Social Media Adoption in Italian Firms

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Abstract
Social Media have changed not only social but also economic relations. Indeed, they represent a profitable and low-cost tool that can contribute to firms' growth, especially for the small-sized ones operating in backward regions. However, to be profitably adopted firms should merge the use of these tools and devices with a clearly defined strategy. This paper aims to analyse social media adoption in Italian enterprises. To this end, we specifically distinguish social media by type (e.g. Facebook-type, Twitter-type, etc,) and by usage purposes (e.g. Marketing, Recruitment, etc.). Moreover, we evaluate their potential role as facilitator of a firm's internationalization. Our results show that, small-sized enterprises in the Southern Italy are more involved in social media adoption, but with the risk of a poorly strategic adoption.

JEL classification: D22; F14; L26.
Key words: Social Media, ICT, Firms.

1 Introduction

The Information and Communication Technologies (ICTs) Revolution started from the end of the nineties has changed the socioeconomic structure in many countries (Perez, 2010). Tools and technologies able to facilitate economic relations, the flow of information and increasing firms' economic opportunities outside country borders, have been introduced (see Galliano et al., 2001; Bayo-Moriones & Lera-López, 2007; Haller & Siedschlag, 2011). However, the ICT Revolution was not homogeneous across countries. For instance, Schivardi & Shmitz (2018) extensively analyse the spread of ICTs in Europe, showing that it has exacerbated the North-South divide across European countries. Southern countries are backward Northern European ones, since a weak industrial base – where large part of the firms is small-

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sized and family owned – and poor management system characterize them (see Bloom et al., 2013; Bloom et al., 2016; Pellegrino and Zingales, 2017).

Recognizing the economic potential of ICTs, a number of studies have looked at the determinants of ICT adoption (see, among the others, Lucchetti & Sterlacchini, 2004; Fabiani et al., 2005; Haller & Siedschlag, 2011; Jorgenson & Vu, 2016). Both firm's internal characteristics (e.g. firm size, human capital etc.) and external factors (e.g. geographical location) are found to matter. In particular, large firms with high-skilled employees and located in capital cities or, in general, in advanced regions are more likely to adopt ICTs (see, for example, Fabiani et al., 2005; Haller & Siedschlag, 2011). However, not all the Information and Communication technologies are unaffordable for small and medium sized firms (SMEs). Indeed, there is a set of low costs technological tools and devices that are frequently used by SMEs. These are the so-called *market-oriented ICTs*, that include Social Media (Lucchetti & Sterlacchini, 2004).

Social Media (SM) are defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content" (see Kaplan and Haenlein, 2010), and include, among the others, microblogs, social networking sites and content community sites. They have changed the way of doing business, helping firms in internal and external communications; in increasing reputation; receiving consumers' feedback (see, for example, Meske and Stieglitz, 2013; Cesaroni and Consoli, 2015; Galati et al., 2017); and, moreover, facilitating the achievement of foreign markets entrance (see, for example, Hassouneh and Brengman, 2011; Okazaki and Taylor, 2013; Alarcón-del-Amo et al., 2018). In addition to these advantages, they are low-cost and do not require particular skills for their usage, these have favour their spread especially among small and medium size firms (see, among the others, Fosso Wamba and Carter, 2014; Galati et al., 2017).

Building on this background the paper aims to analyse the Social Media adoption in Italian firms. To this end, we use the 2015 Italian survey on ICT usage and e-commerce in enterprises. In particular, we look at the determinants of social media adoption distinguishing them by typology (e.g. Facebook-type, Twitter-type, YouTube-type and Wiki-type), purposes (e.g. Marketing, Customers, Innovation, Cooperation, Human resources and Internal communications) and, evaluating their impact on firms' internationalization (export via web). We contribute to the existing literature providing a quantitative analysis on both small, medium and large Italian firms, to exploit whether Social Media adoption is characterized by the well-known North-South divide present in Europe (Schivardi & Schmitz, 2018).

The next section presents the data and the methodology. Section 3 presents the results. Section 4 concludes.

2 Data and Methodology

The empirical analysis exploits the 2015 Italian survey on ICT usage and e-commerce in enterprises that provides information on the presence of ICT specialists, the use of website, e-mail, social media and, moreover, on the turnover, web sales, size and geographical location of firms with more than 10 employees.

Our empirical strategy consists of four steps. First, we run the following probit model to investigate the determinants of generic social media adoption:

$$\Pr(\text{Social Media}=1) = \beta x + \varepsilon \qquad (1)$$

where social media is a dummy variable equal to 1 if the firm uses social media and 0 otherwise, x is a vector of explanatory variables that includes - among the others - firm size, the presence of ICT specialists, the use of websites and mobile connection, the sector of activity and geographical location. See table A1 in the Appendix for the variables and their definition.

Then, we run two multivariate probit models to investigate the factors affecting the different types of social media (Facebook, Twitter, YouTube and Wiki types) and the purposes of social media adoption (Marketing, Customers, Innovation, Cooperation, Human Resources and Internal Communications), respectively. The use of multivariate probit model allows accounting for the decision to use jointly more than one SM or to use them for more than one purpose.

Finally, focusing only on the sub-sample of firms that realizes web sales, we run a probit model as in equation 1 to investigate the influence of the different social media typologies on the probability to choose Europe or the rest of the world - instead of Italy - as the web sales destination market.

3 Preliminary Results

For the sake of brevity, this section reports only the results of equation 1 and sketch some preliminary conclusions.

As shown in Table 1, the probability to use SM is not particularly significant for medium and large companies - small firms are the baseline category. This is in line with the majority of the literature that underlines SM as low-cost tools for small sized firms (see, for example, Galati et al., 2017). The sector of activity plays a role. In particular, operating in the Energy and Building sector rather than in the Manufacturing one (baseline level) reduces the probability to use SM, while this probability increases for firms in the Service Industry. Moreover, employing ICT workers, realizing training activities for both specialized (training1) and not specialized (training2) employees, as well as, having a website and a broadband connection positively affect the probability of using SM. Finally, firm's geographical location plays a role. Specifically, being in the North-East, in the Centre or in the South – rather than in the North-West (baseline category) – increases the probability

of SM adoption. This seems to confirm the role of social media as important devices for firms in "peripheral" (in both economic and geographical terms)regions.

Table 1: *Preliminary Results*

VARIABLES	Social Media
medium_small	-0.044
	(0.0338)
medium_large	-0.060*
	(0.0329)
large	0.003
	(0.0342)
Energy	-0.356***
	(0.0433)
Building	-0.235***
	(0.0358)
Services	0.280***
	(0.0244)
ICT_workers	0.285***
	(0.0265)
training1	0.188***
	(0.0367)
training2	0.166***
	(0.0300)
mobile	0.182***
	(0.0253)
web_site	0.912***
	(0.0285)
broadband2	0.110**
	(0.0438)
broadband3	0.157***
	(0.0458)
broadband4	0.275***
	(0.0511)
broadband5	0.323***
	(0.0540)
North-East	0.144***
	(0.0248)
Centre	0.102***
	(0.0290)
South	0.185***
	(0.0297)
Constant	-1.610***
	(0.055)
Observations	18,433

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

4 Conclusion

This extended abstract provides a brief account of a paper that aims at investigating social media adoption in Italian enterprises. We have reported here some preliminary results that are part of a more extensive analysis. As a first step,

we analyse the determinants of social media adoption in enterprises - without distinguish by SM types and purposes - including both internal characteristics and external factors. Results highlights the presence of ICT specialists, as well as, the use of website and of a broadband connection as factors increasing the probability of social media adoption. Moreover, in line with the prevalent literature we find small-sized firms to be more likely than medium or large ones to use these tools. Regarding geographical location, firms in Central and Southern Italy are more likely than firms in the North-West to use social media. These results underline the need to exploit whether geographical differences in Italian Nuts-1 regions emerge in terms of social media typologies, purposes of adoption and internationalization strategies (export via web).

Appendix A

Table A1: *Main Variables*

Variables	***Definition***
Social Media	Dummy variable equal to 1 if the firm uses social media, 0 otherwise.
Social Media Type:	Facebook-Type Twitter-type YouTube-Type Wiki-type
Social Media Purposes:	Marketing Customers Innovation Cooperation Human Resources Internal Communications
Size:	
Small	10 - 49 employees
Medium_Small	50 - 99 employees
Medium_Large	100 - 249 employees
Large	250 or more employees
Sector:	Manufacturing Energy Building Services
Localization:	North-West North-East Centre South
Export_Web	Dummy variable equal to 1 if the firm realizes web sales outside Italy, 0 otherwise.

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