

European SME digitalisation Study

Executive Summary Report for project participants

By

Sarah Quinton^a, Ana Isabel Canhoto^b, Rebecca Pera^c, Tribikram Budhathoki^d, Sebastian Molinillo^e

^aMarketing Department, Business Faculty, Oxford Brookes University, Wheatley Campus, Oxford OX33 1HX, England, sequinton@brookes.ac.uk

^bMarketing Department, Business Faculty, Oxford Brookes University, Wheatley Campus, Oxford OX33 1HX, England, adomingos-canhoto@brookes.ac.uk

^cDipartimento di Studi per l'Economia e l'Impresa, Università del Piemonte Orientale, Novara, via E. Perrone 18 - CAP 28100, Italy, rebecca.pera@uniupo.it

^dBusiness and Economics Department, Business Faculty, Oxford Brookes University, Wheatley Campus, Oxford OX33 1HX, England, tbudhathoki@brookes.ac.uk

^eBusiness Management Department, Faculty of Economics and Business Administration, Malaga University, Campus El Ejido, 29013 Malaga, Spain, smolinillo@uma.es



UNIVERSIDAD
DE MÁLAGA

with assistance from

Etain Kidney and Anthony Buckley, The Dublin Institute of Technology, Dublin, Ireland.

This project has been funded by Oxford Brookes University, Small Grants Scheme Round 8, research ethics license L14100.

Table of contents

1. Study background.....	3
2. Overview of participating organisations.....	5
3. State of digital adoption	7
4. Sources of value vs. perceived barriers and risks	10
5. Organisational use.....	14
6. The role of individual and organisational attitudes and capabilities.....	15
7. Concluding comments.....	17

1. STUDY BACKGROUND

Small and medium business organisations (commonly referred to as SMEs) are the backbone of the European economy, yet little is understood about how these firms are adopting digital technologies, and deploying them to build competitive advantage. This is problematic because digital technologies can support intelligence gathering, cost reduction and audience extension for SMEs. However, they can also significantly hamper the performance of those firms that lack the technical and marketing expertise, or the enhanced capabilities and leadership qualities, to adapt to the associated changes and to optimise opportunities for the firm.

This study set out to address the gap in the literature on SMEs' use of digital technologies, by investigating the preparedness levels of SMEs for the digital economy. To achieve this goal, the research team reviewed the literature on SMEs' technology adoption and innovation, and subsequently developed an online survey. The questions were derived from academic and business literature, and further informed by earlier interviews with a selection of SMEs in each participating country. The survey ran in four different countries (Ireland, Italy, Spain and the UK), across five different industry sectors (agriculture, manufacturing, tourism/leisure, retail, and professional services) over the Spring and Summer of 2016. Furthermore, the study included the three different types of SMEs, in accordance with the European Commission's classification (Table 1).

Table 1. European Commission's criteria for the classification of SMEs

Category	Number of employees	Yearly turnover
Micro	fewer than 10 people	less than €2m
Small	between 10 and 50 people	between €2m and €10m
Medium	between 50 and 250 employees	between €10m and €50m

This report summarises the findings gleaned from the 357 complete responses to the survey. Section 2 presents an overview of the organisations that participated in this study, noting that the survey collated responses from a wide range of organisations which largely reflect the economic drivers of the participating countries. Section 3 describes the state of digital adoption amongst the participants, and distinguishes between the most widely adopted digital products and the most popular uses of digital technology in a business context. Section 4 then moves on to consider how European SMEs are deriving value from adopting digital technology, as well as identifying the key barriers faced, and the main risks restraining digitalisation of these organisations. Subsequently, section 5 considers whether digital technology is most relevant for the marketing or the non-marketing functions of SMEs. Lastly, section 6 identifies the role of individual vs. organisational attitudes and capabilities in succeeding in the digital environment.

This study would not have been possible without the financial support of Oxford Brookes University, which awarded us a research grant (Oxford Brookes University, small grants scheme round 8, research ethics license L14100), and the interest and support of other organisations including the Confederation of British Industry (CBI) small firms group, and the Confederazione Italiana della Piccola e Media Industria Privata ((CONFAPI).

2. OVERVIEW OF PARTICIPATING ORGANISATIONS

The survey gathered responses from a wide range of participating organisations (Table 2).

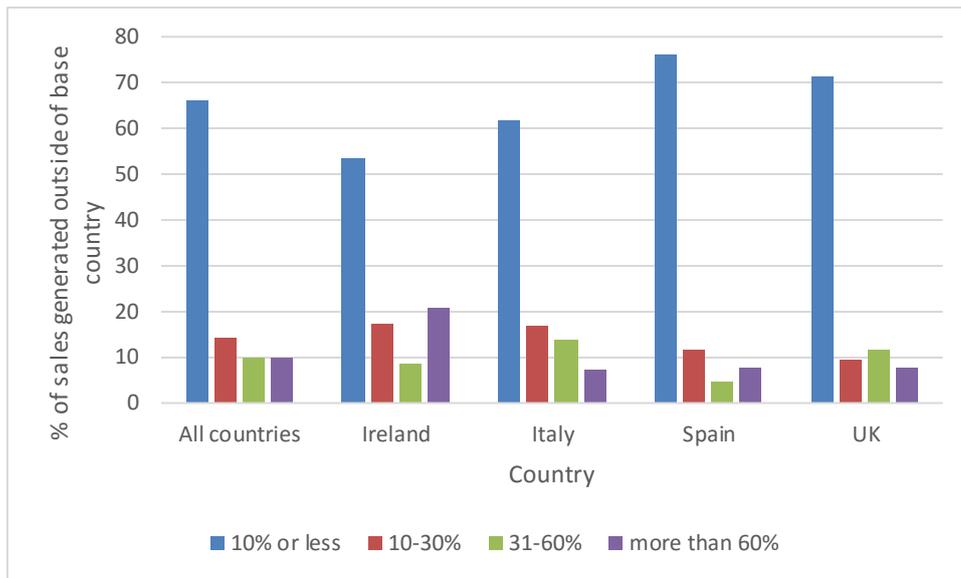
Table 2. Overview of participating organisations

	Categories	% of responses
Industry Sector	Agriculture	4.1
	Manufacture	35.3
	Services	40.5
	Retail/Wholesale	16.6
	Tourism/Leisure	3.5
In existence for	0-5 years	16.6
	6-10 years	12.5
	11-15 years	12.5
	16-20 years	12.2
	20 plus years	46.3
Annual sales revenues	Less than €2m	55.5
	Between €2m and €10m	30.6
	Between €10m and €50m	13.9
Number of employees	Fewer than 10	44.5
	Between 10 and 50	38.6
	Between 50 and 250	16.9

Italy recorded a very high proportion of respondents from the manufacturing sector and from firms which have been in existence for more than 20 years. In contrast, the UK and Ireland saw a high percentage of respondents from firms in the services sector and from firms which have been in existence for 5 years or less. In addition, Spain had the highest percentage of responses from micro-firms, both in terms of annual sales revenue and in terms of number of employees.

Generally, the participants in this study tended to have domestic markets, with two thirds of the respondents reporting that international sales accounted for 10% or less of the total sales of their firms (Figure 1). Ireland’s respondents were the most internationalised in our sample, with 1 in every 5 respondents reporting that 60% or more of their firms’ total sales were generated outside of their base countries.

Figure 1. Degree of internationalisation

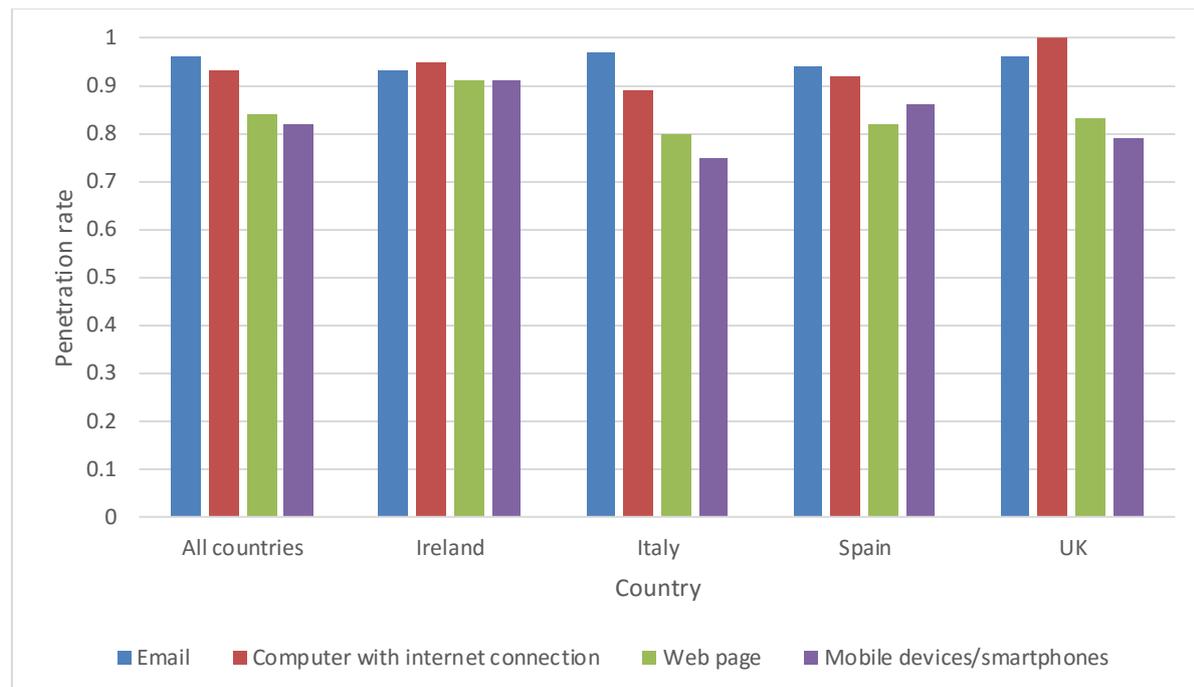


The profile of the respondents broadly reflected the characteristics of the participating countries. This offers reassurance that the findings from the study are representative of the overall reality of SME digitalisation in the four European countries studied.

3. STATE OF DIGITAL ADOPTION

E-mail, desktop access to the internet, having a webpage, and mobile access to the Internet, were the most popular formats of digital technology used by the SMEs in this study, though penetration rates varied significantly across the countries studied (Figure 2).

Figure 2. Most popular formats of digital technology

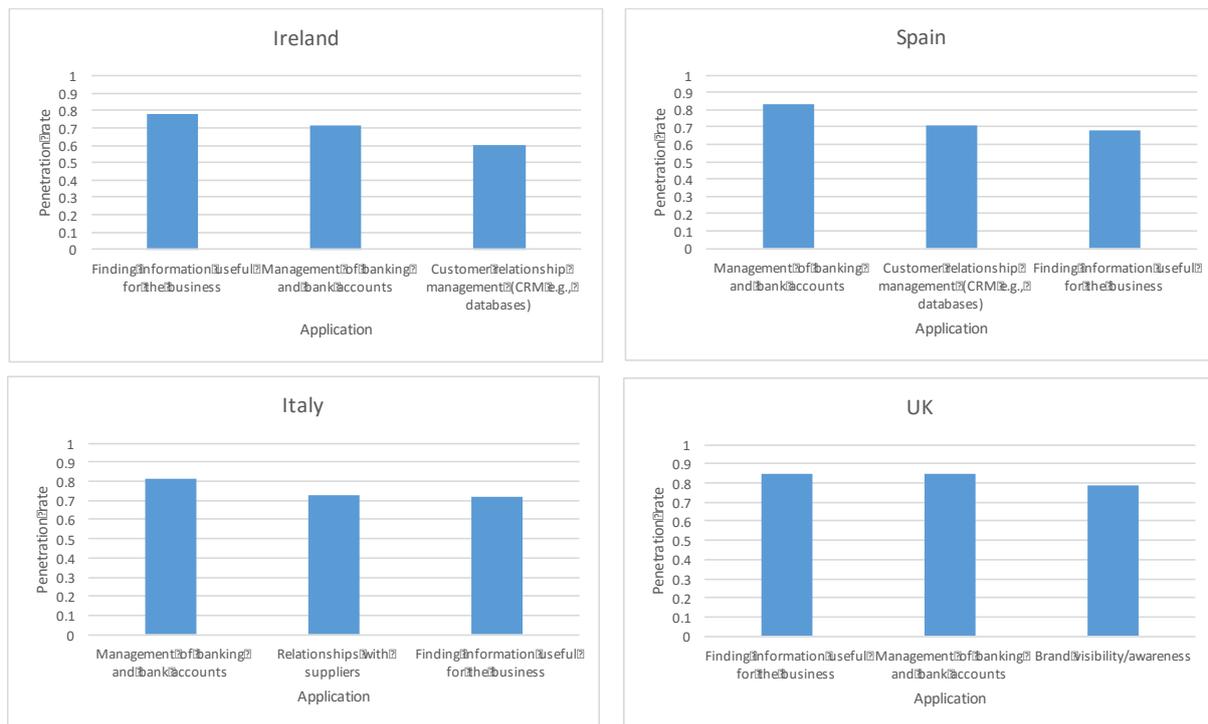


It was surprising to note that, nearly thirty years after the invention of the world wide web and the subsequent popularisation of the Internet, not all SMEs used e-mail. Furthermore, the UK was the only country where all respondents said that their firms had computers with internet connection. Whether this was because these SMEs relied on other means of accessing the internet (e.g., personal computer, or smartphone), or because they did not use these most basic of digital products, it is not clear. However, it does indicate a potential vulnerability in terms of the preparedness levels of SMEs for the digital economy.

In turn, management software, such as products for stock checking or accounting, were used by more than 70% of companies in Italy, Spain and the UK, though only 10% of those in Ireland. Cloud storage products were popular in the UK (65% of respondents), but less so in other countries. In Spain and in the UK, 60% of SMEs had some form of corporate social media presence. Blogging, online communities and Intranets were used only by a minority of firms. Hence, there is significant variance in terms of breadth and penetration of digital products, among the European SMEs participating in this study. While this may not be entirely surprising given the range of organisations considered, it shows the futility of considering SMEs as a whole and, most importantly, of designing policy and other intervention initiatives which do not take into account the digital divide in terms of the formats used.

In terms of the activities for which SMEs use digital technology, there was a skew towards performing operational tasks such as completing various online banking transactions, or finding information. A large number of firms based in the UK and in Spain also reported using digital technology to manage customer databases and perform other customer relationship management functions, while nearly three-quarters of firms in Italy reported using digital technology to manage the relationship with suppliers. Figure 3 shows the most popular uses of digital technology in each country.

Figure 3. Top three applications per country



The study also explored the link between the SMEs' state of digital adoption and the environment in which they operated. As illustrated in figure 4, the data show that compliance requirements were a key environmental factor influencing the adoption of digital technology. Respondents in all countries noted that it was mandatory for them to use digital technologies to perform certain compulsory activities such as paying taxes. In addition, the firms participating in this study placed significant importance on their competitors' actions, for instance by sharing and discussing industry and competitor information across the firm. Firms also monitored their competitors' digital activities closely, with many perceiving that those competitors which had adopted digital technologies were perceived favourably by others in the industry and/or by customers. This environmental factor was particularly relevant for respondents from Spain. In addition, adoption of digital technology by customers was a significant factor in driving digital adoption by firms in Ireland. SMEs in Spain were also influenced by the extent to which their suppliers had adopted digital technology. Surprisingly, industry-wide initiatives to promote the adoption and use of digital technology had less influence than other environmental factors across all the countries questioned.

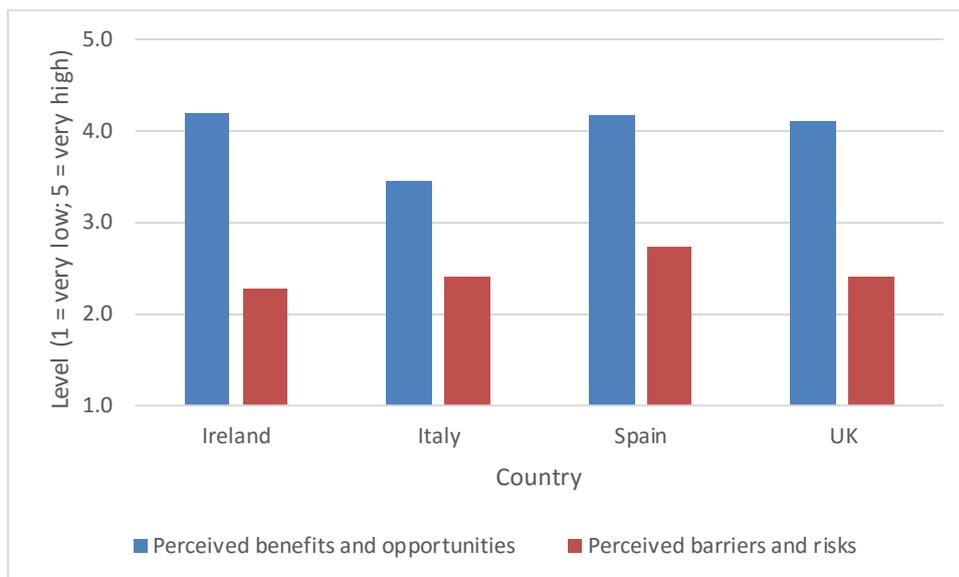
Figure 4. Key environmental factors



4. SOURCES OF VALUE VS. PERCEIVED BARRIERS AND RISKS

Participants in this study were very positive about the contribution of digital technology for their organisations. As per figure 5, in all countries surveyed, participants were more likely to perceive benefits than barriers or risks. However, the sources of actual and potential value, and the barriers faced, varied between the different countries.

Figure 5. Assessment of digital technology



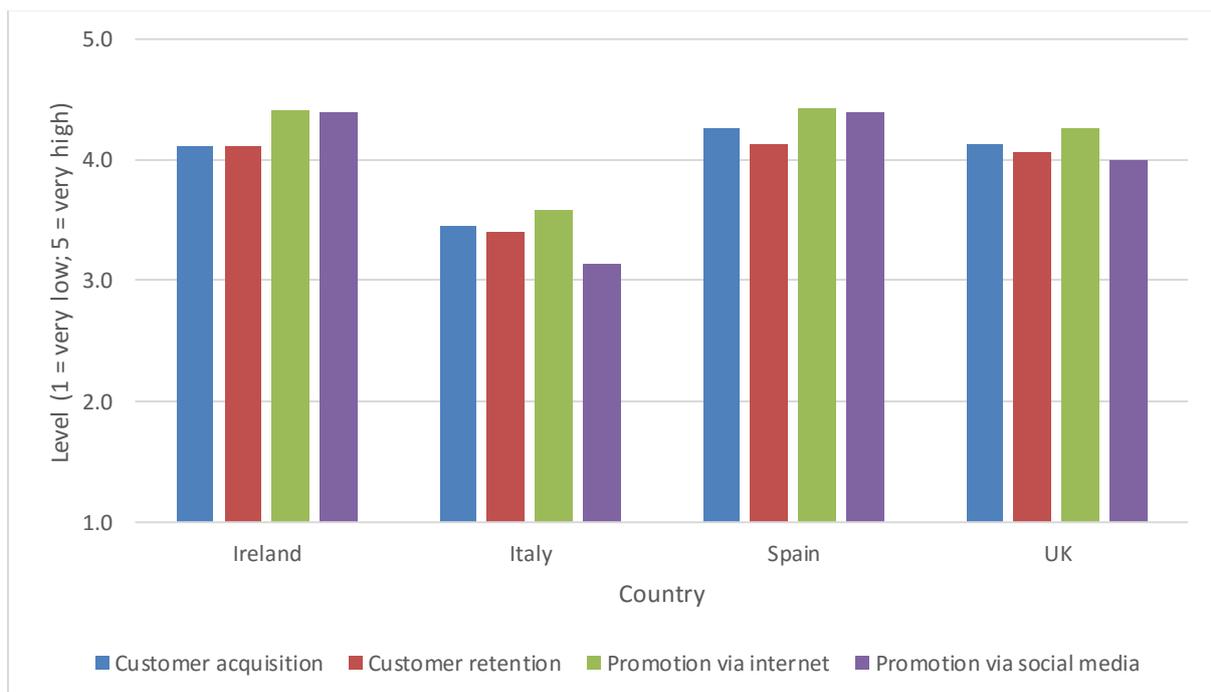
UK was the country most likely to report benefits from adopting digital technology, followed by Ireland, Spain and Italy. The main benefit mentioned across the four countries studied was the contribution of digital technology to improve awareness of the firm and its brand name(s). Improving customer satisfaction was the second benefit mentioned by respondents in Ireland, Italy and Spain, and the third one in the UK. Conversely, impact on sales was the second benefit mentioned by respondents in the UK, and the third one mentioned in Ireland, Italy and Spain.

Figure 6. Key benefits



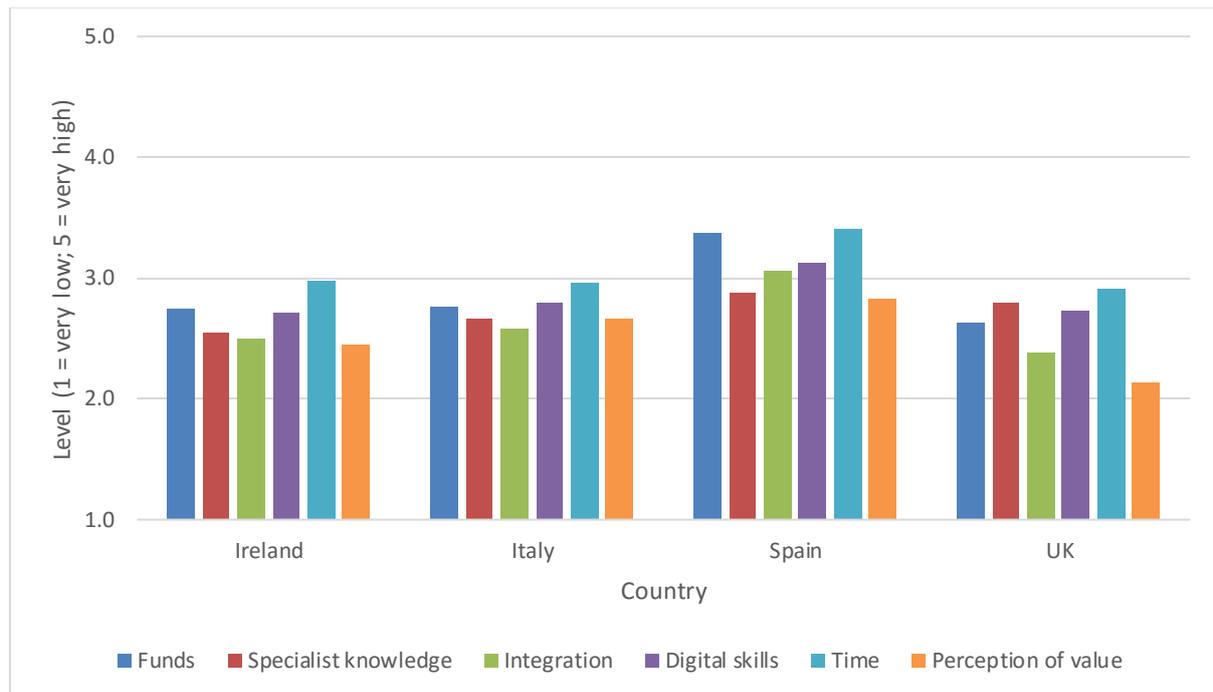
The respondents also felt that using digital technology gave their organisations a relative advantage when it came to promoting products and services via the Internet (Figure 7). This was particularly so for respondents in Ireland and Spain. Respondents in Ireland, Spain and the UK were also likely to see digital technology as a source of relative advantage in terms of acquiring and retaining customers.

Figure 7. Potential for competitive advantage



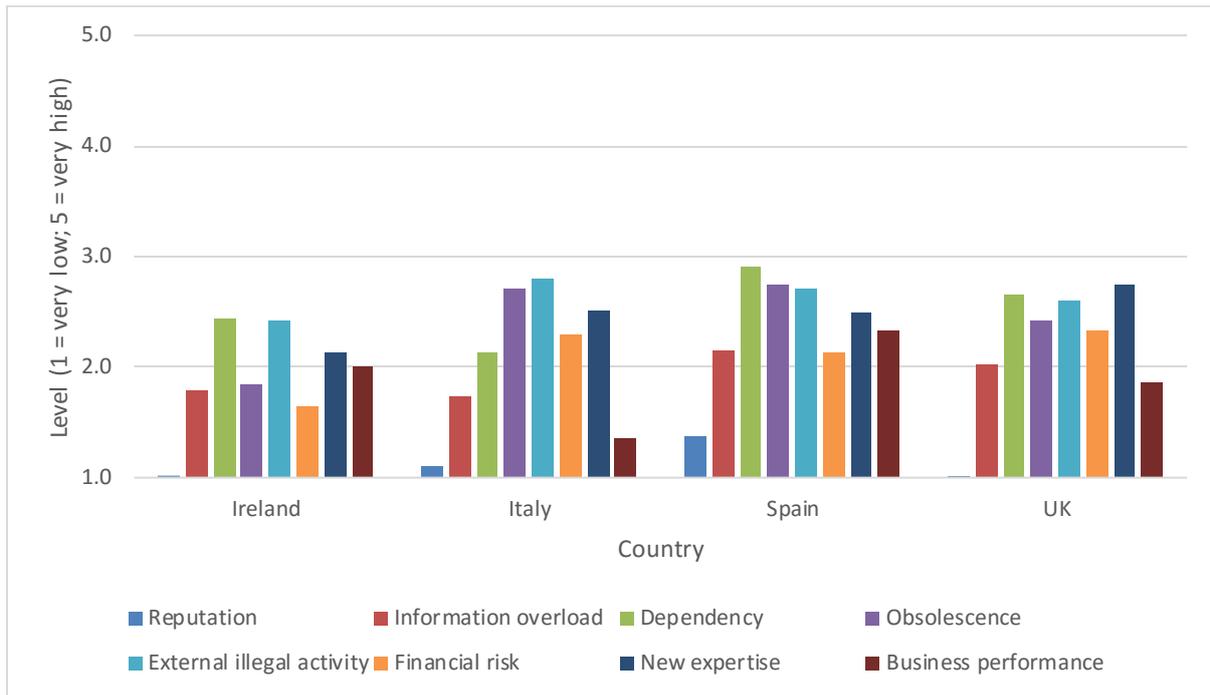
Spanish respondents were the ones most likely to mention barriers in the adoption of digital technologies (Figure 8). The main barrier encountered by these SMEs concerned the time required to research and choose between alternative digital technologies on offer. This was closely followed by limited funding, internal or external. The third barrier referred to access to talent with the necessary digital skills, and the fourth one to the integration into existing business processes.

Figure 8. Key barriers



Spanish respondents also reported the highest perceived level of risk associated with the adoption of digital technology, though it should be noted that even this group reported only moderated levels of perceived risk (Figure 9). Specifically, respondents from Spain perceived that digital technology brought moderate risks for their businesses in terms of: dependency; obsolescence; being exposed to hacking, viruses and other forms of external legal activity; and the need to acquire new expertise. Dependency was a moderate concern for SMEs in Ireland and the UK, too. Obsolescence was a moderate concern for companies in Italy; and external threats and expertise gaps were moderate concerns in Italy and the UK. Surprisingly, financial risk was not a major concern for most companies in this study’s sample, while reputation risk was mentioned by less than 23% of respondents.

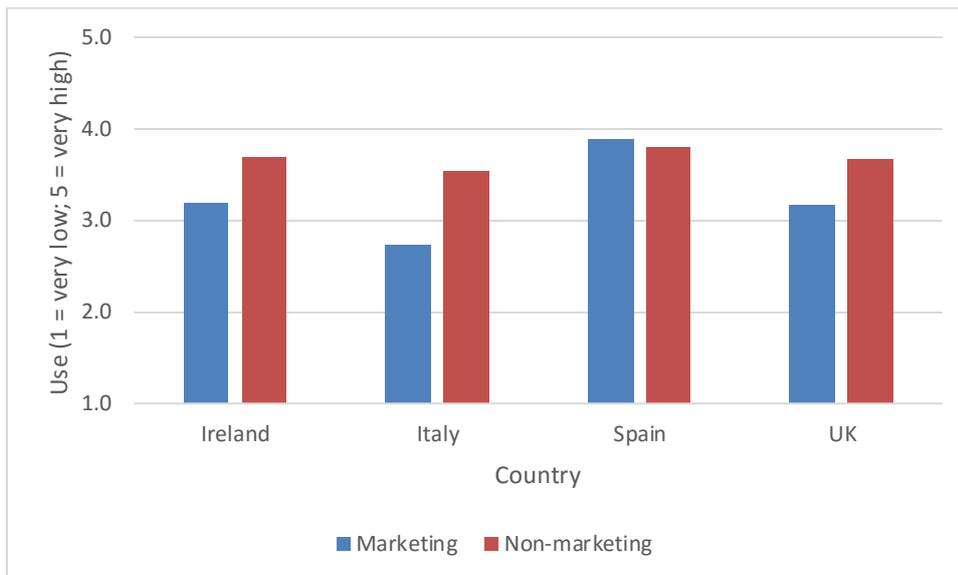
Figure 9. Key risks



5. ORGANISATIONAL USE

There is a debate in the management literature regarding whether digital is primarily a marketing tool, best suited for engagement with consumers or, instead, whether it can contribute to operations and other non-marketing functions. Within our sample, SMEs saw great value in using digital technology in non-marketing functions (Figure 10).

Figure 10. Type of function



Spain's SMEs were particularly positive about the use of digital technology in sharing information with suppliers, integrating data across functions within the organisation, and searching inventory in real-time. Integration of data across functions was the non-marketing application of digital technology most valued by SMEs in the other countries studied. This was followed by the ability to form strategic partnerships with suppliers and/or customers in the case of Ireland and the UK; and, in the case of Italy, sharing information with suppliers.

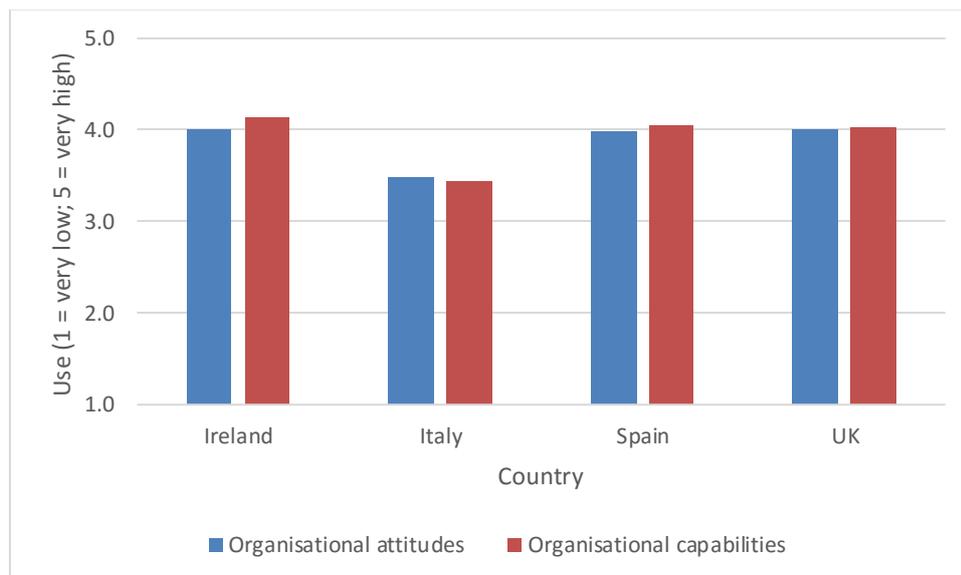
In terms of using digital technology for marketing functions, Spain's SMEs were, once again, more positive than their peers in the other European countries. SMEs in Spain and in the UK were most positive about the role of digital in collecting information about their customers, be it via direct feedback or via website analytics. Ireland's SMEs were enthusiastic about using digital technology in procurement, e-commerce and other forms of order taking. Italy's SMEs were the least enthusiastic in the sample about using digital technology for marketing purposes.

6. THE ROLE OF INDIVIDUAL AND ORGANISATIONAL ATTITUDES AND CAPABILITIES

The last section of the survey explored the role of individual and organisational factors in SMEs' adoption of digital technology. Personal characteristics are highly consequential for small organisations given the limited number of staff, so it is important to investigate the role of individual attitudes and capabilities in the digitalisation of SMEs.

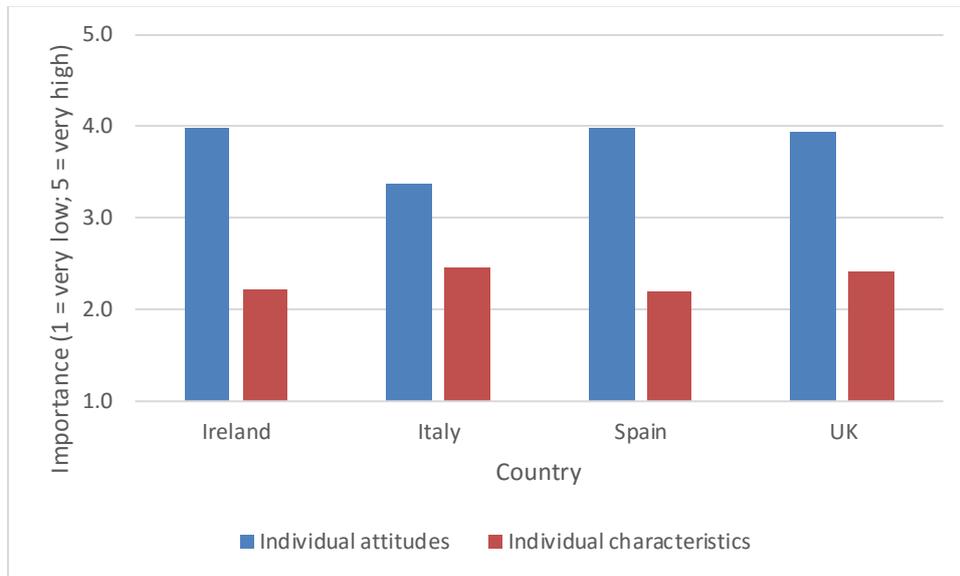
The findings show that both the organisation's capabilities and culture are seen as very important in the firm's digital journey (Figure 11). In other words, attitudes and behaviours like actively learning from other sectors, trying novel ways of doing things, or having a stated desire for digitalisation, may create the conditions for considering digital technology. However, for digitalisation to take hold, there is also the need for organisations to know how (and be able) to derive value from the technology in aspects such as improved market awareness, personalisation of products and communication, innovation, or internationalisation.

Figure 11. Role of organisational attitudes and capabilities



Perhaps more interesting, however, is the importance of individuals' attitudes vs. capabilities in the SMEs' adoption of digital technology (Figure 12). Across all countries studied, individual attitudes were deemed to be more influential than individual capabilities, as evidenced by the fact that the former scored between 3.4 (medium importance) and 4 (high importance) in all of the countries studied, whereas the latter scored between 2.2 and 2.5 (low importance). In terms of which attitudes are most significant, the data show that being achievement oriented was deemed a key factor in all countries studied. Creativity was also a significant factor in Ireland, Italy and Spain, while being competitive by nature was a key trait in SME managers in the UK. It is interesting to note that characteristics which are said to influence a person's use of technology for personal purposes (e.g., age, education, and previous experience), did not emerge as determining these SMEs' use of digital technology.

Figure 12. Role of individual attitudes and characteristics



7. CONCLUDING COMMENTS

This research project set out to investigate the preparedness levels of SMEs for the digital economy, by mapping how micro, small and medium firms, in Europe, are adopting digital technologies, and understanding how these technologies may be deployed to build competitive advantage.

Overall, there was a very positive attitude towards the potential of digital technology for SMEs, even when the organisations are not yet able to capitalise some of those potential benefits. One example of this gap is the role of digital technology in opening international markets, which contrasts with the largely domestic nature of the markets served by the SMEs that participated in this study.

It was also interesting to see the emphasis on non-marketing uses of digital technology, showing that this technology is not a fad but, rather, an intrinsic part of how organisations run their day to day activities. It is this embeddedness of digital technology and, thus, its role in the firms' operations and their competitiveness, that makes it even more important to understand what prevents organisations from adopting this technology more widely and more broadly. Our study identified key barriers and risks in each country, whilst also showing a broad range of products and uses.

The role of the personal element also emerged as a key factor in the preparedness of European SMEs for the digital economy. This was seen in the importance of having a digital champion with the right attitude to build and/or leverage on the organisations culture and capabilities. It was also seen in terms of available resources with the time and expertise to learn about, and choose between, alternative digital technologies on offer.

The findings indicate that there are core similarities across SMEs, irrespective of size, country or industry sector. Overall there is much to be optimistic about, a realisation exists of the value and importance of digital technologies in assisting firms with their success. Whilst minor differences were apparent in the areas such as the implementation and use of specific digital tools, there was strong evidence of adoption, embedding and appreciation of the value that digital technologies were and could bring to the firms including beyond that of the marketing function.

For further details and or questions relating to this report please email either Dr Sarah Quinton sequinton@brookes.ac.uk or Dr Ana Canhoto adomingos-canhoto@brookes.ac.uk

29th September 2016

DOI: 10.13140/RG.2.2.12414.18249