational risk prevention,
- Interviewing techniques.

Additionally, all interviewers underwent a specific briefing on this project, which consisted of the following items:

- Framework (European Commission, IPTS, immigration, ICT),
- Study Objectives (benchmarking, policy-oriented),
- Methodology (face-to-face),
- Workflow and follow-up protocols,
- Incidences,
- Glossary and questionnaire terminology,
- Performance and quality monitoring criteria:
  - Reading all questions literally (no omissions or shortcuts).
  - Keeping to the question order strictly.
  - No answer deduction or interpretation when helping with linguistic difficulties.
  - Asking only actual questions and no leading questions.
  - Not addressing external topics.
  - Not expressing a particular approach or opinion.
  - Not accepting ambiguous answers (politely re-asking or probing).
  - Ability to create a mutual trust environment.
  - Showing courtesy and respect for respondent's time at all times (no pushing).
  - Allowing enough time for respondent to answer while attempting to keep the interview dynamic and assisting respondents with linguistic difficulties.
  - Adaptation to respondent's schedule, interferences and logistical needs.
  - Ability to convey respect for the respondent's culture and possible linguistic limitations.

39 full-time interviewers were hired in Spain, 47 in Bulgaria and 11 in the Netherlands, distributed across different geographical areas, cities and rural areas.

### **5.3.2. Face-to-face survey procedure**

Before doing the interview, interviewers were expected to:

- Identify and contact the target to be interviewed and make sure the interview would be done without interference from other people and the respondent would answer freely.
- Describe with accuracy and brevity the objective of the study and the estimated duration of the interview or offer the possibility of an appointment at a later time/date.
- Encourage the target to collaborate without being pushy, or offering an incentive.
- Checking that the candidate meets all screening criteria and qualifies for the interview.
- Obtain the respondents' informed consent.

During the interview, interviewers were expected to:

- Satisfactorily answer any pertinent question from interviewees.
- Read questions completely and clearly, and all the answer items, when applicable.
- Clarify any interpretations/doubts that arise for any question.
- Write down or type answers without missing any relevant information.
- Be patient and help respondents with linguistic difficulties to understand the questions (or show them the questionnaire in their native language to help them understand the questions).

Some common problems that can be caused by a below-average performance from the interviewer are:

- Questionnaire is administered incorrectly because questions are read incorrectly and answers are recorded incorrectly.
- Questions are asked without a neutral, objective tone, highlighting words that may induce to a specific interpretation or answer.
- Replies to interviewees' queries are not homogeneous and/or the attitude in addressing them is not courteous and helpful.

Interviewers were informed of all these crucial aspects for the successful completion of the questionnaire and that quality control monitoring would also verify their performance on these interviewing aspects.

After the interview was completed, interviewers were expected to:

- Thank respondents for their time and consideration and offer them the agreed incentive.
- Inform respondents that their personal data would be treated with confidentiality and deleted after the study is completed.
- Inform respondents of the possibility of getting a brief quality control (verification) call by another interviewer.
- Review notes and correct unclear or wrong answers on the paper and pencil questionnaires.

### 5.3.3 Participant recruitment strategies

#### Spain

Participant recruitment strategies varied according to the region and specific immigrant community, as it was crucial to take into account the cultural and socio-economic particularities (habits, lifestyles, etiquette, interpersonal communication, socialization locations and timings, and social status) of each of the following groups in order of size:

- **Moroccans** – largest group, spread throughout Spain,
- **Pakistanis** – concentrated in urban areas, especially Barcelona,
- **Colombians** – concentrated in Madrid, Catalonia and Valencia,
- **Ecuadorians** – concentrated mainly in Madrid and Catalonia, but there are also communities elsewhere in Spain,
- **Chinese** – predominantly in urban areas but also spread throughout Spain.

Beyond the specific strategies for each collective and region surveyed, the dissemination strategy followed some principles:

1. Where possible, the largest collectives in the survey were interviewed by trained interviewers from the same nationality or region (namely Latin American, Moroccan and Chinese), in order to:
  - a. make respondents feel comfortable, both culturally and linguistically.
  - b. access “difficult” neighbourhoods or buildings where outsiders may not be welcome.
2. Interviewers were directed primarily to the neighbourhoods or towns/villages where the targeted immigrant community was concentrated.
3. Interviewers were given the freedom to interview respondents at their preferred location: a private residence, store or local business (such as cafés) or public building (such as a church or civic centre), and also in the street, thanks to the relatively benign winter climate in Spain
4. Interviewers were allowed to defer the interview (pre-recruitment), as long as it was done face-to-face, if respondents showed interest but were not available when first asked.

5. Interviewers were allowed to use snowball recruitment by asking for referrals from either community leaders or respondents who had completed the interview or who had had no time to do so.

Recruitment strategies and tactics were explained to interviewers during the briefing. Depending on the location they were visiting on a specific day and time, interviewers would approach one or several of the following target group meeting points:

- Tele-centres (“locutorios”).
- Internet cafés.
- Money transfer offices (e.g. Western Union).
- Diplomatic offices (Consulates, Embassies, Country Information Offices).
- Local business (grocery shops, hairdressers, butchers' shops, etc.).
- Farms and fields in rural areas where agricultural work is performed
- Bars and cafés
- Language schools
- Churches and other religious institutions
- Social services and charity offices
- Employment agencies (both public and private)
- Educational institutions (schools, kindergarten, adult schools, etc.)
- Cultural associations (e.g. folklore clubs)
- Sports facilities (where they play football, basketball, cricket, etc.).

## The Netherlands

Traditionally, the largest communities by country of origin are from Turkey, Morocco, Suriname, Indonesia, the Dutch Caribbean, and China/Hong Kong/Chinese communities. However, many of these immigrants have obtained citizenship.

- **Chinese citizens** - The Hague, Amsterdam and Rotterdam have small “Chinatowns”, but the Chinese live throughout the Netherlands.
- **Turkish** - there are large communities in Rotterdam, Amsterdam, The Hague, Utrecht, Almelo, Deventer and Eindhoven.
- **Americans (US citizens)** – spread throughout the Netherlands with a large community in Amsterdam.
- **Indians** – predominantly in major urban areas.
- **Moroccans** - most of them reside in Amsterdam, Utrecht, Rotterdam, The Hague and Gouda.
- **Surinamese** – integrated into the population since 1975.
- **Brazilians** have recently settled in the Netherlands through marriage or registered partnership, sometimes via the Netherlands Antilles or Suriname. Like many other Latin American migrants, they often first arrive in the Netherlands on Tourist Visas.

To recruit respondents from the largest communities, native interviewers from those communities were selected and trained following the procedure explained in Section 4.1. Since each interview took about 25 minutes, interviewers were advised to make an appointment before and meet the respondent at their preferred location. Individuals to be interviewed were selected from a database that has been developed over the last 20 years from doing research targeting minority groups for

both public and private organizations. Given the richness of that database, respondents from the target communities were contacted by phone and email for a preliminary screening and scheduling of a face-to-face interview.

In parallel, interviewers were asked to recruit other respondents that met the screening criteria (background, age, sex, region, etc.) by snowball recruitment (personal referrals), visits to target group meeting points and street interception. Most respondents were interviewed face-to-face, but in some of the more rural areas, the possibility of phone interviews was offered.

In particular, interviewers would approach both individuals and organisations, such as:

- Community centres,
- Religious centres,
- Sport clubs,
- Cultural clubs,
- Ethnic event organizers,
- Wedding event organizers,
- Ethnic-specific nightclubs/bars,
- Ethnic media (radio, TV, print, online),
- Private schools (ethnic-cultural, language, religious),
- General schools (public and private),
- Consulates/Embassies.

Finding respondents for interviews in urban areas was easier. They were found in locations such as community centres, student hostels, hairdressers, churches and mosques, at people's homes, etc. However, it was much more challenging to recruit respondents without the Dutch citizenship in rural areas.

## Bulgaria

Immigrants in Bulgaria come from the following groups, listed in order of size:

- **Russians** are the largest non-EU27 immigrant community and are very well integrated into the Bulgarian society. Generally, they have a higher than average standard of living. They have settled in urban areas, mainly in Sofia, Plovdiv, Varna, Burgas, Stara Zagora, Blagoevgrad and Ruse.
- **Turks** – mainly in the capital city and other large urban areas. Their main reasons for settling in Bulgaria are family ties, studying and better work opportunities.
- **Macedonians, Ukrainians or Moldovians** are the remaining large migrant communities who came in search of better job opportunities.

Two main approaches were used to find respondents:

1. Visiting different target groups at their usual meeting points e.g. cultural organisations, diplomatic offices, local businesses, bars and cafes, universities. This was the most effective method. Interviewers either did the interview at the moment of their visit, or made an appointment to come back another day.
2. Respondents were recruited by the snowball effect of requesting referrals. Given the small number (in absolute figures) of immigrants in Bulgaria and the physical and cultural similarities between the largest non-EU27 immigrant groups and locals, interviewers generally used this method as the main recruitment strategy. It was the most time consuming approach as the number of referrals given was very limited. The location of the interviews was agreed upon with each respondent at their convenience, this was either

their private residence, their workplace, on the street, or in a public space (cafe, cultural centre).

Interview location was agreed upon with each respondent at their convenience, mostly in private residences or public spaces such as cafés or associations. Where needed, respondents were interviewed with the help of a facilitator of the same nationality or by trained interviewers of the same nationality (e.g., this may be necessary for Middle-Eastern female respondents), in order to make respondents feel comfortable.

## 5.4 Statistical analysis

**Descriptive statistical analysis** for all the variables included in the questionnaire showing the frequencies of each category were carry out, concretely:

- Distribution of frequencies by category of all the variables included in Block A: access to ICT; Block B: ICT utilisation: use, places and devices; Block C: ICT skills and Block D: ICT utilisation: activities to cover objective 1 of the study.
- Distribution of frequencies by category of all the variables included in Block E: integration of immigrants; Block F: employability; Block G: socio-demographics and the chi-square tests performed by country to cover objective 2.

In order to avoid information overload and to interpret the data easily, five scale categories were recoded into 3 scale categories (Totally disagree/ Disagree -Neither agree nor disagree - Totally agree/Agree) and dichotomous variables (Very frequently – Frequently – Occasionally – Rarely to YES – Never to NO).

Moreover, **bivariate analysis**, concretely *chi-square tests* were also performed to study differences between connected and non-connected in Block E: integration of immigrants; Block F: employability, to cover objective 3 of the study. The variable connected was recodified in two categories: Yes (connected) or No (non-connected), being connected those who replied that they had used the Internet within the last three months (n=1,307), and non-connected the rest of the individuals that used the internet less frequently and that they used a computer (Question B1) (n=191). Connected individuals were distributed by country as follows: Spain n=447; Bulgaria n=400 and the Netherlands n=460.

**Multivariate analysis** was also carried out. 5 composite indexes were created through *factorial analysis* in order to explain in a unique indicator: IT skills, internet skills, internet adoption, employability, and integration, respectively. In this sense, factorial analysis is a statistical technique of data reduction used to explain correlations among observed variable with a fewer number of non-observed variables called factors. Factor analysis was developed considering the four steps described in the OECD-JRC Handbook on constructing composite indicators: methodology and user guide (2008)<sup>38</sup>, and based on the theoretical/conceptual framework defined in section 3. Factors resulted of each variables were compared for each socio-demographic variable using analysis of variance (ANOVA). For the specific cases of employability, the groups of connected and non-connected were also compared on these two variables with ANOVA.

Finally, *correlation analysis* we carried out among these composite indexes in order to find linear relationships among them, as well as *regression analysis* to understand which combinations of these variables is related with employability and integration, respectively, after controlling the influence of sociodemographic variables (age and education).

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<sup>38</sup> OECD - JRC. (2008). Handbook on constructing composite indicators methodology and user guide. Paris: OECD.

## 6. Annex 2: English questionnaire final version

### INTRODUCTION:

"Good morning/afternoon/evening, we are studying how people use the Internet and participate in social and public life in (COUNTRY). This survey is completely independent from the (COUNTRY) government, as **it is funded by the European Commission**. The results of this study will **allow European Commission to better understand the relationship between ICT, migration experience and employability so as to foster integration across European Union**.

You have been randomly selected to be part of a representative sample of the (CITY) population. We would like to request your collaboration in this study. **We guarantee that your responses will be completely anonymous and never analysed or displayed individually**. The survey will last for approximately 20 minutes. Are you willing to collaborate?

(When interview starts, for Respondents whose native language may be covered by our translated written questionnaire. Ask: "We can do the interview in (Language). We also have a printed version in (Mention all languages). Please use whichever language you prefer." )

### CONTEXTUAL INFO (TO BE COMPLETED BY INTERVIEWER AFTER THE INTERVIEW)

X1.	Interview number (ID):
X2.	Interviewer's full name:
X3.	Country: <b>1. Spain    2. Bulgaria    3. The Netherlands</b>
X4.	Location (city):
X5.	Contact point (describe):
X6.	a. Date: __ / __ / ____    b. Start time: __: __    c. End time: __: __
X7.	Language of interview: 1. English    2. Dutch    3. Spanish    4. Bulgarian    5. French 6. Russian    7. Arabic    8. Chinese    9. Turkish    10. Indonesian
X8.	Proficiency of interview language evaluation (circle and briefly explain): 1. Excellent    2. Good    3. Fair    4. Limited    5. Poor



## SCREENER:

**S1. Gender (DO NOT ASK):**

1. Female
2. Male

**S2. What is your age?**

\_\_\_\_\_ years old (CLOSE IF UNDER 16 OR ABOVE 74 YEARS OLD)

**S3. In what country were you born?**

\_\_\_\_\_ (CLOSE IF EU-27 M.S.; CHECK LIST IF UNSURE)

**S4. Are you currently a citizen of... (COUNTRY OF INTERVIEW)?**

1. Yes (RE-CONFIRM & CLOSE IF CURRENTLY A CITIZEN)
2. No

**S5. Where do you currently live? (PROBE FOR NEIGHBORHOOD)**

1. \_\_\_\_\_ (City / Town)

2. \_\_\_\_\_ (District / Neighborhood)

**S6. Is it a...? (ASK ONLY IF LOCATION IS UNKNOWN – OTHERWISE CLASSIFY):**

1. Urban area
2. Sub-urban area
3. Rural area

**S7. What is your proficiency level of ... (OFFICIAL LANGUAGE?):**

1. I understand it and speak it very well (USE OFFICIAL LANGUAGE Q'AIRE)
2. I understand it and speak it relatively well (USE OFFICIAL LANGUAGE Q'AIRE & ASSIST RESPONDENT IF COMPREHENSION ISSUES ARISE)
3. I have trouble understanding and speaking it (OFFER ALTERNATIVE LANGUAGE Q'AIRE)

## BLOCK A: ACCESS TO ICT (Information & Communication Technologies)

**A1. Do you or anyone in your household have access to a computer at home?** (any type: desktop, laptop, netbook, tablet, excluding smart phone)

1. Yes
2. No

**A2. Do you or anyone in your household have access to the Internet at home?** (by any type of device)

1. Yes (GO TO QB1)
2. No
3. I don't know

**A3. What are the reasons for not having access to the Internet at home?**

(MULTIPLE ANSWER) (USE SHOWCARD 1) (LIST OF ITEMS TO BE ROTATED)

<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>	Totally agree (5)	Agree (4)	Neither agree nor disagree (3)	Disagree (2)	Totally disagree (1)
1. Have access to Internet elsewhere	5	4	3	2	1
2. Don't need Internet (because not useful, not interesting, etc.)	5	4	3	2	1
3. Equipment costs too high	5	4	3	2	1
4. Access costs too high (telephone, DSL subscription etc.)	5	4	3	2	1
5. Lack of skills	5	4	3	2	1
6. Privacy or security concerns	5	4	3	2	1
7. Broadband internet is not available in our area	5	4	3	2	1
8. Don't want Internet (because content harmful...)	5	4	3	2	1
9. Other	5	4	3	2	1

## BLOCK B: USE OF ICT: USE, PLACE AND DEVICES

**B1. When did you last use a computer (at home, at work or any other place)?**  
(any type: desktop, laptop, netbook, tablet, excluding smart phone)

5. Within the last 3 months (GO TO B2)
6. Between 3 months and a year ago (GO TO B3)
7. More than 1 year ago (GO TO B3)
8. Never used one (GO TO E1)

**B2. How often on average have you used a computer in the last 3 months?**

1. Every day or almost every day
2. At least once a week (but not every day)
3. At least once a month (but not every week)
4. Less than once a month
5. Never

**B3. When did you last use the Internet?** (via any device, desktop, portable or handheld, including mobile or smart phones)

5. Within the last 3 months\* (GO TO B4)
6. Between more than 3 months and a year ago (GO TO C1)
7. More than 1 year ago (GO TO C1)
8. Never used one (GO TO E1)

\*IF CODE 1, CLASSIFY AS "CONNECTED"; IF 2, 3 OR 4, AS "NOT CONNECTED".

**B4. How often on average have you used the Internet in the last 3 months?**

1. Every day or almost every day
2. At least once a week (but not every day)
3. At least once a month (but not every week)
4. Less than once a month

**B5. Where have you used the Internet in the last 3 months (using a computer or any other means)?** (MULTIPLE ANSWER – SPONTANEOUS OR PROMPTED READ LIST)

1. At home
2. At place of work (other than home)
3. At place of education
4. At another person's home
5. At a public library
6. At a post office
7. Public office, town hall, government agency
8. Community or voluntary organisation
9. Internet Café
10. Hotspot (at hotels, airports, public places etc)
11. Other

**B6. Do you use any of the following mobile devices to access the Internet away from home or work? (MULTIPLE ANSWER - READ LIST)**

1. I don't access the Internet via any mobile device away from home or work
2. Mobile phone (or smart phone).

**B6.2. If yes, which of the following?**

1. via mobile phone network (e.g. 3G)
2. via wireless network (e.g. WiFi)
3. Portable computer (e.g. laptop, tablet)

**B6.3. If yes, which of the following?**

1. via mobile phone network, using USB key or (SIM) card or mobile phone as modem
2. via wireless network (e.g. WiFi)
3. No mobile connection to the Internet
4. Other devices

## BLOCK C: ICT SKILLS

**C1. Which of the following are you able to do using a COMPUTER? (MULTIPLE ANSWER) (USE SHOWCARD 2) (LIST OF ITEMS TO BE ROTATED)**

	YES				NO
	Very easily (5)	Easily (4)	Difficult (3)	Very difficult (2)	Never do it (1)
<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>					
1. Copy or move a file or folder	5	4	3	2	1
2. Use copy and paste tools to duplicate or move information within a document)	5	4	3	2	1
3. Use basic arithmetic formulas in a spread sheet (e.g. Excel)	5	4	3	2	1
4. Compress (or zipping) files	5	4	3	2	1
5. Connect and install new devices, e.g. a modem	5	4	3	2	1
6. Write a computer program using a specialised programming language	5	4	3	2	1

**C2. Which of the following are you able to do using the INTERNET?**

*(MULTIPLE ANSWER) (USE SHOWCARD 2) (LIST OF ITEMS TO BE ROTATED)*

<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>	YES				NO
	Very easily (5)	Easily (4)	Difficult (3)	Very difficult (2)	Never do it (1)
1. Use a search engine to find information (e.g. Google)	5	4	3	2	1
2. Send e-mails with attached files (e.g. documents, pictures, etc.)	5	4	3	2	1
3. Post messages to chat rooms, newsgroups or an online discussion forum (e.g. on social networking sites, blogs, etc.)	5	4	3	2	1
4. Use the Internet to make telephone calls	5	4	3	2	1
5. Use peer-to-peer file sharing for exchanging movies, music, etc.	5	4	3	2	1
6. Create a web page	5	4	3	2	1

**C3. How did you obtain your computer and Internet skills?**

*(MULTIPLE ANSWER) (USE SHOWCARD 1) (LIST OF ITEMS TO BE ROTATED)*

<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>	Totally agree (5)	Agree (4)	Neither agree nor disagree (3)	Disagree (2)	Totally disagree (1)
1. Formal educational institution (school, college, university)	5	4	3	2	1
2. Training courses in other centres or institutions	5	4	3	2	1
3. Self-study using books, CD-ROMs, online courses, wikis, online discussion forums, etc	5	4	3	2	1
4. Learning through practice and experience	5	4	3	2	1
5. Help and assistance from relatives, friends, or colleagues	5	4	3	2	1
6. Some other ways	5	4	3	2	1

**BLOCK D: USE OF ICT: ACTIVITIES AND SOCIAL NETWORKING SITES (IF NOT USED INTERNET IN LAST 3 MONTHS (B3=1) GO TO E1)**

**D1. Have you used the Internet for the following INFORMATION purposes in the last 3 months? (USE SHOWCARD 3) (LIST OF ITEMS TO BE ROTATED)**

	YES				NO
	Very frequently (5)	Frequently (4)	Occasionally (3)	Rarely (2)	Never (1)
<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>					
1. Read or download online news, newspapers, and/or magazines	5	4	3	2	1
2. Seek health-related information and health services (e.g. injury, disease, nutrition, improving health, etc.)	5	4	3	2	1
3. Look for information about education, training or course offers	5	4	3	2	1
4. Look for information about social services	5	4	3	2	1
5. Look for information about housing opportunities	5	4	3	2	1
6. Look for information about taxes	5	4	3	2	1
7. Look for information about laws and legal issues	5	4	3	2	1
8. Find information other services different from the above mentioned	5	4	3	2	1
9. Download software (other than games software)	5	4	3	2	1
10. Look for information and news about the country you were born	5	4	3	2	1

**D2. Have you used the Internet for the following COMMUNICATION purposes in the last 3 months?** (USE SHOWCARD 3) (LIST OF ITEMS TO BE ROTATED)

	YES				NO
	Very frequently (5)	Frequently (4)	Occasionally (3)	Rarely (2)	Never (1)
(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)					
1. Post messages to chat rooms, newsgroups or an online discussion forum	5	4	3	2	1
2. Participate in non-professional social networks, such as Facebook, twitter, etc., creating user profile, posting messages, uploading content or other contributions	5	4	3	2	1
3. Participate in professional social networks, such as LinkedIn etc., creating user profile, posting messages, uploading content or other contributions	5	4	3	2	1
4. Send/receive emails	5	4	3	2	1
5. Instant message, chat (Yahoo messenger, Hotmail messenger, etc.)	5	4	3	2	1
6. Telephone over the Internet/video calls via webcam (e.g. Skype)	5	4	3	2	1

**D3. Have you used the Internet for the following PARTICIPATION activities in the last 3 months?** (USE SHOWCARD 3) (LIST OF ITEMS TO BE ROTATED)

	YES				NO
	Very frequently (5)	Frequently (4)	Occasionally (3)	Rarely (2)	Never (1)
(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)					
1. Read and post opinions on civic or political issues via websites (e.g. blogs, social networks, etc.)	5	4	3	2	1
2. Take part in online consultations or voting to define civic or political issues (e.g. urban planning, signing a petition, etc.)	5	4	3	2	1
3. Contact a politician, government or local government official	5	4	3	2	1
4. Participate as volunteer in social group or organisation	5	4	3	2	1
5. Contact the administration to know your rights and duties as a resident	5	4	3	2	1

**D4. Have you used the Internet for the following LEARNING/EDUCATION activities in the last 3 months?** (USE SHOWCARD 3) (LIST OF ITEMS TO BE ROTATED)

	YES				NO
	Very frequently (5)	Frequently (4)	Occasionally (3)	Rarely (2)	Never (1)
<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>					
1. Do an online course to improve your knowledge or skills for work	5	4	3	2	1
2. Do an online course to learn the language of the country where you currently live	5	4	3	2	1
3. Do an online course for any other subject	5	4	3	2	1
4. Surf through the Internet to get information on your education level in the host country	5	4	3	2	1
5. Surf through the Internet to get information for the educational qualification recognition	5	4	3	2	1
6. Surf through the Internet for learning/education purposes (improve your language skills, etc.)	5	4	3	2	1

**D5. Have you used the Internet for the following activities in your PROFESSIONAL LIFE in the last 3 months?** (USE SHOWCARD 3) (LIST OF ITEMS TO BE ROTATED)

	YES				NO
	Very frequently (5)	Frequently (4)	Occasionally (3)	Rarely (2)	Never (1)
<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>					
1. Look for a job or send a job application	5	4	3	2	1
2. Market yourself to possible future employers (e.g. send a CV, upload a CV to a website)	5	4	3	2	1
3. Accomplish tasks related to your usual work	5	4	3	2	1
4. Participate in professional networking sites (creating user profile, posting messages or other contributions to LinkedIn, Xing, etc.)	5	4	3	2	1
5. Find information about employment rights	5	4	3	2	1
6. Find information about unemployment benefits and programmes	5	4	3	2	1
7. Find information about training/apprenticeship courses	5	4	3	2	1
8. Use online tools to assess your professional competences and skills.	5	4	3	2	1



**D6. To what extent do you agree with the following statements related with the use of the Internet for job search? (USE SHOWCARD 1) (LIST OF ITEMS TO BE ROTATED)**

(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)	Totally agree (5)	Agree (4)	Neither agree nor disagree (3)	Disagree (2)	Totally disagree (1)
1. I know how to use the Internet to find a job	5	4	3	2	1
2. I trust the Internet to find a job	5	4	3	2	1
3. I’m interested in the type of jobs offered on the Internet	5	4	3	2	1
4. The use of the Internet to find a job is useful	5	4	3	2	1
5. I really need the Internet to find a job	5	4	3	2	1

## BLOCK E: INTEGRATION OF IMMIGRANTS

### E1. EMPLOYMENT

**E1.1. What is your current employment situation? (SINGLE ANSWER)**

1. Employee full-time work (GO TO E1.3)
2. Employee part-time work (GO TO E1.3)
3. Self-employed (includes family workers, people working in family business or people who own their own business) (GO TO E1.3)
4. Unemployed looking for a job (GO TO E1.2)
5. Student (not in the labour force) (GO TO E1.5)
6. Student with part-time jobs (GO TO E1.3)
7. Homemaker (non-remunerated) (GO TO E1.5)
8. Other not in the labour force (retired, inactive, in compulsory military service, etc.) (GO TO E1.5)

**E1.2. How long have you been out of work? (SINGLE ANSWER)**

1. Less than 3 months
2. Between 3 months and 1 year
3. More than 1 year

**E1.3. What is your current occupation? (SINGLE ANSWER)**

1. Professional (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.)
2. Technician or associate professional (i.e. engineering technicians, nurses, legal associates, information technology technicians)
3. Clerical support worker (i.e. office clerks, secretaries, bank tellers, client information workers)
4. Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson)
5. Skilled agricultural, forestry and fishery worker (i.e. crop growers, animal producers, forestry workers, fishery workers, subsistence crop and livestock farmers)

6. Craft and related trades worker (i.e. electricians, tool makers, steel and metal workers, blacksmiths, printing and handcraft workers, garment, food processing workers)
7. Plant and machine operator or assembler (i.e. mining and mineral processing workers, metal processing, chemical, food processing, wood, textile machine operators)
8. Elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors)
9. Armed forces occupation (commissioned and non-commissioned armed forces officers)
10. Other
11. Don't Know/Refuse

**E1.4. Do you think that your main job here in (country) uses all the skills that you obtained in your training and work life?**

1. My job matches my skills & training
2. My job matches my skills but is not in the area for which I trained
3. My job does not require the skills & training that I have.
4. Refused
5. Don't Know

**E1.5. How did you arrange/get your current or last job in this country? (MULTIPLE ANSWER)**

1. Through family and friends (offline)
2. Through family and friends (online)
3. Through people I met in the Internet
4. Through a job listing on offline newspaper, magazine, etc.
5. Through a job listing on online newspaper, magazine, etc.
6. Through job-seeking websites
7. Through a recruitment agency (offline)
8. Through a recruitment agency (online)
9. Through public employment services (offline)
10. Through public employment services (online)
11. Through a non-governmental organization (online)
12. Through a non-governmental organization (offline)
13. Other (offline)
14. Other (online)
15. Have not been employed in this country

## **E2. EDUCATION AND SKILLS**

**E2.1. What is your educational level? (Please, select one)** (highest level of education completed)

Primary or lower secondary education, no formal education

1. No formal education
2. Primary education
3. Lower secondary education

Upper or post-secondary education, but not tertiary

4. Upper secondary education

5. Post-secondary education but not tertiary

Tertiary education:

6. Tertiary education, first stage

7. Tertiary education, second stage

**E2.2. Have you had any educational qualification recognized in the country where you currently live?**

1. Yes, equivalent level

2. Yes, lower level

3. No

4. Don't know/Refuse

**E2.3. During the last 12 months, have you taken any course to improve your knowledge or skills for work?**

1. Yes

2. No

3. Don't know/refuse

**E2.4. Have you taken any courses to learn the language of the country where you currently live?**

1. Yes

2. No

3. Don't know/refuse

**E2.5. How much do you think that the following skills have helped you / can help you to improve your work situation? (Assign a score from 1 = minimum to 5 = maximum to each item in the list)**

	Minimum (1)	(2)	(3)	(4)	Maximum (5)
1. Language (mother tongue)	1	2	3	4	5
2. Language (country)	1	2	3	4	5
3. Other language different from mother tongue and hosting country	1	2	3	4	5
4. Basic mathematics and science and technology	1	2	3	4	5
5. Use of computer and internet	1	2	3	4	5
6. Ability to learn (Learning to learn )	1	2	3	4	5
7. Understanding / adapting to the (COUNTRY) customs/way of life	1	2	3	4	5
8. Sense of initiative and entrepreneurship	1	2	3	4	5
9. Cultural (understanding/expression through music, dance, singing, etc.)	1	2	3	4	5

### E3. SOCIAL INCLUSION

**E3.1. What are the main sources of income in your family, including yours? (SELECT UP TO 3 ITEMS)**

1. My regular job (if currently employed)
2. Unemployment or social security benefits
3. Subsidy for self-employment/creation of your business
4. Support from a non-governmental organization
5. Training allowance or educational grant
6. Parents or relatives
7. Occasional work
8. Other

**E3.2. Which of the following best describes how you feel about your household's income nowadays? (SINGLE ANSWER)**

1. Living very comfortably on present income
2. Living comfortably on present income
3. Coping on present income
4. Finding it difficult on present income
5. Finding it very difficult on present income
6. Don't Know/Refuse

**E3.3. In the country where you currently live, how would you rate your knowledge of the language in the following areas?**

	Basic	Medium	Advanced
1. Comprehension	1	2	3
2. Spoken	1	2	3
3. Written	1	2	3

**(ASK ONLY IN SPAIN)**

**E3.3S. How would you rate your knowledge of the REGIONAL language where you live? (Catalan/Valencian, Galician, Basque) (READ ITEMS)**

	Basic	Medium	Advanced	No regional language where I live
1. Comprehension	1	2	3	9
2. Spoken	1	2	3	9
3. Written	1	2	3	9

**E3.4. How well informed are you about different living aspects of the country where you currently live? (From a scale of 1-5 where 5 is very well informed and 1 is not informed at all)**

	Very well informed (5)	(4)	(3)	(2)	Not at all informed (1)	Don't know/refuse
1. Legal/Laws	5	4	3	2	1	9
2. Employment rights	5	4	3	2	1	9
3. Job opportunities	5	4	3	2	1	9
4. Health services	5	4	3	2	1	9
5. Education	5	4	3	2	1	9
6. Social services	5	4	3	2	1	9
7. Housing opportunities	5	4	3	2	1	9
8. Taxes	5	4	3	2	1	9

#### **E4. ACTIVE CITIZENSHIP**

**E4.1. Do you volunteer/participate in any social group or organization?**

1. Yes
2. No
3. Don't know/Refuse

**E4.2. During the last 12 months, have you done any of the following political activities in the country where you currently live? (PLEASE, SELECT ALL THAT APPLY)**

	YES				NO
	Very frequently (5)	Frequently (4)	Occasionally (3)	Rarely (2)	Never (1)
1. Contacted a politician, government or local government official	5	4	3	2	1
2. Worked in a political party or action group	5	4	3	2	1
3. Worked in another organization or association	5	4	3	2	1
4. Signed a petition	5	4	3	2	1

**E4.3. Did you vote in the last local and/or national elections?**

1. Yes
2. No
3. Don't know/Refuse

**E5. YOUR MIGRATION EXPERIENCE**

**E5.1. When did you first arrive in the European Union? (in case of Bulgaria just ask about the country not EU)**

..... 1. years / 2. months ago (*INPUT NUMBER & MARK TIME MEASURE*)

**E5.2. How many years have you lived in ... (COUNTRY OF INTERVIEW)?**

..... 1. years / 2. months ago (*INPUT NUMBER & MARK TIME MEASURE*)

**E5.3. Why did you migrate to the European Union? (READ ALL ITEMS)**

	Totally agree (5)	Agree (4)	Neither agree nor disagree (3)	Disagree (2)	Totally disagree (1)
1. To study	5	4	3	2	1
2. To join my family	5	4	3	2	1
3. To work	5	4	3	2	1
4. For medical/health reasons	5	4	3	2	1
5. For political or humanitarian reasons	5	4	3	2	1
6. Other	5	4	3	2	1

**BLOCK F. EMPLOYABILITY**

**F1. How many days of training supported by your current employer (or past employer in case you are unemployed) have you participated in during the past 12 months?**

1. Training of job-related skills \_\_\_\_\_ days
2. Training of generic skills \_\_\_\_\_ days
3. Leadership training \_\_\_\_\_ days

**F2. To what extent do you agree with the following sentences regarding your current employer (or past employer in case you are unemployed)? (USE SHOWCARD 1)**

	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. I'm confident that I would find another job if I started searching	5	4	3	2	1
2. It will be difficult for me to find new employment when leaving the organization" (reverse-scored)	5	4	3	2	1
3. In case I'm dismissed, I'll immediately find a job of equal value.	5	4	3	2	1

**F3. To what extent do you agree with the following sentences regarding your current employer (or past employer in case you are unemployed)? My employer provides me with... (USE SHOWCARD 1) (LIST OF ITEMS TO BE ROTATED)**

<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. Possibility to apply my skills in a variety of contexts	5	4	3	2	1
2. Possibility of a career in the organization	5	4	3	2	1
3. Opportunities for promotion	5	4	3	2	1
4. Possibility of developing a wide range of skills	5	4	3	2	1
5. Opportunities for responsibility in the work task	5	4	3	2	1
6. Interesting work	5	4	3	2	1
7. Possibility to move to a range of different jobs within the organisation	5	4	3	2	1

**F4. To what extent do you agree with the following sentences regarding your education, training and qualifications? (USE SHOWCARD 1) (LIST OF ITEMS TO BE ROTATED)**

<i>(INTERVIEWER: START READING LIST ON ITEM MARKED WITH “*”)</i>	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. My level of education is sufficient for getting a job in my area of work	5	4	3	2	1
2. My skills for doing the type of work I want to do are up to date	5	4	3	2	1
3. I have a good work history	5	4	3	2	1
4. I need more training or education	5	4	3	2	1
5. An employer would be impressed with my qualifications	5	4	3	2	1
6. My work qualifications aren't very good	5	4	3	2	1
7. I have good job references	5	4	3	2	1

**F5. To what extent do you agree with the following sentences regarding your opportunity awareness? (USE SHOWCARD 1)**

	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. I follow developments in the field of industry and employment regularly	5	4	3	2	1
2. I make sure I am informed about vacancies	5	4	3	2	1

**F6. To what extent do you agree with the following sentences regarding your self-presentation skills? (USE SHOWCARD 1)**

	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. I am aware of my interests and skills	5	4	3	2	1
2. I don't find it difficult to prove my capability to others	5	4	3	2	1
3. I am able to convince potential employers or project partners of my competencies	5	4	3	2	1

**F7. To what extent do you agree with the following sentences regarding your competences? (USE SHOWCARD 1)**

	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. I find it important to develop myself in a broad sense, so I will be able to perform different task activities or jobs within the organization	5	4	3	2	1
2. If the organization needs me to perform different tasks, I am prepared to change my work activities	5	4	3	2	1
3. If the organization offered me the possibility to obtain new work experiences, I would take it	5	4	3	2	1



**F8. To what extent do you agree with the following sentences regarding your willingness to change jobs? (USE SHOWCARD 1)**

	Totally agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Totally disagree (1)
1. I am willing to start another job	5	4	3	2	1
2. In case of organizational change, I would prefer to stay in my current department with my colleagues	5	4	3	2	1

**BLOCK G. SOCIO-DEMOGRAPHICS**

**G1. What is your legal marital status?**

1. Unmarried (i.e. never married) (GO TO G4)
2. Married or living together in a relationship (GO TO G2)
3. Widowed (incl. widowed from registered partnership) (GO TO G4)
4. Divorced (incl. legally separated and dissolved registered partnership) (GO TO G4)

**G2. Where does your spouse/partner live? (SINGLE ANSWER)**

1. In my home country
2. In the country I currently live
3. Elsewhere

**G3. Is he/she...? (SINGLE ANSWER)**

1. The same nationality as you
2. From the European Union country where you currently live
3. From another European Union country
4. A different (non-European Union) nationality

**G4. Do you have children?**

1. Yes (GO TO G5)
2. No (GO TO G9)

**G5. How old are your children? (MULTIPLE ANSWER)**

1. Under 12 y.o. (GO TO G6)
2. 12-17 y.o. (GO TO G7)
3. 18 y.o. and older (GO TO G8)

**G6. Where do your children under 12 y.o. live? (SINGLE ANSWER)**

1. In the country where you live
2. In your home country
3. In both countries

**G7. Where do your children 12-17 y.o. live? (SINGLE ANSWER)**

1. In the country where you live
2. In your home country
3. In both countries

**G8. Where do your children 18 y.o. and older live? (SINGLE ANSWER)**

1. In the country where you live
2. In your home country
3. In both countries

**G9. Including yourself, how many people live in your household (housing unit)?**

**Total number** \_\_\_\_\_

**of which:**

1. number of children under 16: \_\_\_\_\_
  1. number of children aged 14-15: \_\_\_\_\_
  2. number of children aged 5-13: \_\_\_\_\_
  3. number of children under 5: \_\_\_\_\_
2. number of persons aged from 16 to 24: : \_\_\_\_\_

**of which** number of students\*: \_\_\_\_\_  
(\*high school, vocational or university)
3. number of persons aged 25 to 64: \_\_\_\_\_
4. number of persons aged 65 or above: \_\_\_\_\_

**G10. Approximately, what is your household monthly income in Euro?**

(Include income from all sources that goes towards the household?)

(USE SHOWCARD 5) (FOR BULGARIA, USE SCALE IN LEV)

1. Less than €150
2. €150 - €300
3. €300 - €500
4. €500 - €1000
5. €1,000 - €1,500
6. €1,500 - €2,000
7. €2,000 - €2,500
8. €2,500 - €3,000
9. €3,000 - €5,000
10. €5,000 - €7,500
11. €7,500 - €10,000
12. More than €10,000

**THANK AND CLOSE**

## SHOWCARD 1: Agreement

<b>Totally agree (5)</b>	<b>Agree (4)</b>	<b>Neither agree nor disagree (3)</b>	<b>Disagree (2)</b>	<b>Totally disagree (1)</b>
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## SHOWCARD 2: Difficulty

<b>Very easily (5)</b>	<b>Easily (4)</b>	<b>Difficult (3)</b>	<b>Very difficult (2)</b>	<b>Never do it (1)</b>
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## SHOWCARD 3: Frequency

<b>Very frequently (5)</b>	<b>Frequently (4)</b>	<b>Occasionally (3)</b>	<b>Rarely (2)</b>	<b>Never (1)</b>
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## SHOWCARD 4: Importance

<b>Very important (4)</b>	<b>Important (3)</b>	<b>Not important (2)</b>	<b>Not important at all (1)</b>
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## SHOWCARD 5: Monthly Income

1. Less than €150
2. €150 - €300
3. €300 - €500
4. €500 - €1000
5. €1,000 - €1,500
6. €1,500 - €2,000
7. €2,000 - €2,500
8. €2,500 - €3,000
9. €3,000 - €5,000
10. €5,000 - €7,500
11. €7,500 - €10,000
12. More than €10,000

## 7. Annex 3: Sample socio-demographic characterisation

### 7.1 Gender, age, and nationality

Age and nationalities were the two parameters (quotas) used to draw the sample reflecting the characterisation that emerges from the Eurostat data presented in Annex 1. It is, thus, straightforward that the data in next two tables are not 'findings' but merely reflect the sampling procedure. As such they should not warrant in depth comments with the exception of the age structure.

The Netherlands sample is clearly younger than the Bulgarian sample (age group 16-24 is 31% versus 20%) and to a lesser extent younger than the Spanish sample (27%). Conversely it is also clear that the proportion of older people (54-74) in Bulgaria is more than three times that of the Netherlands (15% versus 4%) and also quite a lot higher than that of Spain (6%). Since these differences exactly mirror those of the corresponding universe as defined by the Eurostat data (they are not the result of our sampling choice), we can safely state that they tell us something about the country-specific characteristics of the TCNs.

**Table 41: Gender and Age**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Gender								
Female	756	46%	247	40%	250	48%	259	51%
Male	897	54%	377	60%	267	52%	253	49%
n	1653		624		517		512	
Age								
16-24	428	26%	166	27%	102	20%	160	31%
25-54	1094	66%	422	68%	340	66%	332	65%
55-74	131	8%	36	6%	75	15%	20	4%
n	1653		624		517		512	

**Table 42: Nationality / Region**

	SP		BG		NL	
	n	%	n	%	n	%
Morocco	141	23%				
Pakistan	129	21%				
Latin America	219	34%				
Other SP	135	22%				
Russia			131	26%		
Macedonia			125	24%		
Turkey			126	24%		
Former CEE countries			135	26%		
China					107	20%
Turkey					103	20%
United States					100	20%
Asia					100	20%
Other NL					102	20%
n	624		517		512	

Respondents were also asked about the area where they reside (urban area; sub-urban area and rural area) and the table below shows that the majority lives in urban contexts.

**Table 43: Neighbourhood area**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Urban area	1269	77%	435	70%	472	91%	362	72%
Sub-urban area	213	13%	133	21%	0	0%	80	16%
Rural area	171	10%	56	9%	45	9%	70	14%
n	1653		624		517		512	

## 7.2 Marital status

Our sample is split almost in half between unmarried (48%) and married (43%) with smaller percentages of divorced (6%) or widowed (3%).

**Table 44: Legal marital status**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Unmarried (i.e. never married)	798	48%	307	49%	250	48%	241	47%
Married or living together in a relationship	713	43%	286	46%	222	43%	205	40%
Widowed (incl. widowed from registered partnership)	43	3%	6	1%	20	4%	17	3%
Divorced (incl. legally separated and dissolved registered partnership)	99	6%	25	4%	25	5%	49	10%
n	1653		624		517		512	

The next table shows that most of the individuals who are married or living together in a relationship (80%) have their spouse or partner in the same country where they currently live. Approximately 20% of them stated that their spouses/partners live in their home country (i.e. the country of which they are nationals). Moreover, 70% of the respondents claimed that their spouses/partner have the same nationality and 25% of them said their spouses/partners have the nationality of the European Union country where they currently live.

**Table 45: Where does your spouse/partner live?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
In my home country	132	19%	76	27%	25	11%	31	15%
In the country I currently live	573	80%	207	72%	195	88%	171	84%
Elsewhere	8	1%	3	1%	2	1%	3	1%
n	713		286		222		205	

The percentages of those whose partners live in their home country are relatively higher in Spain, reflecting the specificities of some of the nationality groups that are more numerous there. For instance, more than half the spouses/partners of Pakistanis residing in Spain live in their home country.

**Table 46: Spouse/partner nationality by country and citizenship**

		In my home country		In the country I currently live		Elsewhere	
		n	%	n	%	n	%
SP	Morocco	12	19%	49	79%	1	2%
	Pakistan	30	53%	27	47%	0	0%
	Latin America	14	13%	91	86%	1	1%
	Other SP	20	33%	40	66%	1	2%
BG	Russia	6	8%	70	91%	1	1%
	Macedonia	8	17%	38	83%	0	0%
	Turkey	5	14%	30	83%	1	3%
	Former CEE countries	6	10%	57	90%	0	0%
NL	China	5	14%	30	83%	1	3%
	Turkey	0	0%	53	100%	0	0%
	United States	2	5%	37	95%	0	0%
	Asia	19	44%	22	51%	2	5%
	Other NL	5	15%	29	85%	0	0%

The spouse/partner of most of the individuals who are married or living together in a relationship are of the same nationality (70%). This percentage is higher in Spain (83%) than in the Netherlands (68%) and Bulgaria (54%). On the contrary, in Bulgaria 41% of these individuals stated that their spouse/partner has the nationality of the country where they currently live (see Table 47). The composition of TCN in Bulgaria reveals that 60% of the Russians declared that their partner is Bulgarian. This percentage is even higher in the case of US citizens in the Netherlands: 61% of them stated that his/her spouse/partner has Netherland citizenship (see Table 48). In the case of Bulgaria, the higher rate of inter-ethnic marriages has two explanations: a) cultural proximity between Russians and Bulgarians; b) some of the individuals included as Russian citizens in our sample are, in fact, ethnic Bulgarians with Russian passports who 'repatriated' but still could not get or did not ask for Bulgarian nationality.<sup>39</sup>

**Table 47: Spouse/partner nationality**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
The same nationality as you	496	70%	238	83%	120	54%	138	68%
From the European Union country where you currently live	180	25%	37	14%	92	41%	51	25%
From another European Union country	14	2%	7	2%	2	1%	5	2%
A different (non European Union) nationality	23	3%	4	1%	8	4%	11	5%
n	713		286		222		205	

<sup>39</sup> Or as hypothesized in chapter 2, who did not understand the question about citizenship or preferred not to report that they have the Bulgarian Passport.

**Table 48: Spouse/partner nationality by country and citizenship**

		The same nationality as you		From the European Union country where you currently live		From another European Union country		A different (non European Union) nationality	
		n	%	n	%	n	%	n	%
SP	Morocco	55	89%	6	9%	1	2%	0	0%
	Pakistan	52	91%	5	9%	0	0%	0	0%
	Latin America	76	72%	21	20%	6	6%	3	3%
	Other SP	55	90%	5	8%	0	0%	1	2%
BG	Russia	30	39%	47	61%	0	0%	0	0%
	Macedonia	30	65%	13	28%	1	2%	2	4%
	Turkey	29	81%	4	11%	0	0%	3	8%
	Former CEE countries	31	49%	28	44%	1	2%	3	5%
NL	China	28	78%	7	19%	0	0%	1	3%
	Turkey	51	96%	2	4%	0	0%	0	0%
	United States	13	33%	21	54%	3	8%	2	5%
	Asia	27	63%	11	26%	1	2%	4	9%
	Other NL	19	56%	10	29%	1	3%	4	12%

Almost half of the individuals (45%) have children. The distribution by country is homogeneous reflecting that around 60% of the individuals surveyed in the three countries are 25-54 years old.

**Table 49 Do you have children?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Yes	737	45%	277	44%	227	44%	233	46%
No	916	55%	347	56%	290	56%	279	54%
n	1653		624		517		512	

However, if we split the children by age we notice that in Spain 54% of them are below 12 years old while in Bulgaria this percentage is 20% and in the Netherlands it is 42%. In Bulgaria, however, 63% of the individuals who have children stated that these were 18 years old or older. This reflects the fact that the Bulgarian sample included more individuals aged 54 and above.

**Table 50: How old are your children?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
<12	346	40%	181	54%	50	20%	115	42%
12-18	196	23%	80	24%	43	17%	73	27%
>18	318	37%	77	23%	157	63%	84	31%
	860		338		250		272	



**Table 51: Where do your children live by age group**

		Total		SP		BG		NL	
		n	%	n	%	n	%	n	%
<12	In the country where you live	248	72%	122	67%	40	80%	86	75%
	In your home country	94	27%	57	31%	8	16%	29	25%
	In both countries	4	1%	2	1%	2	4%	0	0%
	n	346		181		50		115	
12 - 18	In the country where you live	140	71%	47	59%	34	79%	59	81%
	In your home country	54	28%	33	41%	7	16%	14	19%
	In both countries	2	1%	0	0%	2	5%	0	0%
	n	196		80		43		73	
>18	In the country where you live	209	66%	49	64%	94	60%	66	79%
	In your home country	78	25%	21	27%	44	28%	13	15%
	In both countries	31	10%	7	9%	19	12%	5	6%
	n	318		77		157		84	

### 7.3 Household composition

Individuals were asked how many people live in their households. In the case of the Netherlands, 42% of the individuals stated that they live alone (next table). This percentage is lower in the case of Bulgaria (30%) and Spain (6%).

**Table 52: Including yourself, how many people live in your household (housing unit)?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
1	411	25%	39	6%	157	30%	215	42%
2	342	21%	128	21%	128	25%	86	17%
3	311	19%	144	23%	88	17%	79	15%
4	353	21%	163	26%	110	21%	80	16%
5	142	9%	86	14%	19	4%	37	7%
>5	94	6%	64	10%	15	3%	15	3%
n	1653		624		517		512	

Individuals living alone in the Netherlands are mainly 16-54 years old Asians and US citizens who have come mainly to study or work.

**Table 53: Including yourself, how many people live in your household (housing unit)? by nationality and age**

		1		2		3		4		5		6 or more		
		n	%	n	%	n	%	n	%	n	%	n	%	
SP n=621	Morocco (n=141)	16-24 (n=43)	1	2%	4	9%	7	16%	17	40%	6	14%	8	19%
		25-54 (n=91)	6	7%	22	24%	25	27%	16	18%	15	16%	7	8%
		55-74 (n=7)	0	0%	0	0%	2	29%	2	29%	3	43%	0	0%
	Pakistan (n=129)	16-24 (n=54)	1	2%	3	6%	9	17%	13	24%	10	19%	18	33%
		25-54 (n=68)	3	4%	5	7%	16	24%	24	35%	14	21%	6	9%
		55-74 (n=7)	0	0%	1	14%	1	14%	2	29%	0	0%	3	43%
	Latin America (n=219)	16-24 (n=39)	1	3%	6	15%	9	23%	12	31%	8	21%	3	8%
		25-54 (n=161)	14	9%	54	34%	46	29%	33	20%	9	6%	5	3%
		55-74 (n=19)	4	21%	5	26%	4	21%	3	16%	3	16%	0	0%
	Other SP (n=135)	16-24 (n=30)	1	3%	2	7%	9	30%	13	43%	3	10%	2	7%
		25-54 (n=102)	8	8%	25	25%	15	15%	28	27%	14	14%	12	12%
		55-74 (n=3)	0	0%	1	33%	1	33%	0	0%	1	33%	0	0%
BG n=517	Russia (n=131)	16-24 (n=10)	6	60%	0	0%	2	20%	1	10%	0	0%	1	10%
		25-54 (n=95)	22	23%	23	24%	27	28%	19	20%	4	4%	0	0%
		55-74 (n=26)	2	8%	10	38%	5	19%	4	15%	4	15%	1	4%
	Macedonia (n=125)	16-24 (n=23)	16	70%	2	9%	3	13%	2	9%	0	0%	0	0%
		25-54 (n=87)	27	31%	26	30%	14	16%	16	18%	2	2%	2	2%
		55-74 (n=15)	2	13%	4	27%	2	13%	6	40%	0	0%	1	7%
	Turkey (n=126)	16-24 (n=42)	26	62%	11	26%	2	5%	2	5%	0	0%	1	2%
		25-54 (n=71)	29	41%	13	18%	7	10%	21	30%	0	0%	1	1%
		55-74 (n=13)	1	8%	1	8%	1	8%	3	23%	2	15%	5	38%
	Former CEE (n=135)	16-24 (n=27)	8	30%	7	26%	3	11%	7	26%	1	4%	1	4%
		25-54 (n=87)	18	21%	21	24%	19	22%	24	28%	4	5%	1	1%
		55-74 (n=21)	0	0%	10	48%	3	14%	5	24%	2	10%	1	5%
NL n=512	China (n=107)	16-24 (n=63)	47	75%	9	14%	3	5%	4	6%	0	0%	0	0%
		25-54 (n=44)	13	30%	11	25%	9	20%	8	18%	2	5%	1	2%
		55-74 (n=0)	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Turkey (n=103)	16-24 (n=18)	2	11%	1	6%	4	22%	4	22%	6	33%	1	6%
		25-54 (n=79)	15	19%	10	13%	12	15%	22	28%	17	22%	3	4%
		55-74 (n=6)	1	17%	1	17%	1	17%	0	0%	2	33%	1	17%
	United States (n=100)	16-24 (n=39)	14	36%	5	13%	8	21%	7	18%	3	8%	2	5%
		25-54 (n=59)	22	37%	13	22%	11	19%	11	19%	2	3%	0	0%
		55-74 (n=2)	1	50%	1	50%	0	0%	0	0%	0	0%	0	0%
	Asia (n=100)	16-24 (n=23)	18	78%	3	13%	2	9%	0	0%	0	0%	0	0%
		25-54 (n=70)	37	53%	9	13%	10	14%	12	17%	2	3%	0	0%
		55-74 (n=7)	0	0%	3	43%	0	0%	1	14%	1	14%	2	29%
Other NL (n=102)	16-24 (n=17)	10	59%	2	12%	1	6%	2	12%	1	6%	1	6%	
	25-54 (n=80)	35	44%	14	18%	18	22%	8	10%	1	1%	4	5%	
	55-74 (n=5)	0	0%	4	80%	0	0%	1	20%	0	0%	0	0%	

The following tables show the numbers of people by age group and the number of students living in the households.

**Table 54: People living in your household by age group**

		Total		SP		BG		NL	
		n	%	n	%	n	%	n	%
Number of children under 16	None	1226	74%	422	68%	424	82%	380	74%
	1	249	15%	114	18%	67	13%	68	13%
	2	138	8%	64	10%	24	5%	50	10%
	3 or more	40	2%	24	4%	2	0%	14	3%
	n	1653		624		517		512	
Number of persons aged from 16 to 24	None	987	60%	376	60%	293	57%	318	62%
	1	432	26%	139	22%	159	31%	134	26%
	2	192	12%	78	12%	59	11%	55	11%
	3 or more	42	3%	31	5%	6	1%	5	1%
	n	1653		624		517		512	
Number of persons aged 25 to 64	None	178	11%	16	3%	82	16%	80	16%
	1	445	27%	97	16%	147	28%	201	39%
	2	740	45%	311	50%	218	42%	211	41%
	3 or more	290	18%	200	32%	70	14%	20	4%
	n	1653		624		517		512	
Number of persons aged 65 or above	None	1546	94%	585	94%	463	90%	498	97%
	1	74	4%	28	4%	38	7%	8	2%
	2 or more	33	2%	11	2%	16	3%	6	1%
	n	1653		624		517		512	

**Table 55: Number of students aged 16 to 24 in your household**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
0	1259	76%	483	77%	331	64%	445	87%
1	278	17%	100	16%	144	28%	34	7%
2	98	6%	30	5%	37	7%	31	6%
3 or more	18	1%	11	1%	5	1%	2	0%
n	1653		624		517		512	

**Table 56: People living in your household under 16**

		Total		SP		BG		NL	
		n	%	n	%	n	%	n	%
Number of children aged 14-15	1	115	86%	46	87%	24	96%	45	80%
	2	19	14%	7	13%	1	4%	11	20%
	n	134		53		25		56	
Number of children aged 5-13	1	196	72%	86	68%	47	89%	63	69%
	2	68	25%	35	28%	6	11%	27	30%
	3	7	3%	6	5%	0	0%	1	1%
	n	271		127		53		91	
Number of children under 5	1	114	81%	51	75%	29	91%	34	83%
	2	25	18%	16	24%	3	9%	6	15%
	3	2	1%	1	1%	0	0%	1	2%
	n	141		68		32		41	

## 7.4 Educational level

Individuals were asked about their educational level: 9% of the respondents stated that they have primary education or no formal education; 62% of them have at least post-secondary education and 29% tertiary education. The Netherlands has the highest level of highly educated TCNs.

**Table 57: Education level**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
No formal education	36	2%	23	4%	1	0%	12	2%
Primary education	116	7%	88	14%	0	0%	28	6%
Lower secondary education	207	13%	153	25%	10	2%	44	9%
Upper secondary education	510	31%	178	29%	253	49%	79	16%
Post-secondary education but not tertiary	290	18%	52	8%	123	24%	115	23%
Tertiary education, first stage	360	22%	99	16%	125	24%	136	27%
Tertiary education, second stage	123	7%	31	5%	5	1%	87	17%
n	1642		624		517		501	

In the next table, we look at the break-down by country, nationality, and age group, and find some interesting differences.

In Spain, Moroccans and Pakistanis have a higher percentage of individuals with no or low formal education than the migrants with Latin American origins do. Among Moroccans, this clearly increases with age (49% with no or low formal education among the 16-24 group but 100% among the 55-74). In the case of Pakistanis, we have instead a concentration of individuals with no or low formal education in the group 16-24 and 55-74.

In Bulgaria, individuals with no or low formal education are only concentrated among individuals from Macedonia, whereas Turks and Russian basically do not include individuals with no or low formal education.

In the Netherlands, these respondents are mostly concentrated among the Turks and to some extent among the Chinese.

**Table 58: Education level by nationality and age**

			No formal education, primary or lower secondary		Upper or post-secondary education		Tertiary education	
			n	%	n	%	n	%
SP (n=624)	Morocco (n=141)	16-24 (n=43)	21	49%	20	47%	2	5%
		25-54 (n=91)	46	51%	28	31%	17	19%
		55-74 (n=7)	7	100%	0	0%	0	0%
	Pakistan (n=129)	16-24 (n=54)	39	72%	14	26%	1	2%
		25-54 (n=68)	40	59%	19	28%	9	13%
		55-74 (n=7)	7	100%	0	0%	0	0%
	Latin America (n=219)	16-24 (n=39)	12	31%	21	54%	6	15%
		25-54 (n=161)	30	19%	71	44%	60	37%
		55-74 (n=19)	10	53%	5	26%	4	21%
	Other SP (n=135)	16-24 (n=30)	12	40%	12	40%	6	20%
		25-54 (n=102)	39	38%	39	38%	24	24%
		55-74 (n=3)	1	33%	1	33%	1	33%
BG (n=517)	Russia (n=131)	16-24 (n=10)	0	0%	10	100%	0	0%
		25-54 (n=95)	0	0%	57	60%	38	40%
		55-74 (n=26)	0	0%	17	65%	9	35%
	Macedonia (n=125)	16-24 (n=23)	0	0%	22	96%	1	4%
		25-54 (n=87)	3	3%	65	75%	19	22%
		55-74 (n=15)	3	20%	12	80%	0	0%
	Turkey (n=126)	16-24 (n=42)	0	0%	36	86%	6	14%
		25-54 (n=71)	2	3%	57	80%	12	17%
		55-74 (n=13)	1	8%	9	69%	3	23%
	Former CEE countries (n=135)	16-24 (n=27)	0	0%	23	85%	4	15%
		25-54 (n=87)	2	2%	58	67%	27	31%
		55-74 (n=21)	0	0%	10	48%	11	52%
NL (n=517)	China (n=104)	16-24 (n=60)	1	2%	32	53%	27	45%
		25-54 (n=44)	6	14%	17	39%	21	48%
		55-74 (n=0)	0	0%	0	0%	0	0%
	Turkey (n=103)	16-24 (n=18)	1	6%	7	39%	10	56%
		25-54 (n=79)	28	35%	27	34%	24	30%
		55-74 (n=6)	2	33%	4	67%	0	0%
	United States (n=100)	16-24 (n=39)	0	0%	19	49%	20	51%
		25-54 (n=59)	3	5%	9	15%	47	80%
		55-74 (n=2)	0	0%	1	50%	1	50%
	Asia (n=94)	16-24 (n=20)	2	10%	1	5%	17	85%
		25-54 (n=67)	10	15%	27	40%	30	45%
		55-74 (n=7)	4	57%	2	29%	1	14%
Other NL (n=100)	16-24 (n=16)	5	31%	9	56%	2	12%	
	25-54 (n=79)	18	23%	38	48%	23	29%	
	55-74 (n=5)	4	80%	1	20%	0	0%	

## 7.5 Employment

Table 50 shows the respondents' current employment situation. Approximately, 30% of TCNs are employed full-time in the three countries. Spain has the highest rate of unemployed TCNs, the Bulgarian sample includes the highest proportion of students, and the Netherlands has the highest proportion of individuals employed full-time. Not surprisingly, given the peculiar age structure underlined earlier, in Bulgaria we find the highest proportion of retired individuals. It is worth pointing out that 9% of the respondents stated that they are self-employed.

**Table 59: What is your current employment situation?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Employee full-time work	501	30%	189	30%	144	28%	168	33%
Employee part-time work	153	9%	81	13%	13	3%	59	12%
Self-employed (includes family workers, people working in family business or people who own their own business)	157	9%	65	10%	56	11%	36	7%
Unemployed looking for a job	221	13%	171	27%	23	4%	27	5%
Student (not in the labour force)	350	21%	79	13%	181	35%	90	18%
Student with part-time jobs	103	6%	8	1%	19	4%	76	15%
Homemaker (non-remunerated)	69	4%	11	2%	28	5%	30	6%
Other not in the labour force (retired, inactive, in compulsory military service, etc.)	99	6%	20	3%	53	10%	26	5%
n	1653		624		517		512	

The table below reports the break down by country, nationality and age groups.

**Table 60: What is your current\_employment situation? by nationality and age**

		Employed		Unemployed		Student		Inactive		
		n	%	n	%	n	%	n	%	
SP (n=624)	Morocco (n=141)	16-24 (n=43)	6	14%	10	23%	25	58%	2	5%
		25-54 (n=91)	41	45%	31	34%	9	10%	10	11%
		55-74 (n=7)	2	29%	2	29%	0	0%	3	43%
	Pakistan (n=129)	16-24 (n=54)	24	44%	12	22%	17	31%	1	2%
		25-54 (n=68)	46	68%	21	31%	0	0%	1	1%
		55-74 (n=7)	4	57%	2	29%	0	0%	1	14%
	Latin America (n=219)	16-24 (n=39)	13	33%	4	10%	22	56%	0	0%
		25-54 (n=161)	113	70%	41	25%	2	1%	5	3%
		55-74 (n=19)	10	53%	5	26%	0	0%	4	21%
	Other SP (n=135)	16-24 (n=30)	11	37%	9	30%	10	33%	0	0%
		25-54 (n=102)	64	63%	33	32%	2	2%	3	3%
		55-74 (n=3)	1	33%	1	33%	0	0%	1	33%
BG (n=517)	Russia (n=131)	16-24 (n=10)	1	10%	0	0%	9	90%	0	0%
		25-54 (n=95)	54	57%	11	12%	16	17%	14	15%
		55-74 (n=26)	7	27%	1	4%	0	0%	18	69%
	Macedonia (n=125)	16-24 (n=23)	0	0%	0	0%	23	100%	0	0%
		25-54 (n=87)	50	57%	5	6%	27	31%	5	6%
		55-74 (n=15)	6	40%	0	0%	0	0%	9	60%
	Turkey (n=126)	16-24 (n=42)	0	0%	0	0%	42	100%	0	0%
		25-54 (n=71)	30	42%	2	3%	38	54%	1	1%
		55-74 (n=13)	2	15%	0	0%	0	0%	11	85%
	Former CEE countries (n=135)	16-24 (n=27)	2	7%	0	0%	25	93%	0	0%
		25-54 (n=87)	50	57%	4	5%	20	23%	13	15%
		55-74 (n=21)	11	52%	0	0%	0	0%	10	48%
NL (n=512)	China (n=107)	16-24 (n=63)	7	11%	0	0%	56	89%	0	0%
		25-54 (n=44)	31	70%	1	2%	7	16%	5	11%
		55-74 (n=0)	0	0%	0	0%	0	0%	0	0%
	Turkey (n=103)	16-24 (n=18)	6	33%	2	11%	10	56%	0	0%
		25-54 (n=79)	58	73%	5	6%	5	6%	11	14%
		55-74 (n=6)	5	83%	0	0%	0	0%	1	17%
	United States (n=100)	16-24 (n=39)	2	5%	0	0%	37	95%	0	0%
		25-54 (n=59)	46	78%	2	3%	2	3%	9	15%
		55-74 (n=2)	2	100%	0	0%	0	0%	0	0%
	Asia (n=100)	16-24 (n=23)	1	4%	0	0%	22	96%	0	0%
		25-54 (n=70)	47	67%	7	10%	10	14%	6	9%
		55-74 (n=7)	0	0%	2	29%	0	0%	5	71%
Other NL (n=102)	16-24 (n=17)	7	41%	0	0%	8	47%	2	12%	
	25-54 (n=80)	49	61%	8	10%	9	11%	14	18%	
	55-74 (n=5)	2	40%	0	0%	0	0%	3	60%	

Unemployed individuals looking for a job were asked how long they had been out of work: 13% of them had been unemployed less than 3 months; 28% between 3 months and 1 year and 59% of them more than 1 year. Spain and Bulgaria have the highest rate of this type of unemployed, 63% and 62% respectively.

**Table 61: How long have you been out of work?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Less than 3 months	29	13%	17	10%	7	30%	5	21%
Between 3 months and 1 year	61	28%	46	27%	11	48%	4	17%
More than 1 year	128	59%	108	63%	5	22%	15	62%
n	218		171		23		24	

Table 62 displays the current occupation of the employed respondents (including whether they are in full time or part-time work, are self-employed or students with part-time jobs). Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson) was selected by 34% of the individuals (45% Spain; 35% Bulgaria and 21% the Netherlands).

The second category most frequently selected (18%) was elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors) (27% Spain; 9% Bulgaria and 13% the Netherlands). It is worth pointing out that the Netherlands has the highest rate (16%) of professional respondents (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.).

**Table 62: What is your current occupation?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Professional (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.)	94	9%	11	3%	26	11%	57	16%
Technician or associate professional (i.e. engineering technicians, nurses, legal associates, information technology technicians)	106	11%	22	5%	32	14%	52	15%
Clerical support worker (i.e. office clerks, secretaries, bank tellers, client information workers)	94	9%	33	8%	17	7%	44	12%
Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson)	345	34%	189	45%	82	35%	74	21%
Skilled agricultural, forestry and fishery worker (i.e. crop growers, animal producers, forestry workers, fishery workers, subsistence crop and livestock farmers)	19	2%	2	0%	9	4%	8	2%
Craft and related trades worker (i.e. electricians, tool makers, steel and metal workers, blacksmiths, printing and handcraft workers, garment, food processing workers)	60	6%	18	4%	22	10%	20	6%
Plant and machine operator or assembler (i.e. mining and mineral processing workers, metal processing, chemical, food processing, wood, textile machine operators)	31	3%	7	2%	10	4%	14	4%
Elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors)	177	18%	111	27%	21	9%	45	13%
Armed forces occupation (commissioned and non-commissioned armed forces officers)	2	0%	0	0%	0	0%	2	1%
Other	72	7%	24	6%	12	5%	36	10%
n	1000		417		231		352	



## 7.6 Income

Table 63 displays household monthly income in Euro, self-reported by the individuals interviewed. Unfortunately, 10% of the respondents did not answer. This percentage reaches 17% in the case of Spain. Therefore, this variable should be used with caution.

**Table 63: Approximately, what is your household monthly income in Euro?**

	Total		SP		BG		NL	
	n	%	n	%	n	%	n	%
Less than 150€	11	1%	10	2%	0	0%	1	0%
150€ - 300€	23	1%	10	2%	7	1%	6	1%
300€ - 500€	112	7%	48	8%	52	10%	12	2%
500€ - 1000€	280	17%	166	27%	55	11%	59	12%
1,000€- 1,500€	323	20%	129	21%	90	17%	104	20%
1,500€ - 2,000€	216	13%	78	12%	67	13%	71	14%
2,000€- 2,500€	176	11%	42	7%	55	11%	79	15%
2,500€ - 3,000€	144	9%	16	3%	55	11%	73	14%
3,000€ - 5,000€	102	6%	17	3%	22	4%	63	12%
5,000€ - 7,500€	43	3%	4	1%	13	3%	26	5%
7,500€ - 10,000€	17	1%	0	0%	10	2%	7	1%
More than 10,000€	41	2%	0	0%	38	7%	3	1%
DA/DK	165	10%	104	17%	53	10%	8	2%
n	1653		624		517		512	

## 7.7 Reason to migrate

Finally we report the main reasons that our respondents gave for their decision to migrate to the EU. As can be seen in the table and in the questionnaire, the respondents were presented with five possible reasons and asked to disagree or agree with each statement. Hence, we have multiple answers for each of the five reasons.

Agreement with the statement that 'Work' was a reason to migrate is at 50%, followed by 'Study' (37%) and 'Join the family' (31%). A minority of respondents selected 'Political or humanitarian reasons' (5%) or 'Medical or Health reasons' (4%).

**Table 64: Why did you migrate to the European Union?**

	Totally disagree / Disagree		Neither agree nor disagree		Totally agree / Agree	
	n	%	n	%	n	%
To work	736	45%	96	6%	821	50%
To study	982	59%	66	4%	605	37%
To join my family	1092	66%	53	3%	508	31%
For political or humanitarian reasons	1531	93%	37	2%	85	5%
For medical/health reasons	1538	93%	49	3%	66	4%

The following table reports the results obtained by country. In the case of Spain, Work was selected by 73% of the respondents while in Bulgaria 44% of them selected as a reason Study. In the Netherlands, the distribution of respondents is more homogeneous.

**Table 65: Why did you migrate to the European Union? by country**

		Totally disagree / Disagree		Neither agree nor disagree		Totally agree / Agree	
		n	%	n	%	n	%
SP	To study	397	64%	34	5%	193	31%
	To join my family	371	59%	19	3%	234	38%
	To work	134	21%	33	5%	457	73%
	For medical/health reasons	577	92%	29	5%	18	3%
	For political or humanitarian reasons	592	95%	17	3%	15	2%
BG	To study	273	53%	17	3%	227	44%
	To join my family	362	70%	28	5%	127	25%
	To work	276	53%	54	10%	187	36%
	For medical/health reasons	479	93%	16	3%	22	4%
	For political or humanitarian reasons	484	94%	14	3%	19	4%
NL	To study	312	61%	15	3%	185	36%
	To join my family	359	70%	6	1%	147	29%
	To work	326	64%	9	2%	177	35%
	For medical/health reasons	482	94%	4	1%	26	5%
	For political or humanitarian reasons	455	89%	6	1%	51	10%

Table 66 shows the different combination of reasons reported by TCNs.

**Table 66: Reasons to migrate: all possible combinations**

	%	n
To work	24%	404
To study	20%	334
To join the family & To work	10%	162
To join the family	10%	158
Other	8%	139
To study & To work	6%	96
To study & To join the family	4%	71
To study & To join the family & To work	4%	62
To work & Other	2%	34
For political or humanitarian reasons	2%	33
Indifferent	2%	26
For medical reasons	1%	18
To work & For political or humanitarian reasons	1%	16
To join the family & Other	1%	12
To work & For medical reasons	1%	9
To study & To work & For political or humanitarian reasons	1%	9
All reasons	0%	7
For political or humanitarian reasons & Other	0%	6
To join the family & To work & For medical reasons	0%	6
To join the family & For political or humanitarian reasons	0%	5
To join the family & For medical reasons	0%	5
To study & Other	0%	5
To study & To work & Other	0%	5
For medical reasons & Other	0%	4
To study & To join the family & To work & Other	0%	4
To study & To join the family & To work & For Medical reasons	0%	3
To join the family & For political or humanitarian reasons & Other	0%	2
To join the family & For medical reasons & For political or humanitarian reasons	0%	2
To join the family & To work & Other	0%	2
To study & For political or humanitarian reasons	0%	2
To study & For medical reasons	0%	2
To study & To join the family & Other	0%	2
For medical reasons & For political or humanitarian reasons	0%	1
For medical reasons & For political or humanitarian reasons & Other	0%	1
To join the family & For medical reasons & Other	0%	1
To join the family & For medical reasons & For political or humanitarian reasons & Other	0%	1
To join the family & To work & For medical reasons & For political or humanitarian reasons	0%	1
To study & For political or humanitarian reasons & Other	0%	1
To study & To join the family & For political or humanitarian reasons	0%	1
To study & to join the family & To work & For Medical reasons & For political or humanitarian reasons	0%	1
TOTAL	100%	1653

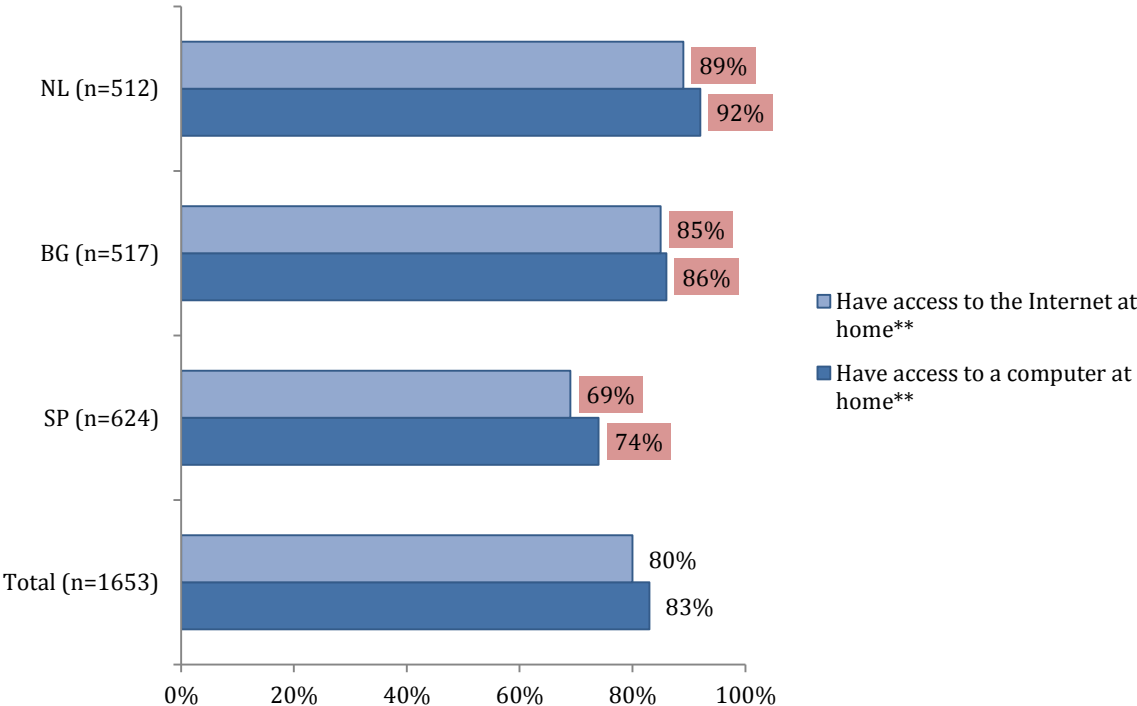
# 8. ANNEX 4. Information and Communication Technologies

## 8.1 Access and use of Information and Communication Technology

**Access to computers and to the Internet:** Most of the interviewed TCNs have access to a computer (83%) and to the Internet at home (80%). Besides providing merely descriptive statistics, chi-square tests were performed in order to see if there is a statistically significant relationship between two variables. We will use this first chi-square as an example of the kind of result that could be expected from this type of test. We provide a full step-by-step explanation and interpretation of the findings of this test, which includes a repetition of the disclaimer about country comparison, for these first two variables. The same reasoning and disclaimer apply for all other variables in this and in the following paragraphs and we will not repeat this full step-by-step illustration there.

This test, also called a "goodness of fit" statistic, measures how well the observed distribution of data (TCNs interviewed) fits with the distribution that would be expected if the variables were independent. The following figure shows four groups of bars. The last group of bars represents the Total number of individuals surveyed (N=1653). It shows the number of individuals who say they 'Have access to a computer at home' (83%) and 'Have access to the Internet at home' (80%)'. The other three groups of bars display the same two variables by country (NL, n=512; BG, n=517; and SP, n=624). Therefore, chi-square tests whether the number of observations that spread in the cells produced by crossing these two variables by country emerges just by chance (accepting the null hypothesis) or because there is some underlying pattern. **To display these results we have marked with \*\* the variables that are significant at the .05 level and we have highlighted in pink in boxes the categories that have an adjusted residual > ± 2.0.**

Figure 29: Access to the Internet and to a computer at home



As mentioned in chapter 2, the next step, if a chi-square test is significant, is to perform an analysis of residuals. If a chi-square is significant, in fact, we need to determine where the significance of the finding comes from. This means understanding whether there is a particular cell or set of cells causing the deviation from no difference between groups (this would be the null hypothesis). The way to test for this is by doing a residual analysis of each of the cells. Under the null hypothesis that the 2 variables are independent, the adjusted residuals will have a standard normal distribution, i.e. have a mean of 0 and standard deviation of 1. So, an adjusted residual that is more

than 1.96 (2.0 is used by convention) indicates that the number of cases in that cell is significantly larger than would be expected if the null hypothesis were true, with a significant level of .05. An adjusted residual that is less than -2.0 indicates that the number of cases in that cell is significantly smaller than would be expected if the null hypothesis were true.

In this specific case, we have highlighted the percentages in the bars that have an adjusted residual  $> \pm 2.0$ , meaning that there are more individuals who have access to a computer and to the Internet that would be expected in the case of Bulgaria and the Netherlands ( $>+2$  adjusted residual). In the case of Spain, there are fewer individuals who have access to these technologies than would be expected ( $>-2$  adjusted residual). In both cases, we compare the countries with the total population surveyed. The results reveal that the Netherlands leads as 92% of the respondents have access to a computer and 89% have access to the Internet at home. In Spain, 74% of third country nationals have access to a computer at home and 69% have access to the Internet.

Chi-square and analysis of residual, when yield positive results, simply tells us that there is something worth further exploring that links the variables tested. Yet, **Chi-square and analysis of residuals do not tell us absolutely anything about the strength of this relation.**

So, commenting again on this first result, we can say that it seems that TCN in the Netherlands (especially) and in Bulgaria have higher levels of access to computers and the Internet than TCNs in Spain. Yet, this result must be read in the light of the heterogeneity of the sample that we disclosed in chapter 2 (i.e. there are considerably more students in the Netherlands and Bulgaria than there are in Spain).

It would only be possible to provide a correct country comparison and interpretation by using a Multilevel Analysis approach, which would treat the data as nested at three hierarchical levels (from top to bottom: country, nationality, individual). This would show how many of the differences in the key variables can be attributed to the country effect, to belonging to a nationality, and to mere individual characteristics regardless of the country where respondents reside and their nationalities.<sup>40</sup>

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<sup>40</sup> As noted in de Leeuw, & Meijer (de Leeuw and Meijer 2008), much of the development of multilevel analysis (MLA) can be traced to educational research ((Aitkin and Longford 1986; Raudenbush and Bryk 1986). This field has distinctive measurement features: large datasets of outcome measures (students' results in aptitude tests) coming from different class, schools, and possibly countries (think, for instance, about the PISA scores). So, the data can be nested at different hierarchical level (though MLA was later extended to non-hierarchical data): class, school, country. The reasoning that led to the development of MLA is intuitively simple: aren't student within a class in a given school more alike than a random sample of students within that school? Aren't students within a school more alike than a random sample of students from all schools? Or even, aren't students within a EU country more alike than a random sample of students from EU28? This logic can be applied to our case asking the same questions applied to our domain. MLA would enable us to consider both the individuals as such, and the individual as nested into nationality, and into country and to find out to the amount of variance, for instance, in Internet usage is explained by being in one country, by belonging to a nationality group, or simply by the individual characteristics of the respondents. From a more general theoretical and epistemological perspective MLA is the technical instrument that allow to reconcile micro and macro (or agency and structure) when analysing individual level survey data without the need of losing information (Subramanian et al. 2009).

**Reasons for not having access to the Internet:** Individuals who do not have access to the Internet at home (n=333) were asked to select the reasons for not having it. The main reasons reported were: a) access costs too high; b) equipment costs too high; and c) Have access to the Internet elsewhere.

**Figure 30: Reasons for not having access to the Internet at home**

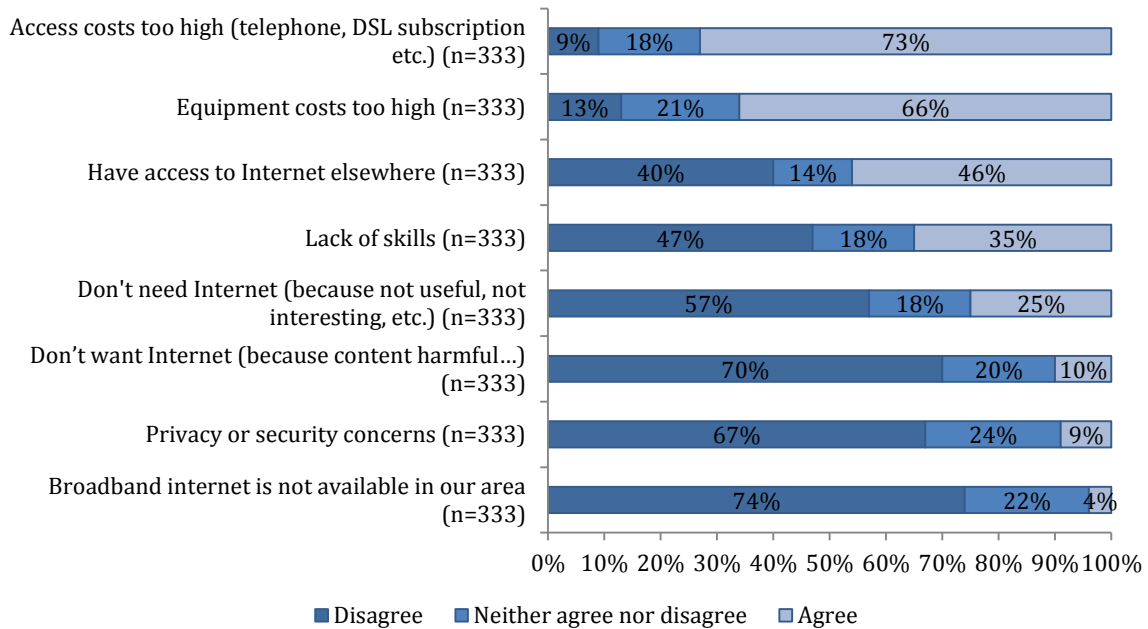


Figure 31 displays these reasons by country. The results show statistically significant differences in several variables and categories. **To display these results we have marked with \*\* the variables that are significant at the .05 level and we have highlighted in boxes the categories that have an adjusted residual > ± 2.0.**

Usefulness (Do not need the Internet) and interest (Do not want the Internet) are the reasons most given in Bulgaria, while access and equipment costs are the reasons most given in Spain.

Third country nationals in the Netherlands are more likely to select 'Lack of skills' and 'Privacy or security' concerns than in Spain and Bulgaria. Individuals surveyed in countries with a higher Internet penetration (such as the Netherlands) are more concerned with barriers related with the utilisation of the Internet, while countries with lower penetration of the Internet (such as Spain and Bulgaria) are more concerned with access and awareness of this technology.

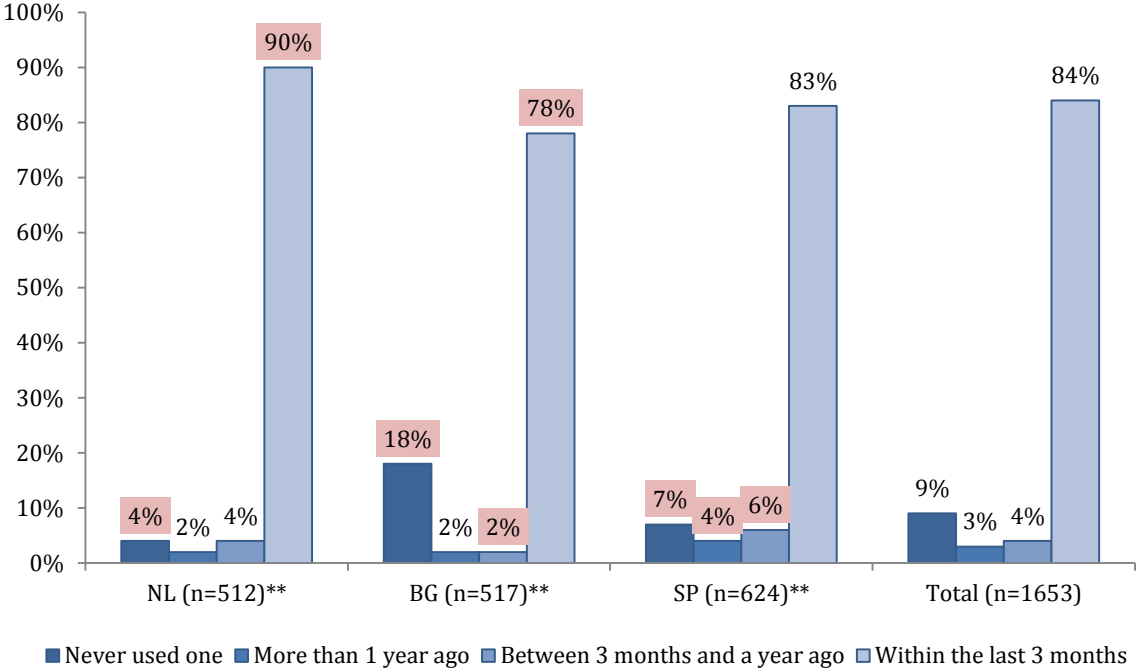
**Figure 31: Reasons for not having access to the Internet at home by country**



\*\* The Chi-square statistic is significant at the .05 level. Highlighted boxes Adjusted residual > ± 2.0

**Frequency of use:** Beyond access to the technology, frequency of use could also be considered high among the third country nationals: 84% of the respondents stated that they last used a computer within the last three months. The Netherlands has the highest percentage of TCNs using the computer within the last three months (90%) while Bulgaria has the lowest percentage (78%).

**Figure 32: When did you last use a computer (at home, at work or any other place)?**



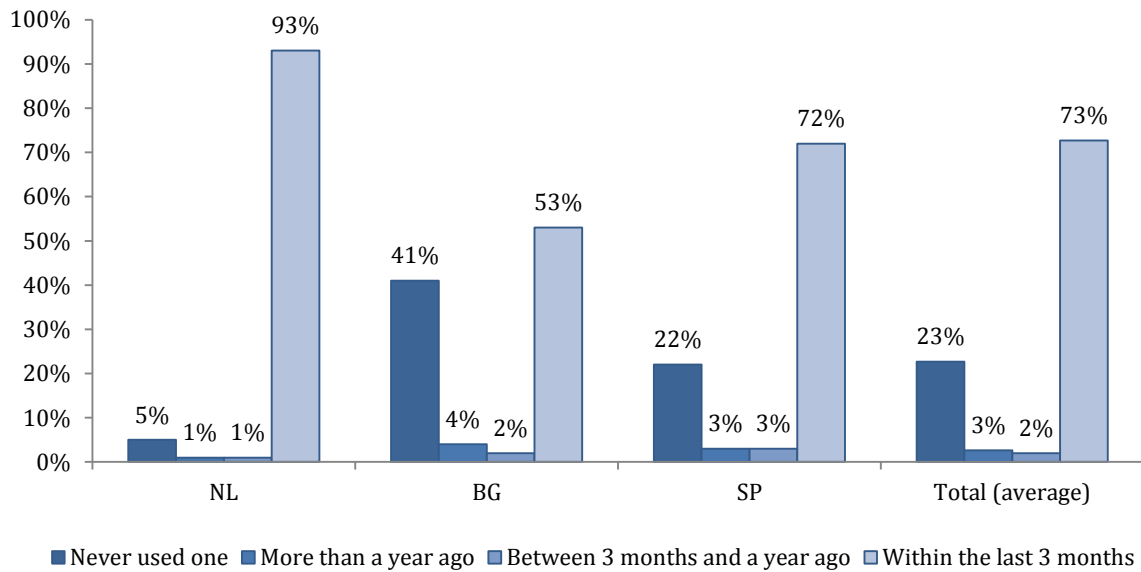
\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

**Comparison with Eurostat data:** If we compare the results from our sample with the general population in each country and the average of the three countries using data available in Eurostat we can see that: a) the percentages of our sample mirror those of Eurostat for the Netherlands and Spain but not for Bulgaria;<sup>41</sup> b) the percentage of TCNs who have used a computer in the last three months in Spain and Bulgaria is higher than the percentage of the total population in these two countries. On the contrary, in the Netherlands this percentage is slightly lower (TCNs 90% - Total population 93%).

<sup>41</sup> Note, however, that also Eurostat data for this country do not seem very stable with large changes from one year to the next. This means that even Eurostat has encountered the same problems we pointed out in reaching a fully representative sample in this country.



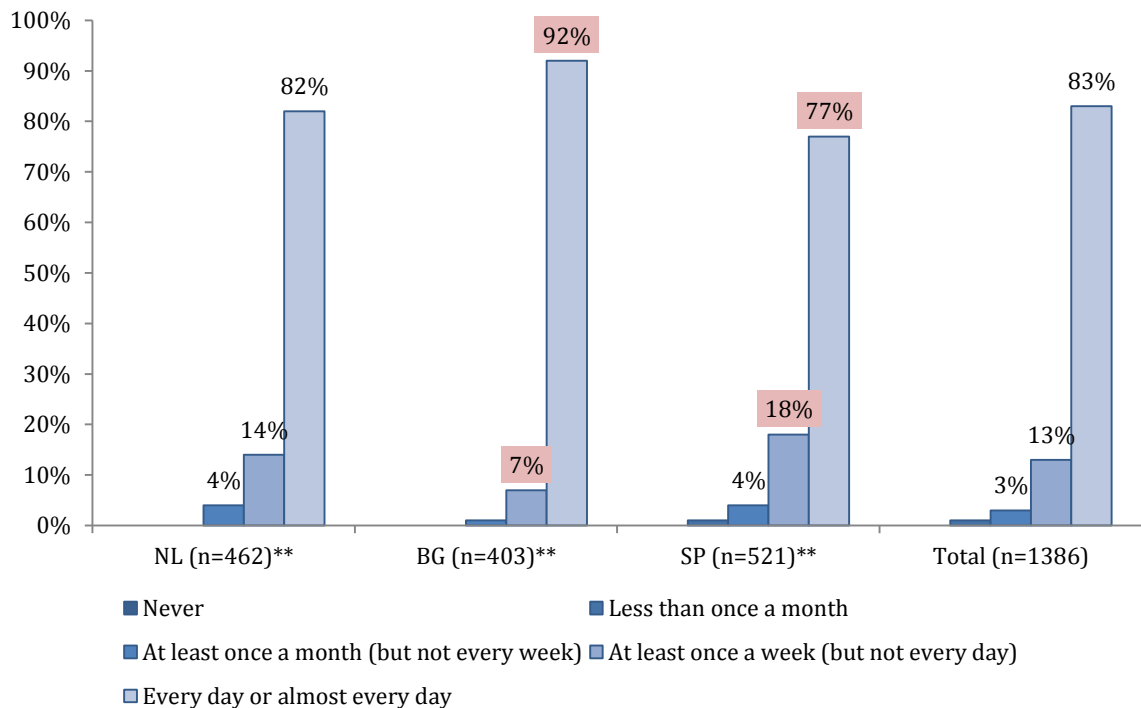
**Figure 33: When did you last use a computer (at home, at work or any other place) Entire population**



Source: EUROSTAT isoc\_ci\_cfp\_cu, 2012

On average, 83% of individuals who have used a computer within the last 3 months do so every day or almost every day (see Figure 34). This percentage reaches 92% in Bulgaria and 77% in Spain.

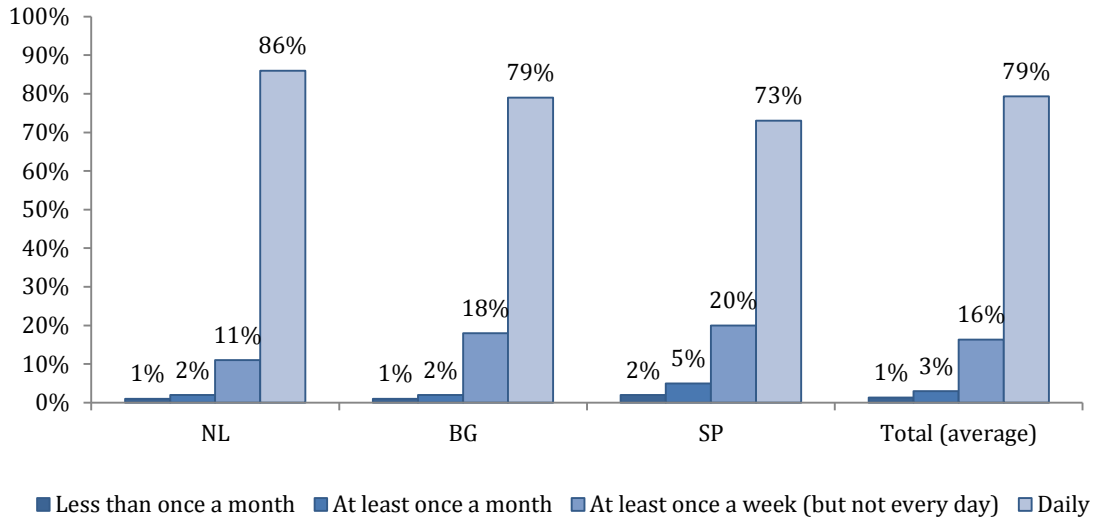
**Figure 34: How often on average have you used a computer in the last 3 months?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Again if we compare our results with the entire population in each country, we see that TCNs in Bulgaria and Spain reported higher frequency of daily use.

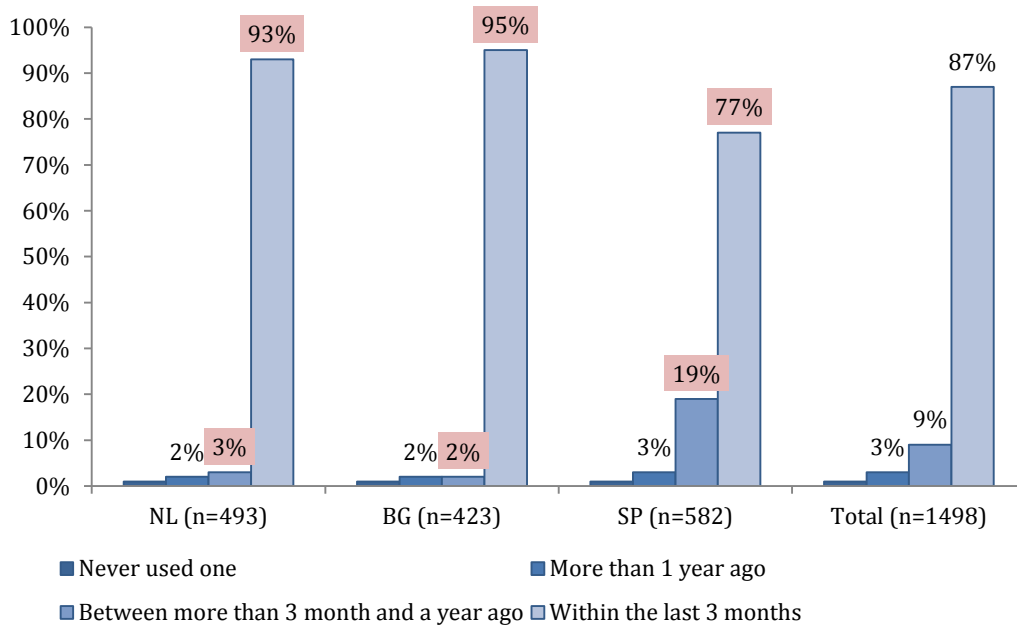
**Figure 35: How often on average have you used a computer in the last 3 months? Entire population**



Source: EUROSTAT isoc\_ci\_cfp\_fu, 2012

TCNs were also asked about the use of the Internet. Most of the individuals surveyed have used the Internet within the last 3 months (87%).<sup>42</sup> This percentage is larger than would be expected in the case of Bulgaria (95%) and the Netherlands (93%) and smaller in the case of Spain (77%) (see Figure 36), although the penetration of the Internet in Bulgaria is less extended than in Spain and the Netherlands.

**Figure 36: When did you last use the Internet? (via any device, desktop, portable or handheld, including mobile or smart phones)**

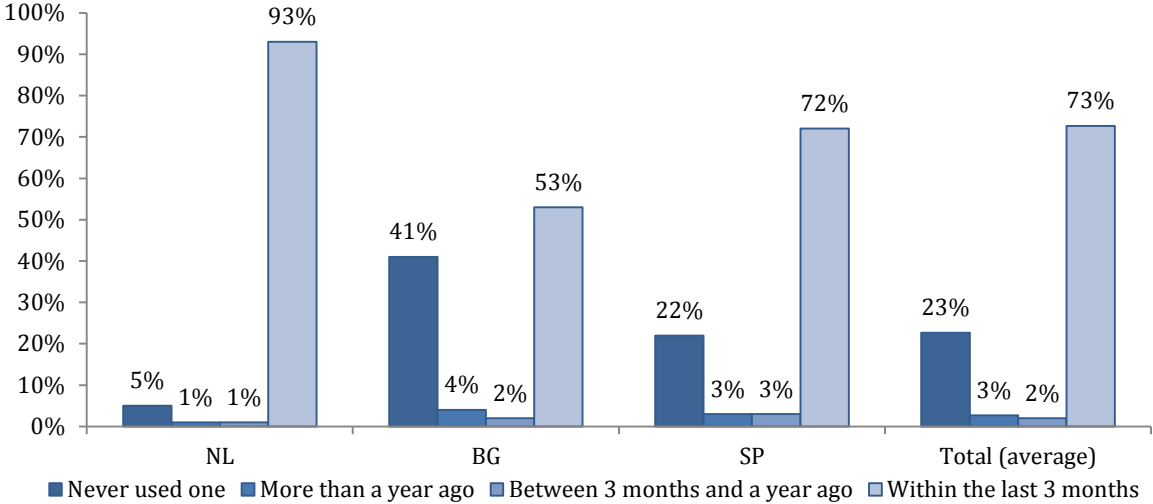


\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

<sup>42</sup> There is one missing response.

The comparison with the entire population in each country using Eurostat data (see Figure 37) reveals the same pattern as with computer use: the percentage of TCNs using the Internet within the last three months is higher than the entire population in Bulgaria and Spain. Moreover, if we compare those who claimed that they never use the Internet we can clearly say that TCNs are more connected to the Internet than the entire population in the three countries surveyed.

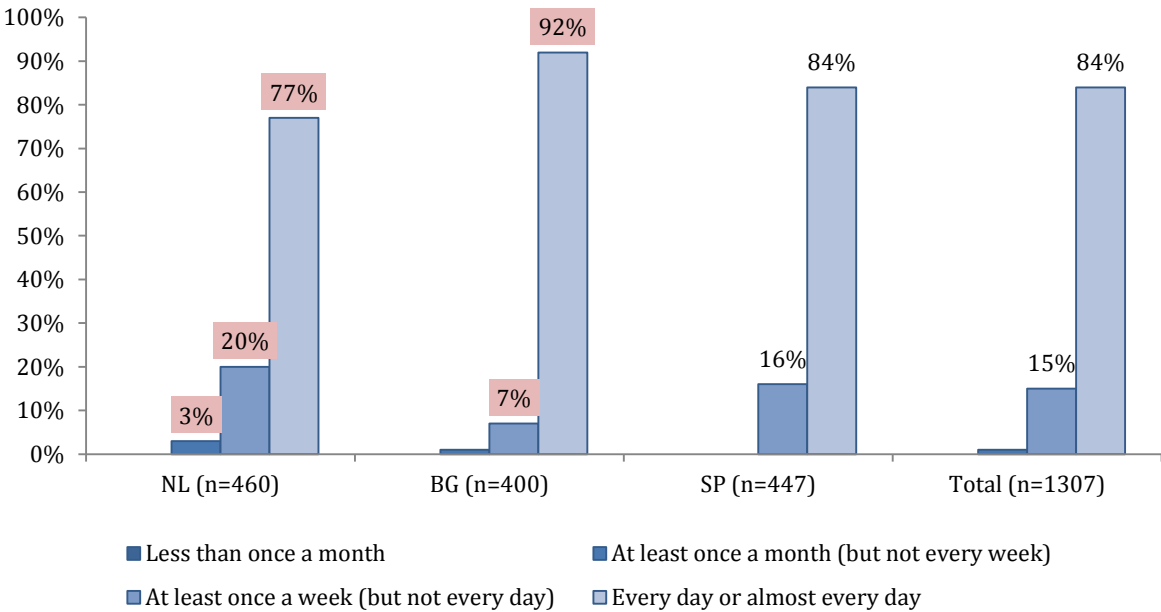
**Figure 37: When did you last use the Internet? (via any device, desktop, portable or handheld, including mobile or smart phones) Entire population**



Source: EUROSTAT isoc\_ci\_cfp\_cu, 2012

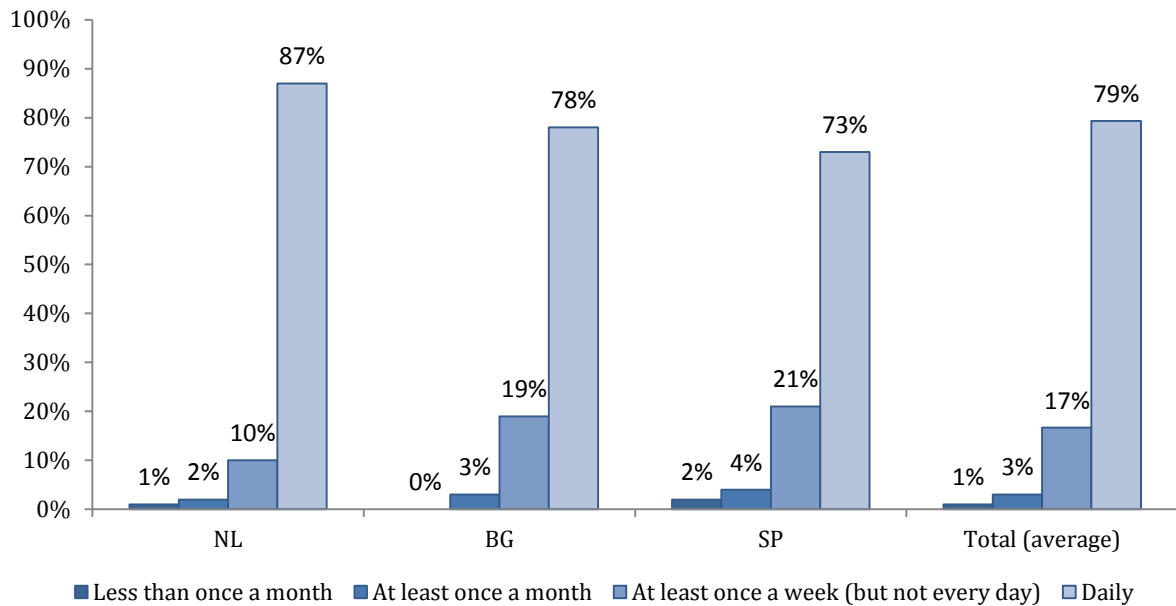
Not surprisingly, the same results emerged in the case of TCNs frequency of use within the last three months (see Figure 38). However, in the case of the Netherlands, the percentage of daily use within the last three months of TCNs is smaller than the percentage of daily use within the last three months of the entire population (see Figure 39).

**Figure 38: How often on average have you used the Internet in the last 3 months?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

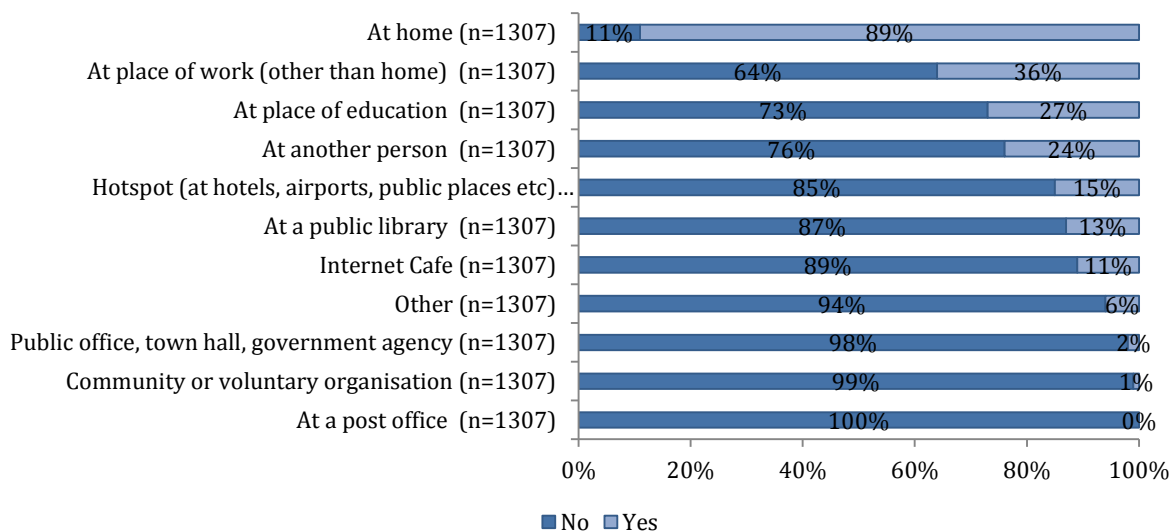
**Figure 39: How often on average have you used the Internet in the last 3 months? Entire population**



Source: EUROSTAT isoc\_ci\_ifp\_fu, 2012

**Place of access.** Figure 40 displays where individuals reported using the Internet in the last 3 months do so: 89% of them stated that they have used it at home; 36% at work; 27% where they study; 15% at a hotspot and 13% at a public library.

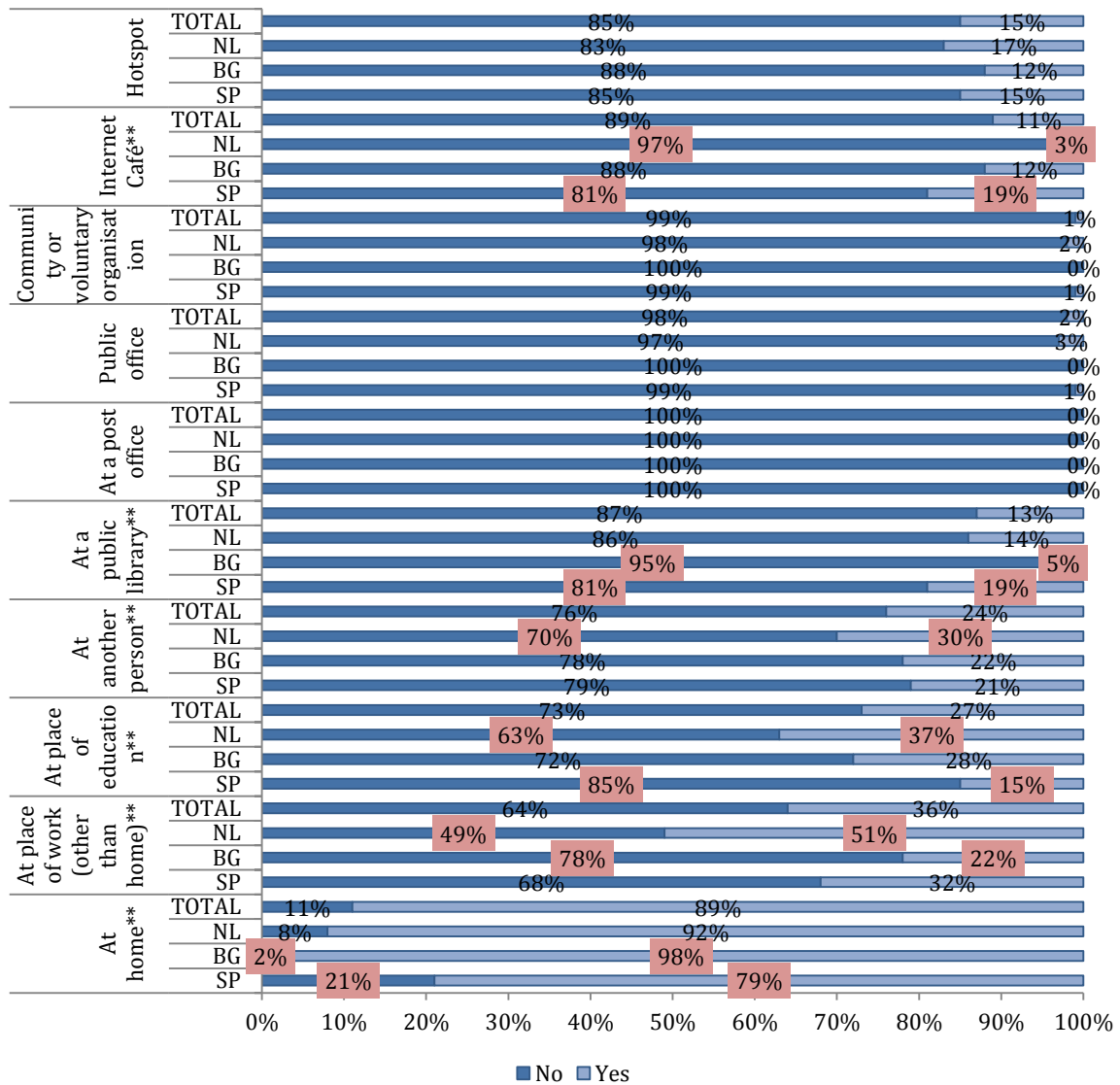
**Figure 40: Where have you used the Internet in the last 3 months (using a computer or any other means)?**



If we approach the place of access by country we can identify several statistical significant differences (see Figure 41). Internet cafes and Public libraries are especially popular among third country nationals in Spain compared with Bulgaria and the Netherlands, while place of education, place of work and at another person' home are larger than would be expected in Netherland compared to Spain and Bulgaria. Finally, Bulgaria has the highest frequency of Internet access from home.

**Figure 41: Where have you used the Internet in the last 3 months (using a computer or any other means)? by country**

(MULTIPLE ANSWER – SPONTANEOUS OR PROMPTED READ LIST)



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

**Mobile Access:** More than half of the respondents (55%) who used the Internet within the last three months use mobile phones (or smart phones) to access the Internet and 38% use a portable computer when away from their home or work place. The Netherlands and Spain are the leading countries.

**Table 67: Do you use any of the following mobile devices to access the Internet away from home or work? (MULTIPLE ANSWER - READ LIST)**

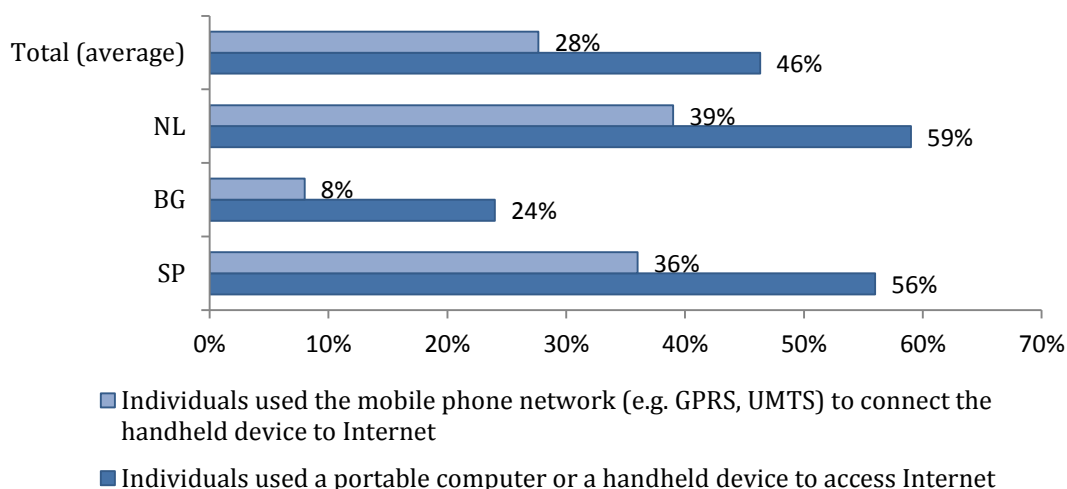
	No		Yes	
	n	%	n	%
Mobile phone (or smart phone)	591	45%	716	55%
Portable computer (e.g. laptop, tablet)	810	62%	497	38%
Other devices	1291	99%	16	1%

**Table 68: Do you use any of the following mobile devices to access the Internet away from home or work? (MULTIPLE ANSWER - READ LIST) by country**

Mobile phone (or smart phone)					
		Country			Total
		SP	BG	NL	
No	Count	179	246	166	591
	%	40.0%	61.5%	36.1%	45.2%
	Adjusted Residual	-2.7	7.9	-4.9	
Yes	Count	268	154	294	716
	%	60.0%	38.5%	63.9%	54.8%
	Adjusted Residual	2.7	-7.9	4.9	
	Count	447	400	460	1307
	% of Total	34.2%	30.6%	35.2%	100.0%
Pearson Chi-Square = 63.120, df = 2; p = .000					
Portable computer (e.g. laptop, tablet)					
		Country			Total
		SP	BG	NL	
No	Count	307	221	282	810
	%	68.7%	55.2%	61.3%	62.0%
	Adjusted Residual	3.6	-3.3	-0.4	
Yes	Count	140	179	178	497
	%	31.3%	44.8%	38.7%	38.0%
	Adjusted Residual	-3.6	3.3	0.4	
	Count	447	400	460	1307
	% of Total	34.2%	30.6%	35.2%	100.0%
Pearson Chi-Square = 16.292, df = 2; p = .000					

The following figure displays the comparison with EUROSTAT showing that mobile access is more spread among Connected TCNs in Bulgaria and Spain than their respective connected populations.

**Figure 42: Do you use any of the following mobile devices to access the Internet away from home or work?**



Source: EUROSTAT isoc\_bde15b\_i, 2012

The following tables show the type of mobile phone and portable computer connection to the Internet.

**Table 69: Type of mobile phone (or smart phone) connection to the Internet**

	No		Yes	
	n	%	n	%
Via mobile phone network, using USB key or (SIM) card or mobile phone as modem	224	31%	492	69%
Via wireless network (e.g. WiFi)	249	35%	467	65%

**Table 70: Type of Portable computer (e.g. laptop, tablet) connection to the Internet**

	No		Yes	
	n	%	n	%
Via mobile phone network, using USB key or (SIM) card or mobile phone as modem	362	73%	135	27%
Via wireless network (e.g. WiFi)	75	15%	422	85%

**Table 71: Type of mobile phone (or smart phone) connection to the Internet by country**

Via mobile phone network, using USB key or (SIM) card or mobile phone as modem					
		Country			Total
		SP	BG	NL	
No	Count	85	48	91	224
	%	31.7%	31.2%	31.0%	31.3%
	Adjusted Residual	0.2	0	-0.2	
Yes	Count	183	106	203	492
	%	68.3%	68.8%	69.0%	68.7%
	Adjusted Residual	-0.2	0	0.2	
	Count	268	154	294	716
	% of Total	37.4%	21.5%	41.1%	100.0%
Pearson Chi-Square = 0.39, df = 2; p = .981					
Via wireless network (e.g. WiFi)					
		Country			Total
		SP	BG	NL	
No	Count	115	59	75	249
	%	42.9%	38.3%	25.5%	34.8%
	Adjusted Residual	3.5	1	-4.3	
Yes	Count	153	95	219	467
	%	57.1%	61.7%	74.5%	65.2%
	Adjusted Residual	-3.5	-1	4.3	
	Count	268	154	294	716
	% of Total	37.4%	21.5%	41.1%	100.0%
Pearson Chi-Square = 19.795, df = 2; p = .000					

**Table 72: Type of Portable computer (e.g. laptop, tablet) connection to the Internet by country**

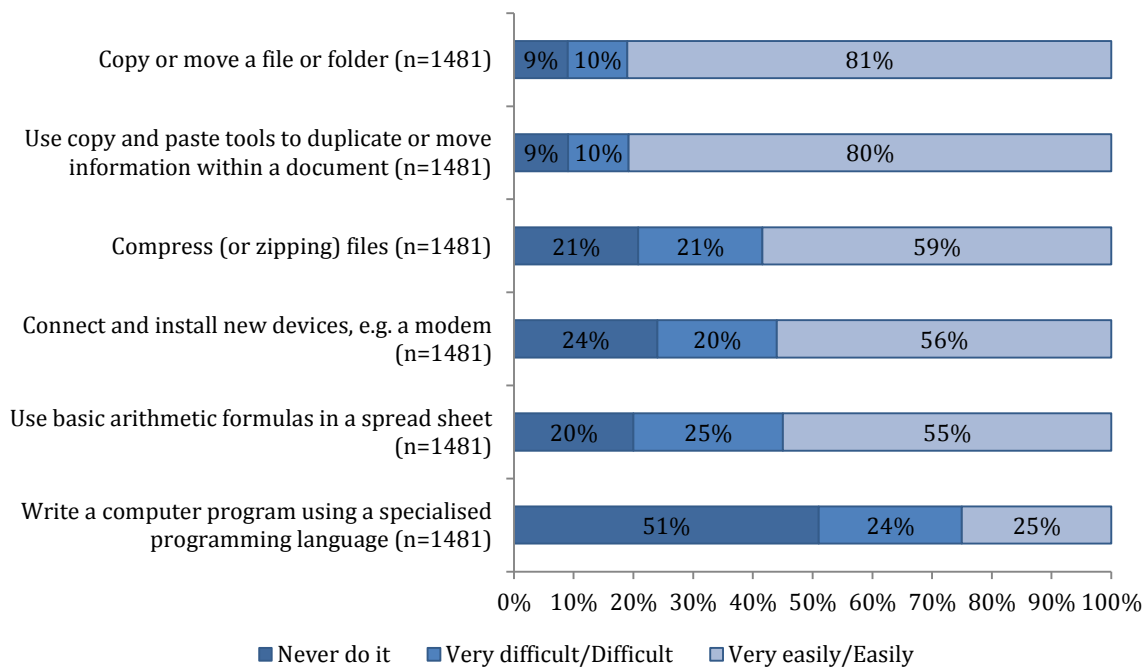
Via mobile phone network, using USB key or (SIM) card or mobile phone as modem					
		Country			Total
		SP	BG	NL	
No	Count	117	112	133	362
	%	83.6%	62.6%	74.7%	72.8%
	Adjusted Residual	3.4	-3.9	0.7	
Yes	Count	23	67	45	135
	%	16.4%	37.4%	25.3%	27.2%
	Adjusted Residual	-3.4	3.9	-0.7	
	Count	140	179	178	497
	% of Total	28.2%	36.0%	35.8%	100.0%
Pearson Chi-Square = 18.010, df = 2; p = .000					
Via wireless network (e.g. WiFi)					
		Country			Total
		SP	BG	NL	
No	Count	14	27	34	75
	%	10.0%	15.1%	19.1%	15.1%
	Adjusted Residual	-2	0	1.9	
Yes	Count	126	152	144	422
	%	90.0%	84.9%	80.9%	84.9%
	Adjusted Residual	2	0	-1.9	
	Count	140	179	178	497
	% of Total	28.2%	36.0%	35.8%	100.0%
Pearson Chi-Square = 5.066, df = 2; p = .079					



## 8.2 ICT skills

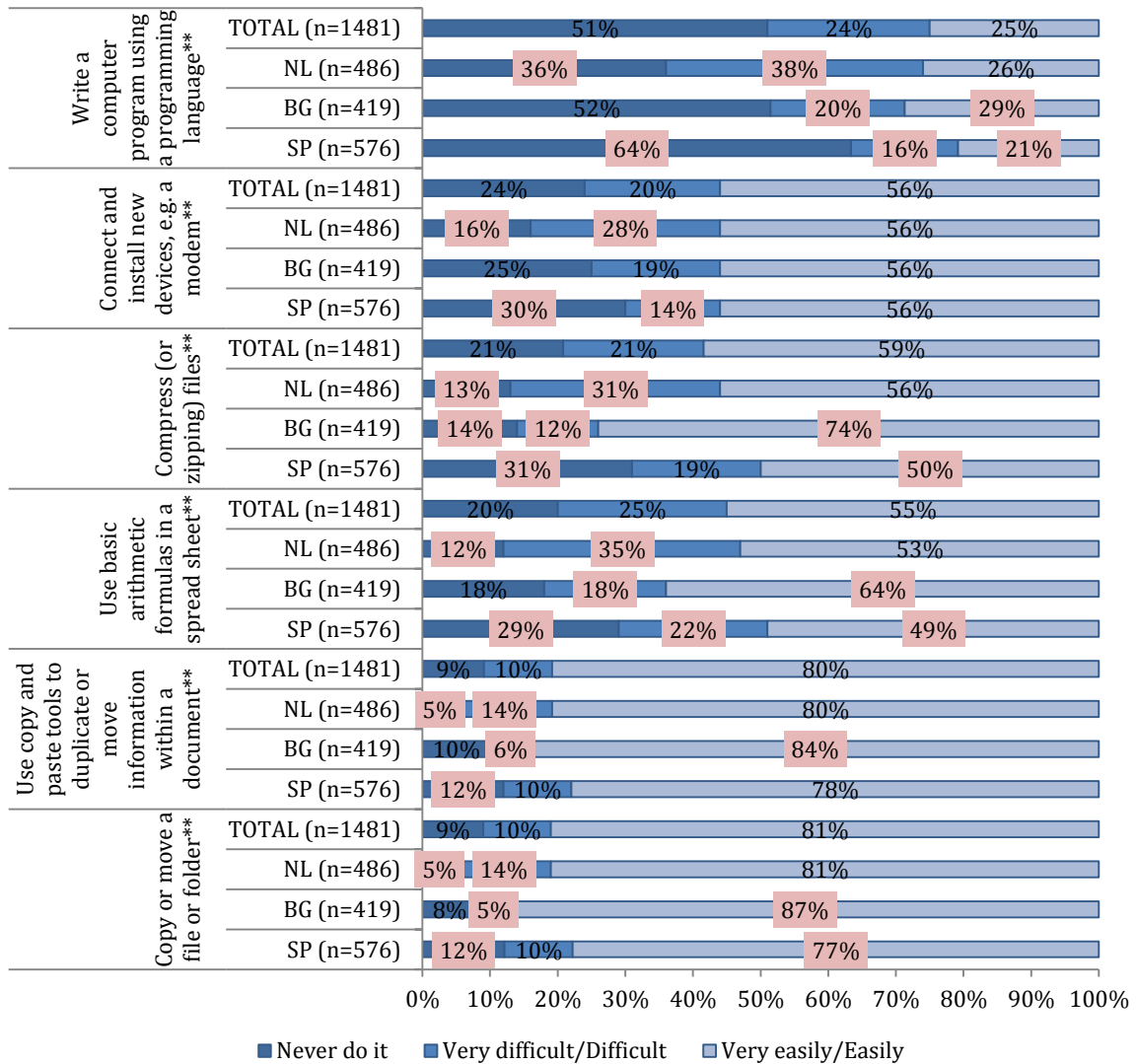
**Computer skills:** To capture the level of ICT skills, third country nationals were asked about 6 different computer tasks and to what extent they consider them difficult. The following figure displays the results: 51% of the individuals have never written a program using a specialised programming language; 24% have never connected and installed new devices and 21% have never compressed files. The previous tasks could be considered as the less widespread and the most difficult ones. On the other hand, more than half of the respondents considered using basic arithmetic formulas in a spread sheet easy or very easy and more than 75% of the respondents consider Copy and Paste tasks as easy or very easy.

**Figure 43: Which of the following are you able to do using a COMPUTER?**



The following figure displays computer activities by country. While there are some statistically significant differences these are not systematic and do not show any clear and easy to interpret pattern..

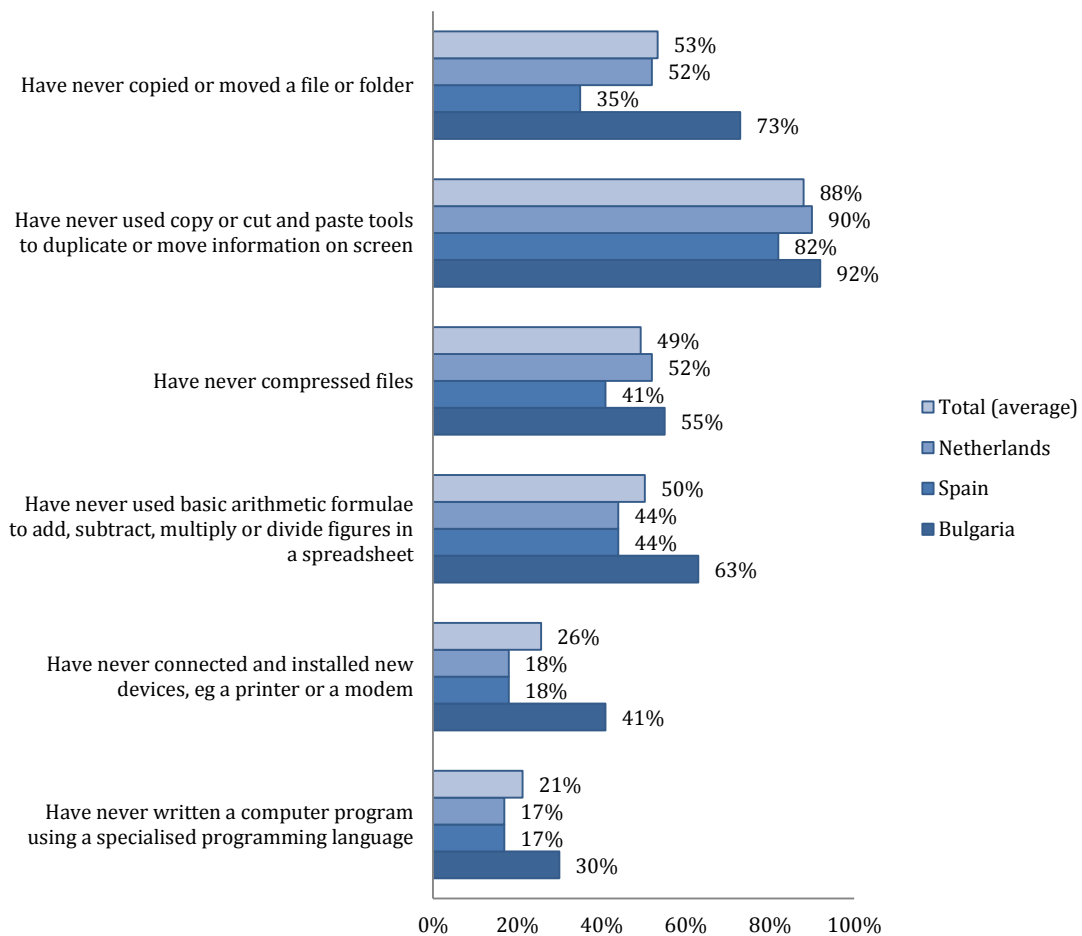
**Figure 44: Which of the following are you able to do using a COMPUTER? Total and by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

To identify possible computer skill gaps, we have compared our results with Eurostat data. The following figure shows the same type of activities reported above, using the percentage of individuals who have used a computer as a base. To facilitate the comparison we report those individuals who have never carried out the listed activities. The results reveal that TCNs who have used a computer could be considered as more skilled than individuals who have used a computer from the general population surveyed by Eurostat.

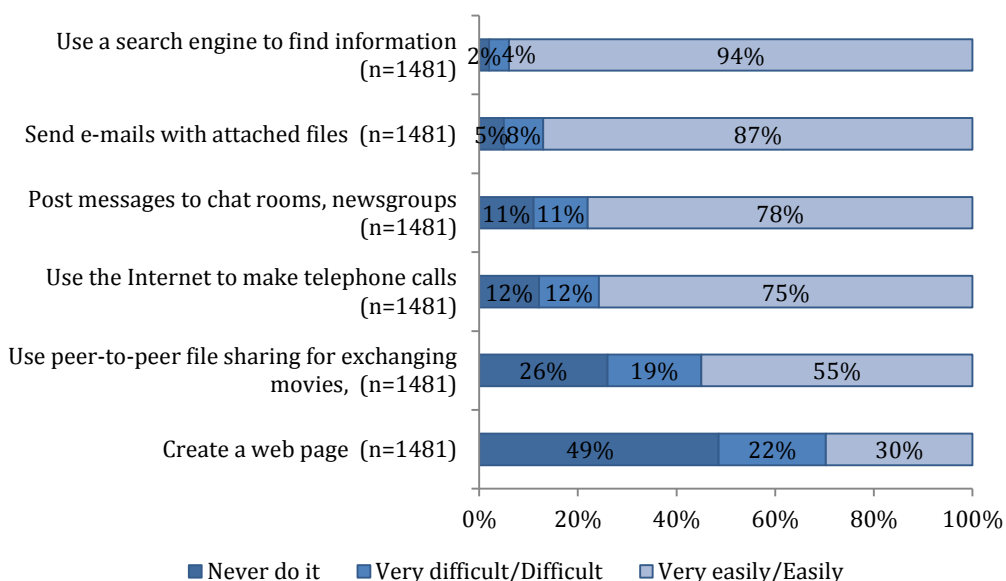
**Figure 45: Which of the following are you not able to do using a COMPUTER? EUROSTAT**



Source: EUROSTAT isoc\_sk\_cskl\_i, 2012

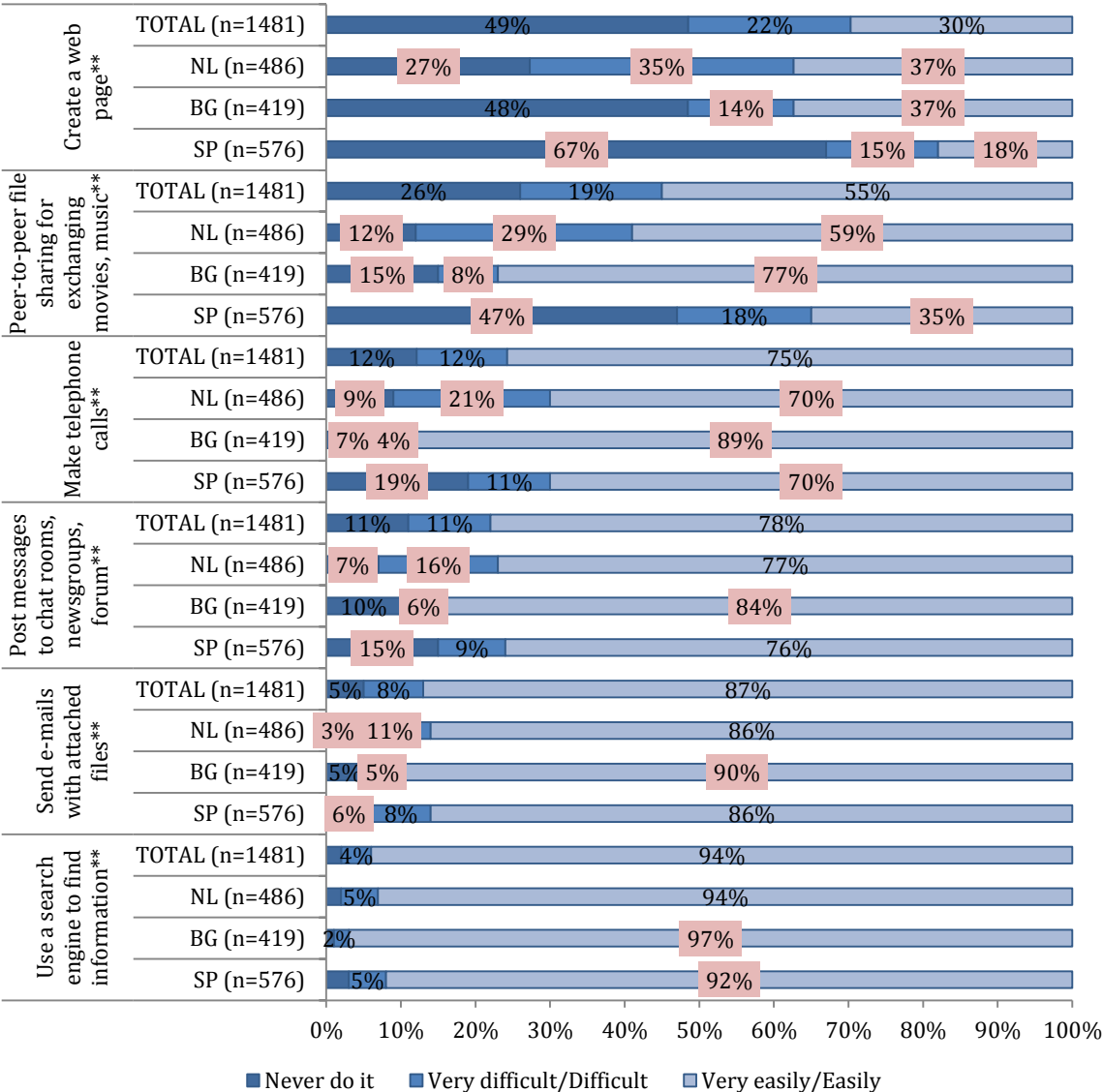
**Internet skills:** The same type of analysis has been carried out in the case of the Internet. Almost half of the respondents (48%) have never created a web page and 26% have never used peer-to-peer file sharing. However, the rest of the tasks are considered as easy or very easy by almost 80% of the respondents.

**Figure 46: Which of the following are you able to do using the INTERNET?**



We also report the results by country, but again differences are not systematic and do not lend themselves to identify clear patterns.

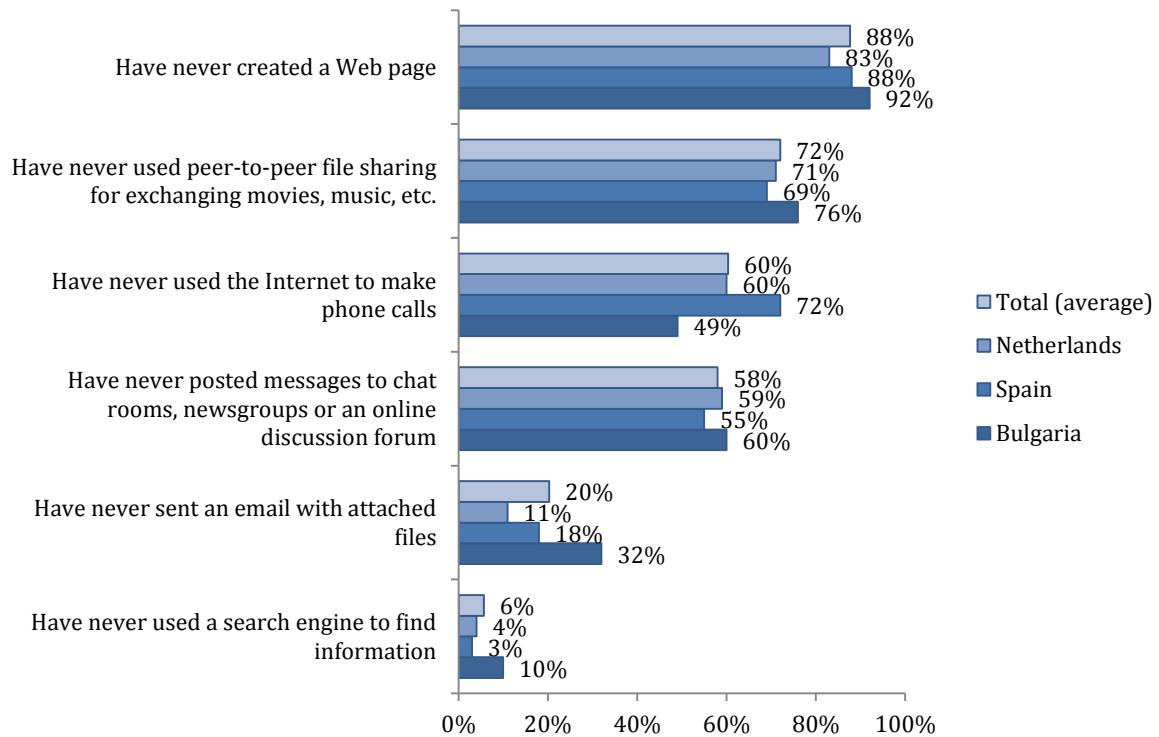
**Figure 47: Which of the following are you able to do using the INTERNET? by Country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

When we compare our results with Eurostat data, again we can confirm that TCNs who used the Internet could be considered as more Internet skilled than the general Internet users in their countries.

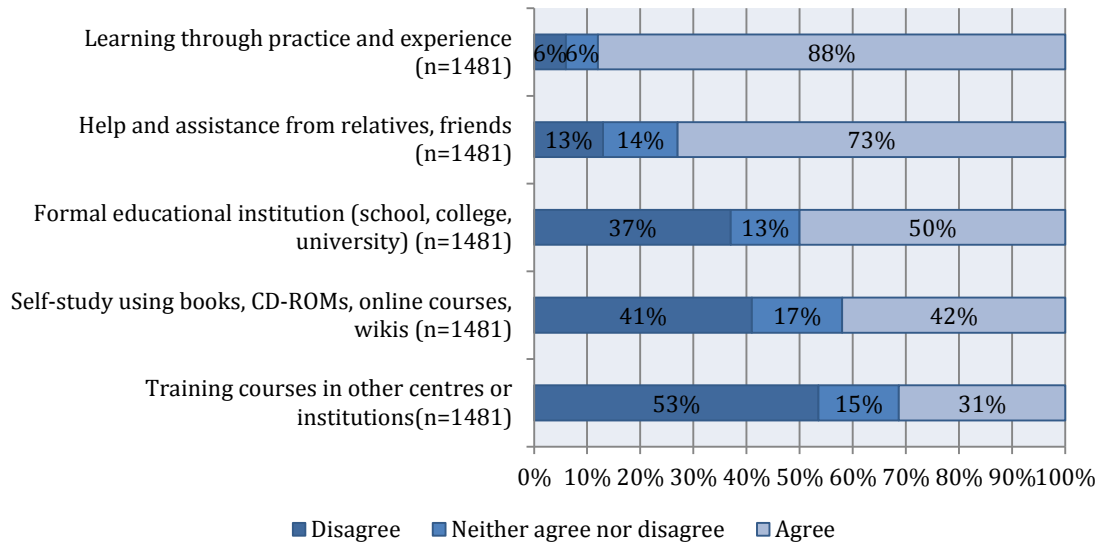
**Figure 48: Which of the following are you not able to do using the INTERNET? EUROSTAT**



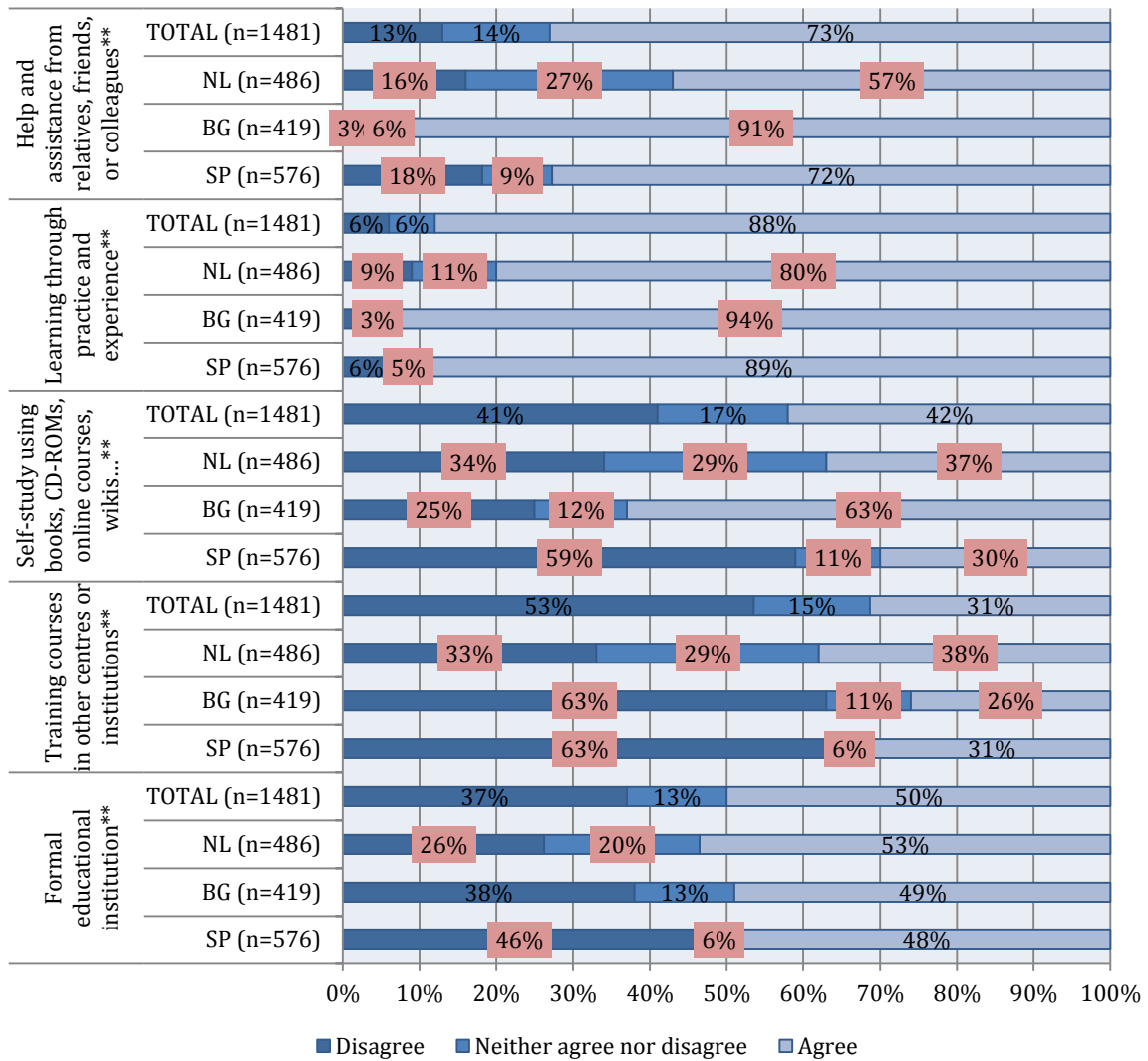
Source: EUROSTAT isoc\_sk\_iskl\_i, 2011

**Computer and Internet skills:** The following figures emphasise the social and informal way of how third country nationals adopt these technologies: Learning through practice and experience (88% Totally agree/agree) and Help and assistance from relatives, friends, or colleagues (73% Totally agree/ agree) were the most common ways to obtain computer and Internet skills. On the contrary, training courses, self-studying and formal education were reported (Totally agree/agree) by 14%, 21% and 30% respectively. Also in this case no clear and systematic country patterns are visible.

**Figure 49: How did you obtain your computer and Internet skills?**



**Figure 50: How did you obtain your computer and Internet skills? by country**

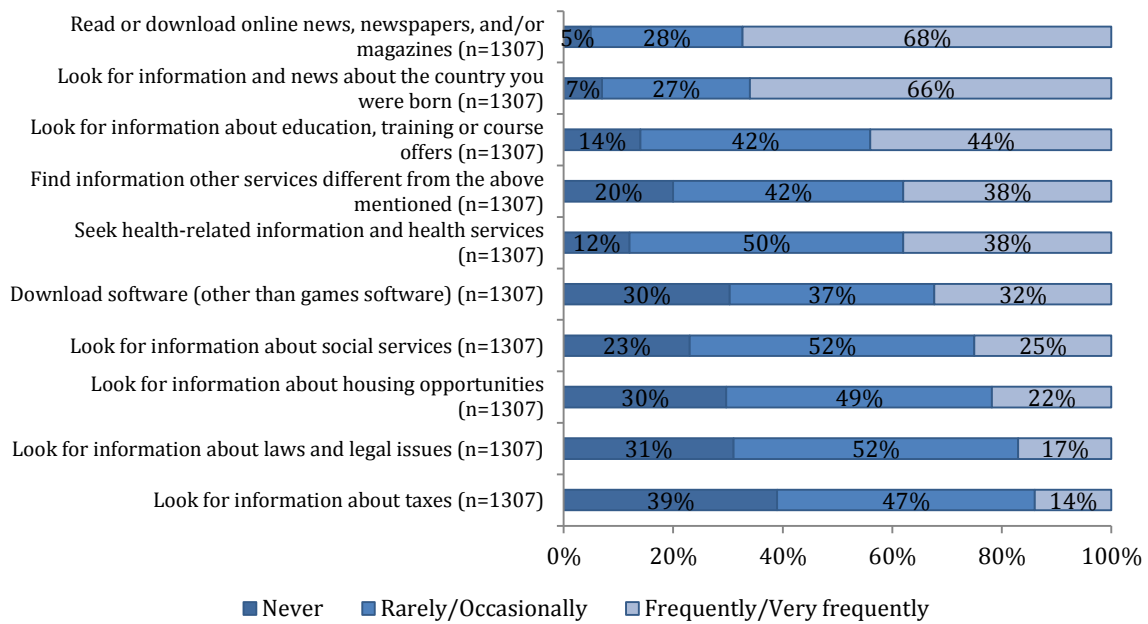


\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

### 8.3 Purpose of usage

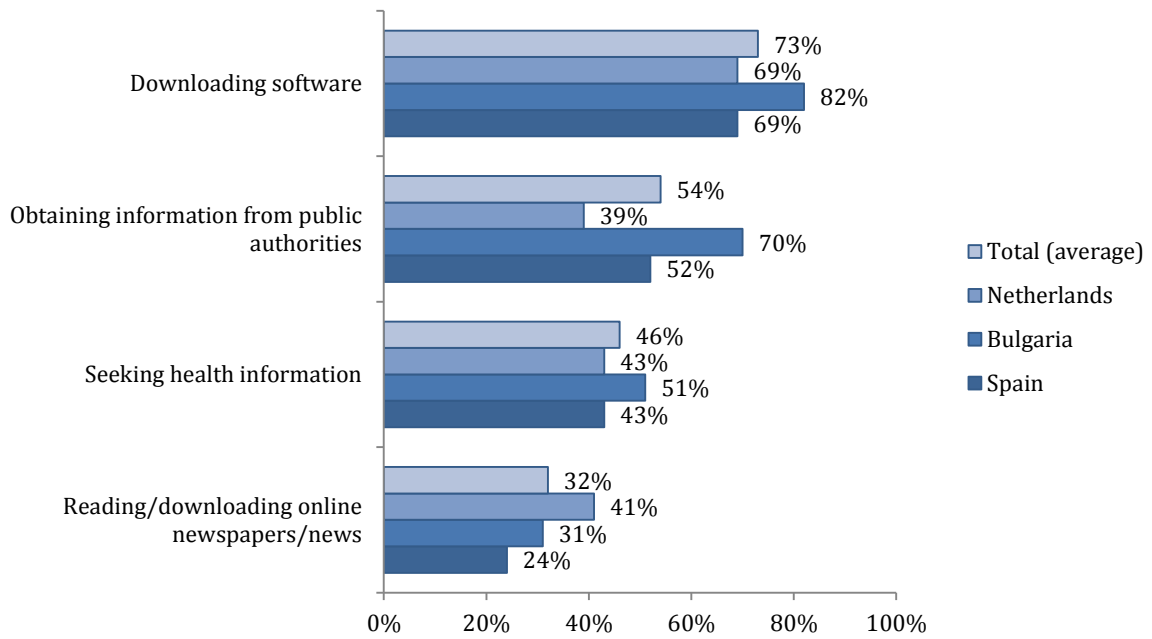
**Information:** The following figure shows clearly that the Internet is also a way of remaining connected with the homeland as 66% reports doing this frequently and very frequently. On the other hand, 67% reports also to read newspapers and magazines online frequently or very frequently. This simple data suggest at a general level that Internet is used both for so-called bonding and bridging purposes. On the other hand, if we drill down to the most common activities typical of socio-economic life in a country we see lower percentages for topics such as laws, taxes, health matters.

**Figure 51: Have you used the Internet for the following INFORMATION purposes in the last 3 months?**



The following figure display the results from EUROSTAT and by country.

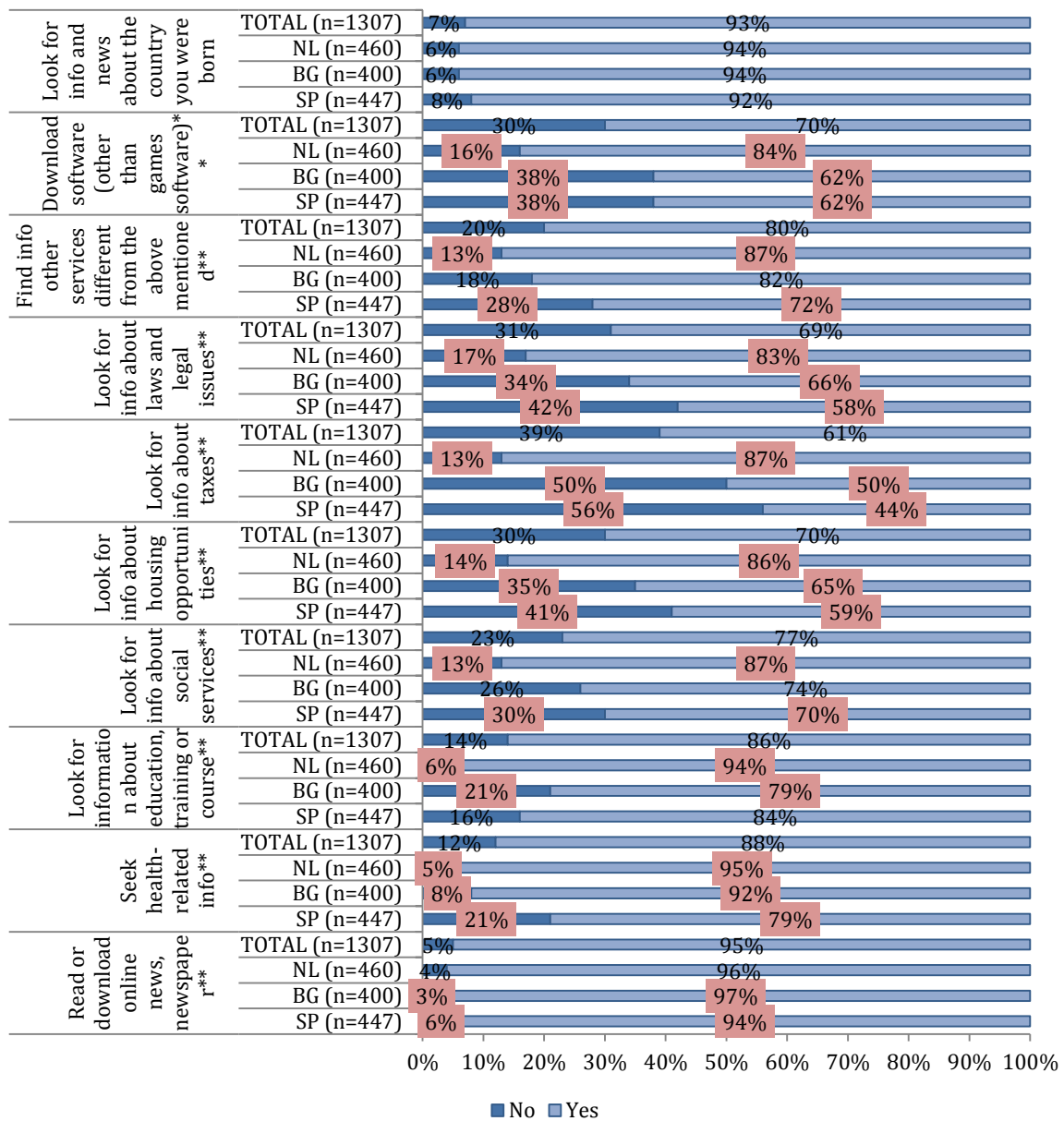
**Figure 52: Have you used the Internet for the following INFORMATION purposes in the last 3 months? EUROSTAT (Never use it)**



Source: EUROSTAT isoc\_bde15cua 2011

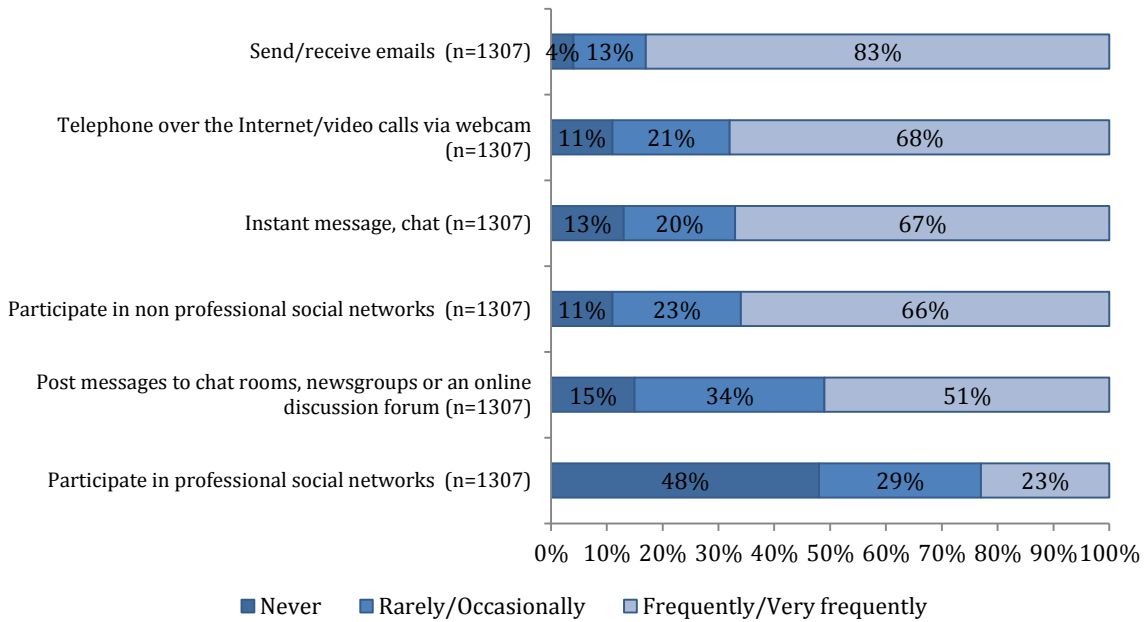


**Figure 53: Have you used the Internet for the following INFORMATION purposes in the last 3 months? by country**



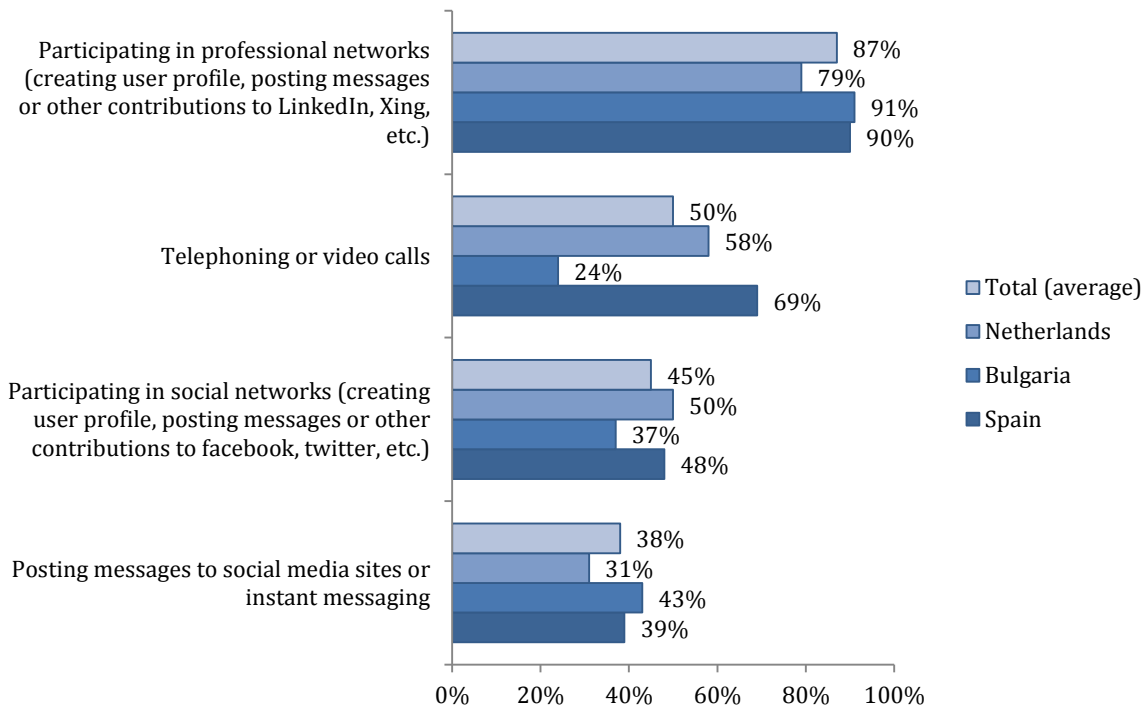
**Communication:** Beyond the information activities, individuals were also asked about Communication activities performed online in the last 3 months. Almost half of the respondents have used the Internet very frequently to Telephone over the Internet/video calls via webcam (45%); to Participate in non-professional social networks, such as Facebook, twitter, etc., creating user profile, posting messages, uploading content or other contributions (43%) and to Chat, Instant message (43%). Comparing the use of the Internet for communication in our sample with data reported by Eurostat for the entire population in the three countries, that usage in this domain appears higher among the surveyed TCNs as compared to the entire population in the three countries.

**Figure 54: Have you used the Internet for the following COMMUNICATION purposes in the last 3 months?**



Comparing the use of the Internet for communication in our sample with data reported by Eurostat for the entire population in the three countries, that usage in this domain appears higher among the surveyed TCNs as compared to the entire population in the three countries.

**Figure 55: Have you used the Internet for the following COMMUNICATION purposes in the last 3 months? EUROSTAT (Never use it)**

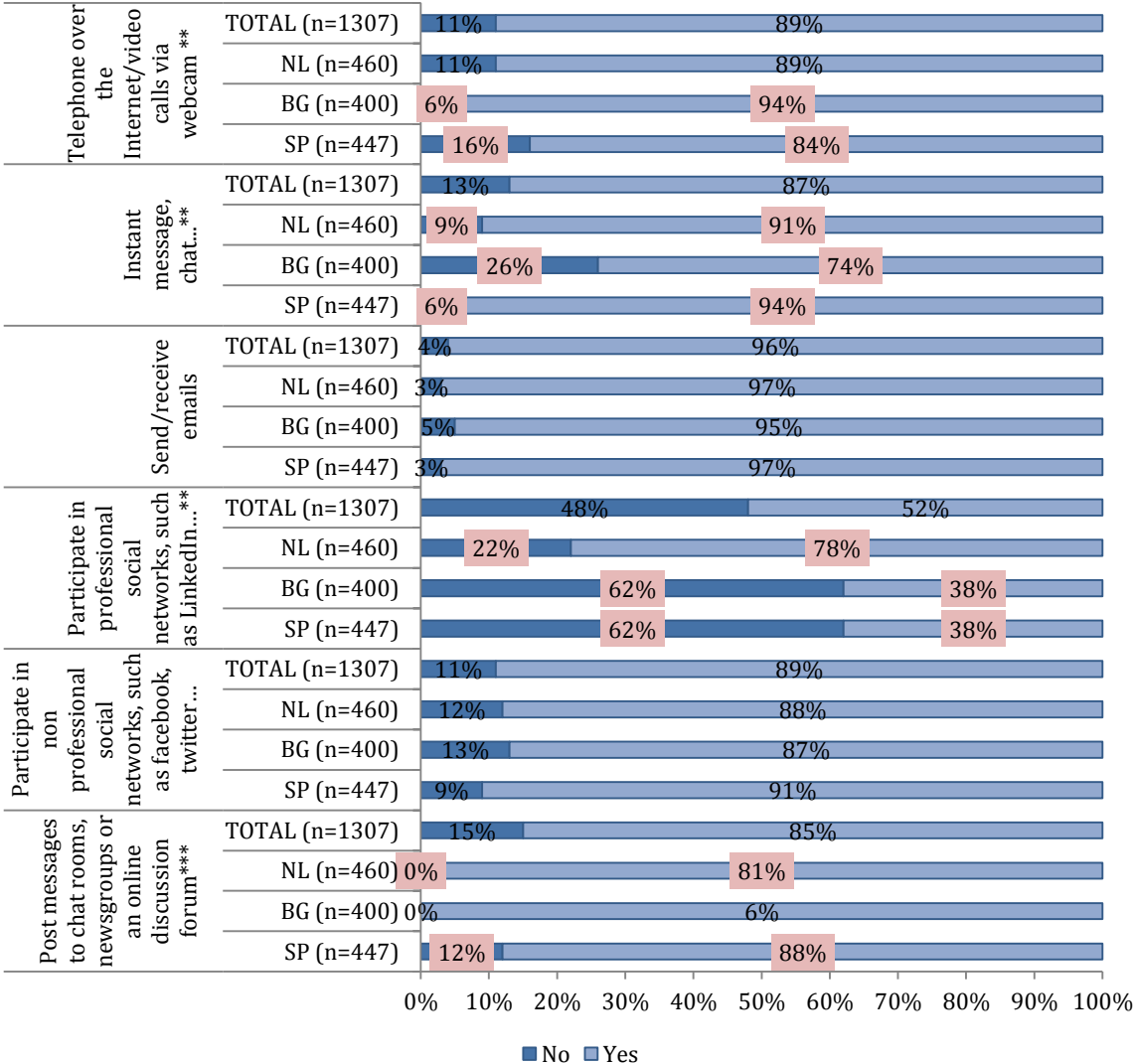


Source: EUROSTAT isoc\_bde15cua 2011

If we recode these variables into dichotomous ones, we can say that third country nationals are using the Internet for communication purposes intensively. More than 80% of the individuals are

performing these activities during the last three months, with the exception of the use of SNS for professional whose is used by half of the individuals.

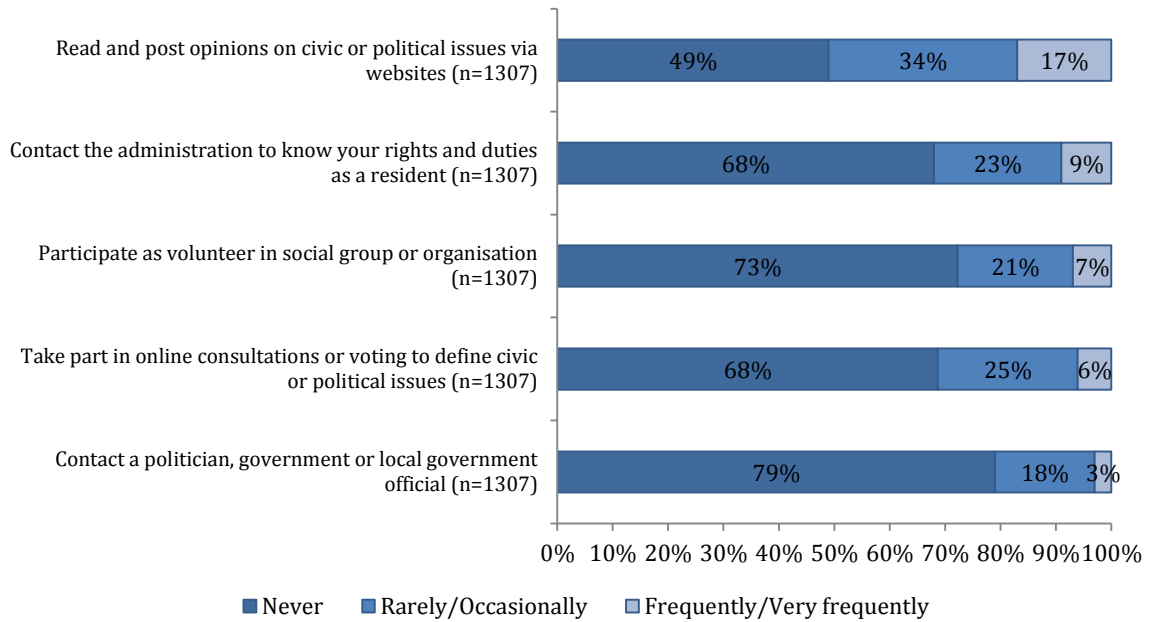
**Figure 56: Have you used the Internet for the following COMMUNICATION purposes in the last 3 months? by Country**



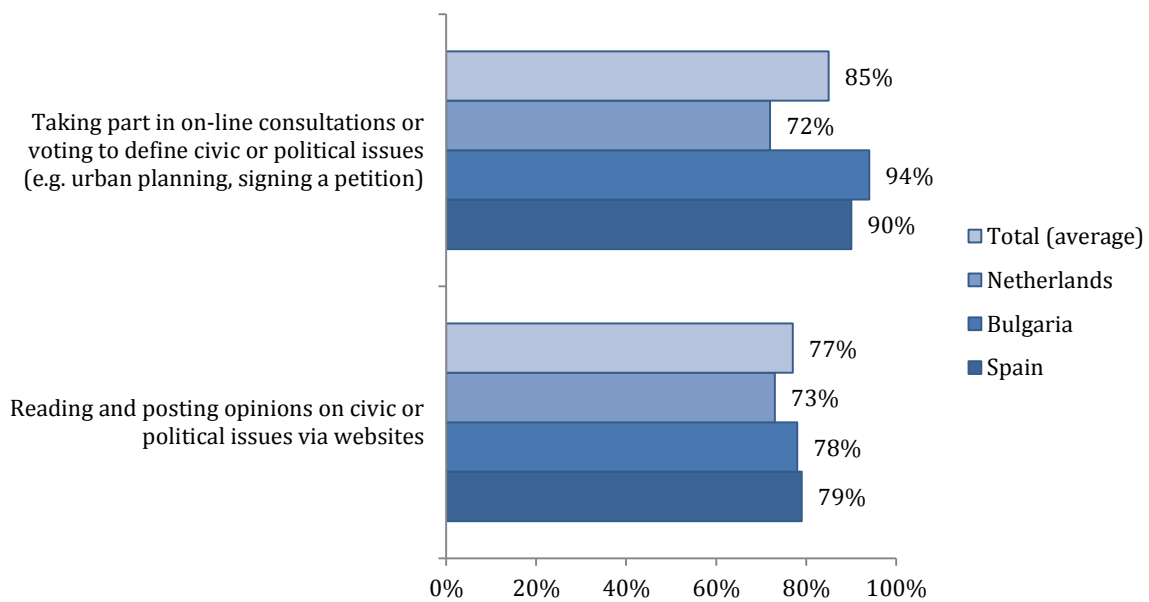
\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

**Social participation:** Social participation was another dimension of the type of activities respondents could carry out on the Internet. By far these activities are less reported: 79% of the individuals have never used the Internet to Contact a politician, government or local government official; 73% of them never Participate as volunteer in social group or organisation and 68% never Contact the administration to know your rights and duties as a resident. On the contrary 51% reported that in the last 3 months they have Read and post opinions on civic or political issues via websites (e.g. blogs, social networks, etc.). In this case, comparison with Eurostat data for the entire population shows that percentages among TCN are lower as compared to all individuals. For instance in our sample at aggregate level only 51% read or post opinions on civic or political issues, whereas from the Eurostat data this percentages is 77% (averaging Eurostat data for the three countries). Taking part to online consultations has been reported by only 32% of respondents in our sample, whereas among the entire population using Eurostat data this percentage is 85%.

**Figure 57: Have you used the Internet for the following PARTICIPATION activities in the last 3 months?**



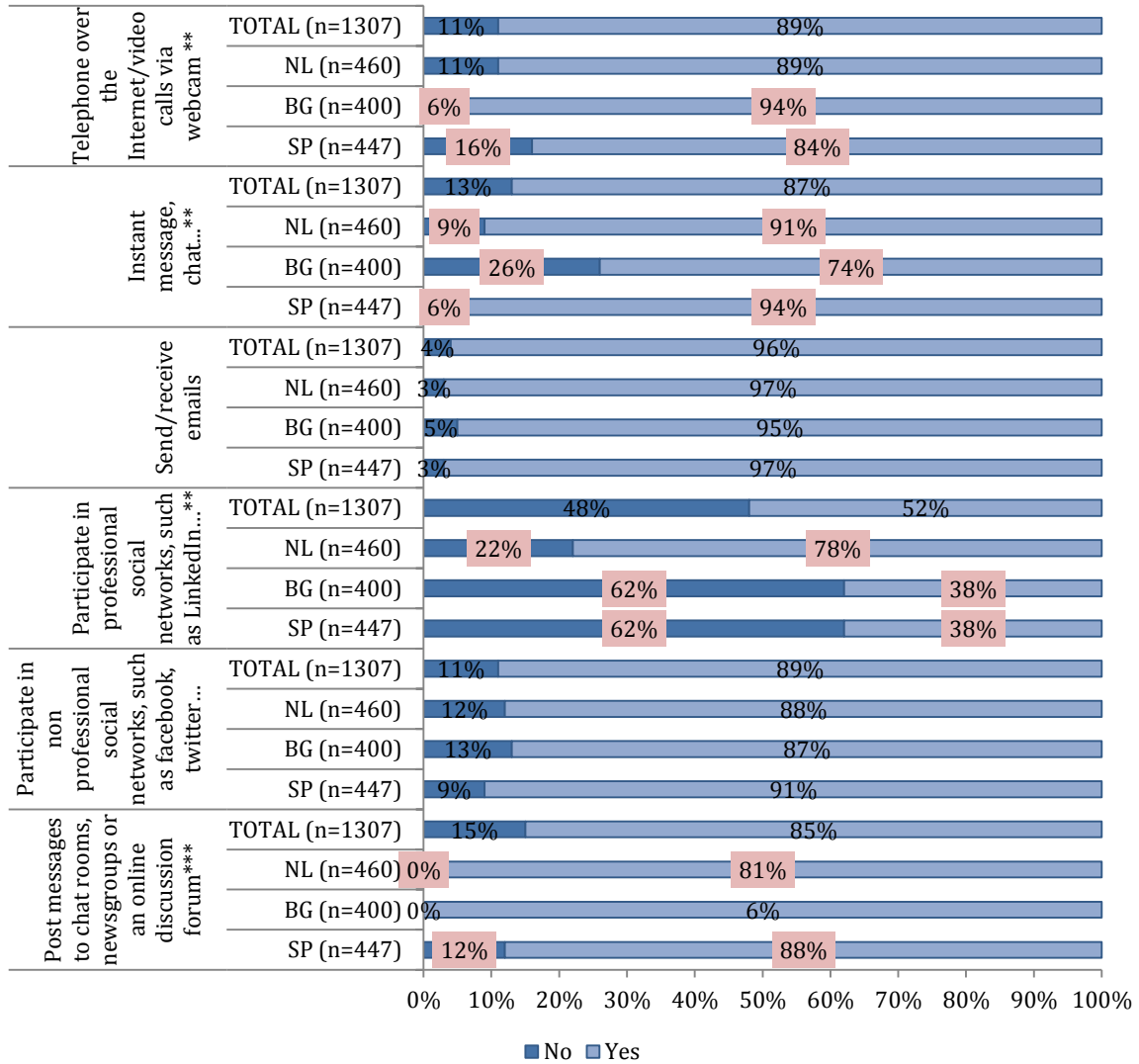
**Figure 58: Have you used the Internet for the following PARTICIPATION activities in the last 3 months? EUROSTAT (Never use it)**



Source: EUROSTAT isoc\_bde15cua 2011

In this case, we can see in Figure 59 that third country nationals in the Netherlands are more active using the Internet for Social participation, followed by Spain and Bulgaria.

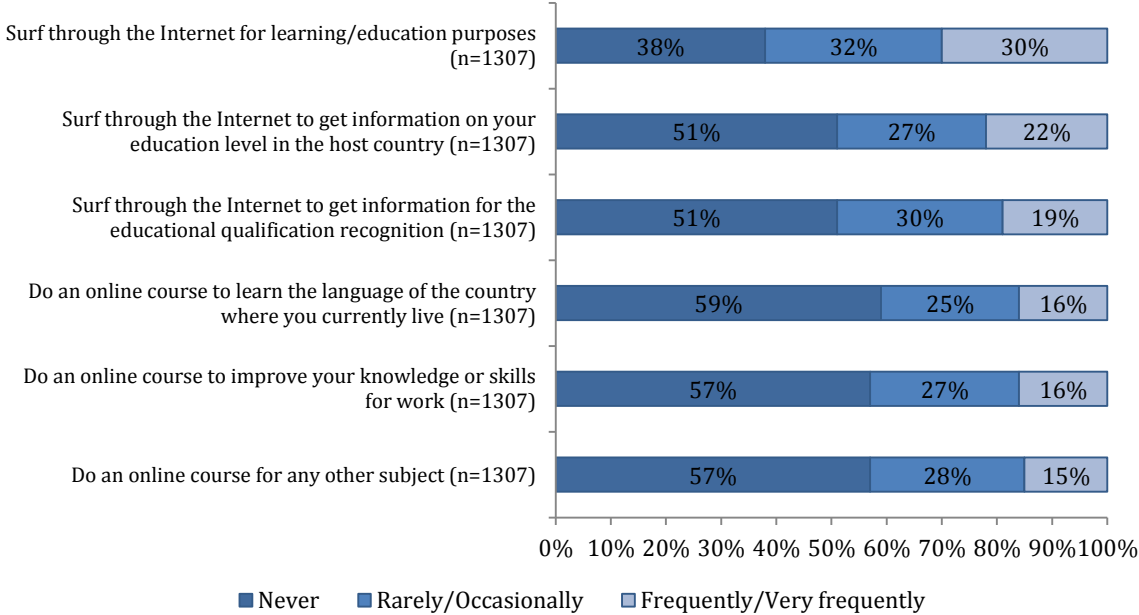
**Figure 59: Have you used the Internet for the following PARTICIPATION activities in the last 3 months? by Country**



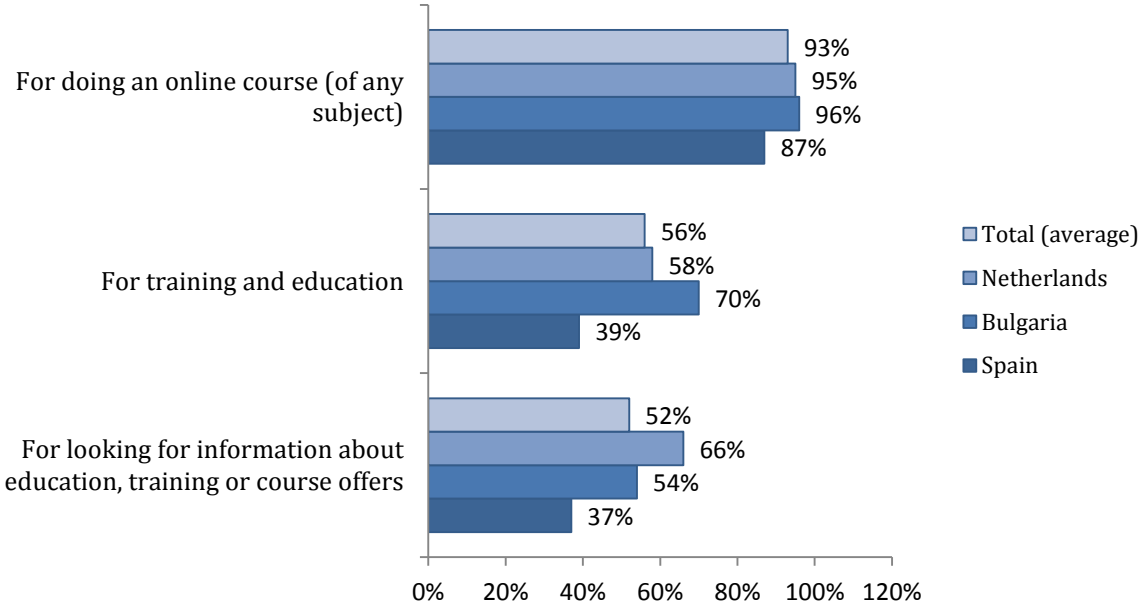
\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

**Learning/ Education:** Approximately more than a half of the individuals surveyed have never used the Internet to carry out activities related with Learning / Education with the exception of generic Surf through the Internet for learning/education purposes (improve your language skills, etc.). It is worth pointing out that the Netherlands stands out in the use of the Internet for Learning and Education in comparison with Spain and Bulgaria. Finally, due to the characteristics of TCNs. Comparing the use of the Internet for Learning and Education in our sample with data reported by Eurostat for the entire population in the three countries, seems that usage in this domain appear higher among the surveyed TCNs as compared to the entire population in the three countries.

**Figure 60: Have you used the Internet for the following LEARNING/EDUCATION activities in the last 3 months?**

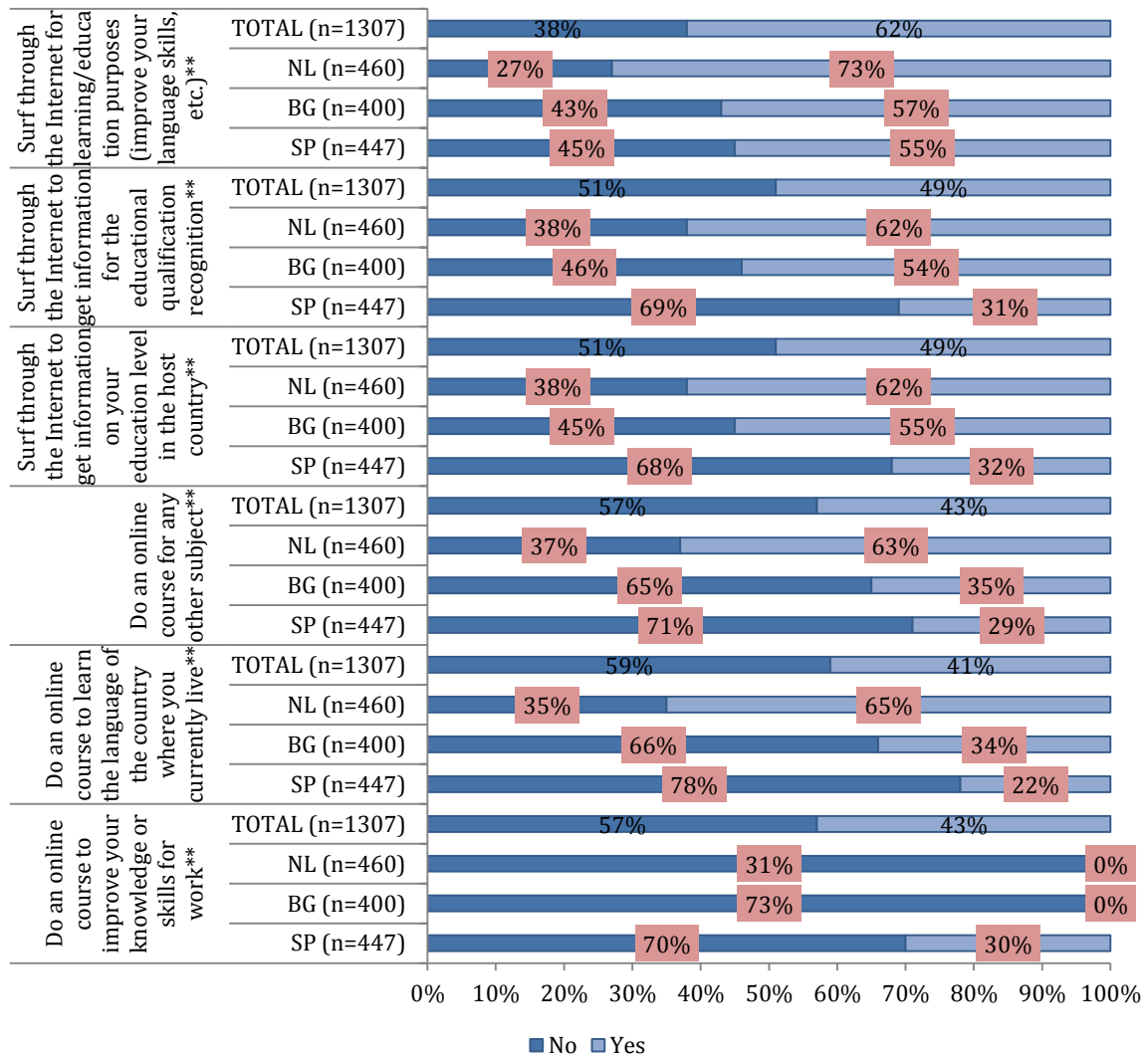


**Figure 61: Have you used the Internet for the following LEARNING/EDUCATION activities in the last 3 months? EUROSTAT (Never use it)**



Source: EUROSTAT isoc\_bde15cua 2011

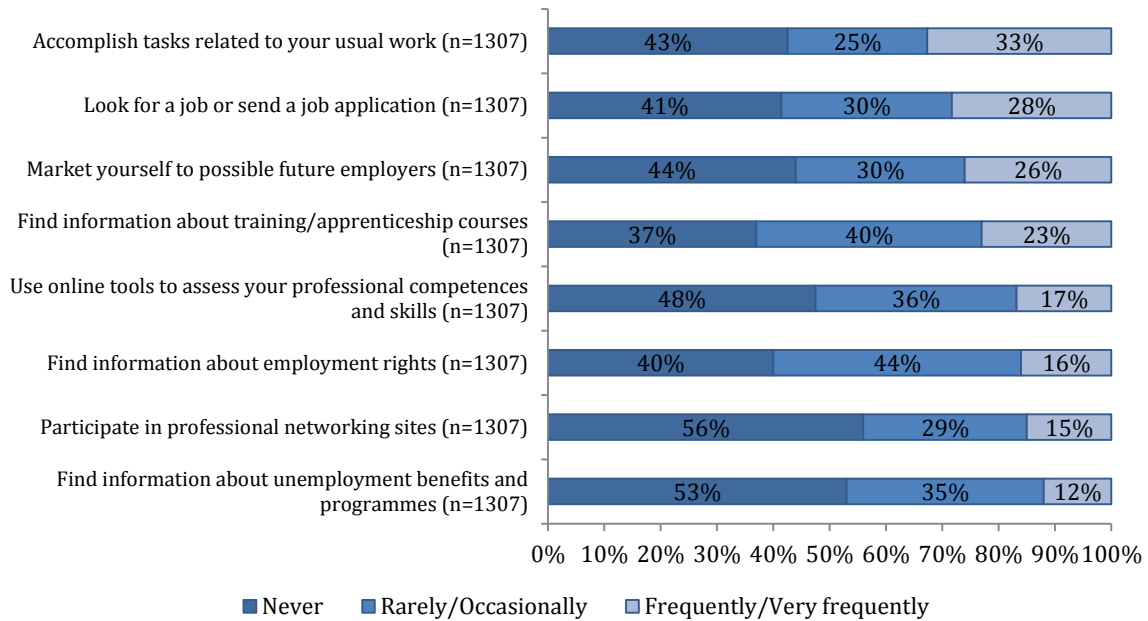
**Figure 62: Have you used the Internet for the following LEARNING/EDUCATION activities in the last 3 months? by Country**



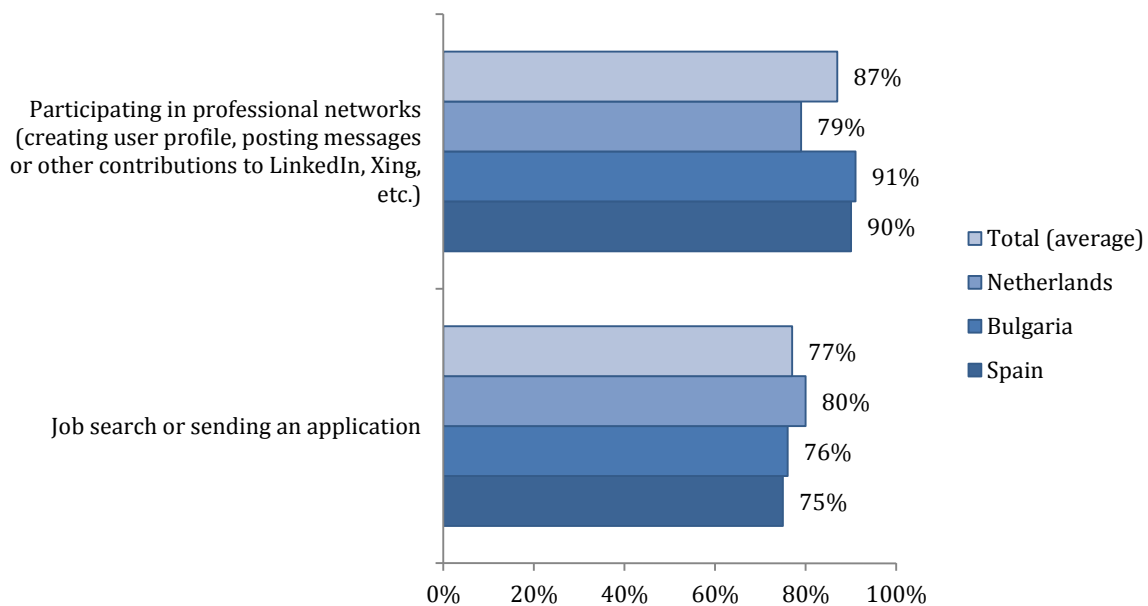
\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

**Professional life and job search.** Figure 63 displays respondents' use of the Internet in their Professionals life. More than 50% of the individuals stated that in the last 3 months they have looked for a job or send a job application; that they have found information about employment rights; and that they have used online tools to assess their professional competences and skills. Compared to data for the all population (Eurostat data) our sample shows a much lower percentage of individuals using professional networking sites (44% versus 87%) and a lower percentage of individuals using the Internet to look for a job and sending an application (59% versus 77%)

**Figure 63: Have you used the Internet for the following activities in your PROFESSIONAL LIFE in the last 3 months?**



**Figure 64: Have you used the Internet for the following activities in your PROFESSIONAL LIFE in the last 3 months? EUROSTAT**

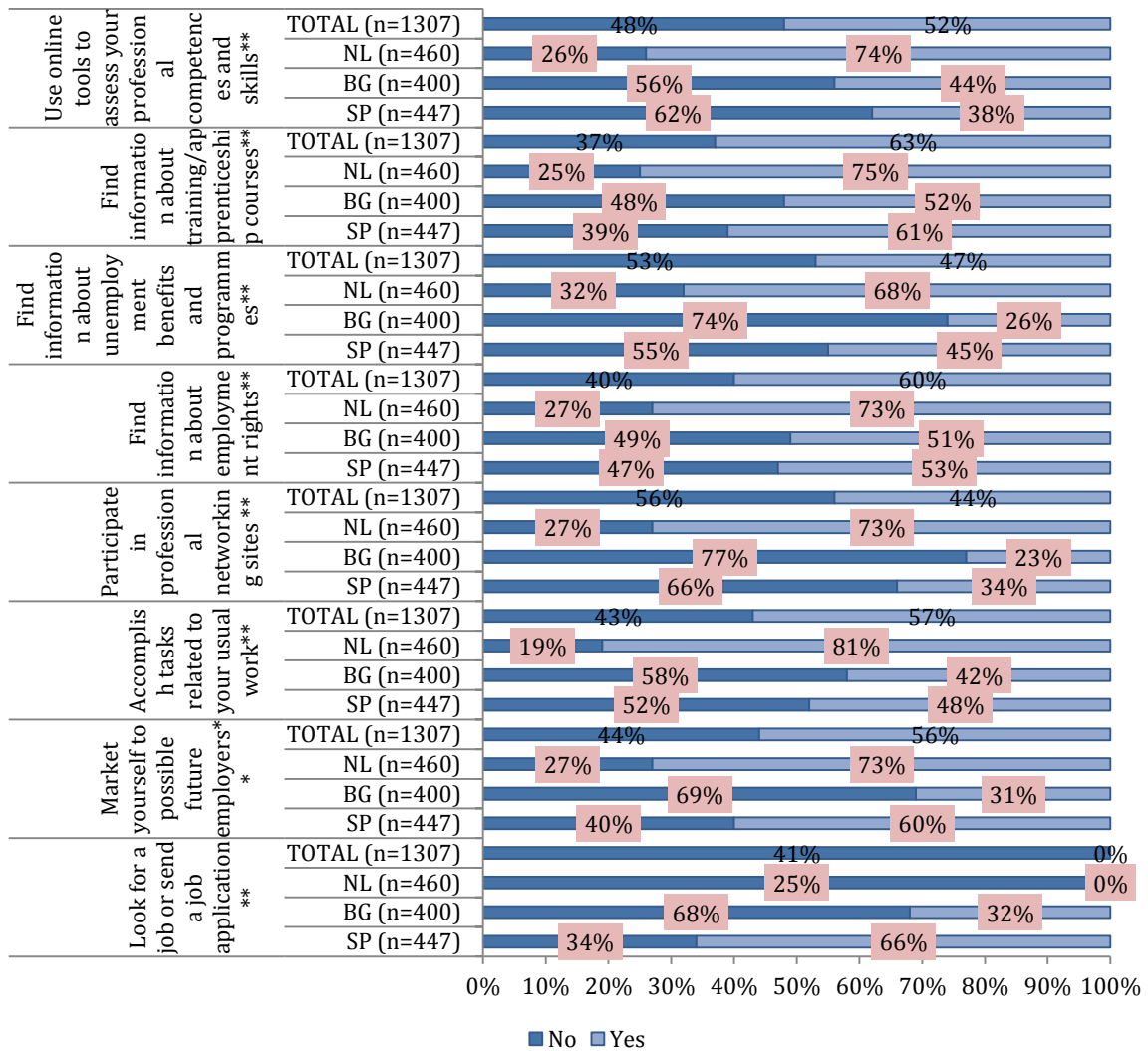


Source: EUROSTAT isoc\_bde15cua 2011



By country (see Figure 65), third country nationals in the Netherlands are leading the use of this type of activity.

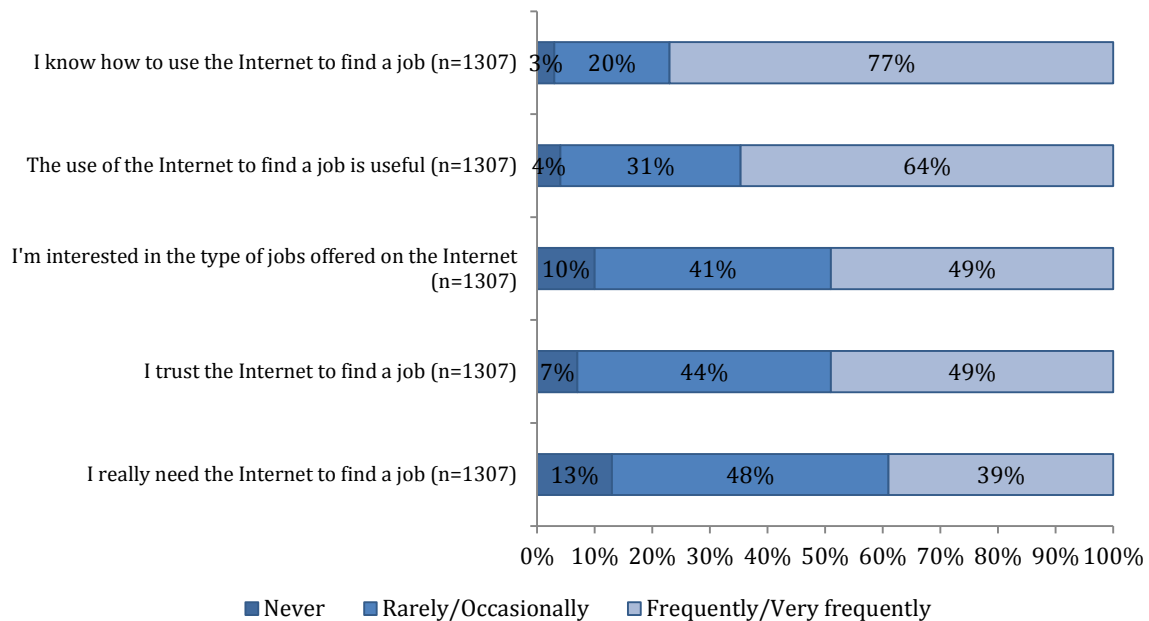
**Figure 65: Have you used the Internet for the following activities in your PROFESSIONAL LIFE in the last 3 months? by Country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

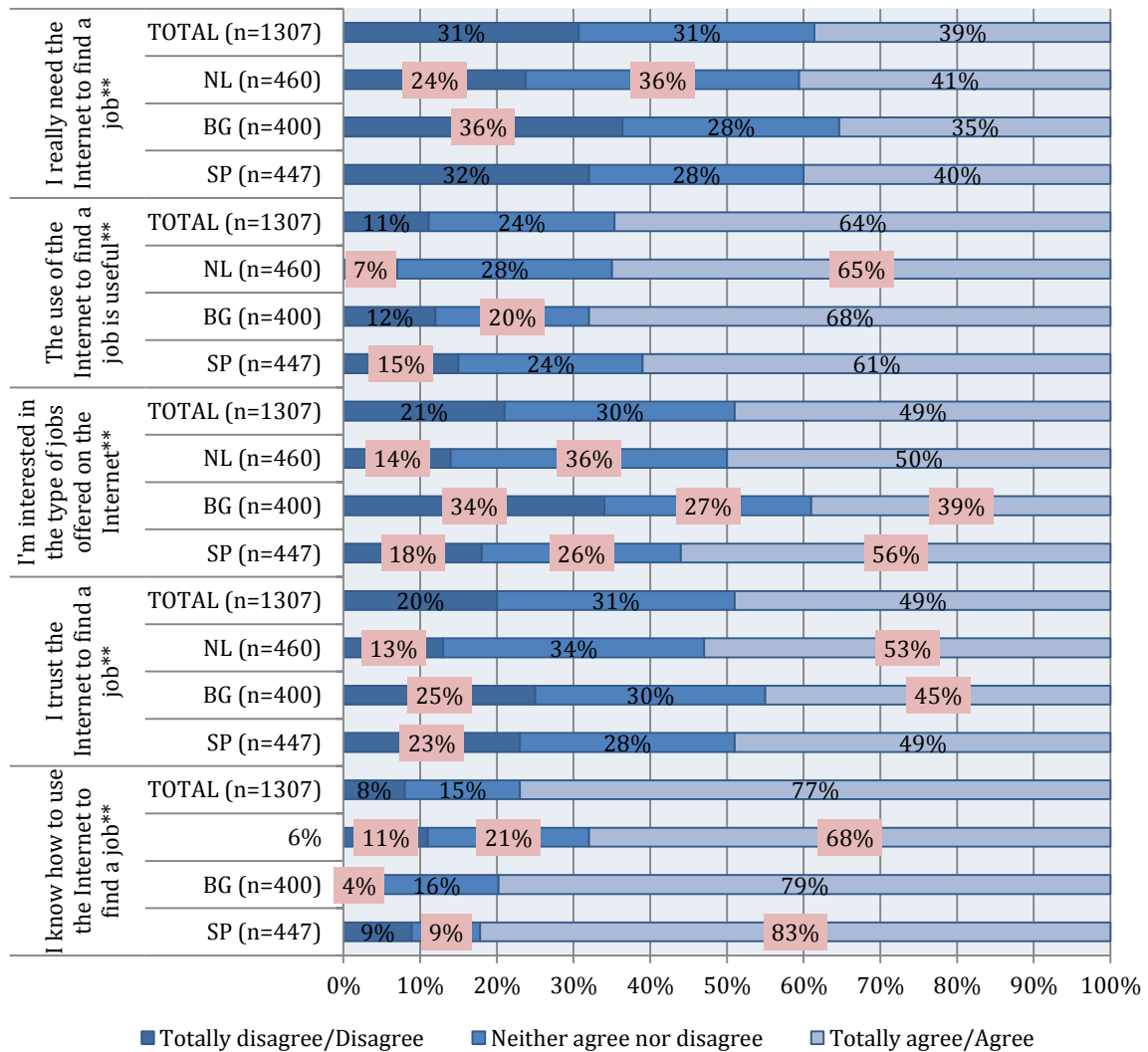
Individuals were asked to what extent they agree with the following statements related with the use of the Internet for job search: 39% of the individuals stated (totally agree) that they know how to use the Internet to find a job; 59% of them stated (totally agree - agree) that they trust the Internet to find a job; and 64% (totally agree - agree) consider it useful to find a job. Eurostat data does not contain any of those items and so the comparison is not possible.

**Figure 66: To what extent do you agree with the following statements related with the use of the Internet for job search?**



In general these figures represent a positive perception of the Internet as tool to find a job. As it was the case of the use of the Internet for professional life, the Netherlands is the leading country in this type of use (see Figure 67).

**Figure 67: To what extent do you agree with the following statements related with the use of the Internet for job search? by Country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Summarising the results of these sections reveal that TCNs show very high percentages and a level of adoption very close to the population as a whole. However, adoption of the Internet for social participation, for learning and education, and for job-related purposes for all three countries is higher among the general population than among the TCNs in our sample.

## 9. Annex 5: Factor Analysis

Factor analysis is one of the most common multivariate techniques. Multivariate analysis could be briefly described as a group of statistical procedures used to simultaneously analyse three or more variables.

These techniques can be classified into dependence and interdependence methods. A **dependence method** is one in which a variable or set of variables are identified as the dependent variable to be predicted or explained by other, independent variables. Dependence techniques include multiple regression analysis, discriminant analysis, and conjoint analysis. An **interdependence method** is one in which no single variable or group of variables is defined as being independent or dependent. The goal of interdependence methods is data summarisation and data reduction, or grouping things together into latent variables. Cluster analysis, factor analysis, principal component analysis, and multidimensional scaling are the most commonly used interdependence methods. **Factor analysis** is an interdependence technique whose primary purpose is to define the underlying structure among the variables in the analysis. This technique has two main approaches. First, data can be analysed with no preconceived ideas about the underlying constructs (latent variables) defining the structure of the data. This approach is called **Exploratory Factor Analysis** or simply **Factor Analysis (FA)**. Thus, it is considered as an **empirical-driven approach**. Second, when there is an understanding of the constructs underlying the data, and it is possible to place substantively meaningful constraints specifying the number of indicators related with each underlying latent construct, then data can be analysed with **Confirmatory Factor Analysis CFA**. It is confirmatory when a specific test or hypothesis about the structure or the number of dimensions underlying a set of variables is performed. Thus, this approach is a **theory-testing procedure**. CFA is appropriate in situations where the dimensionality of a set of variables for a given population is already known because of previous research.

**Factor Analysis.** For the construction of the composite indexes we used Exploratory Factor Analysis or simply Factor Analysis (FA). This technique is used mostly for data reduction purposes, so as to summarise the information contained in a large number of variables into a smaller number of factors and to create indexes with variables that measure similar things (conceptually). Therefore the outcome of the factor analysis is twofold:

- **Data summarisation:** derives underlying dimensions that, when interpreted and understood, describe the data in a much smaller number of concepts than the original individual variables;
- **Data reduction:** extends the process of data summarisation by deriving an empirical value (factor score) for each dimension (factor) and then substituting this new value for the original values of the processed variables.

Basically, FA investigates whether a number of variables of interest are related through some linear function to a smaller number of unobservable factors (latent variables or constructs). In the special vocabulary of FA, the parameters of these linear functions are referred to as **factor loadings**. Factor analysis usually proceeds in three stages. The first stage comprises the analysis of the correlation matrix with two different tests: Bartlett's test of sphericity and Kaiser Meyer Olkin. Bartlett's test of sphericity is used to test the hypothesis that the correlation matrix is an identity matrix (all diagonal terms are one and all off-diagonal terms are zero). The significance should be less than .05 because all items should be perfectly correlated with themselves (one), and have some level of correlation with the other items. If they are not correlated with the other items then they cannot be part of the same factor. Kaiser Meyer Olkin (KMO) is a measure of sampling adequacy, and is used to compare the magnitudes of the observed correlation coefficients in relation to the magnitudes of the partial correlation coefficients. Large KMO values are good because correlations between pairs of variables (i.e. potential factors) can be explained by the other variables. If the sum of the partial correlation coefficients between all pairs of variables is small when compared to the observed correlation coefficients, the KMO measure will be close to one. If

KMO is below .5, then FA is not recommended. A partial correlation is a measure of the strength of the relationship between any two variables when the other variables are held constant.

In the second stage, one set of loadings is calculated which yields theoretical variances and covariance that fit the observed ones as closely as possible according to a certain criterion. These loadings, however, may not agree with the prior expectations, or may not lend themselves to a reasonable interpretation. Thus, in the third stage, the first loadings are “rotated” in an effort to arrive at another set of loadings that fit equally well the observed variances and co-variances, but are more consistent with prior expectations or more easily interpreted. An optimal structure exists when all variables have high loadings only on a single factor. Variables that cross-load (load highly on two or more factors) are usually deleted unless theoretically justified or if the objective is strictly data reduction. A method widely used for determining a first set of loadings is the principal component method. This method seeks values of the loadings that bring the estimate of the total communality as close as possible to the total of the observed variances (the communality of a variable is the part of its variance that is explained by the common factors, while the specific variance is the part of the variance of the variable that is not accounted for by the common factors). Varimax rotation method, the most widely used for rotation, help the detection of factors each of which is related to few variables, and at the same time, it prevents the detection of factors influencing all variables.

## 10. Annex 6: Composite index

A Composite Index (CI) is formed when individual indicators are compiled into a single index on the basis of an underlying conceptual model with the support of the empirical exploration of the dataset. A CI measures multi-dimensional concepts, which cannot be captured by a simple indicator. To develop our composite index, we have followed the four steps described in the OECD-JRC Handbook on construction composite indicators methodology and user guide (2008)<sup>43</sup>.

Firstly, a **theoretical/conceptual framework** has been developed to define the phenomenon to be measured and its key dimensions. Secondly, the base level variables (or indicators) produced by the respondents' answers to our questionnaire were grouped within each dimension reflecting the conceptual framework. Thirdly, **multivariate statistical analysis** has been carried out as follows. Means and their significant correlation were checked to confirm whether internal complementarities existed among the variables included within each of dimensions. This step enabled Factor Analysis (FA), more specifically, exploratory factor analysis, to find a small set of unobserved variables, which can account for the covariance among a larger set of observed variables (also called manifest variables, items or indicators). A factor is an unobservable variable that is assumed to influence observed variables. Therefore this statistical technique facilitates the categorisation of items or indicators into clear-cut and meaningful themes by identifying common relations between similar variables, uncovering sub-dimensions that were labelled so as to better describe themes not directly observable when looking only at the base variables separately. An analysis of the correlation matrix (KMO and Bartlett's test of sphericity) was carried out to check that the matrixes were factorable. Data reductions were undertaken by principal components analysis using the Varimax option to identify likely underlying dimensions. Fourthly, a **careful and transparent definition of weights** was performed, squaring and normalising the estimated factor loadings from the factor analysis. The squared factor loadings represent the proportion of the total unit variance of a base variable that is explained by a factor. The resulting score by sub-dimension can be aggregated into the summary indicator of the dimension according to its relative contribution to the explanation of the overall variance of all factors. Thus each sub-dimension could be also considered as a composite index itself.

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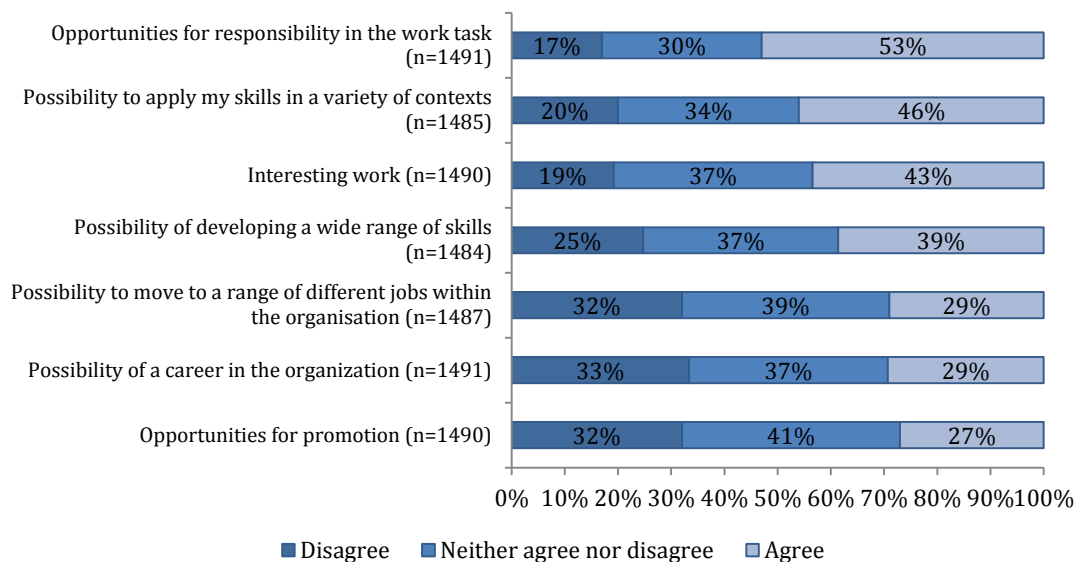
<sup>43</sup> OECD - JRC. (2008). Handbook on constructing composite indicators methodology and user guide. Paris: OCED.

## 11. Annex 7: Results of employability

### 11.1 Competence development

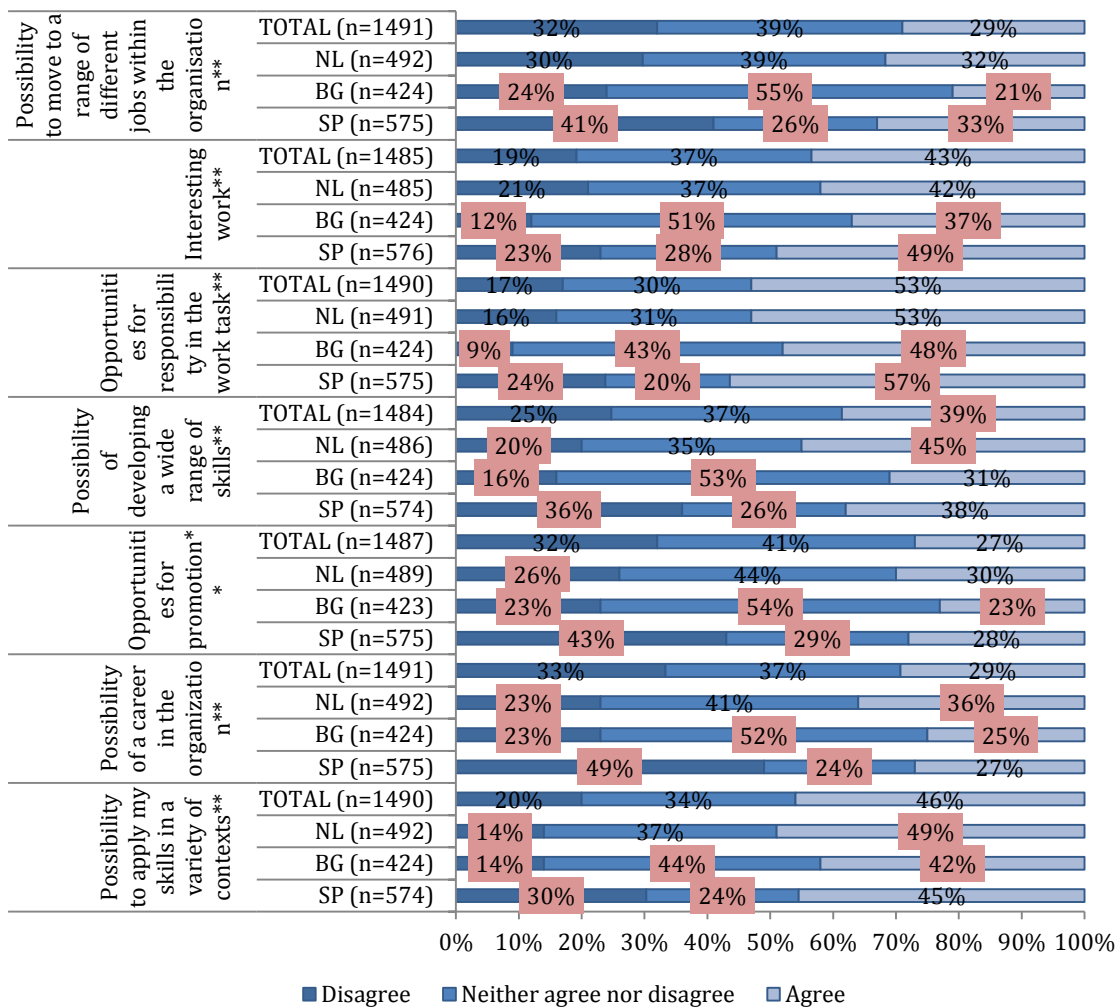
After the statement “My employer provides me with...” (or past employer in case they were unemployed) participants were asked to what extent they agreed with sentences regarding their current employer to assess employers’ inducements in terms of support for career and skill development. We assumed that competence development provided by the employer would positively influence perceived employability. Approximately half of the TCNs stated that their employers provide them opportunities for responsibility in the work task; possibilities to apply their skills in a variety of context and interesting work. However, just a third of the participants recognised that their employers offer them possibility of a career in the organisation or possibilities of developing a wide range of skills.

**Figure 68: Competence development**



The following figure displays the results by country (Figure 69). The results do not allow us to draw any systematic conclusions.

**Figure 69: Competence development by Country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

However, in the case of Connected and Non-Connected individuals we can see that Connected TCNs are more likely to receive from their employers the possibility to develop their competences. Table 73 reveals that Non-Connected TCNs are less likely to perceive that their employees offer them the possibility to apply their skills in a variety of contexts: 33.1% of Non-Connected TCNs disagree with the sentence “my employer provides me with the possibility to apply my skills in a variety of contexts while just 16.8% of Connected TCNs disagree with it.



**Table 73: Competence development by Connected and Non-connected (1)**

Possibility to apply my skills in a variety of contexts				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	104	198	302
	%	33.1%	16.8%	20.3%
	Adjusted Residual	6.4	-6.4	
Neither agree nor disagree	Count	122	387	509
	%	38.9%	32.9%	34.2%
	Adjusted Residual	2.0	-2.0	
Totally agree / Agree	Count	88	591	679
	%	28.0%	50.3%	45.6%
	Adjusted Residual	-7.0	7.0	
Total	Count	314	1176	1490
	% of Total	21.1%	78.9%	100.0%
Pearson Chi-Square = 61.862, df = 2; p = .000				

Table 74 shows that Connected TCNs are more likely to perceive that their employer offers them the Possibility of a career in the organization: 33.7% of them agree with this sentence while just 12.7% of Non-Connected do so.

**Table 74: Competence development by Connected and Non-connected (2)**

Possibility of a career in the organization				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	157	338	495
	%	50.0%	28.7%	33.2%
	Adjusted Residual	7.1	-7.1	
Neither agree nor disagree	Count	117	442	559
	%	37.3%	37.6%	37.5%
	Adjusted Residual	-.1	.1	
Totally agree / Agree	Count	40	397	437
	%	12.7%	33.7%	29.3%
	Adjusted Residual	-7.3	7.3	
Total	Count	314	1177	1491
	% of Total	21.1%	78.9%	100.0%
Pearson Chi-Square = 71.089, df = 2; p = .000				

Table 75 displays the results in the case of opportunities for promotion. Connected TCNs (31.2% agree) are more likely to perceive these opportunities than Non-Connected (13.4% agree).

**Table 75: Competence development by Connected and Non-connected (3)**

Opportunities for promotion				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	150	322	472
	%	47.8%	27.5%	31.7%
	Adjusted Residual	6.9	-6.9	
Neither agree nor disagree	Count	122	485	607
	%	38.9%	41.3%	40.8%
	Adjusted Residual	-8	8	
Totally agree / Agree	Count	42	366	408
	%	13.4%	31.2%	27.4%
	Adjusted Residual	-6.3	6.3	
Total	Count	314	1173	1487
	% of Total	21.1%	78.9%	100.0%

Pearson Chi-Square = 61.284, df = 2; p = .000

Table 76 shows the same trend. Connected TCNs are more likely to agree (44.1%) with their possibility of developing a wide range of skills offered by their employer than Non-Connected (17.9% agree).

**Table 76: Competence development by Connected and Non-connected (4)**

Possibility of developing a wide range of skills				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	129	238	367
	%	41.2%	20.3%	24.7%
	Adjusted Residual	7.6	-7.6	
Neither agree nor disagree	Count	128	417	545
	%	40.9%	35.6%	36.7%
	Adjusted Residual	1.7	-1.7	
Totally agree / Agree	Count	56	516	572
	%	17.9%	44.1%	38.5%
	Adjusted Residual	-8.5	8.5	
Total	Count	313	1171	1484
	% of Total	21.1%	78.9%	100.0%

Pearson Chi-Square = 89.355, df = 2; p = .000

Table 77 reveals that Connected TCNs are more likely to be offered opportunities for responsibility in the work task (58.1% agree) than Non-Connected TCNs (33.4%).

**Table 77: Competence development by Connected and Non-connected (5)**

Opportunities for responsibility in the work task				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	101	151	252
	%	32.2%	12.8%	16.9%
	Adjusted Residual	8.1	-8.1	
Neither agree nor disagree	Count	108	342	450
	%	34.4%	29.1%	30.2%
	Adjusted Residual	1.8	-1.8	
Totally agree / Agree	Count	105	683	788
	%	33.4%	58.1%	52.9%
	Adjusted Residual	-7.8	7.8	
Total	Count	314	1176	1490
	% of Total	21.1%	78.9%	100.0%

Pearson Chi-Square = 85.491, df = 2; p = .000

Table 78 confirms that Connected TCNs are also more likely to develop interesting work (47.9% agree) than Non-Connected TCNs (26.1% agree).

**Table 78: Competence development by Connected and Non-connected (6)**

Interesting work				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	95	191	286
	%	30.3%	16.3%	19.3%
	Adjusted Residual	5.6	-5.6	
Neither agree nor disagree	Count	137	419	556
	%	43.6%	35.8%	37.4%
	Adjusted Residual	2.6	-2.6	
Totally agree / Agree	Count	82	561	643
	%	26.1%	47.9%	43.3%
	Adjusted Residual	-6.9	6.9	
Total	Count	314	1171	1485
	% of Total	21.1%	78.9%	100.0%
Pearson Chi-Square = 56.231, df = 2; p = .000				

Finally, table 79 displays the results related with the possibility to move to a range of different jobs within the organisation. Non-Connected TCNs are less likely to perceive this type of opportunities offered by their employer (44.3% disagree) than Connected TCNs (29.3% disagree).

**Table 79: Competence development by Connected and Non-connected (7)**

Possibility to move to a range of different jobs within the organisation				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	139	345	484
	%	44.3%	29.3%	32.5%
	Adjusted Residual	5.0	-5.0	
Neither agree nor disagree	Count	119	456	575
	%	37.9%	38.7%	38.6%
	Adjusted Residual	-.3	.3	
Totally agree / Agree	Count	56	376	432
	%	17.8%	31.9%	29.0%
	Adjusted Residual	-4.9	4.9	
Total	Count	314	1177	1491
	% of Total	21.1%	78.9%	100.0%
Pearson Chi-Square = 34.161, df = 2; p = .000				

## 11.2 Current level of job-related skills

To assess current level of job related skills all TCNs were asked to what extent they agree with the following sentences regarding their education, training and qualifications. More than half of the participants claimed that their level of education was sufficient for getting a job in his/her area of work (60% agree) and almost half of them stated that they have good job references (49% agree) and 57% claimed that their skills are updated to develop the type of work they are doing (57% agree). Moreover, just 16% consider that their level of education is not sufficient for getting a job in their areas of work and 18% stated that they do not have good job references.

**Figure 70: Current level of job related skills**

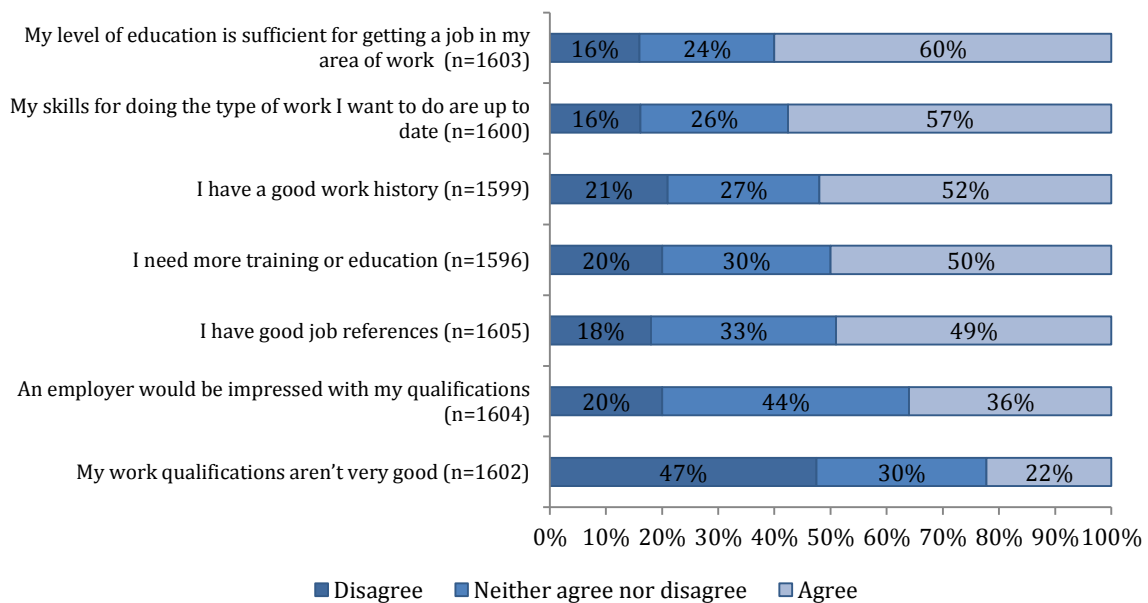
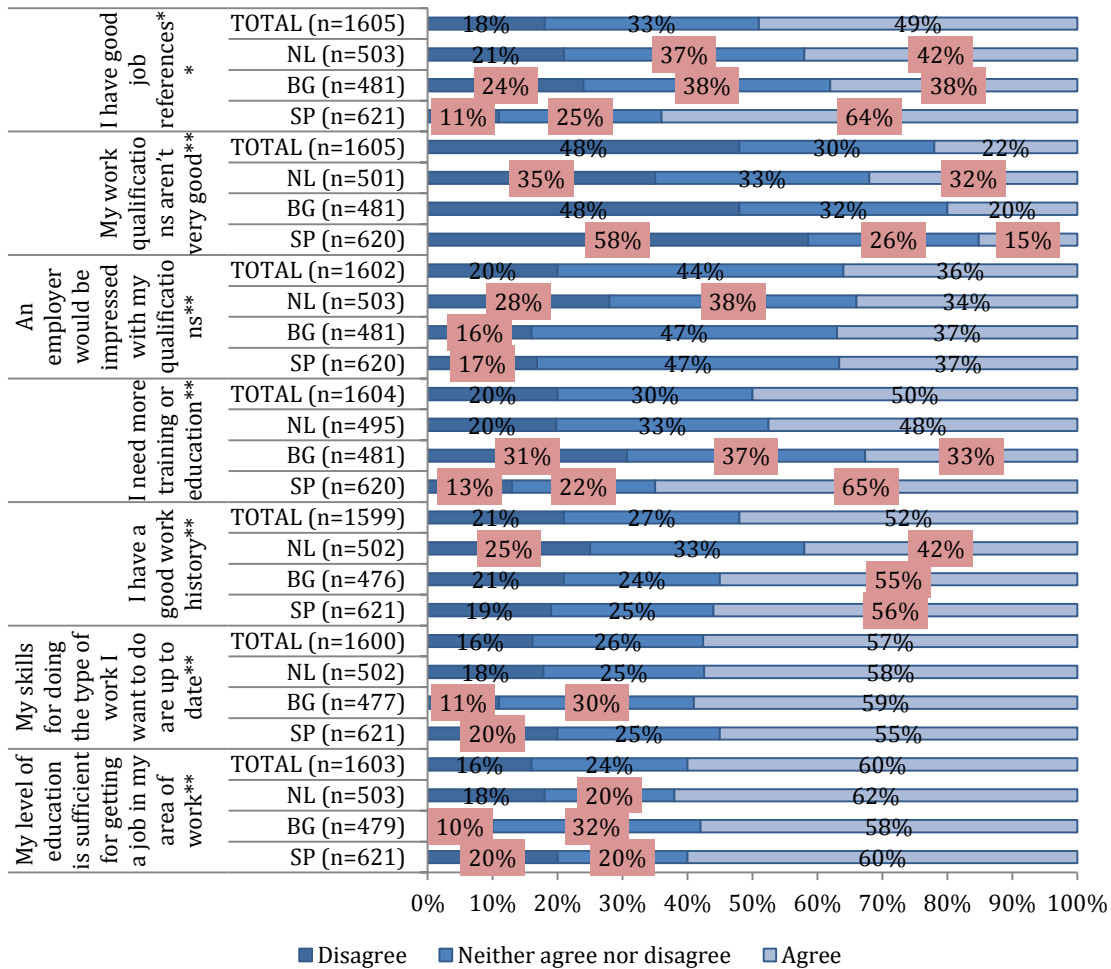


Figure 71 displays the results by country. The results do not allow us to draw any systematic conclusions.

**Figure 71: Current level of job related skills by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The following tables display the results by Connected and Non-connected TCNs. In this case, we can identify a trend suggesting that Connected TCNs are more likely to be skilled to perform their job.

Table 80 reveals that Connected TCNs (64.3% agree) are more likely than Non-Connected (44.3% agree) to claim that their level of education is sufficient for getting a job in their area of work.

**Table 80 Current level of job related skills by Connected and Non-Connected (1)**

My level of education is sufficient for getting a job in my area of work				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	81	178	259
	%	24.3%	14.0%	16.2%
	Adjusted Residual	4.5	-4.5	
Neither agree nor disagree	Count	105	275	380
	%	31.4%	21.7%	23.7%
	Adjusted Residual	3.7	-3.7	
Totally agree / Agree	Count	148	816	964
	%	44.3%	64.3%	60.1%
	Adjusted Residual	-6.6	6.6	
Total	Count	334	1269	1603
	% of Total	20.8%	79.2%	100.0%

Pearson Chi-Square = 45.319, df = 2; p = .000

Table 81 shows that Connected TCNs (60.6% agree) also stated that their skills for doing the type of work they want to do are up to date while just 44.8% of Non-connected agreed with this sentence.

**Table 81: Current level of job related skills by Connected and Non-Connected (2)**

My skills for doing the type of work I want to do are up to date				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	90	174	264
	%	26.9%	13.8%	16.5%
	Adjusted Residual	5.7	-5.7	
Neither agree nor disagree	Count	95	325	420
	%	28.4%	25.7%	26.2%
	Adjusted Residual	1.0	-1.0	
Totally agree / Agree	Count	150	766	916
	%	44.8%	60.6%	57.2%
	Adjusted Residual	-5.2	5.2	
Total	Count	335	1265	1600
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 39.826, df = 2; p = .000				

Table 82 shows that there is no significant statistical difference between the two profiles in the case of having a good work history.

**Table 82: Current level of job related skills by Connected and Non-Connected (3)**

I have a good work history				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	80	261	341
	%	23.9%	20.6%	21.3%
	Adjusted Residual	1.3	-1.3	
Neither agree nor disagree	Count	96	336	432
	%	28.7%	26.6%	27.0%
	Adjusted Residual	.8	-.8	
Totally agree / Agree	Count	159	667	826
	%	47.5%	52.8%	51.7%
	Adjusted Residual	-1.7	1.7	
Total	Count	335	1264	1599
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 3.162, df = 2; p = .206				

Table 83 shows that there is no significant statistical difference between the two profiles.

**Table 83: Current level of job-related skills by Connected and Non-Connected (4)**

I need more training or education				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	82	241	323
	%	24.6%	19.1%	20.2%
	Adjusted Residual	2.2	-2.2	
Neither agree nor disagree	Count	97	379	476
	%	29.0%	30.0%	29.8%
	Adjusted Residual	-.4	.4	
Totally agree / Agree	Count	155	642	797
	%	46.4%	50.9%	49.9%
	Adjusted Residual	-1.5	1.5	
Total	Count	334	1262	1596
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 5.023, df = 2; p = .081				

Table 84 reveals that Connected TCNs are slightly more confident about their qualifications than Non Connected: 39.2% of Connected stated that their employer would be impressed with their qualifications while just 23.9% of Non-Connected agree with this sentence.

**Table 84: Current level of job related skills by Connected and Non-Connected (5)**

An employer would be impressed with my qualifications				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	98	223	321
	%	29.3%	17.6%	20.0%
	Adjusted Residual	4.8	-4.8	
Neither agree nor disagree	Count	157	548	705
	%	46.9%	43.2%	44.0%
	Adjusted Residual	1.2	-1.2	
Totally agree / Agree	Count	80	498	578
	%	23.9%	39.2%	36.0%
	Adjusted Residual	-5.2	5.2	
Total	Count	335	1269	1604
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 36.246, df = 2; p = .000				

Table 85 suggests that Connected TCNs are slightly more critical with their qualifications than Non-Connected: 23.2% of Connected agree that they qualifications are not very good while just 17.6% of Non-Connected agree with this sentence.

**Table 85: Current level of job related skills by Connected and Non-Connected (6)**

My work qualifications aren't very good				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	157	610	767
	%	46.9%	48.1%	47.9%
	Adjusted Residual	-.4	.4	
Neither agree nor disagree	Count	119	363	482
	%	35.5%	28.7%	30.1%
	Adjusted Residual	2.4	-2.4	
Totally agree / Agree	Count	59	294	353
	%	17.6%	23.2%	22.0%
	Adjusted Residual	-2.2	2.2	
Total	Count	335	1267	1602
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 7.578, df = 2; p = .023				

Table 86 shows statistical significant difference between Connected and Non-Connected TCNs in the case of having good job references. Connected TCNs are more likely (51.5% agree) than Non-Connected (41.2%) to claim that they have good job references.

**Table 86: Current level of job related skills by Connected and Non-Connected (7)**

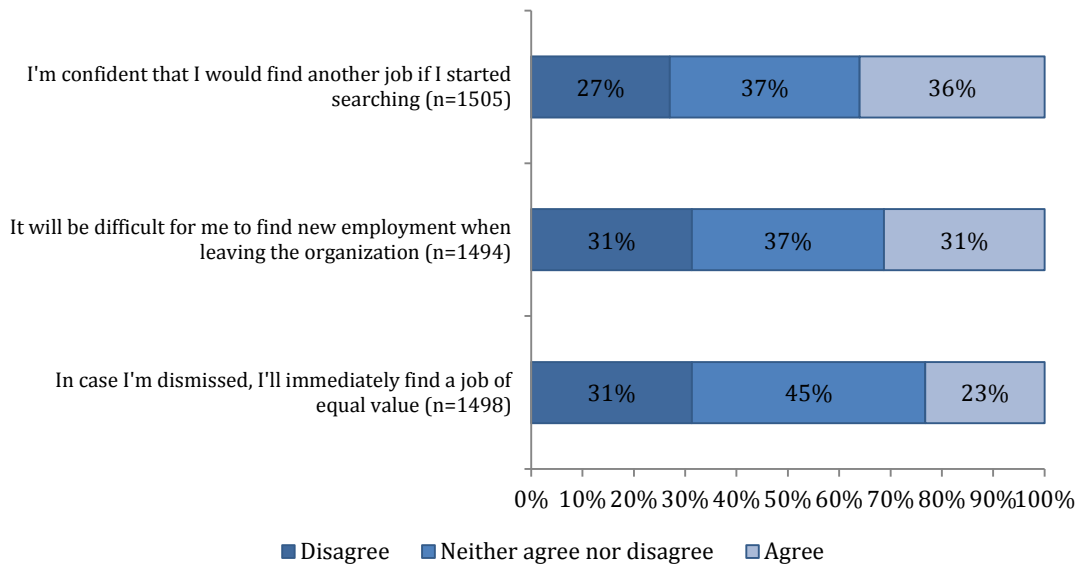
I have good job references				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	77	211	288
	%	23.0%	16.6%	17.9%
	Adjusted Residual	2.7	-2.7	
Neither agree nor disagree	Count	120	405	525
	%	35.8%	31.9%	32.7%
	Adjusted Residual	1.4	-1.4	
Totally agree / Agree	Count	138	654	792
	%	41.2%	51.5%	49.3%
	Adjusted Residual	-3.4	3.4	
Total	Count	335	1270	1605
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 12.950, df = 2; p = .002				



### 11.3 Perceived employability

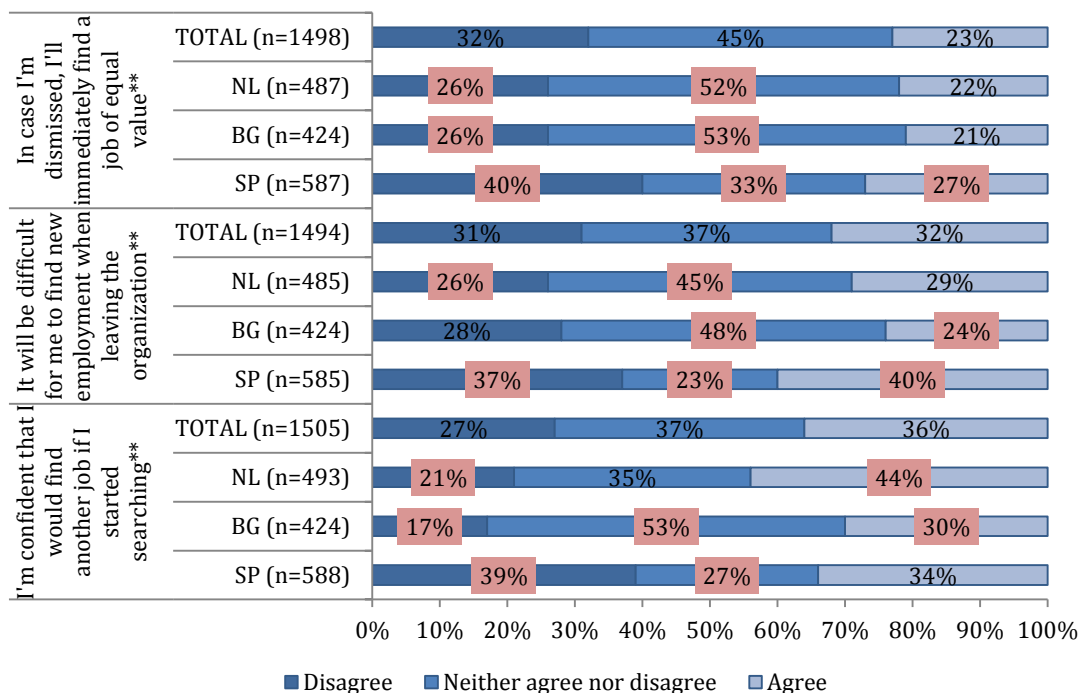
Perceived employability refers to opportunities on the internal and/or external labour market. To capture this dimension all TCNs were asked to what extent they agree with the sentences displayed in Figure 72 regarding your current employer (or past employer in case you are unemployed): 36% of the individuals are confident (agree) that they would find another job if they started searching. Nevertheless, 31% of the individuals also claimed that it would be difficult for them to find new employment when leaving the organization. Finally, 45% neither agree nor disagree about the opportunity to find a job of equal value.

**Figure 72: Perceived employability**



The results by country do not allow us to draw any systematic conclusions.

**Figure 73: Perceived employability by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Finally, the following tables reveal that Connected TCNs are more likely to have a better perception of their employability. Table 87 shows that these individuals are more likely (40.8% agree) than Non-Connected TCNs (18.6% agree) to be confident that they would find another job if they started searching.

**Table 87: Perceived employability by Connected and Non-Connected (1)**

I'm confident that I would find another job if I started searching				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	137	266	403
	%	42.4%	22.5%	26.8%
	Adjusted Residual	7.2	-7.2	
Neither agree nor disagree	Count	126	434	560
	%	39.0%	36.7%	37.2%
	Adjusted Residual	.8	-.8	
Totally agree / Agree	Count	60	482	542
	%	18.6%	40.8%	36.0%
	Adjusted Residual	-7.4	7.4	
Total	Count	323	1182	1505
	% of Total	21.5%	78.5%	100.0%
Pearson Chi-Square = 72.638, df = 2; p = .000				

Table 88 shows that there is no significant statistical difference between Connected and Non-Connected in the difficulties they have in finding a new job.

**Table 88: Perceived employability by Connected and Non-Connected (2)**

It will be difficult for me to find new employment when leaving the organization (reverse-score)				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	107	355	462
	%	33.1%	30.3%	30.9%
	Adjusted Residual	1.0	-1.0	
Neither agree nor disagree	Count	97	460	557
	%	30.0%	39.3%	37.3%
	Adjusted Residual	-3.0	3.0	
Totally agree / Agree	Count	119	356	475
	%	36.8%	30.4%	31.8%
	Adjusted Residual	2.2	-2.2	
Total	Count	323	1171	1494
	% of Total	21.6%	78.4%	100.0%
Pearson Chi-Square = 9.762, df = 2; p = .008				

Finally, Table 89 reveals that Connected TCNs (25.1% agree) are slightly more likely than Non-Connected (17.0% agree) to be confident about their possibilities of immediately finding a job of equal value if they are dismissed.

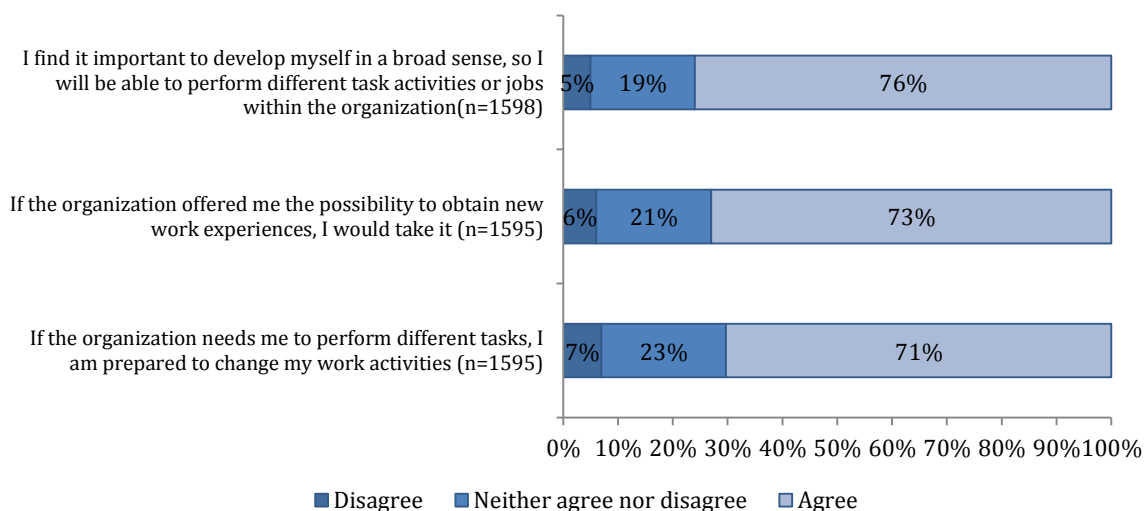
**Table 89 Perceived employability by Connected and Non-Connected (3)**

In case I'm dismissed, I'll immediately find a job of equal value				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	146	329	475
	%	45.2%	28.0%	31.7%
	Adjusted Residual	5.9	-5.9	
Neither agree nor disagree	Count	122	551	673
	%	37.8%	46.9%	44.9%
	Adjusted Residual	-2.9	2.9	
Totally agree / Agree	Count	55	295	350
	%	17.0%	25.1%	23.4%
	Adjusted Residual	-3.0	3.0	
Total	Count	323	1175	1498
	% of Total	21.6%	78.4%	100.0%
Pearson Chi-Square = 35.411, df = 2; p = .000				

### 11.4 Willingness to develop new competences or change job

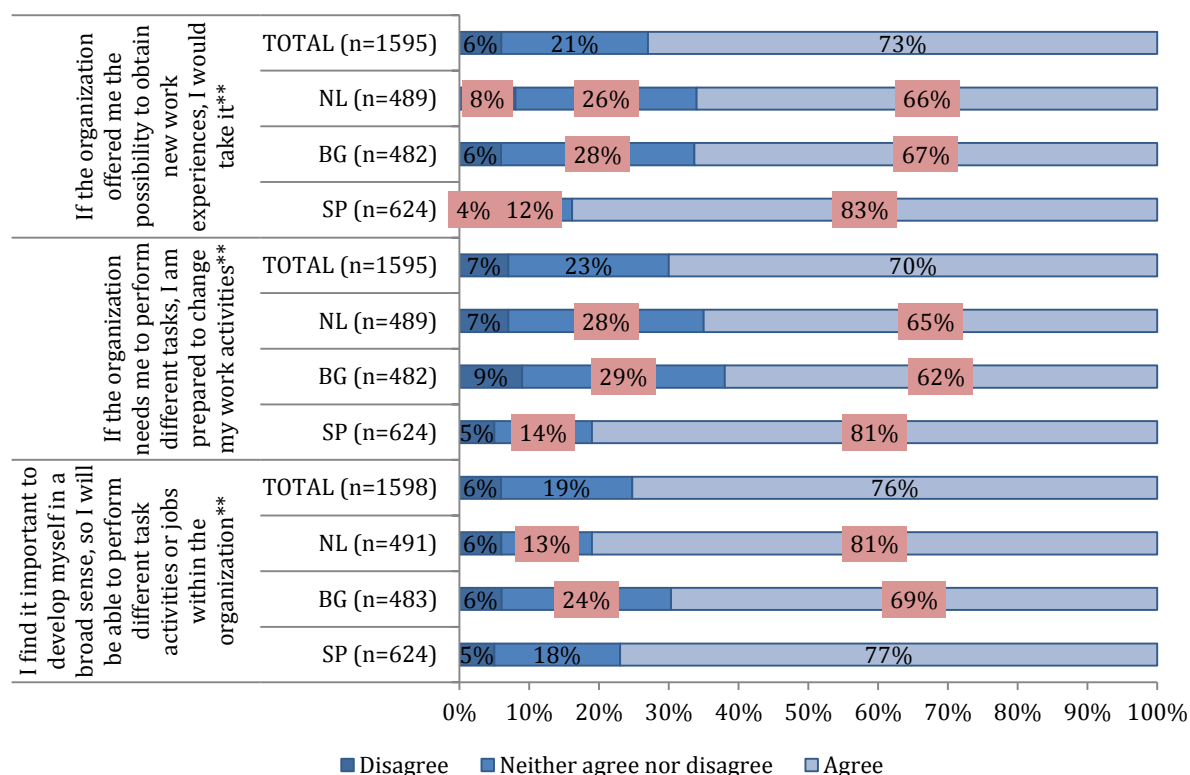
Willingness to develop new competencies or change jobs was assessed on two different scales. The first scale referred to willingness to develop competencies and consisted of three items displayed in the following figure. The results reveal that more than 76% of the respondents stated (agree) that they find it important to develop themselves in a broad sense, in order to be able to perform different task activities or jobs within the organization. Moreover, 70% of them (agree) claimed that they are prepared to change their work activities if the organisation required it.

**Figure 74: Willingness to develop new competences**



The following figure shows the results by country:

**Figure 75: Willingness to develop new competences by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The analysis of these items by Connected and Non-Connected reveals that Connected TCNs are more likely to develop new competencies. Table 90 shows that 80.5% of Connected TCNs find it important (agree) to develop themselves in a broad sense, in order to be able to perform different task activities or jobs within the organization. This percentage is 58.9% in the case of Non-Connected.

**Table 90: Willingness to develop new competences by Connected and Non-Connected (1)**

I find it important to develop myself in a broad sense, so I will be able to perform different task activities or jobs within the organization				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	45	44	89
	%	13.2%	3.5%	5.6%
	Adjusted Residual	6.9	-6.9	
Neither agree nor disagree	Count	95	201	296
	%	27.9%	16.0%	18.5%
	Adjusted Residual	5.0	-5.0	
Totally agree / Agree	Count	201	1012	1213
	%	58.9%	80.5%	75.9%
	Adjusted Residual	-8.3	8.3	
Total	Count	341	1257	1598
	% of Total	21.3%	78.7%	100.0%

Pearson Chi-Square = 82.111, df = 2; p = .000

Table 91 also reveals that Connected TCNs (72.5% agree) are more likely to perform different tasks and change work activities than Non-Connected (62.6% agree).

**Table 91: Willingness to develop new competences by Connected and Non-Connected (2)**

If the organization needs me to perform different tasks, I am prepared to change my work activities				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	43	68	111
	%	12.6%	5.4%	7.0%
	Adjusted Residual	4.6	-4.6	
Neither agree nor disagree	Count	84	277	361
	%	24.7%	22.1%	22.6%
	Adjusted Residual	1.0	-1.0	
Totally agree / Agree	Count	213	910	1123
	%	62.6%	72.5%	70.4%
	Adjusted Residual	-3.5	3.5	
Total	Count	340	1255	1595
	% of Total	21.3%	78.7%	100.0%
Pearson Chi-Square = 24.604, df = 2; p = .000				

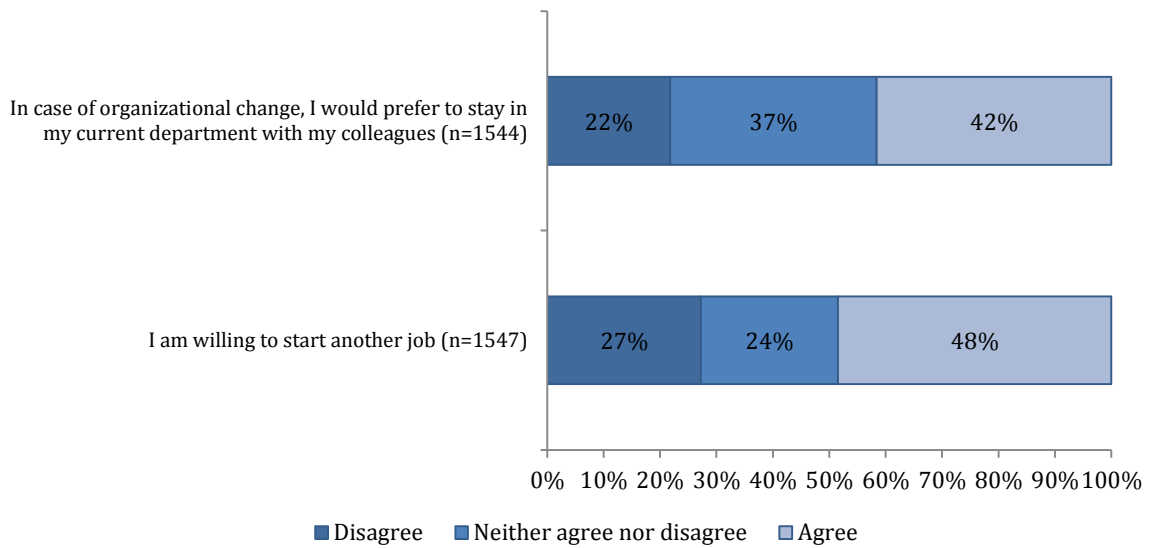
Table 92 shows the same pattern. Connected TCNs (75.5% agree) are more likely than Non-Connected (64.4% agree) to take opportunities to obtain new work experiences if the organization offered them.

**Table 92 Willingness to develop new competences by Connected and Non-Connected (3)**

If the organization offered me the possibility to obtain new work experiences, I would take it				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	38	53	91
	%	11.2%	4.2%	5.7%
	Adjusted Residual	4.9	-4.9	
Neither agree nor disagree	Count	83	255	338
	%	24.4%	20.3%	21.2%
	Adjusted Residual	1.6	-1.6	
Totally agree / Agree	Count	219	947	1166
	%	64.4%	75.5%	73.1%
	Adjusted Residual	-4.1	4.1	
Total	Count	340	1255	1595
	% of Total	21.3%	78.7%	100.00%
Pearson Chi-Square = 29.251, df = 2; p = .000				

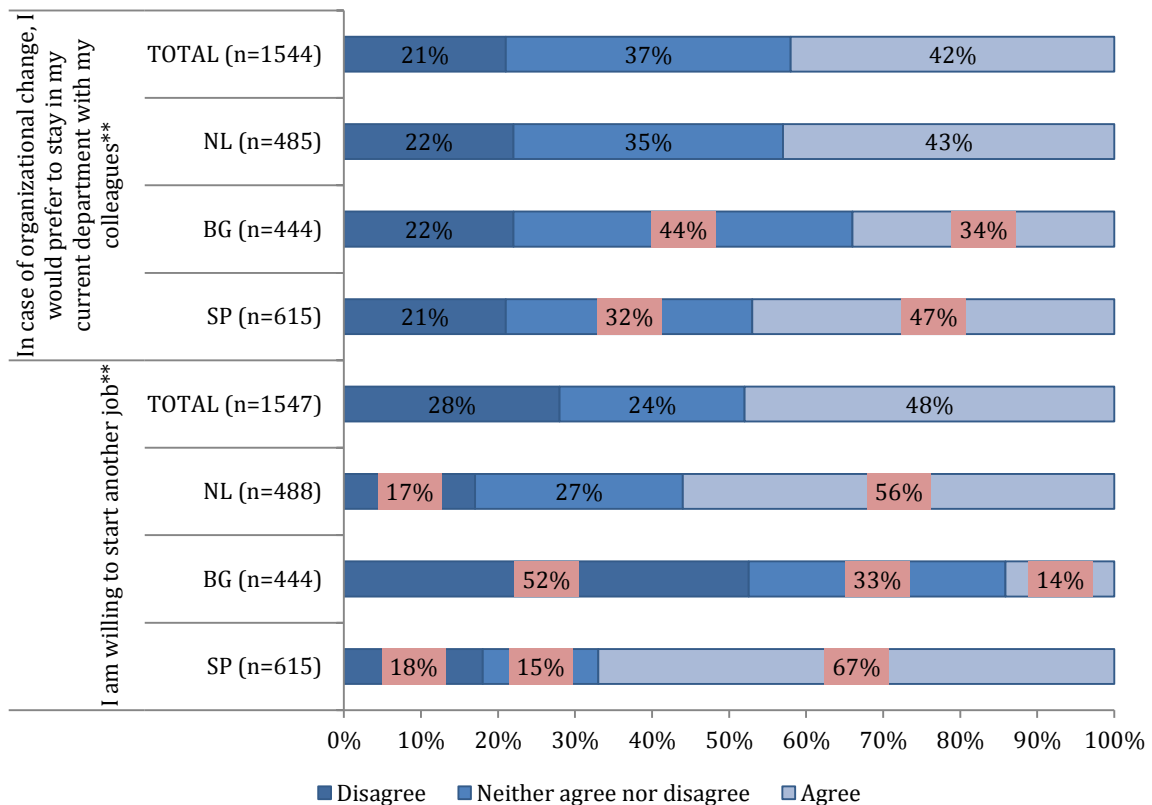
The second scale concerned willingness to change jobs or departments and was assessed using two items displayed in the following figure. Almost 50% of the participants stated (agree) that they are willing to start another job and 42% claimed (agree) that in case of organizational change, they would prefer to stay in the current department. Therefore, there is a clear dichotomy between willingness to change jobs within the company and willingness to change jobs outside the company.

**Figure 76: Willingness to change job**



The country characterization reveals that in both cases, TCNs in Spain show more willingness to change jobs

**Figure 77: Willingness to change job by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The following tables display the results by Connected and Non-Connected. Table 93 shows that Non-Connected TCNs (35.9% disagree) are less likely than Connected (25.2% disagree) to be willing to start another job.

**Table 93: Willingness to change job by Connected and Non-Connected (1)**

I am willing to start another job				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	121	305	426
	%	35.9%	25.2%	27.5%
	Adjusted Residual	3.9	-3.9	
Neither agree nor disagree	Count	53	322	375
	%	15.7%	26.6%	24.2%
	Adjusted Residual	-4.1	4.1	
Totally agree / Agree	Count	163	583	746
	%	48.4%	48.2%	48.2%
	Adjusted Residual	.1	-.1	
Total	Count	337	1210	1547
	% of Total	21.8%	78.2%	100.0%
Pearson Chi-Square = 23.840, df = 2; p = .000				

Table 94 shows that the results in this case are not statistically significant.

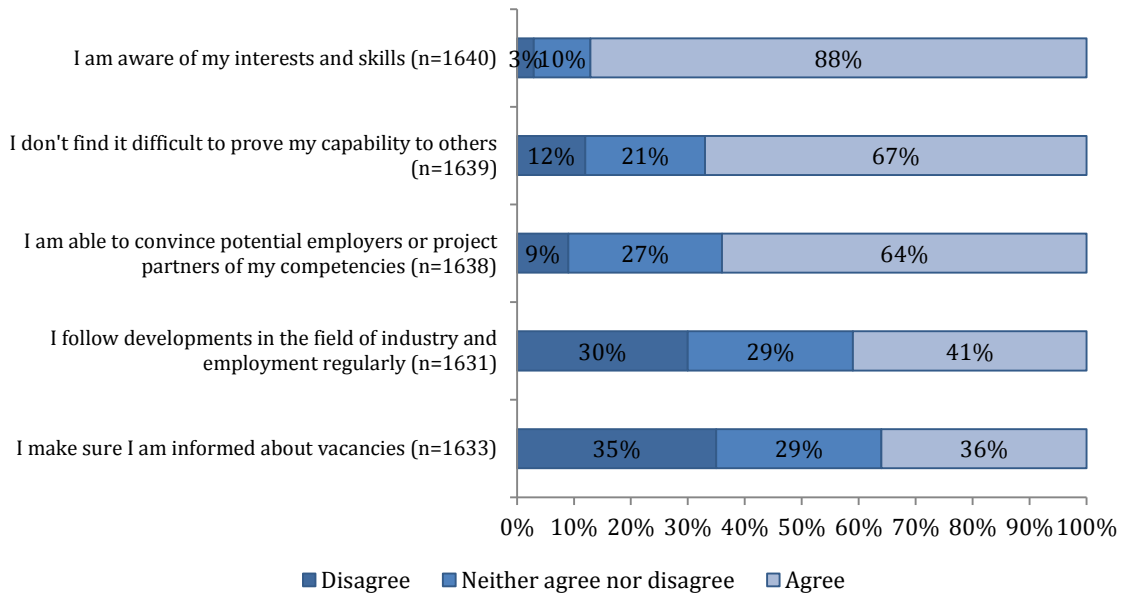
**Table 94: Willingness to change job by Connected and Non-Connected (2)**

In case of organizational change, I would prefer to stay in my current department with my colleagues				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	92	238	330
	%	27.4%	19.7%	21.4%
	Adjusted Residual	3.0	-3.0	
Neither agree nor disagree	Count	106	458	564
	%	31.5%	37.9%	36.5%
	Adjusted Residual	-2.1	2.1	
Totally agree / Agree	Count	138	512	650
	%	41.1%	42.4%	42.1%
	Adjusted Residual	-.4	.4	
Total	Count	336	1208	1544
	% of Total	21.8%	78.2%	100.0%
Pearson Chi-Square = 10.277, df = 2; p = .006				

## 11.5 Opportunity awareness and self-presentation skills

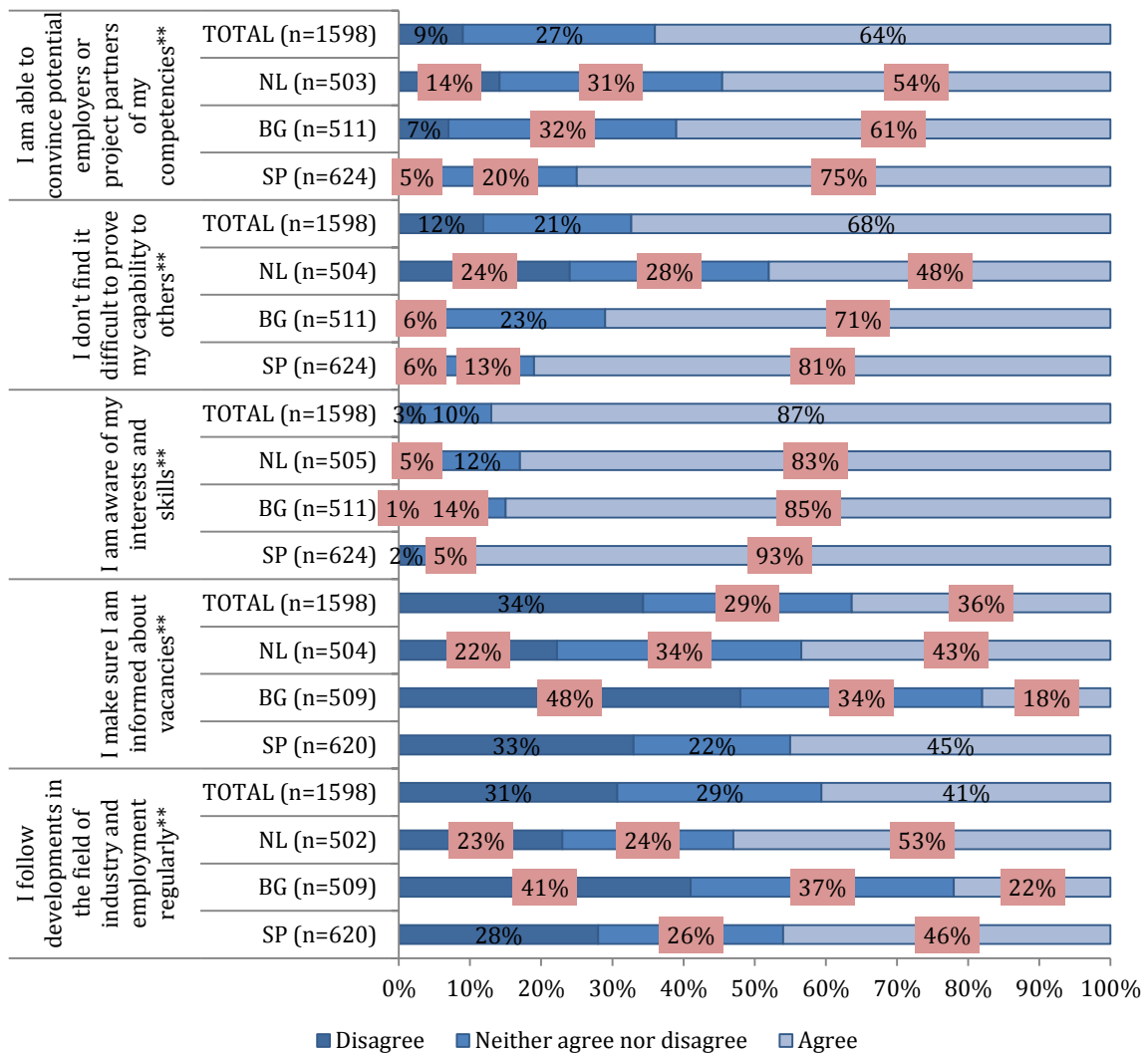
Opportunity awareness was assessed with the following sentences: I follow developments in the field of industry and employment regularly; I make sure I am informed about vacancies and I am aware of my interests and skills. Self-presentation skill was assessed using two sentences: I don't find it difficult to prove my capability to others and I am able to convince potential employers or project partners of my competencies. The following figure captures to what extent individuals agree or disagree with these sentences, in order to show Opportunity awareness and self-presentation skill. More than half of the participants stated that they are able to convince potential employers or project partners of their competencies and do not find it difficult to prove their capabilities to others. Moreover, more than 80% of the third country nationals interviewed are aware of their interests and skills.

**Figure 78: Opportunity awareness and self-presentation skill**



The following figure presents opportunity awareness and self-presentation skills items by country.

**Figure 79: Opportunity awareness and self-presentation skill by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0



The analysis of these items by Connected and Non-Connected reveals that Connected TCNs are more aware of opportunities and have better self-presentations skill. Table 95 shows that Connected TCNs are more likely (44.6% agree) than Non-Connected (25.7% agree) to follow the developments in the field of industry and employment where they work.

**Table 95: Opportunity awareness and self-presentation skill by Connected and Non-connected (1)**

I follow developments in the field of industry and employment				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	173	327	500
	%	50.6%	25.4%	30.7%
	Adjusted Residual	9.0	-9.0	
Neither agree nor disagree	Count	81	387	468
	%	23.7%	30.0%	28.7%
	Adjusted Residual	-2.3	2.3	
Totally agree / Agree	Count	88	575	663
	%	25.7%	44.6%	40.6%
	Adjusted Residual	-6.3	6.3	
Total	Count	342	1289	1631
	% of Total	21%	79%	100.0%
Pearson Chi-Square = 83.542, df = 2; p = .000				

Table 96 also suggest that Connected TCNs are more aware about the opportunities in the labour market: 39.0% of Connected stated (agree) that they make sure they are informed about vacancies versus 25.7% of Non-Connected.

**Table 96: Opportunity awareness and self-presentation skill by Connected and Non-connected (2)**

I make sure I am informed about vacancies				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	182	378	560
	%	53.2%	29.3%	34.3%
	Adjusted Residual	8.3	-8.3	
Neither agree nor disagree	Count	72	409	481
	%	21.1%	31.7%	29.5%
	Adjusted Residual	-3.8	3.8	
Totally agree / Agree	Count	88	504	592
	%	25.7%	39.0%	36.3%
	Adjusted Residual	-4.6	4.6	
Total	Count	342	1291	1633
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 68.753, df = 2; p = .000				

Table 97 also reveals that Connected TCNs are more likely (89.3% agree) than Non-Connected (80.0% agree) to be aware of their own interest and skills.

**Table 97: Opportunity awareness and self-presentation skill by Connected and Non-connected (3)**

I am aware of my interests and skills				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	25	21	46
	%	7.2%	1.6%	2.8%
	Adjusted Residual	5.6	-5.6	
Neither agree nor disagree	Count	44	117	161
	%	12.8%	9.0%	9.8%
	Adjusted Residual	2.1	-2.1	
Totally agree / Agree	Count	276	1157	1433
	%	80.0%	89.3%	87.4%
	Adjusted Residual	-4.6	4.6	
Total	Count	345	1295	1640
	% of Total	21.0%	79.0%	100.0%
Pearson Chi-Square = 37.288, df = 2; p = .000				

Table 98 displays the results related with self-presentation skills. Connected TCNs seem to be slightly more confident (69.2%) than Non Connected (62.3%) that they can prove their capabilities to others.

**Table 98: Opportunity awareness and self-presentation skill by Connected and Non-connected (4)**

I don't find it difficult to prove my capability to others				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	53	139	192
	%	15.4%	10.7%	11.7%
	Adjusted Residual	2.4	-2.4	
Neither agree nor disagree	Count	77	260	337
	%	22.3%	20.1%	20.6%
	Adjusted Residual	.9	-.9	
Totally agree / Agree	Count	215	895	1110
	%	62.3%	69.2%	67.7%
	Adjusted Residual	-2.4	2.4	
Total	Count	345	1294	1639
	% of Total	21.0%	79.0%	100.0%
Pearson Chi-Square = 7.506, df = 2; p = .026				

Table 99 shows that this confidence is even broader when convincing potential employers or project partners about one’s competencies: 68.3% of Connected TCNs agree, versus 48.8% of Non-Connected TCNs.

**Table 99: Opportunity awareness and self-presentation skill by Connected and Non-connected (4)**

I am able to convince potential employers or project partners of my competencies				
		Connected		Total
		No	Yes	
Totally disagree / Disagree	Count	59	84	143
	%	17.1%	6.5%	8.7%
	Adjusted Residual	6.2	-6.2	
Neither agree nor disagree	Count	117	326	443
	%	33.9%	25.2%	27.0%
	Adjusted Residual	3.2	-3.2	
Totally agree / Agree	Count	169	883	1052
	%	49.0%	68.3%	64.2%
	Adjusted Residual	-6.6	6.6	
Total	Count	345	1293	1638
	% of Total	21.1%	78.9%	100.0%

Pearson Chi-Square = 58.509, df = 2; p = .000

## 11.6 Training

Finally, individuals were asked if they have participated in training supported by their current employer (or past employer if they are unemployed) during the past 12 months. Just 16% of the respondents stated that they have received Training in job-related skills; 8% of them have received Training in generic skills and just 5% have received Leadership training. Therefore only a minority of third country nationals have been trained.

**Figure 80: Have you participated in training supported by your current employer (or past employer in case you are unemployed) during the past 12 months?**

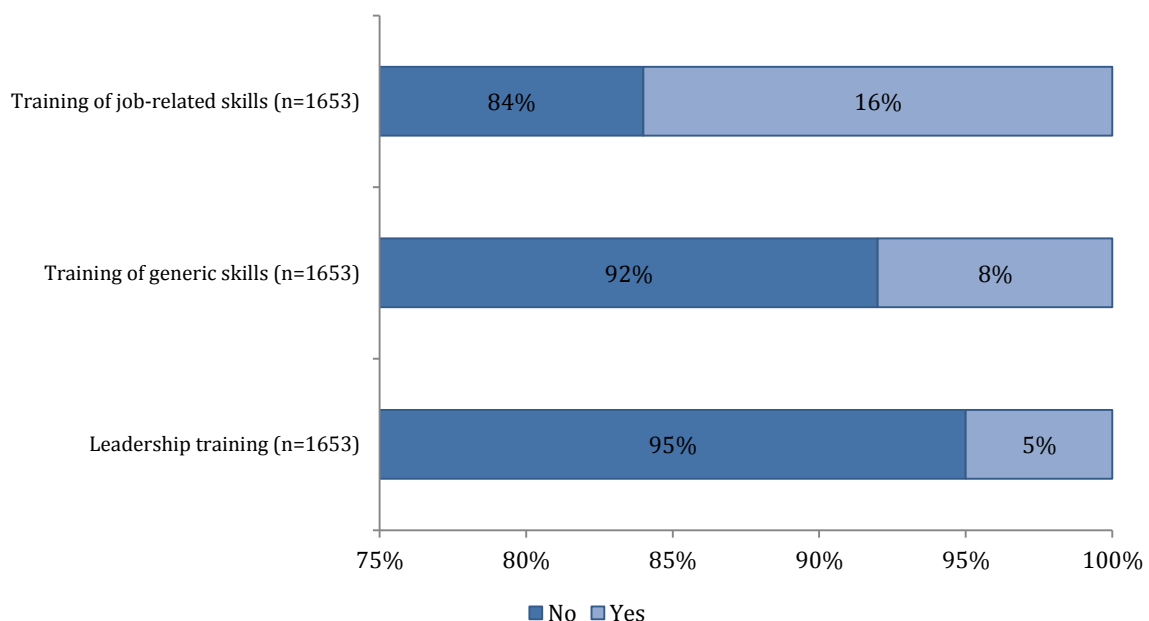
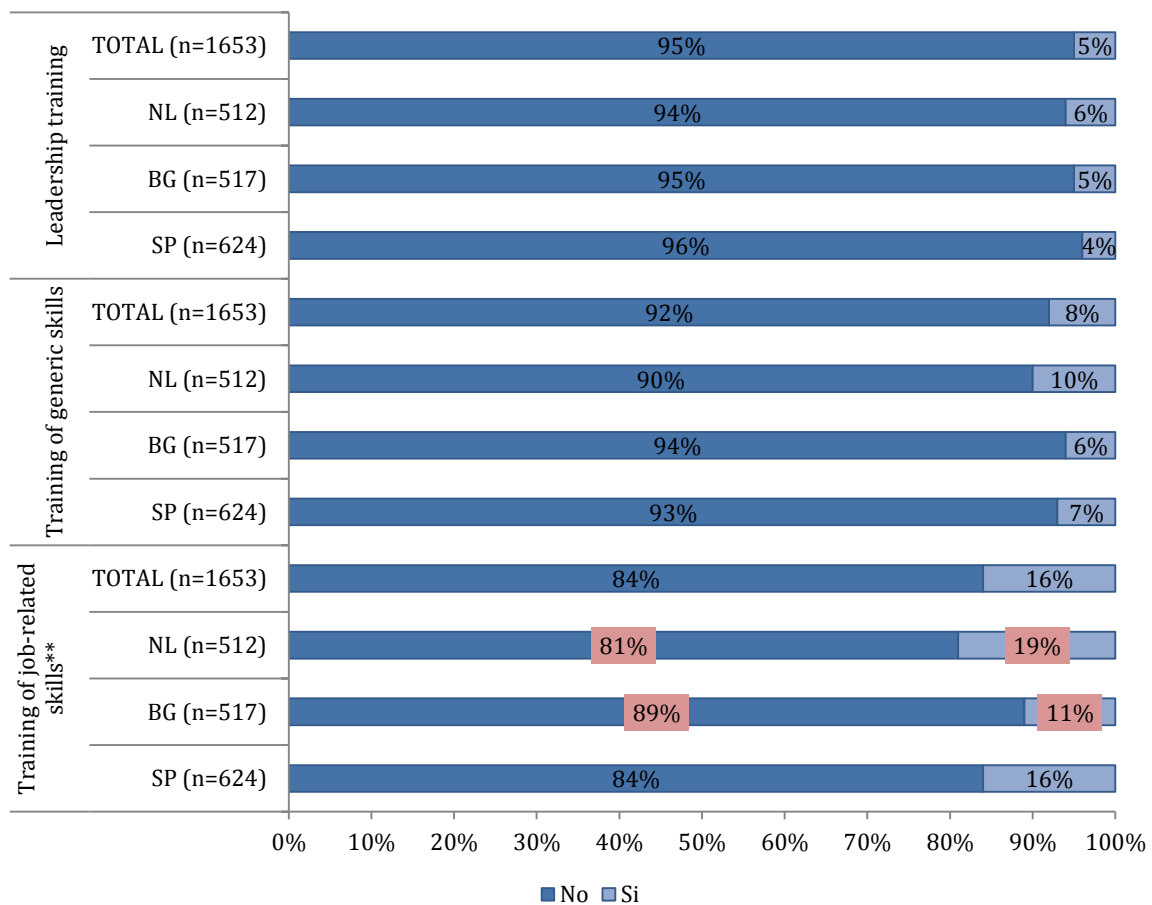


Figure 81 displays the results by country.

**Figure 81: Have you participated in training supported by your current employer (or past employer in case you are unemployed) during the past 12 months? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

In the case of Connected and Non-Connected we have identified the same trend as before, even though only a minority of third country nationals have been trained. Table 100 reveals that Connected TCNs (17.3% agree) are more likely to participate in training activities of job-related skills supported by their employers than Non-Connected (9.2%).

**Table 100: Have you participated in training supported by your current employer (or past employer in case you are unemployed) during the past 12 months? by Connected and Non-connected (1)**

		Training of job-related skills		Total
		No	Yes	
No	Count	314	1081	1395
	%	90.8%	82.7%	84.4%
	Adjusted Residual	3.7	-3.7	
Yes	Count	32	226	258
	%	9.2%	17.3%	15.6%
	Adjusted Residual	-3.7	3.7	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100%

Pearson Chi-Square = 13.436, df = 1; p = .000

This difference is also identified in the case of training in generic skills. Table 101 shows that Connected TCNs (9.0% agree) are more likely to receive this type of training than Non-Connected (3.8% agree).

**Table 101: Have you participated in training supported by your current employer (or past employer in case you are unemployed) during the past 12 months? by Connected and Non-connected (2)**

Training of generic skills				
		Connected		Total
		No	Yes	
No	Count	333	1190	1523
	%	96.2%	91.0%	92.1%
	Adjusted Residual	3.2	-3.2	
Yes	Count	13	117	130
	%	3.8%	9%	7.9%
	Adjusted Residual	-3.2	3.2	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 10.188, df = 1; p = .001				

There is no significant statistical difference in the case of leadership training (see Table 102)

**Table 102: Have you participated in training supported by your current employer (or past employer in case you are unemployed) during the past 12 months? by Connected and Non-connected (3)**

Leadership training				
		Connected		Total
		No	Yes	
No	Count	338	1233	1571
	%	97.7%	94.3%	95.0%
	Adjusted Residual	2.6	-2.6	
Yes	Count	8	74	82
	%	2.3%	5.7%	5.0%
	Adjusted Residual	-2.6	2.6	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 6.511, df = 1; p = .011				

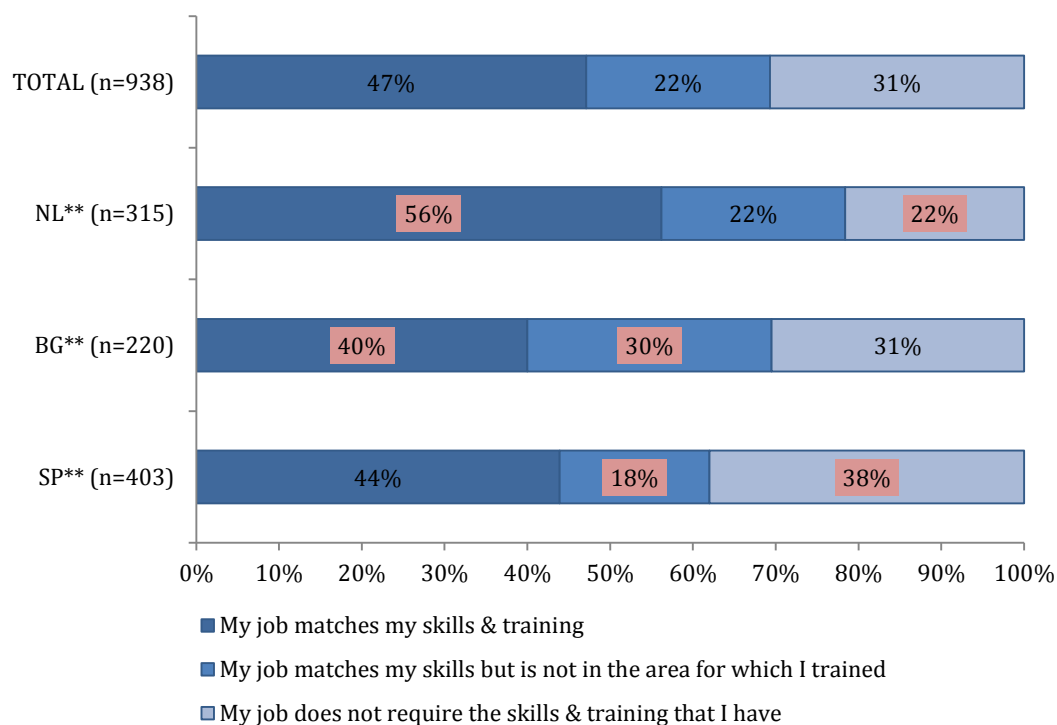
## 12. Annex 6: Results of integration

### 12.1 Labour market

Almost half the TCNs in the labour market (47%) claimed that their jobs matched their skills and training. 22% stated that their jobs match their skills but not in the area for which they were trained and 31% answered that their jobs do not require the skills and training that they have.

TCNs in the Netherlands are more likely to have a job that matches their skills (56%) than in Bulgaria (40%). TCNs in Spain are more likely to have a job that does not require their skills (38%) compared to the Netherlands (22%).

**Figure 82: Do you think that your main job here in (country) uses all the skills that you obtained in your training and work life**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Table 103 shows that there is no significant statistical difference between Connected and Non Connected TCNs.

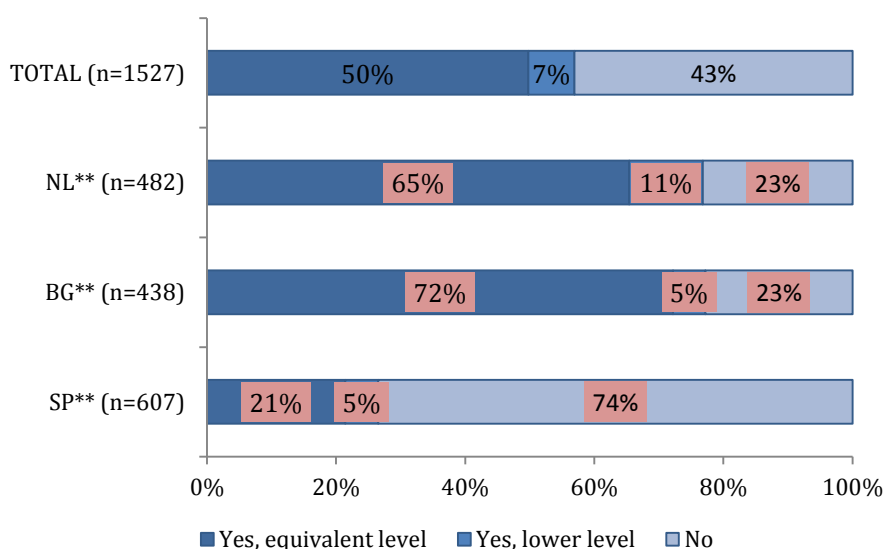
**Table 103: Do you think that your main job here in (country) uses all the skills that you obtained in your training and work life by Connected and Non-Connected**

		Connected		Total
		No	Yes	
My job matches my skills & training	Count	75	367	442
	%	45.5 %	47.5 %	47.1%
	Adjusted Residual	-0.5	0.5	
My job matches my skills but is not in the area for which I was trained	Count	33	175	208
	%	20.0 %	22.6 %	22.2%
	Adjusted Residual	-0.7	0.7	
My job does not require the skills & training that I have.	Count	57	231	288
	%	34.5 %	29.9 %	30.7%
	Adjusted Residual	1.2	-1.2	
Total	Count	165	773	938
	% of Total	17.6 %	82.4 %	100.0 %

Pearson Chi-Square = 1.508, df = 2; p = .471

All TCNs surveyed were asked whether their educational qualifications were recognized in the country where they currently live. 50% of them stated that their qualifications were recognized at equivalent level; 7% at lower level and 43% said they were not recognized. Bulgaria and the Netherlands have the highest percentage of equivalent level recognition, while Spain has the lowest level.

**Figure 83: Educational qualification recognized in the country where you currently live by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The following table reveals that Connected TCNs are more likely to have an equivalent level of education qualification recognized.

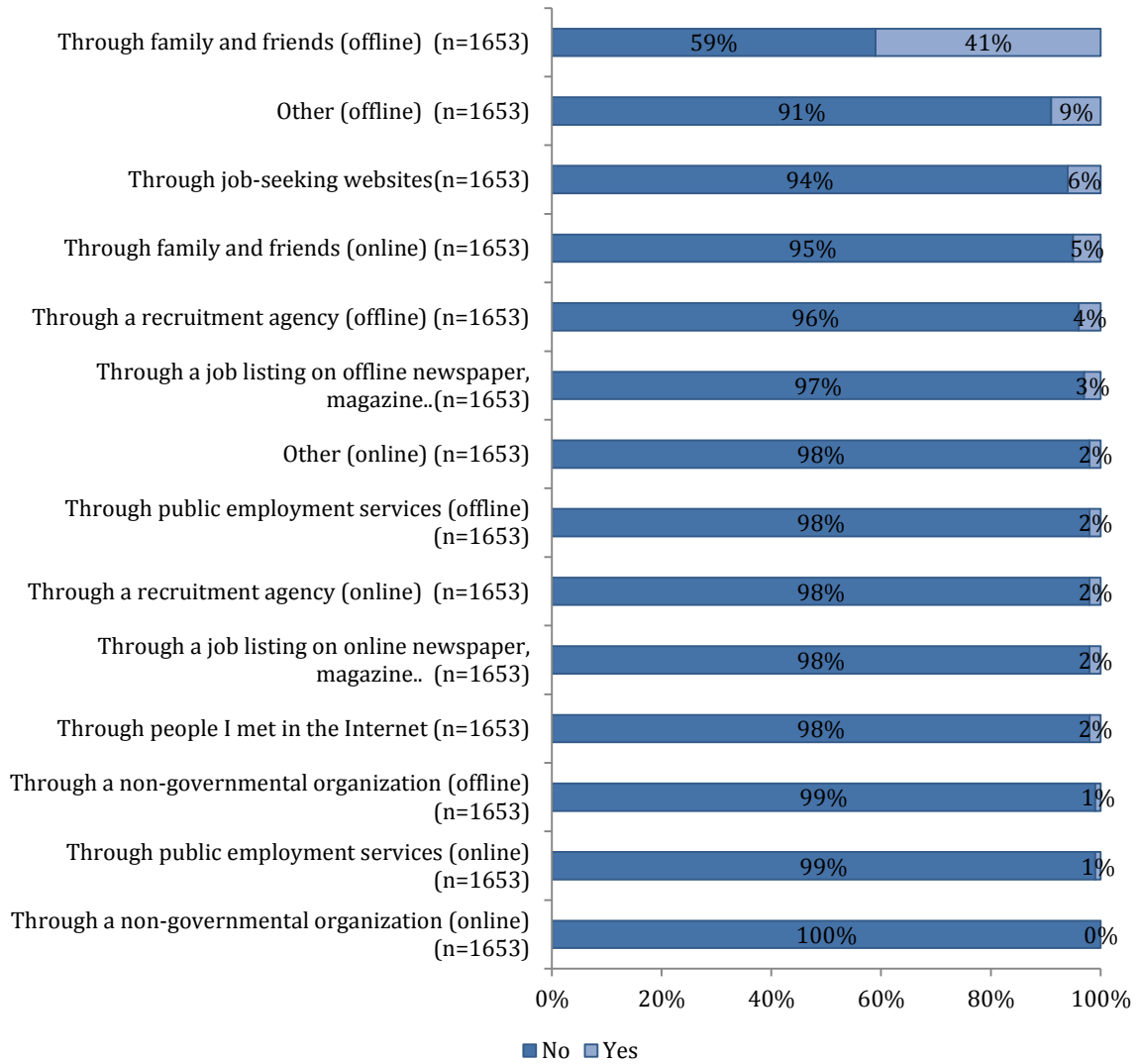
**Table 104: Educational qualification recognized in the country where you currently live by Connected and Non-connected**

		Connected		Total
		No	Yes	
Yes, equivalent	Count	72	689	761
	%	23.5%	56.5%	49.8%
	Adjusted Residual	-10.3	10.3	
Yes, lower level	Count	15	93	108
	%	4.9%	7.6%	7.1%
	Adjusted Residual	-1.7	1.7	
No	Count	220	438	658
	%	71.7%	35.9%	43.1%
	Adjusted Residual	11.3	-11.3	
Total	Count	307	1220	1527
	% of Total	20.0%	80.0%	100.0%
Pearson Chi-Square = 127.713, df = 2; p = .000				

The following figure shows how the participants found their current or their last job. It is clear from the results that the main channel for getting jobs is through family and friends (41%). Other channels are used by less than 6% of the individuals.

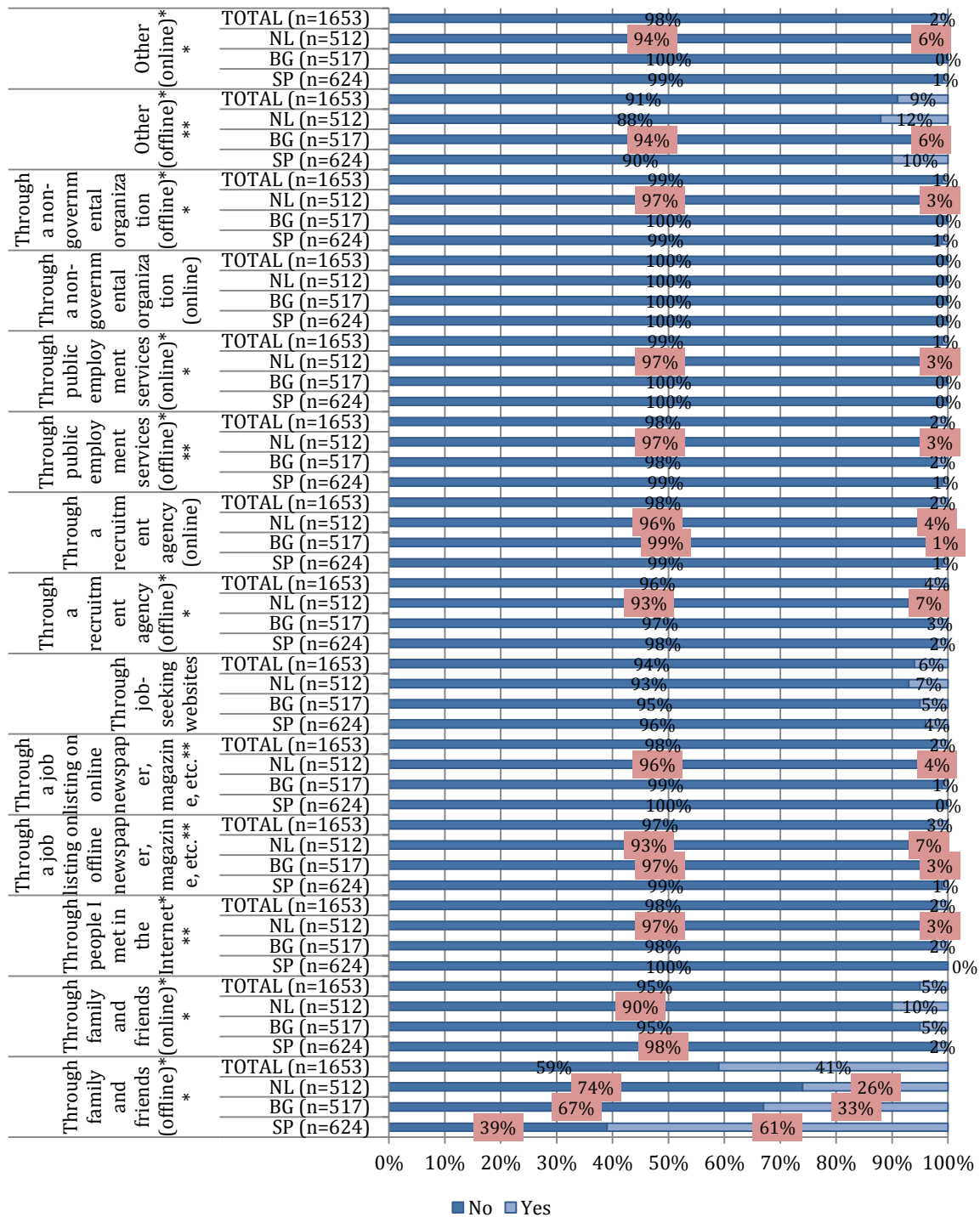


**Figure 84: How did you arrange/get your current or last job in this country?**



The following figure reports the difference between countries.

**Figure 85: How did you arrange/get your current or last job in this country? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

As could be expected, the non-connected TCNs are more likely to arrange/get jobs through family and friends (offline) than Connected TCNs (see Table 105).

**Table 105: How did you arrange/get your current or last job in this country? by Connected and Non-connected (1)**

Through family and friends (offline)				
		Connected		Total
		No	Yes	
No	Count	154	814	968
	%	44.5%	62.3%	58.6%
	Adjusted Residual	-6.0	6.0	
Yes	Count	192	493	685
	%	55.5%	37.7%	41.4%
	Adjusted Residual	6.0	-6.0	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 35.604, df = 1; p = .000				

Connected TCNs are more likely to get a job through family and friends through online connections (see Table 106) and through job-seeking websites (see Table 107).

**Table 106: How did you arrange/get your current or last job in this country? by Connected and Non-connected (2)**

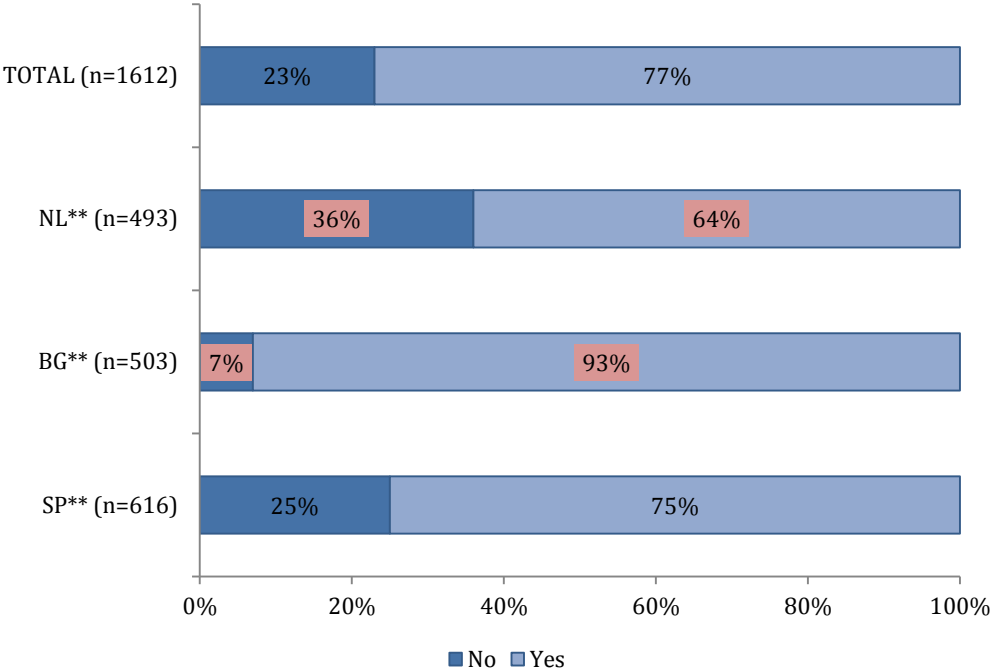
Through family and friends (online)				
		Connected		Total
		No	Yes	
No	Count	342	1223	1565
	%	98.8%	93.6%	94.7%
	Adjusted Residual	3.9	-3.9	
Yes	Count	4	84	88
	%	1.2%	6.4%	5.3%
	Adjusted Residual	-3.9	3.9	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 15.080, df = 1; p = .000				

**Table 107: How did you arrange/get your current or last job in this country? by Connected and Non-connected (3)**

Through job-seeking websites				
		Connected		Total
		No	Yes	
No	Count	345	1216	1561
	%	99.7%	93.0%	94.4%
	Adjusted Residual	4.8	-4.8	
Yes	Count	1	91	92
	%	.3%	7.0%	5.6%
	Adjusted Residual	-4.8	4.8	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 23.089, df = 1; p = .000				

TCNs were asked if they have taken any courses to improve their knowledge or skills for work: 77% of third country nationals have not taken courses of this kind. This percentage is lower in the case of the Netherlands (64%) and higher in the case of Bulgaria (93%).

**Figure 86: During the last 12 months, have you taken any course to improve your knowledge or skills for work? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Table 108 reveals that Connected TCNs (25.4%) are more likely than Non-Connected (12.8%) to take courses to improve their knowledge or skills for work.

**Table 108: During the last 12 months, have you taken any course to improve your knowledge or skills for work? by Connected and Non-connected**

		Connected		Total
		No	Yes	
No	Count	293	952	1245
	%	87.2%	76.5%	77.2%
	Adjusted Residual	4.9	-4.9	
Yes	Count	43	324	367
	%	12.8%	25.4%	22.8%
	Adjusted Residual	-4.9	4.9	
Total	Count	336	1277	1612
	% of Total	20.8%	79.2%	100.0%
Pearson Chi-Square = 23.992, df = 1; p = .000				

Beyond improving knowledge or skills for work, learning the language of the country where third country nationals currently live is a key dimension of integration. More than half the third country nationals surveyed (67%) have taken this type of course. Moreover, connected third country nationals are more likely to participate in this type of courses.

**Table 109: Have you taken any courses to learn the language of the country where you currently live? by Connected and Non-connected**

		Connected		Total
		No	Yes	
No	Count	242	744	986
	%	70.6%	58.1%	60.8%
	Adjusted Residual	4.2	-4.2	
Yes	Count	101	536	637
	%	<b>29.4%</b>	<b>41.9%</b>	39.2%
	Adjusted Residual	-4.3	4.3	
Total	Count	343	1280	1623
	% of Total	21.1%	78.9%	100.0%
Pearson Chi-Square = 18.204, df = 1; p = .000				

Finally, respondents were asked to rate, from 1 = minimum, to 5 = maximum, nine different skills that could help them to improve their work situation. The maximum rate was given to Language (country) by 84% of the individuals, followed by Sense of initiative and entrepreneurship (81%).

**Figure 87: How much do you think that the following skills have helped you / can help you to improve your work situation?**

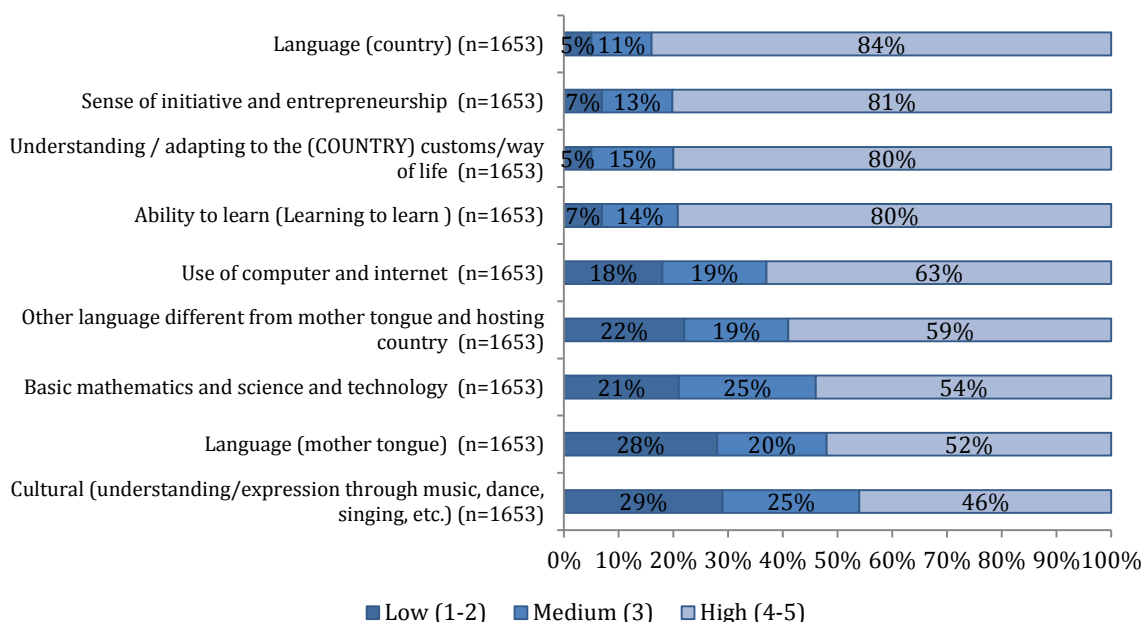
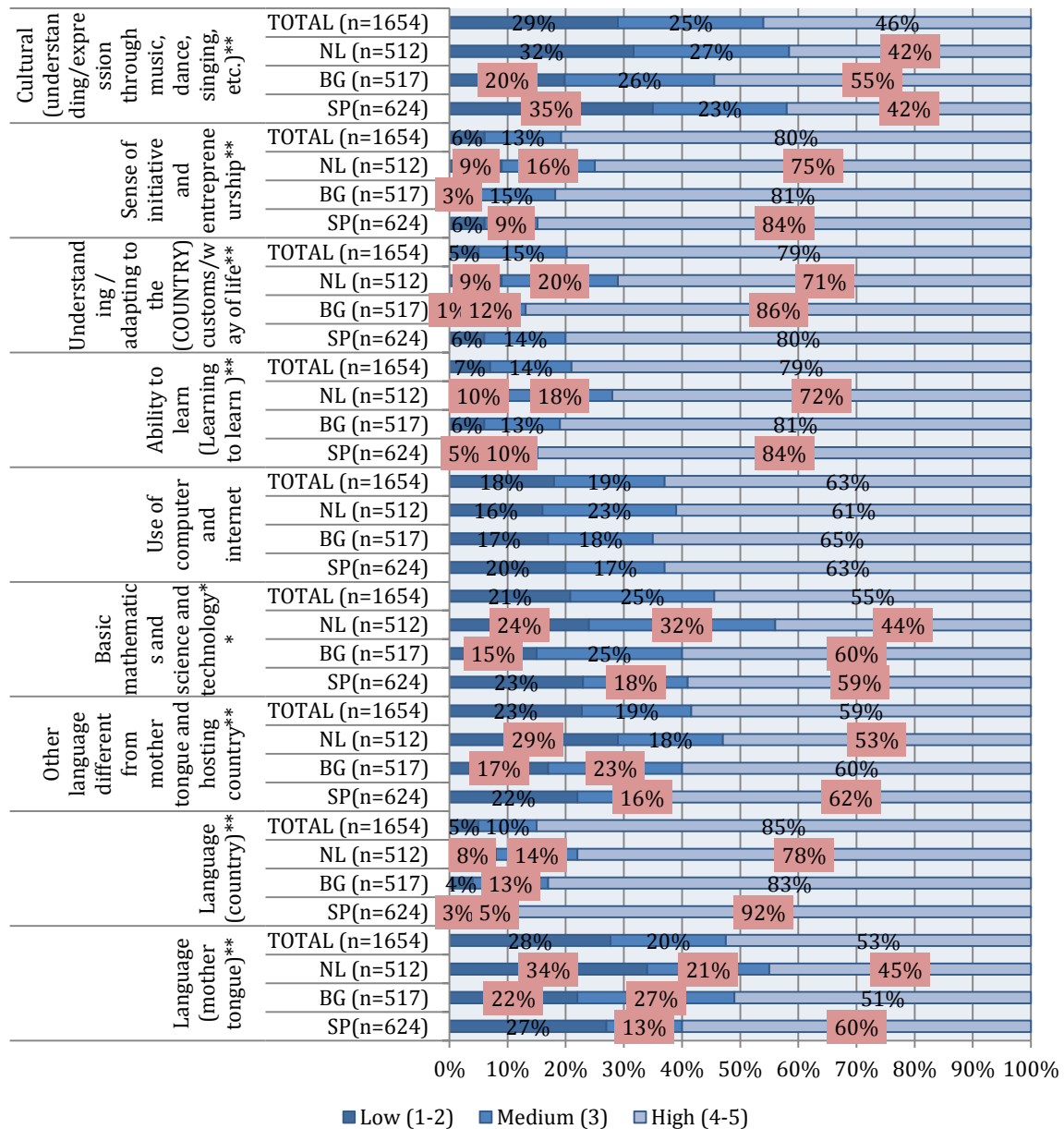


Figure 88 shows the distribution by country.

**Figure 88: How much do you think that the following skills have helped you / can help you to improve your work situation? by Country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The following tables show the results by Connected and Non-Connected TCNs and they reveal that Connected TCNs are more likely to value all the mentioned skills.

**Table 110: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (1)**

Language (mother tongue)				
		Connected		Total
		No	Yes	
Low (1-2)	Count	127	333	460
	%	36.7%	25.5%	27.8%
	Adjusted Residual	4.1	-4.1	
Medium (3)	Count	61	264	325
	%	17.6%	20.2%	19.7%
	Adjusted Residual	-1.1	1.1	
High (4-5)	Count	158	710	868
	%	45.7%	54.3%	52.5%
	Adjusted Residual	-2.9	2.9	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 17.215, df = 2; p = .000				

**Table 111: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (2)**

Language (country)				
		Connected		Total
		No	Yes	
Low (1-2)	Count	29	51	80
	%	8.4%	3.9%	4.8%
	Adjusted Residual	3.5	-3.5	
Medium (3)	Count	37	135	172
	%	10.7%	10.3%	10.4%
	Adjusted Residual	.2	-.2	
High (4-5)	Count	280	1121	1401
	%	80.9%	85.8%	84.8%
	Adjusted Residual	-2.2	2.2	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 12.135, df = 2; p = .002				

**Table 112: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (3)**

Other language different from mother tongue and hosting country				
		Connected		Total
		No	Yes	
Low (1-2)	Count	113	262	375
	%	32.7%	20.0%	22.7%
	Adjusted Residual	5.0	-5.0	
Medium (3)	Count	86	224	310
	%	24.9%	17.1%	18.8%
	Adjusted Residual	3.3	-3.3	
High (4-5)	Count	147	821	968
	%	42.5%	62.8%	58.6%
	Adjusted Residual	-6.8	6.8	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 47.980, df = 2; p = .000				

**Table 113: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (4)**

Basic mathematics and science and technology				
		Connected		Total
		No	Yes	
Low (1-2)	Count	113	231	344
	%	32.7%	17.7%	20.8%
	Adjusted Residual	6.1	-6.1	
Medium (3)	Count	90	317	407
	%	26.0%	24.3%	24.6%
	Adjusted Residual	.7	-.7	
High (4-5)	Count	143	759	902
	%	41.3%	58.1%	54.6%
	Adjusted Residual	-5.6	5.6	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 43.961, df = 2; p = .000				

**Table 114: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (5)**

Use of computer and internet				
		Connected		Total
		No	Yes	
Low (1-2)	Count	182	115	297
	%	52.6%	8.8%	18.0%
	Adjusted Residual	18.9	-18.9	
Medium (3)	Count	78	240	318
	%	22.5%	18.4%	19.2%
	Adjusted Residual	1.8	-1.8	
High (4-5)	Count	86	952	1038
	%	24.9%	72.8%	62.8%
	Adjusted Residual	-16.4	16.4	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 394.932, df = 2; p = .000				

**Table 115: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (6)**

Ability to learn (Learning to learn )				
		Connected		Total
		No	Yes	
Low (1-2)	Count	55	59	114
	%	15.9%	4.5%	6.9%
	Adjusted Residual	7.4	-7.4	
Medium (3)	Count	80	145	225
	%	23.1%	11.1%	13.6%
	Adjusted Residual	5.8	-5.8	
High (4-5)	Count	211	1103	1314
	%	61.0%	84.4%	79.5%
	Adjusted Residual	-9.6	9.6	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 99.322, df = 2; p = .000				



**Table 116: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (7)**

Understanding / adapting to the (COUNTRY) customs/way of life				
		Connected		Total
		No	Yes	
Low (1-2)	Count	36	53	89
	%	10.4%	4.1%	5.4%
	Adjusted Residual	4.7	-4.7	
Medium (3)	Count	72	180	252
	%	20.8%	13.8%	15.2%
	Adjusted Residual	3.2	-3.2	
High (4-5)	Count	238	1074	1312
	%	68.8%	82.2%	79.4%
	Adjusted Residual	-5.5	5.5	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 35.549, df = 2; p = .000				

**Table 117: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (8)**

Sense of initiative and entrepreneurship				
		Connected		Total
		No	Yes	
Low (1-2)	Count	44	58	102
	%	12.7%	4.4%	6.2%
	Adjusted Residual	5.7	-5.7	
Medium (3)	Count	68	155	223
	%	19.7%	11.9%	13.5%
	Adjusted Residual	3.8	-3.8	
High (4-5)	Count	234	1094	1328
	%	67.6%	83.7%	80.3%
	Adjusted Residual	-6.7	6.7	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 51.505, df = 2; p = .000				

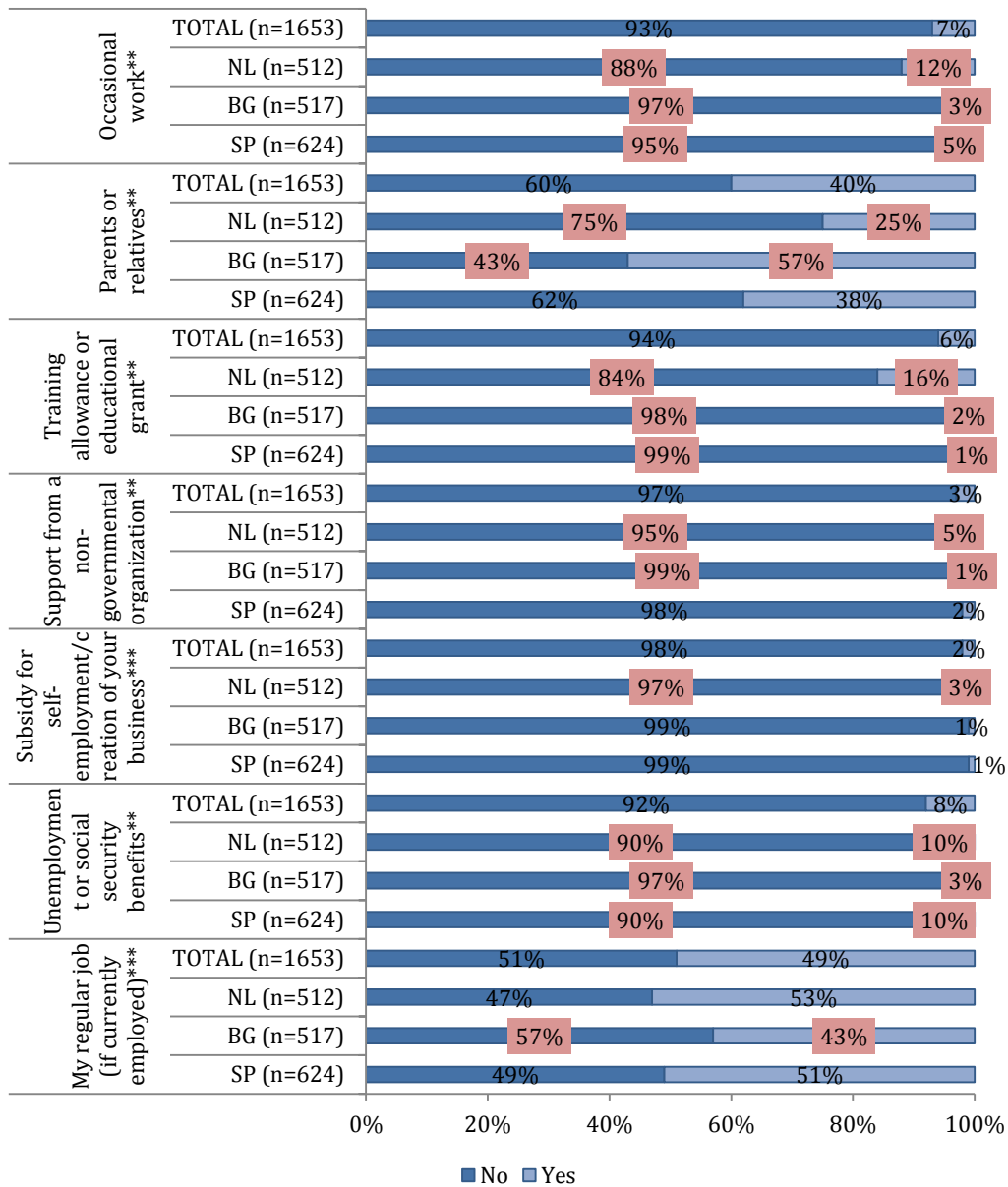
**Table 118: How much do you think that the following skills have helped you / can help you to improve your work situation? by Connected and Non-Connected (9)**

Cultural (understanding/expression through music, dance, singing, etc.)				
		Connected		Total
		No	Yes	
Low (1-2)	Count	115	366	481
	%	33.2%	28.0%	29.1%
	Adjusted Residual	1.9	-1.9	
Medium (3)	Count	82	333	415
	%	23.7%	25.5%	25.1%
	Adjusted Residual	-.7	.7	
High (4-5)	Count	149	608	757
	%	43.1%	46.5%	45.8%
	Adjusted Residual	-1.1	1.1	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 3.633, df = 2; p = .150				

## 12.2 Social Inclusion

Main source of income in the family was included in the questionnaire as a proxy for social inclusion. Almost a half of third country nationals stated that their regular jobs are the main source of income while 40% said their parents or relatives are the main source. The rest of the sources were selected by around 10% of the individuals.

**Figure 89: What are the main sources of income in your family, including yours?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Finally, Connected TCNs are more likely than Non Connected to have their regular jobs as their main source of income and are less likely to claim Unemployment or social security benefits.

**Table 119: What are the main sources of income in your family, including yours? by Connected and Non-Connected (1)**

My regular job (if currently employed)				
		Connected		Total
		No	Yes	
No	Count	202	641	843
	%	58.4%	49.0%	51.0%
	Adjusted Residual	3.1	-3.1	
Yes	Count	144	666	810
	%	41.6%	51.0%	49.0%
	Adjusted Residual	-3.1	3.1	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 9.546, df = 1; p = .002				

**Table 120: What are the main sources of income in your family, including yours? by Connected and Non-Connected (2)**

Unemployment or social security benefits				
		Connected		Total
		No	Yes	
No	Count	293	1231	1524
	%	84.7%	94.2%	92.2%
	Adjusted Residual	-5.9	5.9	
Yes	Count	53	76	129
	%	15.3%	5.8%	7.8%
	Adjusted Residual	5.9	-5.9	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 34.338, df = 1; p = .002				

**Table 121: What are the main sources of income in your family, including yours? by Connected and Non-Connected (3)**

Subsidy for self-employment/creation of your business				
		Connected		Total
		No	Yes	
No	Count	341	1287	1628
	%	98.6%	98.5%	98.5%
	Adjusted Residual	.1	-.1	
Yes	Count	5	20	25
	%	1.4%	1.5%	1.5%
	Adjusted Residual	-.1	.1	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 0.13, df = 1; p = .908				

**Table 122: What are the main sources of income in your family, including yours? by Connected and Non-Connected (4)**

Support from a non-governmental organization				
		Connected		Total
		No	Yes	
No	Count	340	1268	1608
	%	98.3%	97.0%	97.3%
	Adjusted Residual	1.3	-1.3	
Yes	Count	6	39	45
	%	1.7%	3.0%	2.7%
	Adjusted Residual	-1.3	1.3	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 1.614, df = 1; p = .204				

**Table 123: What are the main sources of income in your family, including yours? by Connected and Non-Connected (5)**

Training allowance or educational grant				
		Connected		Total
		No	Yes	
No	Count	343	1212	1555
	%	99.1%	92.7%	94.1%
	Adjusted Residual	4.5	-4.5	
Yes	Count	3	95	98
	%	.9%	7.3%	5.9%
	Adjusted Residual	-4.5	4.5	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 20.102, df = 1; p = .000				

**Table 124: What are the main sources of income in your family, including yours? by Connected and Non-Connected (6)**

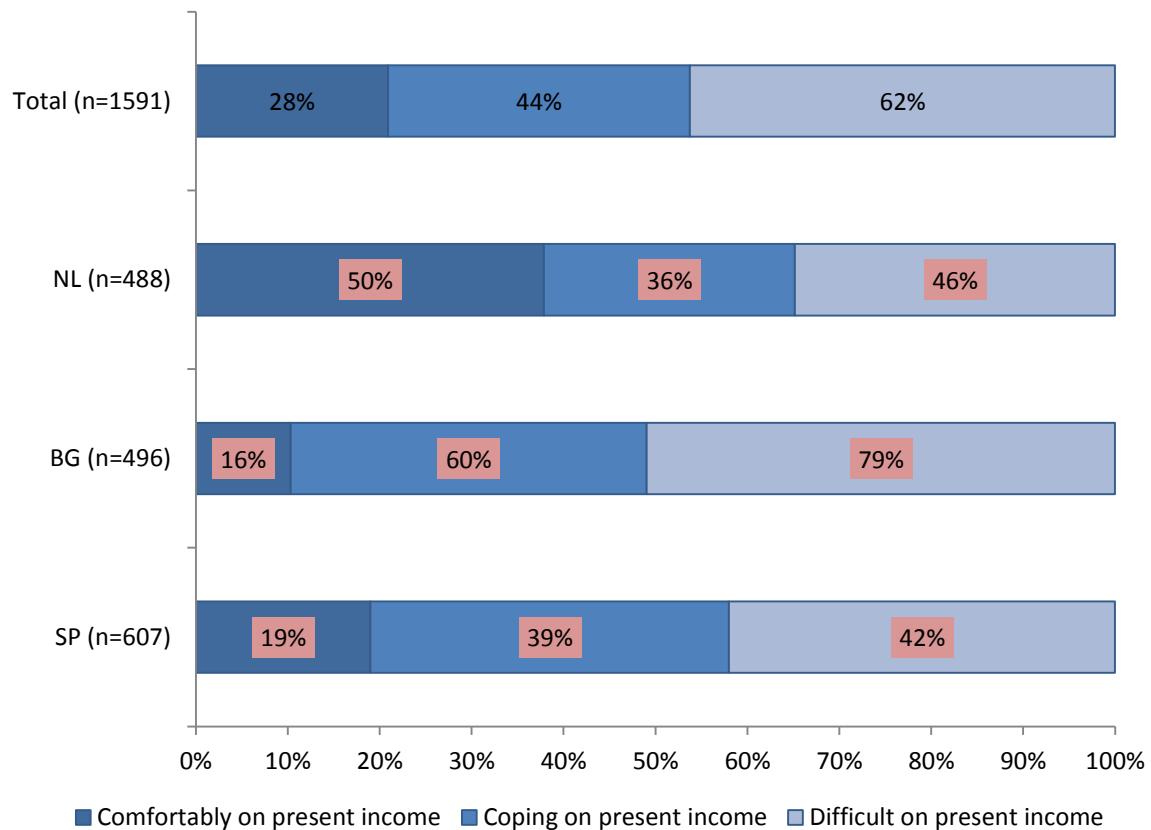
Parents or relatives				
		Connected		Total
		No	Yes	
No	Count	229	765	994
	%	66.2%	58.5%	60.1%
	Adjusted Residual	2.6	-2.6	
Yes	Count	117	542	659
	%	33.8%	41.5%	39.9%
	Adjusted Residual	-2.6	2.6	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 6.685, df = 1; p = .010				

**Table 125: What are the main sources of income in your family, including yours? by Connected and Non-Connected (7)**

Occasional work				
		Connected		Total
		No	Yes	
No	Count	335	1209	1544
	%	96.8%	92.5%	93.4%
	Adjusted Residual	2.9	-2.9	
Yes	Count	11	98	109
	%	3.2%	7.5%	6.6%
	Adjusted Residual	-2.9	2.9	
Total	Count	346	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 8.285, df = 1; p = .003				

However, third country nationals' perception of how they are coping on their present income gives us a better picture of social inclusion. Figure 90 shows that 45% of the individuals surveyed said they are coping on their present income; 28% of them stated that they are living very comfortably or comfortably and the same percentage declared they find it difficult. At a country level, the Netherlands clearly stands above (50%) Spain (19%) and Bulgaria (16%), in the number of third country-nationals living comfortably on their present income. Spain has the highest percentage (46%) of individuals having difficulties.

**Figure 90: Which of the following best describe how you feel about your household's income nowadays?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

In this case, there is also a statistically significant difference between Connected and Non-connected TCNs: 42.1% of third country nationals who reported having difficulties are Non-Connected, compared to 23.9% of those Connected. Similarly, only 15.2% of those Non-connected report living comfortably on present income, compared to 30.8% of those connected.

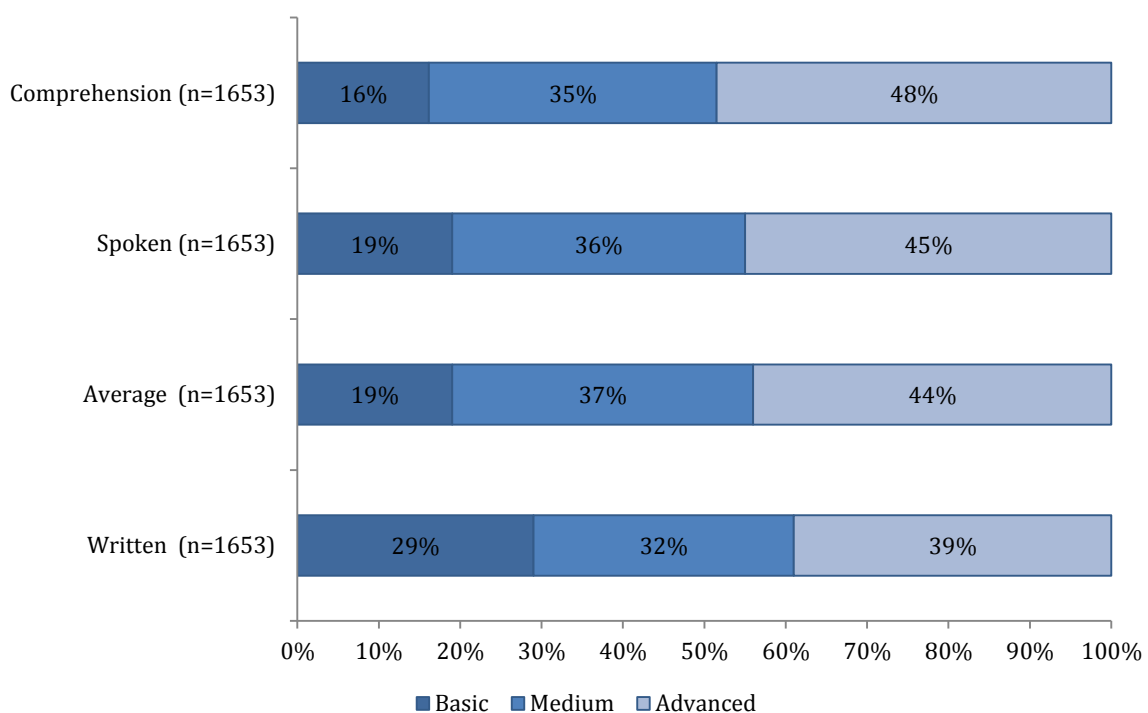
**Table 126: Which of the following best describe how you feel about your household's income nowadays? by Connected and Non-connected**

		Connected		Total
		No	Yes	
Difficult on present income	Count	139	301	440
	%	42.1%	23.9%	27.7%
	Adjusted Residual	6.6	-6.6	
Coping on present income	Count	141	571	712
	%	42.7%	45.3%	44.8%
	Adjusted Residual	-0.8	0.8	
Comfortably on present income	Count	50	389	439
	%	15.2%	30.8%	27.6%
	Adjusted Residual	-5.7	5.7	
Total	Count	330	1261	1591
	% of Total	20.7%	79.3%	100.0%

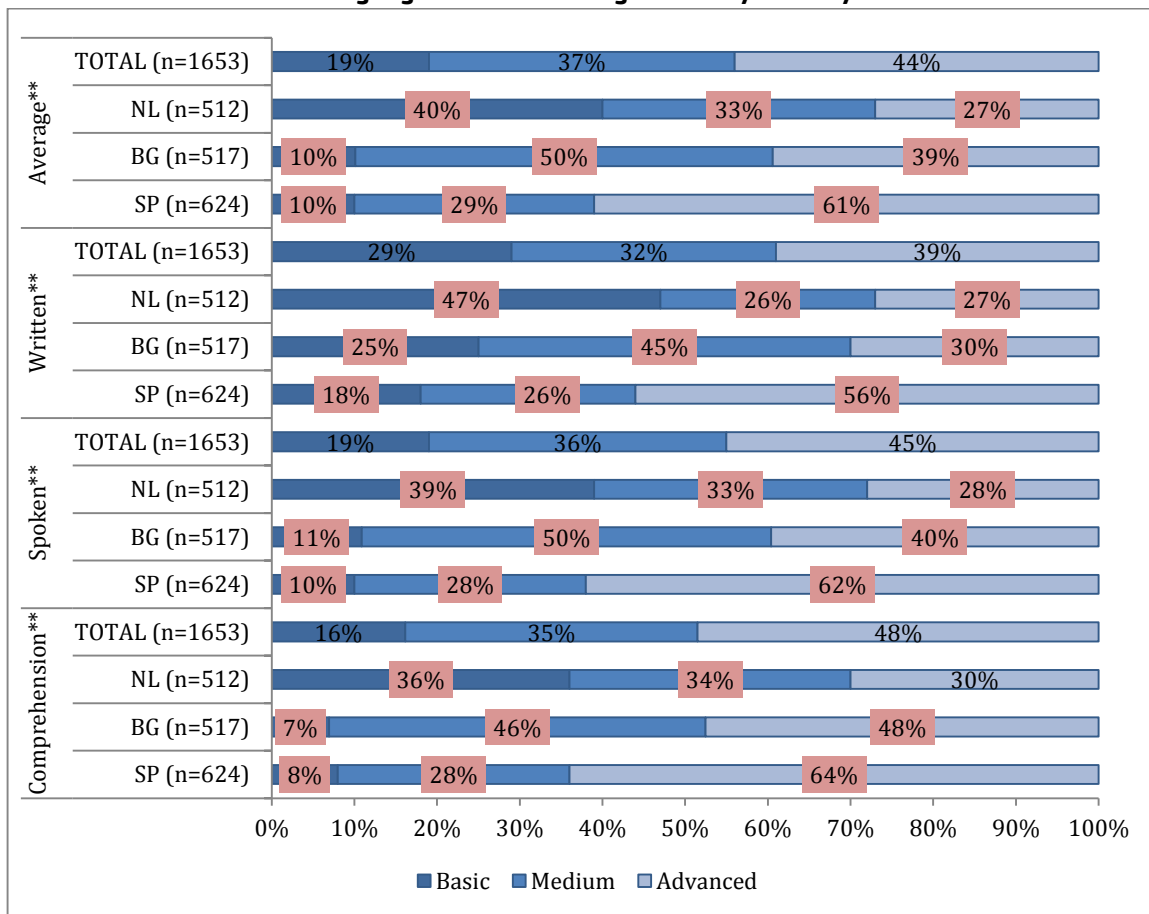
Pearson Chi-Square = 55.241, df = 2; p = .000

Knowledge of the language is considered as one of the main drivers of social inclusion. Almost half the participants rated their comprehension (48%) and spoken level (45%) as Advanced. Written level is reported as Advanced by 39% of the third country nationals. However, almost 50% of the respondents consider their knowledge of the language to be advanced. However, there are differences between countries in all the dimensions identified.

**Figure 91: In the country where you currently live, how would you rate your knowledge of the language in the following areas?**



**Figure 92: In the country where you currently live, how would you rate your knowledge of the language in the following areas? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The following table reveals statistically significant differences between Connected and Non-Connected. Connected TCNs are more likely than Non Connected to have an advanced level of language knowledge (48.2% vs. 26.6%).

**Table 127: In the country where you currently live, how would you rate your knowledge of the language? by Connected and Non-connected**

		Connected		Total
		No	Yes	
Basic	Count	94	226	320
	%	27.2%	17.3%	19.4%
	Adjusted Residual	4.1	-4.1	
Medium	Count	160	451	611
	%	46.2%	34.5%	37.0%
	Adjusted Residual	4.0	-4.0	
Advance	Count	92	630	722
	%	26.6%	48.2%	43.7%
	Adjusted Residual	-7.2	7.2	
Total	Count	345	1307	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 53.235, df = 2; p = .000				

Finally, participants were asked about how well informed they are about different aspects of living in the country where they are currently. 47% of the respondents stated that they are well-informed about education; 40% also said they were well informed about health services; 35% about job opportunities and 30% about employment rights. On average 40% of the individuals claimed that they are informed or very well-informed.

**Figure 93: How well informed are you about different living aspects of the country where you currently live?**

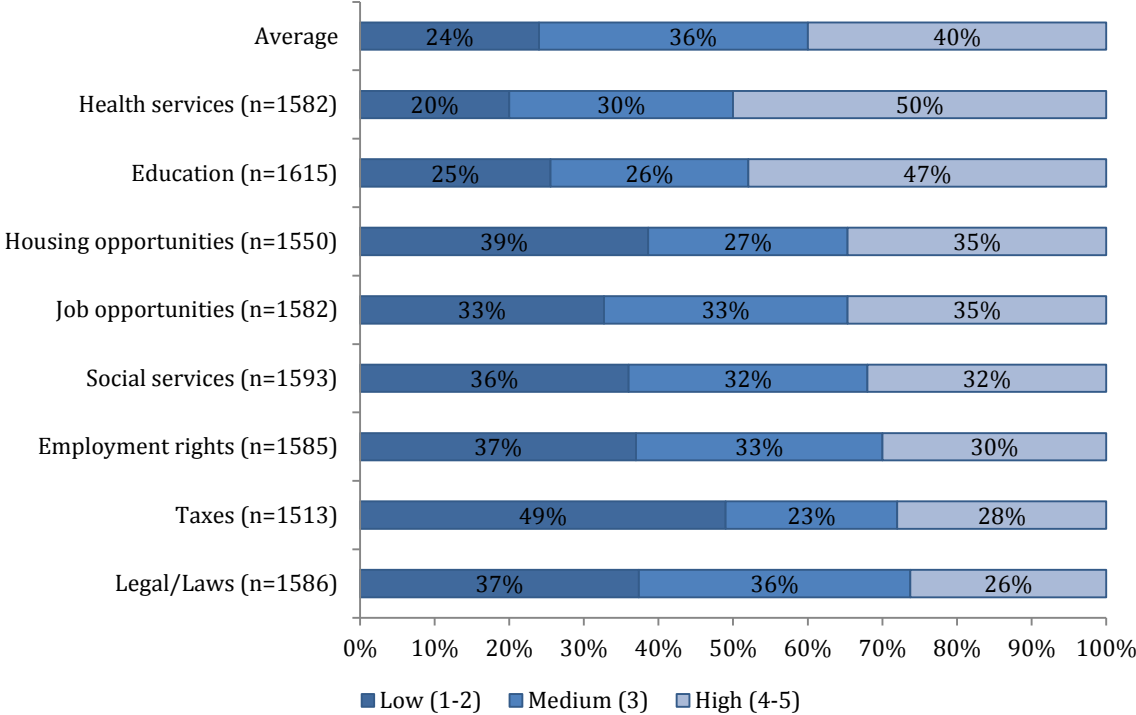
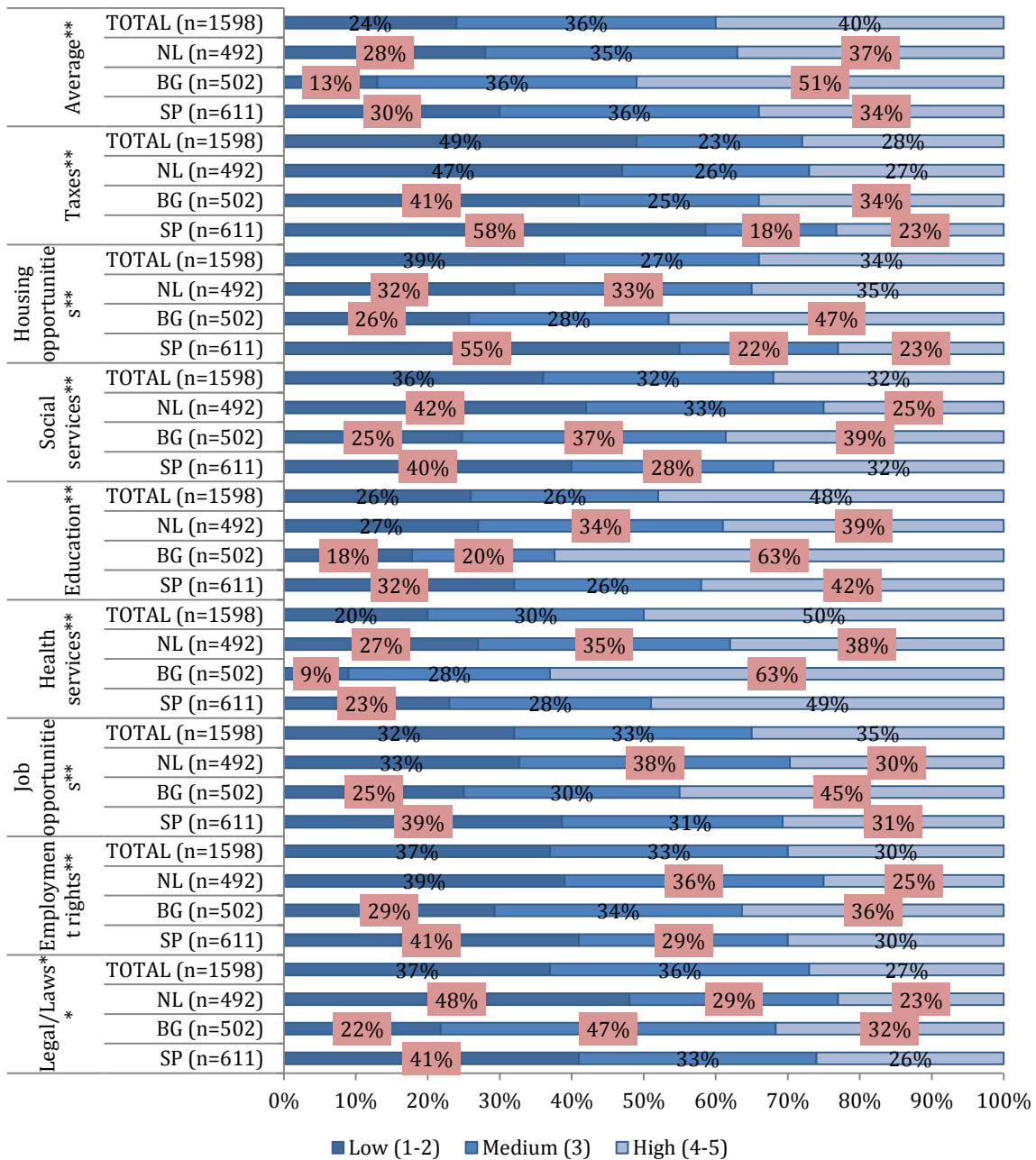




Figure 94 reveals that this percentage is higher in Bulgaria and lower in Spain and the Netherlands

**Figure 94: How well informed are you about different living aspects of the country where you currently live? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

On average, Connected TCNs are more likely to be well informed than Non-Connected.

**Table 128: How well informed are you about different living aspects of the country where you currently live? by Connected and Non-connected**

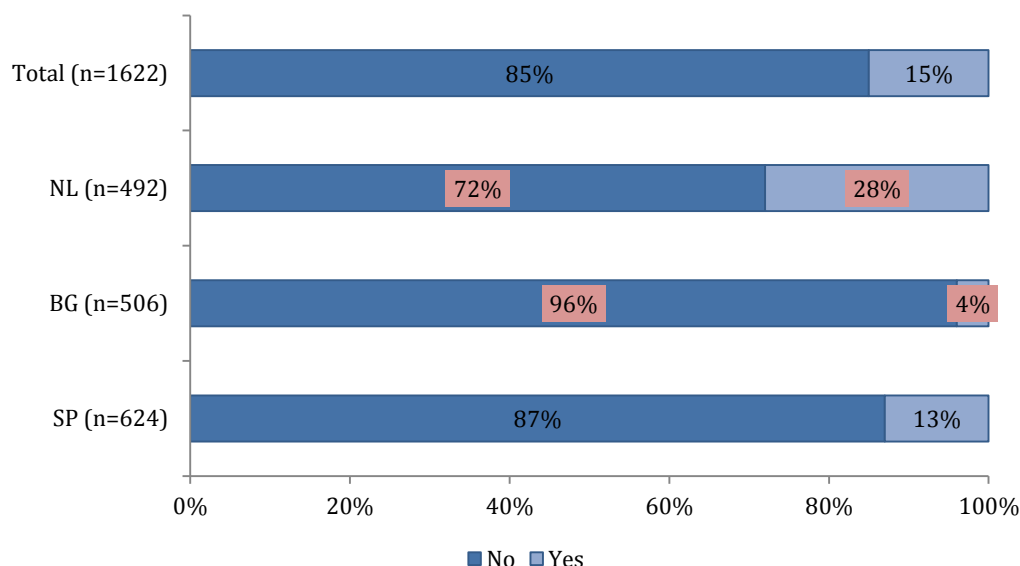
		Connected		Total
		No	Yes	
Low	Count	110	237	347
	%	37.8%	20.4%	23.9%
	Adjusted Residual	6.2	-6.2	
Medium	Count	101	419	520
	%	34.7%	36.1%	35.8%
	Adjusted Residual	-0.4	0.4	
High	Count	80	505	585
	%	27.6%	43.5%	40.3%
	Adjusted Residual	-5.0	5	
Total	Count	291	1161	1452
	% of Total	20.0%	80.0%	100.0%

Pearson Chi-Square = 44.353, df = 2; p = .000

### 12.3 Active citizenship

To capture the active citizenship dimension of third country nationals' integration, individuals were asked if they participate in any social group or organization. Just 15% of total respondents participate in this kind of organisation. This percentage is significantly higher in the Netherlands (28%) and lower in Bulgaria (4%).

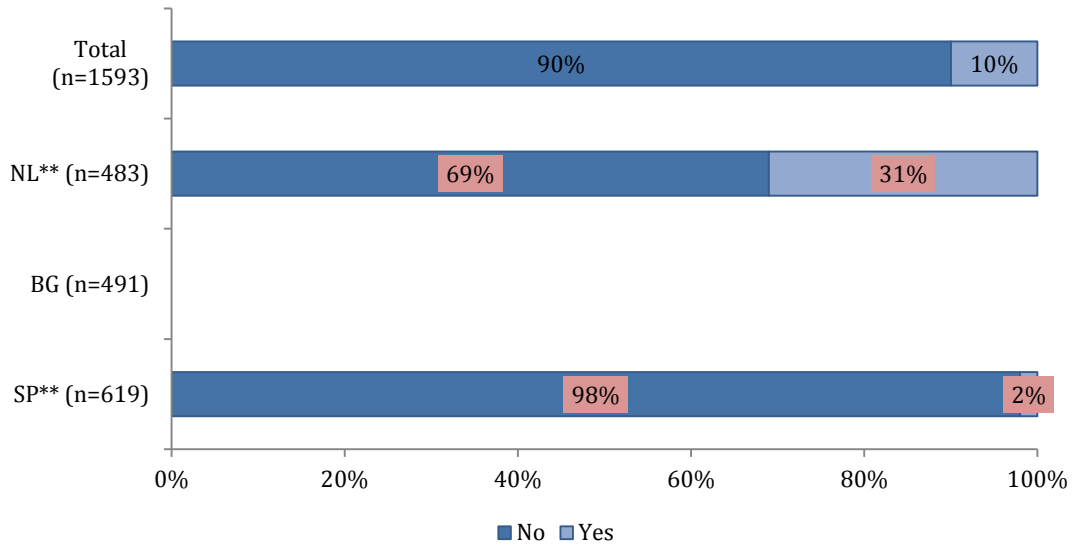
**Figure 95: Do you volunteer/participate in any social group or organization? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

Individuals were also asked about their participation in the last local and/or national elections in those cases where they were able to participate: 31% of individuals surveyed in the Netherlands voted in the last election, whereas only 3% of the individuals surveyed in Spain voted. Individuals surveyed in Bulgaria do not have the right to vote.

**Figure 96: Did you vote in the last local and/or national elections? by country**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

A statistically significant difference was found between Connected and Non-connected profiles. Connected TCNs are more likely to participate in social groups (16.5%) than Non-Connected. The same pattern appears in voting.

**Table 129: Do you volunteer/participate in any social group or organization? by Connected and Non-Connected**

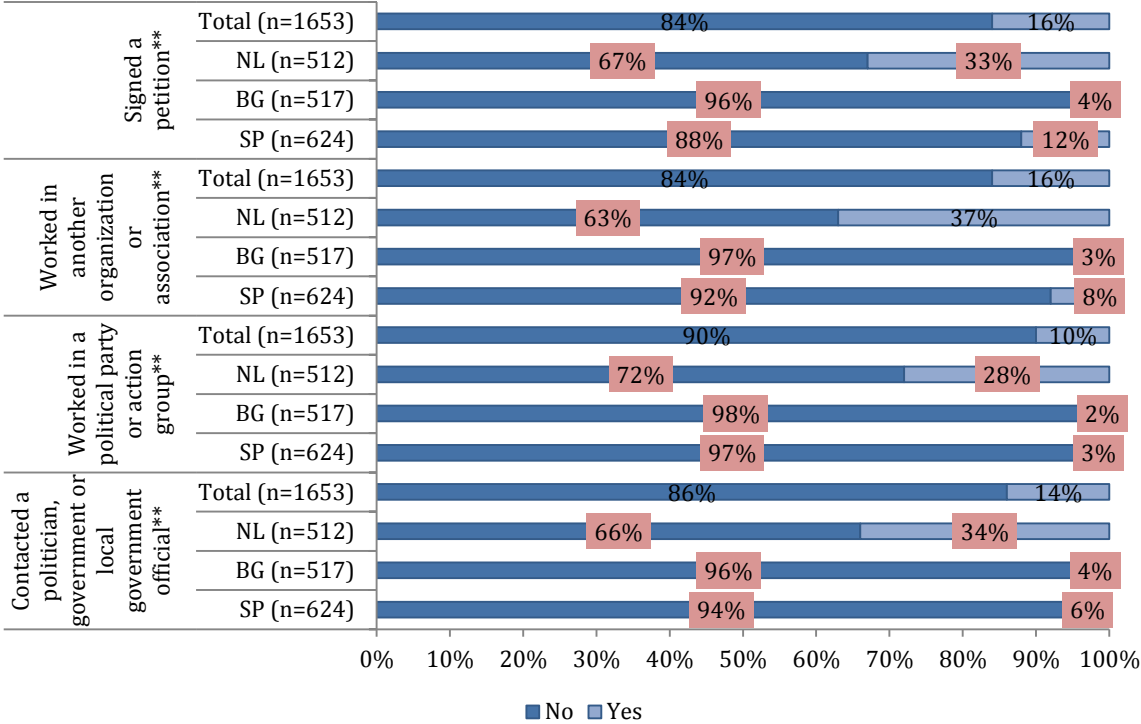
		Connected		Total
		No	Yes	
No	Count	310	1072	1382
	%	91.7%	83.5%	85.2%
	Adjusted Residual	3.8	-3.8	
Yes	Count	28	212	240
	%	8.3%	16.5%	14.8%
	Adjusted Residual	-3.8	3.8	
Total	Count	338	1284	1622
	% of Total	20.8%	79.2%	100.0%
Pearson Chi-Square = 14.364, df = 1; p = .000				

**Table 130: Did you vote in the last local and/or national elections? by Connected and Non-Connected**

		Connected		Total
		No	Yes	
No	Count	328	1101	1429
	%	96.5%	87.9%	89.7%
	Adjusted Residual	4.6	-4.6	
Yes	Count	12	152	164
	%	3.5%	12.1%	10.3%
	Adjusted Residual	-4.6	4.6	
Total	Count	340	1254	1593
	% of Total	21.3%	78.7%	100.0%
Pearson Chi-Square = 21.279, df = 1; p = .00				

TCNs were also asked to what extent they have carried our political activities in the country where they live. More than 80% of the respondents have never carried out any of the activities reported in the following figure. In these cases, the Netherlands stands out in terms of third country national participation in political activities (around 30% of third country nationals) compared to Spain and Bulgaria where this participation does not reach 5% in most of the activities reported.

**Figure 97: During the last 12 months, have you done any of the following political activities in the country where you currently live?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

In terms of Internet access, the majority of those who participate in these political activities are connected.

**Table 131: During the last 12 months, have you done any of the following political activities in the country where you currently live? by Connected and Non-Connected (1)**

		Contacted a politician, government or local government official		Total
		Connected		
		No	Yes	
No	Count	329	1095	1424
	%	95.1%	83.8%	86.1%
	Adjusted Residual	5.4	-5.4	
Yes	Count	17	212	229
	%	4.9%	16.2%	13.9%
	Adjusted Residual	-5.4	5.4	
Total	Count	345	1308	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 29.307, df = 1; p = .000				

**Table 132—During the last 12 months, have you done any of the following political activities in the country where you currently live? by Connected and Non-Connected (2)**

Worked in a political party or action group				
		Connected		Total
		No	Yes	
No	Count	335	1145	1480
	%	96.8%	87.6%	89.5%
	Adjusted Residual	5.0	-5.0	
Yes	Count	11	162	173
	%	<b>3.2%</b>	<b>12.4%</b>	10.5%
	Adjusted Residual	-5.0	5.0	
Total	Count	345	1308	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 24.795, df = 1; p = .000				

**Table 133: During the last 12 months, have you done any of the following political activities in the country where you currently live? by Connected and Non-Connected (3)**

Worked in another organization or association				
		Connected		Total
		No	Yes	
No	Count	332	1062	1394
	%	96.0%	81.3%	84.3%
	Adjusted Residual	6.7	-6.7	
Yes	Count	14	245	259
	%	4.0%	18.7%	15.7%
	Adjusted Residual	-6.7	6.7	
Total	Count	345	1308	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 44.734, df = 1; p = .000				

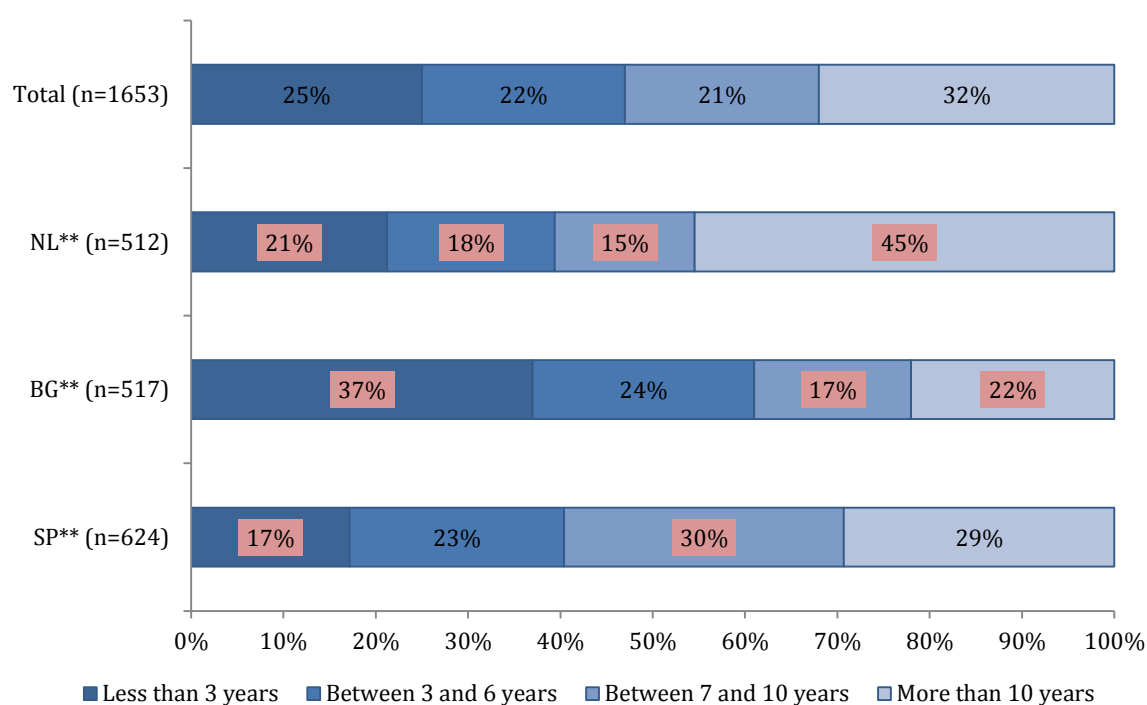
**Table 134: During the last 12 months, have you done any of the following political activities in the country where you currently live? by Connected and Non-Connected (4)**

Signed a petition				
		Connected		Total
		No	Yes	
No	Count	326	1060	1386
	%	94.2%	81.1%	83.8%
	Adjusted Residual	5.9	-5.9	
Yes	Count	20	247	267
	%	<b>5.8%</b>	<b>18.9%</b>	16.2%
	Adjusted Residual	-5.9	5.9	
Total	Count	345	1308	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 34.760, df = 1; p = .000				

## 12.4 Migration experience

Third country nationals were asked about when they first arrived in the EU. The results displayed in the following figure show that the distribution of individuals is very homogeneous. However, almost half of the individuals (45%) in the Netherlands stated that they first arrived in the EU more than 10 years ago while in Bulgaria the highest percentage of third country nationals (37%) are represented by those who arrived in the EU less than 3 years ago.

**Figure 98: When did you first arrive in the European Union? (in the case of Bulgaria, just ask about the country not the EU)**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The adjusted residuals displayed in the next table do not allow us to draw any conclusions regarding Connected and Non Connected TCNs.

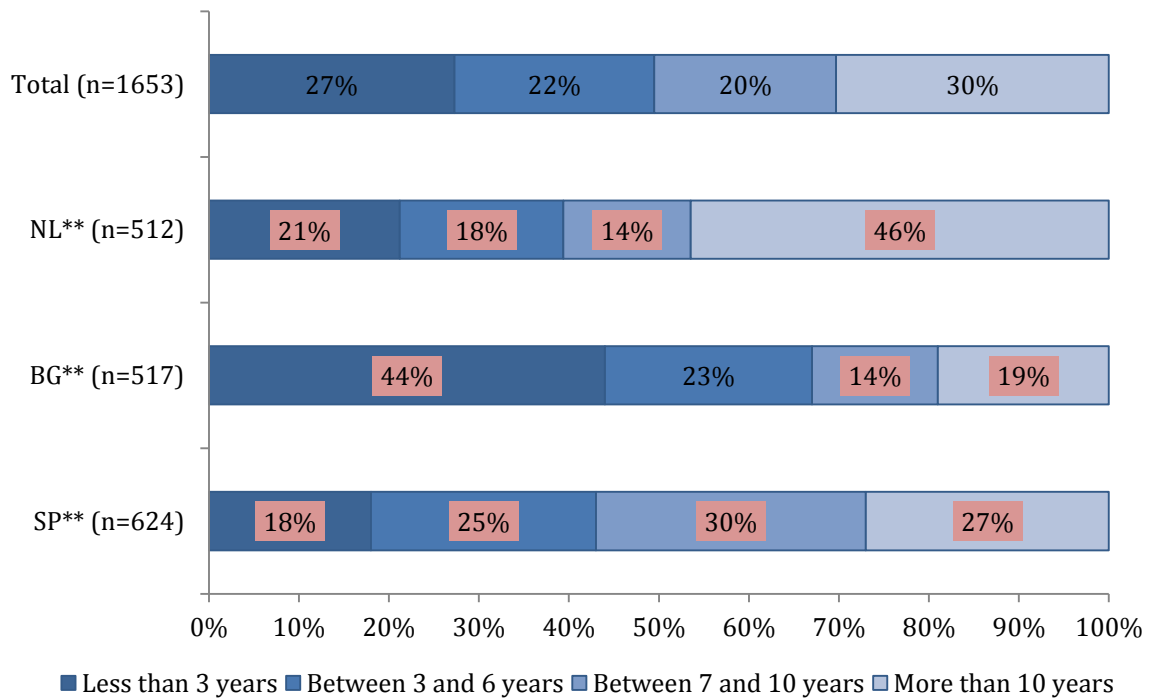
**Table 135: When did you first arrive in the European Union? (in the case of Bulgaria, just ask about the country not the EU) by Connected and Non-Connected**

		Connected		Total
		No	Yes	
Less than 3 years	Count	81	327	408
	%	23.4%	25.0%	24.7%
	Adjusted Residual	-0.6	0.6	
Between 3 and 6 years	Count	65	298	363
	%	18.8%	22.8%	22.0%
	Adjusted Residual	-1.6	1.6	
Between 7 and 10 years	Count	98	255	353
	%	28.3%	19.5%	21.4%
	Adjusted Residual	3.6	-3.6	
More than 10 years	Count	102	427	529
	%	29.5%	32.7%	32.0%
	Adjusted Residual	-1.1	1.1	
Total	Count	345	1308	1653
	% of Total	20.9%	79.1%	100.0%

Pearson Chi-Square = 13.115, df = 3; p = .004

Third country nationals were also asked about how many years they have lived in the country where they were interviewed. If we look at the total population surveyed, the results are homogeneous.

**Figure 99: How many years have you lived in (COUNTRY OF INTERVIEW)?**



\*\* The Chi-square statistic is significant at the .05 level. Boxes = Adjusted residual > ± 2.0

The analysis of Connected and Non Connected in this variable reveals significant difference.

**Table 136: How many years have you lived in (COUNTRY OF INTERVIEW)? by Connected and Non-Connected**

		Connected		Total
		No	Yes	
Less than 3 years	Count	94	358	452
	%	27.2%	27.4%	27.3%
	Adjusted Residual	-0.1	0.1	
Between 3 and 6 years	Count	74	297	371
	%	21.4%	22.7%	22.4%
	Adjusted Residual	-0.5	0.5	
Between 7 and 10 years	Count	86	246	332
	%	24.9%	18.8%	20.1%
	Adjusted Residual	2.5	-2.5	
More than 10 years	Count	92	406	498
	%	26.6%	31.1%	30.1%
	Adjusted Residual	-1.6	1.6	
Total	Count	345	1308	1653
	% of Total	20.9%	79.1%	100.0%
Pearson Chi-Square = 6.999, df = 3; p = .071				

## 13. Annex 7: Main findings of the multivariate statistical analysis

### 13.1 IT skills composite index and characterisation

As a first step toward the construction of a composite index of IT skills, we performed a Factor Analysis (FA) on the eight items that in our questionnaire were used to measure the level of IT skills (see first columns in the table below).

**Table 137: Computer Skills Factor analysis**

	Factor loadings		Square Factor loadings (scaled to sum unit)	
Use copy and paste tools to duplicate or move information within a document)	0.936		0.319	
Copy or move a file or folder	0.935		0.319	
Use basic arithmetic formulas in a spread sheet (e.g. Excel)	0.71		0.184	
Compress (or zipping) files	0.699		0.178	
Write a computer program using a specialised programming language		0.933		0.708
Connect and install new devices, e.g. a modem		0.599		0.292
Variance explained by the factor	2.743	1.229		
Explained variance divided by the total variance of the factors	0.69	0.31		
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations. Kaiser-Meyer-Olkin Measure of Sampling Adequacy .837 Bartlett's Test of Sphericity Sig .000 Variance explained 81% Eigenvalue .8				

FA shows that the eight items can be reduced to two latent variables that can be named as **'Basic skills'** and as **'Advanced skills'**. The first factor has high positive coefficients (factor loadings) on the following items: 'Use copy and paste tools to duplicate or move information within a document'; 'Copy or move a file or folder'; 'Use basic arithmetic formulas in a spread sheet (e.g. Excel)' and 'Compress (or zipping) files'. This factor includes basic activities therefore it is labelled as **'Basic skills'**. The second factor has high positive coefficients (factor loadings) on: 'Write a computer program using a specialised programming language'; 'Connect and install new devices'. As these can be considered more advanced type of activities, they have been labelled **'Advanced skills'**.

The two factors are included in the **'IT skills composite index'** using as weights the 'Explained variance' divided by the total variance of the factors. Factors and composite index are normalised from 1 Never do it to 5 Very easily. The value of the Composite Index (C.I.) is reported in the last column of the next two tables below and crossed against the variables listed in the first column. To determine whether there are any significant differences between the means of three or more independent groups (categorical variables), we have used the one-way analysis of variance (ANOVA). This test compares the means between the groups you are interested in and determines whether any of those means are significantly different from each other. Therefore, we have used this test to check whether there are any significant differences between the means of the composite index and the sub-dimensions developed and the categorical variables, mainly socio-demographic variables.



**Table 138: IT Skills composite index characterization (I)**

	Basic	Advance	C.I.
<b>GENDER</b>			
Female (n=675)	3.65	2.42	3.27
Male (n=806)	3.66	2.64	3.34
ANOVA F-test	.002	9891	1480
P	.965	.002	.224
<b>AGE</b>			
16-24 (n=425)	4.08	2.88	3.71
25-54 (n=995)	3.54	2.46	3.20
55-74 (n=61)	2.58	1.54	2.26
ANOVA F-test	71.257	33.707	66.019
P	.000	.000	.000
<b>EDUCATION</b>			
Primary or lower secondary education, no formal education (n=292)	2.90	1.93	2.60
Upper or post-secondary education (n=709)	3.69	2.52	3.33
Tertiary education (n=469)	4.06	2.92	3.71
ANOVA F-test	114.628	52.578	105.580
P	.000	.000	.000
<b>EMPLOYMENT</b>			
Employee full-time work (n=462)	3.54	2.36	3.17
Employee part-time work (n=145)	3.39	2.37	3.07
Self-employed (includes family workers, people working in family business) (n=139)	3.49	2.45	3.17
Unemployed looking for a job (n=192)	3.16	2.13	2.84
Student (not in the labour force) (n=349)	4.25	3.12	3.90
Student with part-time jobs (n=349)	4.23	3.18	3.91
Homemaker (non-remunerated) (n=49)	3.00	1.53	2.54
Other not in the labour force (retired, inactive, military service) (n=42)	3.01	2.04	2.71
ANOVA F-test	35.226	24.225	36.533
P	.000	.000	.000
<b>OCCUPATION</b>			
Professional (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.) (n=93)	4.09	2.87	3.71
Technician or associate professional (i.e. engineering technicians, nurses, legal associates, information technology technicians) (n=105)	4.17	3.16	3.85
Clerical support worker (i.e. office clerks, secretaries, bank tellers, client information workers) (n=91)	3.94	2.47	3.49
Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson) (n=323)	3.42	2.29	3.07
Skilled agricultural, forestry and fishery worker (i.e. crop growers, animal producers, forestry workers, fishery workers, subsistence crop and livestock farmers) (n=17)	2.82	1.74	2.49
Craft and related trades worker (i.e. electricians, tool makers, steel and metal workers, blacksmiths, printing and handcraft workers, garment, food processing workers) (n=52)	3.23	2.33	2.95
Plant and machine operator or assembler (i.e. mining and mineral processing workers, metal processing, chemical, food processing, wood, textile machine operators) (n=22)	2.87	2.16	2.65
Elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors) (n=156)	3.05	2.01	2.73
Armed forces occupation (commissioned and non-commissioned armed forces officers) (n=0)	.	.	.
Other (n=64)	3.73	2.85	3.46
ANOVA F-test	15.840	9.842	15.435
P	.000	.000	.000

**Table 139: IT Skills composite index characterization (II)**

AREA	Basic	Advance	C.I.
Urban area (n=1135)	3.67	2.51	3.31
Sub-urban area (n=194)	3.66	2.71	3.36
Rural area (n=152)	3.53	2.52	3.21
ANOVA F-test	1.127	1.870	.811
P	.324	.155	.444
COUNTRY			
SP (n=576)	3.53	2.33	3.15
BG (n=419)	3.79	2.60	3.42
NL (n=486)	3.69	2.74	3.40
ANOVA F-test	7.054	13.384	9.439
P	.001	.000	.000
NATIONALITY			
Morocco (n=120)	3.64	2.68	3.34
Pakistan (n=117)	3.37	2.13	2.99
Latin America (n=211)	3.65	2.38	3.26
Other SP (n=128)	3.36	2.09	2.97
Russia (n=112)	3.46	2.36	3.12
Macedonia (n=88)	4.12	2.62	3.65
Turkey (n=102)	4.14	3.16	3.83
Former CEE countries (n=117)	3.54	2.32	3.16
China (n=107)	3.82	2.83	3.51
Turkey (n=97)	3.63	2.33	3.22
United States (n=99)	3.97	2.71	3.58
Asia (n=91)	3.46	3.10	3.35
Other NL (n=92)	3.55	2.75	3.30
ANOVA F-test	6.003	7.426	6.169
P	.000	.000	.000

The characterisation shows a number of important and statistically significant findings:

- **IT skills are a clear function of age:** younger people have a higher IT skills composite index than older people and the differences are statistically significant (see value of chi-square test);
- **The higher the educational level, the higher the level of IT skills is:** the composite index is highest for individuals with tertiary education and this difference is statistically significant;
- **IT skills are a clear function of employment/activity:** the composite index is highest for individuals who are either employed, self-employed, or students and is lowest among the unemployed and the homemakers, and these differences are statistically significant;
- **Knowledge and service workers have higher IT skills:** the IT skills composite index is higher, for instance, among professionals and technicians than it is among manual workers, and this difference is statistically significant;
- **IT skills are higher in the Netherlands and Bulgaria than they are in Spain:** this difference is statistically significant;
- **IT skills levels differ by nationality groups:** these differences are all statistically significant and can be distinguished by country as follows: a) in Spain, Moroccans and Latin Americans seem more skilled than Pakistanis; b) in Bulgaria, Turks and Macedonians are more skilled than Russians; c) in the Netherlands, individuals who are nationals of the USA and China are more skilled than Turks.

With regard to the last two bullet points we repeat the disclaimer that country differences and nationality group differences should be taken with great caution as they reflect the peculiarities and limitations of our sample explained earlier.

## 13.2 Internet skills composite index and characterisation

For Internet skills we proceeded as illustrated previously: we performed FA, identified two latent variables, and constructed a composite index that we characterise by crossing them with other relevant variables.

**Table 140: Internet Skills Factor analysis**

	Factor loadings		Square Factor loadings (scaled to sum unit)	
Use a search engine to find information (e.g. Google)	0.886		0.326	
Send e-mails with attached files (e.g. documents, pictures, etc.)	0.871		0.315	
Post messages to chat rooms, newsgroups or an online discussion forum (e.g. on social networking sites, blogs, etc.)	0.733		0.223	
Use the Internet to make telephone calls	0.571		0.135	
Create a web page		0.871		0.558
Use peer-to-peer file sharing for exchanging movies, music, etc.		0.775		0.442
Variance explained by the factor	2.743	1.229		
Explained variance divided by the total variance of the factors	0.69	0.31		
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations. Kaiser-Meyer-Olkin Measure of Sampling Adequacy .816 Bartlett's Test of Sphericity Sig .000 Variance explained 72% Eigenvalue 1				

The first factor has high positive coefficients on the more **'Basic skills'** (Use a search engine to find information (e.g. Google); Send e-mails with attached files (e.g. documents, pictures, etc.); Post messages to chat rooms, newsgroups or an online discussion forum (e.g. on social networking sites, blogs, etc.) and Use the Internet to make telephone calls). The second factor groups together: 'Create a web page' and 'Use peer-to-peer file sharing' and labels them as **'Advanced skills'**. Both factors are components of the final **'Internet skills composite index'**.

The following tables show the characteristics of the population surveyed in terms of their Internet Skills.

**Table 141: Internet Skills Characterization (I)**

	Basic	Advance	C.I.
<b>GENDER</b>			
Female (n=675)	4.37	2.76	3.79
Male (n=806)	4.33	2.84	3.80
ANOVA F-test	.815	1.295	.004
P	.367	.255	.952
<b>AGE</b>			
16-24 (n=425)	4.64	3.19	4.12
25-54 (n=995)	4.28	2.70	3.71
55-74 (n=61)	3.45	1.76	2.84
ANOVA F-test	63.090	38.748	69.374
P	.000	.000	.000
<b>EDUCATION</b>			
Primary or lower secondary education, no formal education (n=292)	3.79	1.94	3.12
Upper or post-secondary education (n=709)	4.42	2.86	3.86
Tertiary education (n=469)	4.59	3.24	4.11
ANOVA F-test	89.544	91.289	125.485
P	.000	.000	.000
<b>EMPLOYMENT</b>			
Employee full-time work (n=462)	4.29	2.62	3.69
Employee part-time work (n=145)	4.13	2.39	3.50
Self-employed (includes family workers, people working in family business) (n=139)	4.40	2.73	3.80
Unemployed looking for a job (n=192)	4.02	2.10	3.33
Student (not in the labour force) (n=349)	4.75	3.54	4.32
Student with part-time jobs (n=103)	4.63	3.66	4.28
Homemaker (non-remunerated) (n=49)	3.93	2.20	3.31
Other not in the labour force (retired, inactive, military service) (n=42)	3.64	2.18	3.11
ANOVA F-test	25.547	38.601	42.647
P	.000	.000	.000
<b>OCCUPATION</b>			
Professional (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.) (n=93)	4.59	3.45	4.18
Technician or associate professional (i.e. engineering technicians, nurses, legal associates, information technology technicians) (n=105)	4.61	3.40	4.18
Clerical support worker (i.e. office clerks, secretaries, bank tellers, client information workers) (n=91)	4.58	2.89	3.97
Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson) (n=323)	4.30	2.46	3.64
Skilled agricultural, forestry and fishery worker (i.e. crop growers, animal producers, forestry workers, fishery workers, subsistence crop and livestock farmers) (n=17)	3.63	2.46	3.21
Craft and related trades worker (i.e. electricians, tool makers, steel and metal workers, blacksmiths, printing and handcraft workers, garment, food processing workers) (n=52)	4.03	2.32	3.41
Plant and machine operator or assembler (i.e. mining and mineral processing workers, metal processing, chemical, food processing, wood, textile machine operators) (n=22)	3.62	2.11	3.08
Elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors) (n=156)	3.92	1.97	3.22
Armed forces occupation (commissioned and non-commissioned armed forces officers) (n=0)	.	.	.
Other (n=64)	4.37	3.00	3.88
ANOVA F-test	11.831	17.447	18.391
P	.000	.000	.000

**Table 142: Internet Skills Characterization (II)**

	Basic	Advance	C.I.
AREA			
Urban area (n=1135)	4.38	2.83	3.82
Sub-urban area (n=194)	4.28	2.68	3.70
Rural area (n=152)	4.20	2.78	3.69
ANOVA F-test	3.604	1.021	2.573
P	.027	.361	.077
COUNTRY			
SP (n=576)	4.31	2.19	3.55
BG (n=419)	4.54	3.21	4.06
NL (n=486)	4.24	3.18	3.86
ANOVA F-test	14.657	106.616	42.579
P	.000	.000	.000
NATIONALITY			
Morocco (n=120)	4.28	2.24	3.55
Pakistan (n=117)	4.17	2.03	3.40
Latin America (n=211)	4.46	2.30	3.68
Otra SP (n=128)	4.20	2.11	3.45
Russia (n=112)	4.38	2.97	3.87
Macedonia (n=88)	4.65	3.21	4.13
Turkey (n=102)	4.64	3.46	4.21
Former CEE countries (n=117)	4.53	3.24	4.06
China (n=107)	4.35	3.34	3.99
Turkey (n=97)	4.18	2.85	3.70
United States (n=99)	4.55	3.68	4.24
Asia (n=91)	3.92	3.11	3.63
Other NL (n=92)	4.16	2.84	3.68
ANOVA F-test	6.317	21.678	11.609
P	.000	.000	.000

The characterisation shows a number of important and statistically significant findings:

- **Internet skills are a clear function of age:** younger people have a higher Internet skills composite index than older people and the differences are statistically significant (see value of chi-square test);
- **The higher the educational level, the higher the level of Internet skills:** the composite index is highest for individuals with tertiary education and this difference is statistically significant;
- **Internet skills are a clear function of employment/activity:** the composite index is highest for individuals who are either employed, self-employed, or students and is lowest among the unemployed and the homemakers, and these differences are statistically significant;
- **Knowledge and service workers have higher Internet skills:** the Internet skills composite index is higher, for instance, among professionals and technicians as compared to manual workers, and this difference is statistically significant;
- **Internet skills are higher in the Netherlands and Bulgaria than they are in Spain:** this difference is statistically significant;
- **Internet skills levels differ by nationality groups:** these differences are all statistically significant and can be distinguished by country as follows: a) in Spain, Moroccans and Latin Americans seem more skilled than Pakistanis; b) in Bulgaria, Turks and Macedonians are more skilled than Russians; c) in the Netherlands, individuals who are nationals of the USA and China are more skilled than Turks.

### **13.3 Internet adoption composite index and characterisation**

All the items reported in Section 3.3.2 were used to carry out a factor analysis (see Table 143, Table 144, and Table 145). This analysis yields seven statistically significant and conceptually meaningful factors that summarise more than 30 base level variables. These factors are:

- Education;
- Participation;
- Job search;
- Information seeking;
- Communication;
- Professional life socially-oriented;
- Professional life self-oriented.

These factors were grouped into the Internet adoption composite index capturing to what extent individuals use the Internet in their daily lives. This index ranges from 1 (representing migrants with the lowest level of Internet adoption) to 5 (representing the Networked migrants).

**Table 143: Internet Usage Factor Analysis – Factor loadings**

	Education	Participation	Job search	Information seeking	Communication	Professional life social oriented	Professional life self oriented
Surf through the Internet to get information on your education level in the host country	0,797						
Do an online course for any other subject	0,786						
Do an online course to learn the language of the country where you currently live	0,783						
Surf through the Internet to get information for the educational qualification recognition	0,773						
Do an online course to improve your knowledge or skills for work	0,706						
Surf through the Internet for learning/education purposes (improve your language skills, etc.)	0,654						
Take part in online consultations or voting to define civic or political issues (e.g. urban planning, signing a petition, etc.)		0,819					
Contact a politician, government or local government official		0,813					
Participate as volunteer in social group or organisation		0,752					
Read and post opinions on civic or political issues via websites (e.g. blogs, social networks, etc.)		0,688					
Contact the administration to know your rights and duties as a resident		0,679					
I trust the Internet to find a job			0,823				
I'm interested in the type of jobs offered on the Internet			0,82				
The use of the Internet to find a job is useful			0,817				
I really need the Internet to find a job			0,773				
I know how to use the Internet to find a job			0,627				
Look for information about laws and legal issues				0,776			
Look for information about taxes				0,748			
Look for information about housing opportunities				0,681			
Look for information about social services				0,655			
Find information other services different from the above mentioned				0,644			
Download software (other than games software)				0,383			
Participate in non professional social networks, such as facebook, twitter, etc, creating user profile, posting messages, uploading content or other contributions					0,77		
Post messages to chat rooms, newsgroups or an online discussion forum					0,744		
Send/receive emails					0,709		
Instant message, chat (Yahoo messenger, Hotmail messenger, etc.)					0,673		
Telephone over the Internet/video calls via webcam (e.g. Skype)					0,598		
Participate in professional networking sites (creating user profile, posting messages or other contributions to LinkedIn, Xing, etc.)						0,751	
Participate in professional social networks, such as LinkedIn etc, creating user profile, posting messages, uploading content or other contributions						0,67	
Accomplish tasks related to your usual work						0,585	
Find information about training/apprenticeship courses							0,689
Find information about employment rights							0,619
Use online tools to assess your professional competences and skills.							0,617

**Table 144: Internet Usage Factor Analysis – Square Factor loadings (scaled to unity sum)**

	Education	Participation	Job search	Information seeking	Communication	Professional life social oriented	Professional life self oriented
Surf through the Internet to get information on your education level in the host country	0.187						
Do an online course for any other subject	0.182						
Do an online course to learn the language of the country where you currently live	0.181						
Surf through the Internet to get information for the educational qualification recognition	0.176						
Do an online course to improve your knowledge or skills for work	0.147						
Surf through the Internet for learning/education purposes (improve your language skills. etc.)	0.126						
Take part in online consultations or voting to define civic or political issues (e.g. urban planning, signing a petition, etc.)		0.237					
Contact a politician, government or local government official		0.233					
Participate as volunteer in social group or organisation		0.200					
Read and post opinions on civic or political issues via websites (e.g. blogs, social networks, etc.)		0.167					
Contact the administration to know your rights and duties as a resident		0.163					
I trust the Internet to find a job			0.225				
I'm interested in the type of jobs offered on the Internet			0.224				
The use of the Internet to find a job is useful			0.222				
I really need the Internet to find a job			0.199				
I know how to use the Internet to find a job			0.131				
Look for information about laws and legal issues				0.230			
Look for information about taxes				0.214			
Look for information about housing opportunities				0.177			
Look for information about social services				0.164			
Find information other services different from the above mentioned				0.159			
Download software (other than games software)				0.056			
Participate in non professional social networks, such as facebook, twitter, etc., creating user profile, posting messages, uploading content or other contributions					0.241		
Post messages to chat rooms, newsgroups or an online discussion forum					0.225		
Send/receive emails					0.204		
Instant message, chat (Yahoo messenger, Hotmail messenger, etc.)					0.184		
Telephone over the Internet/video calls via webcam (e.g. Skype)					0.145		
Participate in professional networking sites (creating user profile, posting messages or other contributions to LinkedIn, Xing, etc.)						0.416	
Participate in professional social networks, such as LinkedIn etc, creating user profile, posting messages, uploading content or other contributions						0.331	
Accomplish tasks related to your usual work						0.253	
Find information about training/apprenticeship courses							0.383
Find information about employment rights							0.309
Use online tools to assess your professional competences and skills.							0.307



**Table 145: Internet Usage Factor Analysis – Method and Variance explained**

	Education	Participation	Job search	Information seeking	Communication	Professional life social oriented	Professional life self oriented
Variance explained by the factor - Expl.Var	3.390	2.832	3.008	2.616	2.460	1.355	1.239
Explained variance divided by the total variance of the factors - Expl./Tot	0.20	0.17	0.18	0.15	0.15	0.08	0.07
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations. Kaiser-Meyer-Olkin Measure of Sampling Adequacy .899 Bartlett's Test of Sphericity Sig .000 Variance explained 64% Eigenvalue 1							

Table 146 shows Internet adoption and its sub-dimensions by gender; age and education. The results confirm traditional factors explaining digital inequalities: age and education for which we find statistically significant differences. On the other hand, there is no statistically significant difference by gender. Younger and more highly-educated individuals are more likely to be 'Networked migrants'.

**Table 146: Internet adoption characterisation (I)**

	Education	Participation	Job search	Information seeking	Communication	Professional life social oriented	Professional life self oriented	Composite index
<b>GENDER</b>								
Female (n=615)	1.74	1.60	3.51	2.46	3.79	2.33	2.20	2.53
Male (n=692)	1.81	1.60	3.51	2.52	3.81	2.24	2.23	2.55
ANOVA F-test	1.877	.000	.011	1.523	.205	2.075	.165	.397
P	.171	.990	.916	.217	.651	.150	.685	.529
<b>AGE</b>								
16-24 (n=388)	2.05	1.56	3.69	2.41	4.12	2.31	2.29	2.66
25-54 (n=876)	1.68	1.62	3.46	2.55	3.71	2.30	2.22	2.52
55-74 (n=43)	1.14	1.38	2.83	2.09	2.75	1.56	1.51	1.93
ANOVA F-test	32.512	2.555	19.580	8.151	53.98	8.296	11.129	29.447
P	.000	.078	.000	.000	.000	.000	.000	.000
<b>EDUCATION</b>								
Primary or lower secondary education, no formal education (n=193)	1.35	1.34	3.22	2.15	3.69	1.71	1.81	2.22
Upper or post secondary education (n=645)	1.71	1.49	3.44	2.46	3.81	1.99	2.16	2.47
Tertiary education (n=459)	2.02	1.85	3.72	2.68	3.84	2.93	2.45	2.77
ANOVA F-test	40.252	40.943	23.028	25.624	1.660	130.453	28.593	67.988
P	.000	.000	.000	.000	.191	.000	.000	.000
<b>EMPLOYMENT</b>								
Employee full-time work (n=412)	1.61	1.67	3.46	2.56	3.65	2.49	2.13	2.51
Employee part-time work (n=122)	1.70	1.70	3.49	2.48	3.63	2.28	2.36	2.52
Self-employed (includes family workers, people working in family business) (n=124)	1.51	1.57	3.12	2.72	3.66	2.35	1.97	2.41
Unemployed looking for a job (n=139)	1.54	1.51	3.73	2.43	3.97	1.99	2.41	2.52
Student (not in the labour force) (n=337)	2.12	1.43	3.57	2.36	4.16	2.08	2.18	2.61
Student with part-time jobs (n=102)	2.39	1.96	4.01	2.70	3.96	2.98	3.00	2.98
Homemaker (non-remunerated) (n=38)	1.27	1.50	3.07	2.32	3.23	1.55	1.65	2.13
Other not in the labour force (retired, inactive, military service) (n=58)	1.28	1.35	3.04	2.15	2.71	1.35	1.44	1.97
ANOVA F-test	23.072	6.784	11.487	4.167	19.81	15.458	16.338	16.013
P	.000	.000	.000	.000	.000	.000	.000	.000

Employment status shows statistically significant differences. The employed, self-employed, and the students have higher Internet adoption than other groups. On the other hand, the differences on this dimension are not as marked as they are on the dimensions of age and educational level.

Table 147 displays, as could be expected, that professionals and technicians have the highest scores while skilled agricultural, craft and related trade workers, as well as plant and machine operators or assemblers have the lowest scores. The differences are statistically significant.

**Table 147: Internet adoption characterisation (II)**

	Education	Participation	Job search	Information seeking	Communication	Professional life social oriented	Professional life self oriented	Composite index
<b>OCCUPATION</b>								
Professional (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.) (n=90)	1.93	2.21	3.63	3.13	3.92	3.29	2.55	2.92
Technician or associate professional (i.e. engineering technicians, nurses, legal associates, information technology technicians) (n=104)	1.95	1.75	3.92	2.68	3.82	3.17	2.47	2.79
Clerical support worker (i.e. office clerks, secretaries, bank tellers, client information workers) (n=88)	1.81	1.93	3.79	2.74	3.90	3.08	2.58	2.79
Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson) (n=278)	1.51	1.55	3.33	2.46	3.77	2.15	2.12	2.42
Skilled agricultural, forestry and fishery worker (i.e. crop growers, animal producers, forestry workers, fishery workers, subsistence crop and livestock farmers) (n=14)	2.04	1.43	3.12	2.50	2.72	2.12	2.04	2.31
Craft and related trades worker (i.e. electricians, tool makers, steel and metal workers, blacksmiths, printing and handcraft workers, garment, food processing workers) (n=46)	1.48	1.54	3.18	2.24	3.37	1.70	1.94	2.24
Plant and machine operator or assembler (i.e. mining and mineral processing workers, metal processing, chemical, food processing, wood, textile machine operators) (n=13)	1.45	1.45	2.89	2.32	2.98	1.36	1.83	2.09
Elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors) (n=120)	1.53	1.37	3.32	2.24	3.52	1.79	2.06	2.29
Other (n=58)	2.00	1.98	3.70	2.98	3.77	2.70	2.50	2.81
ANOVA F-test	5.818	10.553	7.398	10.203	5.271	30.866	4.986	15.515
P	.000	.000	.000	.000	.000	.000	.000	.000

Finally, Table 148 shows individuals Internet adoption by Area, Country and Nationality. There is no statistically significant difference by urban, sub-urban or rural area. The Netherlands leads in terms of Networked migrants followed by Spain and Bulgaria. In terms of nationalities, Latin Americans, North Americans and Macedonians stand out in Spain, the Netherlands and Bulgaria respectively.

**Table 148: Internet adoption characterisation (III)**

	Education	Participation	Job search	Information seeking	Communication	Professional life social oriented	Professional life self oriented	Composite index
AREA								
Urban area (n=1019)	1.77	1.59	3.50	2.53	3.79	2.26	2.22	2.54
Sub-urban area (n=161)	1.89	1.63	3.59	2.33	3.94	2.36	2.27	2.59
Rural area (n=127)	1.65	1.61	3.46	2.42	3.77	2.39	2.10	2.49
ANOVA F-test	2.544	.192	.808	3.788	1.816	1.075	1.045	.904
P	.079	.825	.446	.023	.163	.342	.352	.405
COUNTRY								
SP (n=447)	1.50	1.49	3.53	2.37	4.11	2.16	2.19	2.49
BG (n=400)	1.79	1.31	3.40	2.37	3.75	1.80	1.99	2.39
NL (n=460)	2.03	1.96	3.58	2.72	3.55	2.82	2.44	2.72
ANOVA F-test	39.761	84.843	4.253	23.203	41.17	91.988	20.812	33.056
P	.000	.000	.014	.000	.000	.000	.000	.000
NATIONALITY								
Morocco (n=97)	1.61	1.42	3.63	2.53	4.11	2.07	2.21	2.53
Pakistan (n=74)	1.26	1.31	3.26	2.15	4.15	1.66	1.87	2.27
Latin America (n=173)	1.49	1.57	3.70	2.38	4.16	2.50	2.39	2.58
Other SP (n=103)	1.57	1.54	3.34	2.37	3.99	2.03	2.08	2.44
Russia (n=105)	1.59	1.30	3.42	2.36	3.62	1.74	1.90	2.32
Macedonia (n=86)	1.81	1.29	3.58	2.52	3.96	1.83	2.19	2.50
Turkey - BG (n=99)	2.04	1.31	3.25	2.24	3.87	1.72	2.00	2.41
Former CEE countries (n=110)	1.73	1.32	3.37	2.38	3.61	1.92	1.91	2.36
China (n=101)	1.77	1.63	3.58	2.56	3.51	2.64	2.20	2.55
Turkey - NL (n=96)	2.50	2.61	3.47	2.95	3.83	2.93	2.95	3.03
United States (n=99)	1.79	1.87	3.69	2.91	3.45	2.99	2.37	2.70
Asia (n=78)	2.44	1.97	3.69	2.41	3.48	2.93	2.30	2.76
Other NL (n=86)	1.74	1.69	3.50	2.72	3.46	2.59	2.34	2.56
ANOVA F-test	14.590	25.197	3.026	7.048	8.942	19.677	8.023	10.573
P	.000	.000	.000	.000	.000	.000	.000	.000

### 13.4 Employability composite index and characterisation

Through factor analysis, we extracted from the 30 items measuring employability five statistically significant and conceptually meaningful factors (see Table 149, Table 150 and 151).

The first factor has high positive coefficients (factor loadings) on: 'Possibility of a career in the organization'; 'Opportunities for promotion'; 'Possibility of developing a wide range of skills'; 'Possibility to apply my skills in a variety of contexts'; 'Opportunities for responsibility in the work task'; 'Possibility to move to a range of different jobs within the organisation and Interesting work'. We labelled this factor as **'Competence development'**.

The second factor has positive coefficients on: 'I have a good work history'; 'My skills for doing the type of work I want to do are up to date'; 'My level of education is sufficient for getting a job in my area of work'; 'An employer would be impressed with my qualifications and I have good job references'. In addition, two items ('I need more training or education' and 'My work qualifications aren't very good') are also included in this factor but with negative coefficients (reverse-scored). This factor is labelled as **'Current level of job-related skills'**.

The third factor has positive factor loadings on: 'If the organization needs me to perform different tasks, I am prepared to change my work activities'; 'If the organization offered me the possibility to obtain new work experiences, I would take it'; 'I find it important to develop myself in a broad sense, so I will be able to perform different task activities or jobs within the organization'; 'I am able to convince potential employers or project partners of my competencies'; 'I am aware of my interests and skills and I don't find it difficult to prove my capability to others'. This factor captures together **'Willingness to develop new competences and self-presentation awareness'**.

The fourth factor that emerged from the factor analysis has positive coefficients on: 'I make sure I am informed about vacancies'; 'I follow developments in the field of industry and employment regularly'; 'I am willing to start another job and if there is organizational change, I would prefer to stay in my current department with my colleagues'. So, this factor has been labelled as **'Willingness to change jobs and opportunity awareness'**.

The fifth factor has positive factor loadings on: 'I am confident that I would find another job if I started searching'; 'If I am dismissed, I will immediately find a job of equal value'. It has negative factor loadings on: 'It will be difficult for me to find new employment when leaving the organization (reverse-scored). Therefore, this factor has been labelled as **'Perceived employability'**.

Finally, all these factors were included in the **'Employability composite index'** using as weights 'Explained variance' divided by the total variance of the factors. Factors and composite index are normalised from 1 to 5 where 1 represents the lowest level of employability and 5 represents the highest level of employability.

**Table 149: Employability Factor analysis – Factor loadings**

	Competence development	Current level job related skills	Willingness to develop new competences and self-presentation awareness	Willingness to change jobs and opportunity awareness	Perceived employability
Possibility of a career in the organization	0.862				
Opportunities for promotion	0.861				
Possibility of developing a wide range of skills	0.859				
Possibility to apply my skills in a variety of contexts	0.774				
Opportunities for responsibility in the work task	0.768				
Possibility to move to a range of different jobs within the organisation	0.766				
Interesting work	0.745				
I have a good work history		0.773			
My skills for doing the type of work I want to do are up to date		0.743			
My level of education is sufficient for getting a job in my area of work		0.689			
An employer would be impressed with my qualifications		0.622			
I have good job references		0.553			
I need more training or education		-0.507			
My work qualifications aren't very good		-0.493			
If the organization needs me to perform different tasks, I am prepared to change my work activities			0.792		
If the organization offered me the possibility to obtain new work experiences, I would take it			0.789		
I find it important to develop myself in a broad sense, so I will be able to perform different task activities or jobs within the organization			0.736		
I am able to convince potential employers or project partners of my competencies			0.638		
I am aware of my interests and skills			0.614		
I don't find it difficult to prove my capability to others			0.581		
I make sure I am informed about vacancies				0.856	
I follow developments in the field of industry and employment regularly				0.784	
I am willing to start another job				0.637	
In case of organizational change, I would prefer to stay in my current department with my colleagues				0.316	
I'm confident that I would find another job if I started searching					0.739
It will be difficult for me to find new employment when leaving the organization (reverse-scored)					-0.731
In case I'm dismissed, I'll immediately find a job of equal value					0.677

**Table 150: Employability Factor analysis – Square Factor loadings (scaled to unity sum)**

	Competence development	Current level job related skills	Willingness to develop new competences and competence awareness	Willingness to change jobs and opportunity awareness	Perceived employability
Possibility of a career in the organization	0.163				
Opportunities for promotion	0.163				
Possibility of developing a wide range of skills	0.162				
Possibility to apply my skills in a variety of contexts	0.132				
Opportunities for responsibility in the work task	0.130				
Possibility to move to a range of different jobs within the organisation	0.129				
Interesting work	0.122				
I have a good work history		0.212			
My skills for doing the type of work I want to do are up to date		0.196			
My level of education is sufficient for getting a job in my area of work		0.169			
An employer would be impressed with my qualifications		0.137			
I have good job references		0.109			
I need more training or education		0.091			
My work qualifications aren't very good		0.086			
If the organization needs me to perform different tasks, I am prepared to change my work activities			0.215		
If the organization offered me the possibility to obtain new work experiences, I would take it			0.214		
I find it important to develop myself in a broad sense, so I will be able to perform different task activities or jobs within the organization			0.186		
I am able to convince potential employers or project partners of my competencies			0.140		
I am aware of my interests and skills			0.129		
I don't find it difficult to prove my capability to others			0.116		
I make sure I am informed about vacancies				0.395	
I follow developments in the field of industry and employment regularly				0.332	
I am willing to start another job				0.219	
In case of organizational change, I would prefer to stay in my current department with my colleagues				0.054	
I'm confident that I would find another job if I started searching					0.355
It will be difficult for me to find new employment when leaving the organization (reverse-scored)					0.347
In case I'm dismissed, I'll immediately find a job of equal value					0.298

**Table 151 Employability Factor Analysis – Method and Variance explained**

	Competence development	Current level job related skills	Willingness to develop new competences and competence awareness	Willingness to change jobs and opportunity awareness	Perceived employability
Variance explained by the factor - Expl.Var	4.553	2.817	2.913	1.853	1.539
Explained variance divided by the total variance of the factors - Expl./Tot	0.33	0.21	0.21	0.14	0.11
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 7 iterations. Kaiser-Meyer-Olkin Measure of Sampling Adequacy .905 Bartlett's Test of Sphericity Sig .000 Variance explained 63% Eigenvalue 1					



Table 152 shows the characterisation of the Employability Composite Index by Gender, Age, Education, Employment situation, and by Connected and Not-Connected status. Middle-aged individuals are more likely to score higher in the employability index than younger and older individuals. Participants with tertiary education are more likely to score higher than less educated individuals. Students working part time and full time workers obtained the highest scores. ***It is noteworthy that connected migrants have a statistically significant higher level of employability as compared to the non-connected migrants.***

**Table 152: Employability Composite Index – Characterisation (I)**

	Competence development	Current level job related skills	Willingness to develop new competences and competence	Willingness to change jobs and opportunity awareness	Perceived employability	C.I. Employability
<b>GENDER</b>						
Female	3.10	3.32	3.93	3.04	2.98	3.32
Male	3.15	3.46	4.03	3.20	3.04	3.40
ANOVA F-test	1.283	16.764	6.959	8.896	2.778	6.614
P	.258	.000	.008	.003	.096	.010
<b>AGE</b>						
16-24	3.22	3.17	4.00	3.26	3.12	3.38
25-54	3.15	3.50	4.03	3.19	3.02	3.41
55-74	2.69	3.24	3.59	2.22	2.70	2.94
ANOVA F-test	15.306	37.411	21.771	58.516	19.230	33.433
P	.000	.000	.000	.000	.000	.000
<b>EDUCATION</b>						
Primary or lower secondary education, no formal education	2.71	3.06	3.79	3.11	2.85	3.09
Upper or post secondary education,	3.05	3.35	3.95	2.97	2.97	3.30
Tertiary education	3.54	3.73	4.19	3.37	3.19	3.66
ANOVA F-test	87.646	107.272	32.791	21.737	29.326	97.516
P	.000	.000	.000	.000	.000	.000
<b>EMPLOYMENT</b>						
Employee full-time work	3.34	3.71	4.13	3.20	3.16	3.55
Employee part-time work	2.97	3.42	4.03	3.27	2.99	3.33
Self-employed (includes family workers, people working in family business)	3.39	3.72	4.13	2.96	2.96	3.51
Unemployed looking for a job	2.84	3.40	4.12	3.58	2.89	3.35
Student (not in the labour force)	3.09	3.01	3.91	2.97	3.01	3.23
Student with part-time jobs	3.33	3.35	4.03	3.70	3.31	3.51
Homemaker (non-remunerated)	2.50	2.66	3.20	2.40	2.58	2.63
Other not in the labour force (retired, inactive, military service)	2.67	2.98	3.39	2.14	2.65	2.81
ANOVA F-test	17.875	60.100	28.838	34.582	16.002	37.870
P	.000	.000	.000	.000	.000	.000
<b>CONNECTED MIGRANT</b>						
Yes	3.26	3.47	4.07	3.25	3.09	3.47
No	2.65	3.14	3.68	2.70	2.76	3.00
ANOVA F-test	111.804	60.574	79.048	80.159	62.616	162.70
P	.000	.000	.000	.000	.000	.000

Table 153 displays Employability Composite Index characterisation by Occupation. Professionals and Technicians are positioned at the top of the index.

**Table 153: Employability Composite Index – Characterisation (II)**

	Competence development	Current level job related skills	Willingness to develop new competences and competence awareness	Willingness to change jobs and opportunity awareness	Perceived employability	C.I. Employability
<b>OCCUPATION</b>						
Professional (i.e. doctors, architects, teachers/professors, veterinarians, librarians, lawyers or paralegals, actors, musicians, etc.)	3.94	4.03	4.24	3.30	3.27	3.87
Technician or associate professional (i.e. engineering technicians, nurses, legal associates, information technology technicians)	3.89	3.90	4.24	3.37	3.19	3.83
Clerical support worker (i.e. office clerks, secretaries, bank tellers, client information workers)	3.36	3.66	4.20	3.42	3.13	3.57
Service or sales worker (i.e. travel attendants, cooks, hairdressers, cashiers, personal care workers, child care workers, shop salesperson)	3.19	3.59	4.16	3.20	3.07	3.48
Skilled agricultural, forestry and fishery worker (i.e. crop growers, animal producers, forestry workers, fishery workers, subsistence crop and livestock farmers)	3.17	3.58	3.86	2.75	2.73	3.31
Craft and related trades worker (i.e. electricians, tool makers, steel and metal workers, blacksmiths, printing and handcraft workers, garment, food processing workers)	3.13	3.66	4.02	2.94	3.19	3.42
Plant and machine operator or assembler (i.e. mining and mineral processing workers, metal processing, chemical, food processing, wood, textile machine operators)	3.02	3.44	3.82	3.31	3.10	3.30
Elementary occupation (i.e. cleaners and helpers, agricultural labourers, food preparation assistants, street vendors)	2.58	3.24	3.93	3.26	2.95	3.14
Armed forces occupation (commissioned and non-commissioned officers in the armed forces)	1.00	1.00	3.59	2.41	2.68	1.93
Other	3.32	3.59	4.07	3.29	2.99	3.50
ANOVA F-test	30.031	22.526	4.400	1.996	3.491	24.781
P	.000	.000	.000	.037	.000	.000

Finally, table 154 shows the Employability composite index by Area, Country and Nationality. There is no statistically significant difference by area. By country, individuals in Spain lead the index followed by the Netherlands and Bulgaria. By Nationality, Latin Americans and Pakistanis in Spain are the individuals with highest average score. In Bulgaria, individuals from the former CEE countries obtained the highest employability scores. In the case of the Netherlands, migrants from the United State have the highest average score.

**Table 154: Employability Composite Index - Characterisation (III)**

	Competence development	Current level job related skills	Willingness to develop new competences and competence	Willingness to change jobs and opportunity awareness	Perceived employability	C.I. Employability
AREA						
Urban area	3.13	3.41	4.00	3.09	3.02	3.37
Sub-urban area	3.11	3.34	4.00	3.38	2.95	3.38
Rural area	3.12	3.33	3.90	3.11	3.05	3.33
ANOVA F-test	.036	1.773	1.235	7.241	1.080	.320
P	.965	.170	.291	.001	.340	.726
COUNTRY						
SP	3.03	3.46	4.20	3.35	2.96	3.43
BG	3.18	3.42	3.94	2.61	3.02	3.32
NL	3.20	3.29	3.76	3.32	3.08	3.33
ANOVA F-test	5.393	8.166	54.820	90.261	3.917	4.725
P	.005	.000	.000	.000	.020	.009
NATIONALITY						
Morocco	3.06	3.24	4.07	3.27	2.99	3.36
Pakistan	3.08	3.39	4.16	3.26	3.02	3.42
Latin America	2.95	3.59	4.33	3.49	2.90	3.47
Other SP	3.07	3.54	4.15	3.31	2.99	3.43
Russia	3.30	3.58	3.94	2.57	3.09	3.40
Macedonia	3.05	3.33	3.87	2.64	2.96	3.24
Turkey	3.02	3.23	3.93	2.51	2.94	3.20
Former CEE countries	3.33	3.53	4.04	2.72	3.06	3.43
China	3.11	3.19	3.77	3.51	3.19	3.30
Turkey	3.04	3.44	3.74	3.08	2.95	3.28
United States	3.61	3.42	3.88	3.56	3.23	3.56
Asia	3.31	3.26	3.78	3.33	3.03	3.38
Other NL	2.93	3.16	3.62	3.12	2.98	3.15
ANOVA F-test	4.660	6.377	11.165	17.775	2.436	3.801
P	.000	.000	.000	.000	.004	.000

### 13.5 Mapping Integration items by the four composite indexes

The items contained in the integration block of our questionnaire were so many and so disparate that factor analysis could not effectively reduce and summarise the data. Hence, it was not possible to construct a synthetic composite index for integration. The next two tables plot the integration items against the four composite indexes presented in the previous four paragraphs.

**Table 155: Integration characteristics (I)**

	Computer skills Composite Index	Internet skills Composite Index	Internet adoption Composite Index	Employability Composite Index
<b>LABOUR MARKET</b>				
Do you think that your main job here in (country) uses all the skills that you obtained in your training and work life?				
• My job matches my skills & training	3.34 (n=416)	3.78 (n=416)	2.62 (n=367)	3.64 (n=422)
• My job matches my skills but is not in the area for which I trained	3.14 (n=195)	3.73 (n=195)	2.55 (n=175)	3.50 (n=197)
• My job does not require the skills & training that I have	3.12 (n=262)	3.63 (n=262)	2.49 (n=231)	3.32 (n=270)
ANOVA F-test	3.963	2.316	2.717	31.578
P	.019	.099	.067	.000
Have you had any educational qualification recognized in the country where you currently live?				
• Yes, equivalent level	3.66 (n=715)	4.11 (n=715)	2.68 (n=689)	3.48 (n=623)
• Yes, lower level	3.29 (n=99)	3.62 (n=99)	2.57 (n=93)	3.47 (n=86)
• No	2.86 (n=573)	3.40 (n=573)	2.32 (n=438)	3.24 (n=588)
ANOVA F-test	96.548	111.050	47.451	26.799
P	.000	.000	.000	.000
<b>SOCIAL INCLUSION</b>				
Which of the following best describes how you feel about your household				
• Living very comfortably on present income	3.58 (n=133)	4.03 (n=133)	2.87 (n=129)	3.59 (n=127)
• Living comfortably on present income	3.65 (n=279)	3.95 (n=279)	2.59 (n=260)	3.53 (n=263)
• Coping on present income	3.36 (n=636)	3.86 (n=636)	2.50 (n=571)	3.33 (n=619)
• Finding it difficult on present income	3.02 (n=244)	3.61 (n=244)	2.44 (n=208)	3.24 (n=217)
• Finding it very difficult on present income	2.67 (n=132)	3.24 (n=132)	2.37 (n=93)	3.18 (n=145)
ANOVA F-test	26.566	21.095	13.345	16.447
P	.000	.000	.000	.000
Average level of knowledge of the language (hosted country)				
• Basic	3.33 (n=276)	3.79 (n=276)	2.68 (n=226)	3.16 (n=265)
• Medium	3.37 (n=513)	3.77 (n=513)	2.53 (n=451)	3.34 (n=506)
• Advance	3.41 (n=692)	3.91 (n=692)	2.58 (n=630)	3.53 (n=636)
ANOVA F-test	.516	2.787	3.402	31.365
P	.597	.062	.034	.000
Average level of information about living aspects of the country				
• 1-Not at all informed	2.95 (n=40)	3.51 (n=40)	2.59 (n=28)	2.82 (n=42)
• 2	3.09 (n=263)	3.58 (n=263)	2.42 (n=209)	3.21 (n=247)
• 3	3.31 (n=468)	3.79 (n=468)	2.48 (n=419)	3.35 (n=432)
• 4	3.50 (n=484)	3.99 (n=484)	2.64 (n=457)	3.49 (n=488)
• 5-Very well informed	3.72 (n=50)	4.19 (n=50)	2.95 (n=48)	3.74 (n=50)
ANOVA F-test	9.318	12.888	10.876	25.715
P	.000	.000	.000	.000

**Table 156: Integration characteristics (II)**

	Computer skills Composite Index	Internet skills Composite Index	Internet adoption Composite Index	Employability Composite Index
<b>ACTIVE CITIZENSHIP</b>				
Do you volunteer/participate in any social group or organization?				
• Yes	3.50 (n=229)	3.95 (n=229)	2.85 (n=212)	3.46 (n=214)
• No	3.28 (n=1226)	3.77 (n=1226)	2.48 (n=1072)	3.35 (n=1167)
ANOVA F-test	8.405	7.782	63.963	5.363
P	.004	.005	.000	.021
<b>MIGRATION EXPERIENCE</b>				
How many years have you lived in ... (COUNTRY OF INTERVIEW)?				
• Less than 3 years	3.54 (n=400)	4.00 (n=400)	2.59 (n=358)	3.34 (n=363)
• Between 3 and 6 years	3.41 (n=336)	3.86 (n=336)	2.60 (n=297)	3.39 (n=309)
• Between 7 and 10 years	3.23 (n=295)	3.72 (n=295)	2.50 (n=246)	3.39 (n=286)
• More than 10 years	3.08 (n=450)	3.61 (n=450)	2.48 (n=406)	3.35 (n=449)
ANOVA F-test	14.179	14.302	3.348	.700
P	.000	.000	.018	.552

In general the two tables report statistically significant results all pointing the same way: individuals who are more integrated show higher levels for all the four composite indexes: a) individuals who report that their skills match their current jobs are more employable, better skilled both in terms of IT and Internet, and show higher Internet adoption compared to those who report that their current job does not require the skills they possess; b) individuals who had their educational qualifications recognised in the host country are more employable, better skilled both in terms of IT and Internet, and show higher Internet adoption than those who did not have their educational qualification recognised; c) individuals with better skills in the language of the host country are more employable, better skilled both in terms of IT and Internet, and show higher Internet adoption than those with only basic language skills; d) individuals reporting they live comfortably on their current income are more employable, better skilled both in terms of IT and Internet, and show higher Internet adoption than those who said that they have difficulty coping on their current income; e) those who are more informed about the country where they live are also more employable, better skilled both in terms of IT and Internet, and show higher Internet adoption; f) those who participate in social groups or organisations are more employable, better skilled both in terms of IT and Internet, and show higher Internet adoption than those who do not participate.

On the other hand, the results of the migration experience are less univocal and a bit more mixed. Being in the country for less than 3 years, between 3 and 6, between 7 and 10, and for more than 10 years does not make a statistically significant difference in terms of employability. On the other hand, more recent migrants seem to be better skilled in terms of both IT and Internet and show higher Internet penetration than individuals who have been living in the host country for more than 10 years.

### 13.6 Correlation and regression analysis

From the overall conceptual framework on which we based our questionnaire combined with the results of the multivariate interdependence analysis presented in the previous paragraphs, we



dependent variable (or sometimes, the outcome variable). The variable we are using to predict the other variable's value is called the independent variable (or sometimes, the predictor variable).

In our case, we used Integration (well-being) as dependent variable first and as independent variables: Internet adoption Composite Index; and Employability Composite Index. Moreover, we controlled for Age and Education levels as independent variables to avoid possible bias due to these two socio-demographic characteristics. The regression model is statistically significant, meaning that the independent variables predict the dependent variable. Standardized Coefficients revealed that Internet adoption and Employability have a positive impact on integration, controlling for the positive impact of Education and a small but negative impact of age.

**Table 158: Linear regression analysis - Integration as dependent variable**

Independent variables	Standardized Coefficients - B	t	Sig.
Internet adoption Composite Index	.088	2.631	.009
Employability Composite Index	.097	2.991	.003
Education level	.201	6.369	.000
Age	-.080	-2.659	.008

Second, we carried out another liner regression using Employability as dependent variable and average level of the language of the country; age; education and Internet adoption as independent variables (see table 159). The regression model is statistically significant, meaning that the independent variables predict the dependent variable. Age is not statistically significant in the model, whereas educational level, average level of the language and Internet adoption have a positive impact on the employability of the individuals.

**Table 159: Liner regression analysis – Employability as dependent variable**

Independent variables	Standardized Coefficients - B	t	Sig.
Education level	.178	6.257	.000
Age	.033	1.183	.237
Average level of language knowledge	.187	6.864	.000
Internet adoption Composite Index	.337	11.749	.000

***It is worth pointing out that Internet adoption has the statistically significant effect of increasing both integration and employability of migrants.***

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**EUR 27352 EN – Joint Research Centre – Institute for Prospective Technological Studies**

Title: ICT for the Employability and Integration of Immigrants in the European Union. Results from a Survey in Three Member States

Authors: Francisco Lupiañez, Cristiano Codagnone, Rosa Dalet

Luxembourg: Publications Office of the European Union

2015 – 237 pp. – 21.0 x 29.7 cm

EUR – Scientific and Technical Research series – ISSN 1831-9424 (online)

ISBN 978-92-79-49580-9 (PDF)

doi:10.2791/271816

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doi:10.2791/271816

ISBN 978-92-79-49580-9

