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## Article

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International Journal of Management and Economics

## Provided in Cooperation with:

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*Suggested Citation:* Wąsowska, Aleksandra (2017) : Organisational-level attributes of micro-multinationals: The evidence from European SMEs, International Journal of Management and Economics, ISSN 2543-5361, De Gruyter Open, Warsaw, Vol. 53, Iss. 1, pp. 84-98, <https://doi.org/10.1515/ijme-2017-0006>

This Version is available at:

<https://hdl.handle.net/10419/309632>

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# Organisational-Level Attributes of Micro-Multinationals. The Evidence From European SMEs

## Abstract

This paper investigates organisational-level attributes that allow European SMEs to choose equity-based modes of entry to foreign markets, thus becoming micro-multinationals. We hypothesize that international R&D cooperation (hypothesis 1) and using digital marketing (hypothesis 2) by SMEs increase their likelihood of becoming a mMNE. These hypotheses are tested through a logistic regression analysis based on a large sample of European companies drawn from the Flash Eurobarometer study. Separate regression models are estimated for companies originating from EU-13 and EU-15. Hypothesis 1 is supported by both samples. Hypothesis 2 is supported in the EU-15 sample. Our identification of organisational-level attributes that increase the likelihood of SMEs choosing equity-based internationalisation contributes to International Entrepreneurship entry mode literature.

**Keywords:** micro-multinational, SME, entry mode, Europe, international R&D alliance  
**JEL:** M10, M16

## Introduction

As asserted by HSBC [2016], “for decades, the biggest firms operated internationally, while smaller firms tended to be domestic”. The International Business discipline is therefore based on studies on large multinational corporations (MNCs), typically originating

from developed economies. Their behaviour has been depicted by traditional theories of MNCs, such as the OLI model or the internalisation theory. Recently, the global arena has been populated by new species of multinationals, such as emerging market multinationals and micro-multinationals [Mathews, Zander, 2007, p. 390].

Micro-multinationals (mMNEs) are defined as “small- and medium-size firms that control and manage value-added activities through constellation and investment modes in more than one country” [Dimitratos, Johnson, Slow, Young, 2003, p. 165] or “small to medium size enterprises that use higher commitment entry modes beyond exporting” [Prashantham, 2011]. Their competitive advantage over traditional, large MNCs is based on agility: mMNEs are smaller, less complex, with fewer levels of decision-making [HSBC, 2016]. mMNEs typically also have simple structures, with affiliates directly (and fully) owned by parent companies, without further ownership links [UNCTAD, 2016]. mMNEs tend to offer global niche products, often specialising in one part of the production cycle (for instance, one component of mobile phones) [HSBC, 2016]. And mMNEs differ from other types of entrepreneurial companies, such as born globals or International New Ventures, insofar as the defining criterion of mMNE is not their time to internationalisation (or internationalisation speed), but instead their use of advanced modes of entry to foreign markets, while at the same time remaining relatively small.

A number of studies have revealed that SMEs prefer non-equity modes of entry to foreign markets, and that exports is their most common path to internationalisation [Mittelstaedt, Harben, Ward, 2003]. Buckley [1989, p. 94] argues that FDI is more risky and failures more costly for SMEs, as “it is likely that the proportion of resources committed to a single foreign investment will be greater in small firm than in the large one.” Like all companies, SMEs entering foreign markets face the ‘liability of foreignness.’ However, their resource constraints impede their ability to deal with this liability. Resources that small firms may commit to foreign markets are very limited [Lu, Beamish, 2001]. Thus, the ‘liability of smallness’ is added to the ‘liability of foreignness’, making internationalisation of SMEs more difficult than in the case of large corporations.

A general conclusion from the IB literature is that using equity-based modes of entry (that is, investing abroad) by SMEs is extremely challenging and therefore, SMEs typically choose exporting instead of FDI. And yet we observe an increasing number of mMNEs. To better understand the phenomenon of equity-based internationalisation by SMEs, we need to investigate the organisational-level attributes that allow these companies to compensate for the ‘liability of smallness’ and ‘liability of foreignness’ and expand abroad. Thus, we ask the following question: which organisational attributes allow European SMEs to choose equity-based modes of entry to foreign markets and become micro-multinationals? To answer this question we assess the impact of two organisational-level variables on the likelihood of becoming a mMNE: international R&D cooperation and the use of digital marketing. The following characteristics are controlled: company size, age, degree of internationalisation (foreign sales to total sales), country of origin and industry. Our

research hypotheses are tested through a logistic regression analysis based on a large sample of European companies, drawn from the Flash Eurobarometer study [European Commission, 2015]. To explain possible heterogeneities between companies from more developed European countries (EU-15) and less developed, emerging markets of 'new' European Union members (EU-13), two sub-samples – EU-15 and EU-13 – were separately analysed, consistent with several other EU-based studies [Kacprzyk, Doryń, 2015; Ciszewska-Mlinaric, 2016].

Our study extends the research on entry mode in International Entrepreneurship literature [Jones et al., 2011]. Dimitratos et al. [2014, p. 909] observed that “international entrepreneurship research might benefit from study of the mode rather than simply the time to internationalization”. Following this observation, we focus on the determinants of entry mode choice by SMEs, thus contributing to a better understanding of a new species of entrepreneurial companies – mMNEs.

In the first section of this study an overview of relevant literature is presented and our research hypotheses are developed. Then, we outline the research methods used and discuss the results, followed by a presentation of the theoretical and practical implications of these results and suggested areas for further research.

## Literature Review and Development of Hypotheses

Small and medium enterprises (SMEs) constitute the backbone of virtually every economy. In the European Union, SMEs represent 99% of firms, accounting for 85% of new jobs [European Commission, 2015, p. 4], are increasingly active in foreign markets, and have attracted much scholarly attention [Coviello, McAuley, 1996; Ruzzier et al., 2006]. Literature on the internationalisation of SMEs has typically focused on the internationalisation process [Oviatt, McDougall, 1994], and the Uppsala model is an outgrowth of that work. [Johanson, Vahlne, 1977]. This model depicted internationalisation as a process of deepening international commitment, starting with a pre-export phase and finishing with foreign direct investment. An important stream of research on SMEs focuses on the speed of internationalisation, and the distinction between 'traditional' internationals (i.e. SMEs following the gradual internationalisation path, consistent with the Uppsala model) and born globals or International New Ventures [Oviatt, McDougall, 1994].

Although less attention has been devoted to entry modes chosen by entrepreneurial companies [Jones et al., 2011], that choice is a key decision influencing the amount of resources committed to foreign markets, risks associated with foreign activity, control over foreign activities and, finally, the results achieved by internationalisation. Trade-related (e.g. exporting), transfer-related (e.g. licensing, franchising) and capital-related (e.g. joint venture, wholly-owned subsidiary) are among the potential entry modes that companies

may choose. Entry mode studies investigate the antecedents and consequences of a firm's choices posed by possible arrangements for participating in a foreign market [Hennart, 2014]. Despite a large body of literature, some gaps remain, including analyses of the modes of entry chosen by SMEs [Prashantham, 2011]. More specifically, the majority of studies on SME internationalisation focus on exporting. Much less attention has been devoted to equity-based internationalisation of SMEs.

The literature on equity-based internationalisation of SMEs be divided into three streams; that is, studies on: the determinants of entry mode choices; the performance implications of FDI by SMEs; and the characteristics of micro-multinational SMEs investing abroad.

Laufs and Schwens [2014] have recently reviewed studies on the determinants of entry modes chosen by SMEs.. They identified four primary main theoretical frameworks that have guided academic debate in this field: Transaction Cost Economics (TCE) [Williamson, 1985], Eclectic Paradigm [Dunning, 1988], Institutional Theory [North, 1990; Scott, 1995], and Network Theory [Adler, Kwon, 2002]. Several recent studies in this topic have also been grounded in Resource-Based View [Laufs, Schwens, 2016].

TCE posits organisational structure choice (including the mode of entry to foreign markets) is driven by the principle of minimization of transaction costs. Those costs, in turn, depend on three factors: asset specificity, uncertainty and frequency of transactions [Williamson, 1985]. The general conclusion from research on TCE-based determinants of entry mode choice [Mroczek, 2013] can be formulated thusly: when asset specificity is low, companies are more prone to use non-equity modes. If asset specificity is high, companies opt for equity entry modes. Moreover, depending on the level of uncertainty, companies pursuing equity entry modes may opt for shared ownership (i.e. joint-venture) or wholly-owned subsidiaries. The former is more likely if the level of uncertainty is exceptionally high. Brouthers and Nakos [2004] provide strong support for applying TCE to SME mode of entry choice. Based on a sample of 209 Dutch and Greek companies operating in CEE, they found that firms making greater asset-specific investment, perceiving target market uncertainties as low, and with developed internal control systems are more likely to choose equity modes. Moreover, they found that companies using entry modes predicted by TCE achieve better financial and non-financial performance than SMEs using entry modes that did not fit TCE.

The Eclectic Paradigm offers a more comprehensive perspective on the determinants of entry mode which it posits, results from consideration of three types of advantages included in the OLI model: ownership advantage (i.e. firm-specific competitive advantage, typically based on resources), location advantage (i.e. country-specific advantages of the target market) and internalisation advantage (i.e. advantages arising from the optimisation of transaction costs). The Eclectic Paradigm has been used by Hi, Ho, Siu [2001], in their study of small Hong Kong firms investing in mainland China. They found no support for the importance of an internalisation advantage in the choice entry mode. However, several ownership advantages turned out to be significant. More specifically, target country

experience, as well as relationships with China, increased the likelihood that a firm would prefer joint-venture over wholly-owned subsidiary.

Institutional theory offers another way to assess entry mode choice determinants. This theory focuses on the 'rules of the game' constituted by formal and informal institutions [North, 1990]. Thus, the institutional theory shifts focus on environmental conditions shaped by three types of institutions: formal rules and laws (the regulatory dimension); cognitive structures (i.e. the cognitive dimension); and social values, culture and norms (i.e. the normative dimension) [Scott, 1995]. Studies grounded in the institutional theory suggest that the choice of high-commitment entry modes is a remedy for institutional pressures at home [Cheng, Yiu, 2008].

Network theory focuses on the value of networks as a means to acquire resources from business partners and the overall importance of network ties in the company's decision-making process. The role of networks in the internationalisation process has been recognised in the 'revised' Uppsala model [Johanson, Vahlne, 2009]. Based on a case study of small software firms from Australia, Coviello, Munro [1997] proposed that both market selection and the mode of entry to foreign markets is shaped by formal and informal network relationships.

In their study based on the Resource-Based View and the upper echelons approach, Laufs et al. [2016] investigate the influence of CEO demographic characteristics (namely, age, tenure and international experience) on the choice of mode of entry by SMEs. They used a sample of German SMEs and found that none of the examined CEO's characteristics directly affected entry mode choice. These characteristics did, however, become significant when considering their interactions with contextual factors. More specifically, given high political risk in the foreign country, older CEOs, as well as CEOs with longer tenure, were unwilling to choose equity entry modes.

Studies of the performance implications of equity-based SME internationalisation indicate that advanced modes of entry may contribute to SME performance. For example, Lu and Beamish [2001], investigate the effects of internationalisation on the performance of 164 Japanese SMEs. They found that the relationship between FDI and performance of SMEs is nonlinear. At a low FDI level performance declines, while at a high FDI level it increases. Thus, the early stage of equity-based internationalisation represents a significant challenge for SMEs. However, in the long run, FDI constitutes a profitable strategy. Interestingly, in the period under study, the impact of exporting on SMEs performance was negative. The authors conclude that for SMEs, FDI may be a more beneficial mode of entry to foreign markets than exporting. Moreover, they suggest that SMEs should not be discouraged by the initial investment necessary to take the first steps in a foreign market, as it pays off in the long run. The main benefits that emerge from a high-commitment entry mode arise from greater proximity to suppliers and customers [Lu, Beamish, 2001].

A key question in the mMNEs literature concerns the attributes that enable these companies to pursue internationalisation through FDI, instead of exporting. Although

mMNEs are typically associated with the ICT sector [Arwidson, Dreber, Kolsjo, 2014], they can be encountered in nearly every industry. Ibeh et al. [2004] found, based on a survey from Scottish Council for Development, that mMNEs originate from both high- and low-technology sectors. Moreover, their market selection is influenced by market and knowledge-seeking considerations rather than by psychic distance. Dimitratos et al. [2014], relying on a sample of 116 internationalized Chilean SMEs, found that networking (with both domestic and international partners), as well as risk-taking propensity, increased the probability of a firm becoming a mMNE. Prashantham [2011], using data from 102 Indian software firms concluded that cross-border co-ethnic ties increase the likelihood that a SME become a mMNE, and that mMNEs have a significantly higher level of internationalisation (measured with the foreign sales to total sales ratio) than exporters.

Literature on SME internationalisation reveals that these companies are not smaller versions of large corporations. Instead, they exhibit unique characteristics that shape their international competitiveness. More specifically, SMEs suffer from the 'liability of smallness'; that is, limited access to financial resources, insufficient managerial capabilities, and a weak bargaining position with customers and suppliers. They also lack economies of scale [Ebben, Johnson, 2005]. Smaller firms are also more vulnerable to market, product and technological changes since they typically operate on a 'one product, one market' basis and lack diversification [Buckley, 1989].

Following the Resource-Based View, we argue that, to offset both the 'liability of foreignness' encountered by companies entering foreign markets and the 'liability of smallness', SMEs need access to unique intangible resources and/or capabilities. These resources do not necessarily need to be 'possessed', but may be accessed through networking with external partners. The significance of networks for the choice of entry modes by SMEs has been recognised in the IB literature [Coviello, Munro, 1997]. There are two types of relevant SMEs networks; social networks, developed from personal relationships and business networks, involving a mutual exchange of resources and/or concerted efforts to resolve problems by entering formal agreements [Vasilchenko, Morrish, 2011, p. 91], for example in the R&D domain.

R&D cooperation is a goal-oriented business networking between two or more firms [Vasilchenko, Morrish, 2011], aimed at developing innovation (e.g. new products, new technological processes). Since the 1980s, the number of R&D cooperation agreements, including international R&D alliances, has continuously increased due to shortened product life cycles, increasing technological complexity and the focus on firms' 'core competencies' [Lichtenthaler, Lichtenthaler, 2004]. International R&D alliances provide companies with technologies not available in their home country. Studies on international R&D alliances have typically been conducted within the context of large corporations, some of which carry out more than 100 alliances simultaneously [Lichtenthaler, Lichtenthaler, 2004]. However, globally dispersed R&D alliances also involve SMEs. For those companies, international R&D cooperation may be a vehicle to leverage the resources and capabilities of partners



[Li, Zhong, 2003]. Given the limited resource endowment of SMEs, such relationships may play a prominent role in building competitive advantage on the home market and abroad, and remedy resource shortages. We argue that participation in international R&D cooperation will increase SMEs' potential to expand abroad using equity-based entry modes. Therefore, we formulate the following hypothesis:

Hypothesis 1. International R&D cooperation will increase the likelihood of an SME choosing equity-based entry modes.

Our first hypothesis refers to the means to offset the liabilities of smallness and foreignness by tapping into technological resources from foreign partners. International Entrepreneurship literature indicates that another way to deal with these liabilities is by using digital marketing [Arenius, Gabrielsson, Sasi, 2005]. Digital marketing is defined as “an interactive system inside marketing and sales activities of a company”, using “digital communication media to achieve the main purpose of the enterprise – exposure, promotion and sales” [Medina, Ramirez, Noriega, 2013, p. 352]. Arenius et al. [2005] revealed that the use of the Internet by knowledge-intensive firms contributed to decreases liability of foreignness and lower resource scarcity, thus increasing internationalisation speed. They argue that “the use of Internet has the potential to increase both the international intensity and the global diversity (...)”, as the “firms appear to compensate for the lack of critical mass in international experience and business development”. These arguments are in line with research on the characteristics of mMNEs, which reveal that these companies overcome entry barriers to foreign markets through extensive use of online platforms and social media [HSBC, 2016]. Therefore, we formulate the following hypothesis:

Hypothesis 2. Using digital marketing will increase the likelihood of a SME choosing equity-based entry modes.

## Research Methods

The study is based on data obtained from the Flash Eurobarometer survey conducted at the request of the European Commission [2015]. That survey covered 14 513 SMEs from the 28 EU countries and 6 non-EU countries: Albania, the Former Yugoslav Republic of Macedonia (FYROM), Iceland, Moldova, Montenegro and Turkey. The survey was conducted in June 2015 by a specialised research agency (TNS Political & Social) using CATIs (computer-assisted telephone interview). The targeted respondents were: CEOs, general managers, financial directors and other legal officer with decision-making responsibilities in the company. The interviews were conducted in local languages.

The survey focused on the international activities of SMEs and 52% of surveyed companies were involved in international business activities. The forms of international activity were as follows: 39% of surveyed companies imported from another country; 33% exported to another country; 16% used a subcontractor based abroad; 13% worked as



a subcontractor for a company based abroad; 8% worked on R&D with a partner based abroad; and 4% pursued foreign direct investment [European Commission, 2015].

In official European statistics (e.g. Eurostat) SMEs are defined by employment size (i.e. enterprises with less than 250 employees). The same definition was applied in the Flash Eurobarometer survey [European Commission, 2015]. However, such definition is very broad and encompasses companies with different ownership structures. More specifically, medium-sized firms are often part of an enterprise group. In most countries, dependent SMEs (i.e. subsidiaries of larger corporations) are more open to international business than independent companies. Thus, in terms of international business activities, dependent SMEs “behave like large ones” [Airaksinen et al., 2015]. As asserted by Coviello and McAuley [1999], independence is the key feature of smaller firms, and differentiates them from MNEs. To account for this fact, we exclude dependent SMEs. Moreover, focusing on the micro-multinationals from the European Union, we exclude companies from the 6 non-EU countries covered by the survey. Our final sample is composed of 3791 independent SMEs from EU-28 (1782 from EU-13 and 2009 from EU-15).

Our dependent variable (*entry mode*) is binary and takes the value of 1 if a company uses equity-based entry modes. It is measured with a question: ‘In the last three years has your company done any of the following inside the EU/ outside the EU?’ If the respondent marks the answer: “Invested in a company based abroad”, *entry mode* takes the value of 1.

International R&D cooperation (*R&D cooperation*) is binary and it is measured with a question: “In the last three years has your company done any of the following inside the EU/ outside the EU?” If the respondent marks the answer: “Worked with a partner based abroad for research and development (R&D) purposes”, *R&D cooperation* takes the value of 1. Use of digital marketing (*digital marketing*) is binary and is measured with a question: “Is it possible to look at a website presenting your products and/or services?”. If the respondent marked “yes”, *digital marketing* takes the value of 1.

We employed control variables for company size (measured with a natural logarithm of the number of employees), company age (measured by the number of years since registration), the level of internationalisation (measured using the foreign sales to total sales (FSTS) ratio) and for industry (using industry dummies created based on NACE classification). Firms were classified into: *manufacturing* (NACE category C); *retail* (NACE category G); *services* (NACE categories H, I, J, K, L, M, N); and *industry* (B/D/E/F). To control for the country of origin, we used a variable: country development level, measured with a natural logarithm of GDP per capita.

To test our research hypotheses we used logistic regression analysis, which is appropriate where the dependent variable is binary and typically used in mode of entry studies [Brouthers, Nakos, 2004].

## Results

Table 1 presents descriptive statistics of the variables used in the study. We analyse two samples (EU-13 and EU-15) separately. Descriptive statistics allow us to identify several major differences between the two samples. In terms of the characteristics of the domestic market: home markets of EU-13 firms are less developed (lower GDP per capita). Companies from EU-13 are younger, participate less frequently in international R&D cooperation, less frequently use digital marketing, and less frequently choose equity-based entry modes.

**TABLE 1. Descriptive statistics**

		EU-13 N= 1782	EU-15 N= 2009
Continuous variables		Mean (SD)	
Firm size		2.73 (1.27)	2.74 (1.29)
Firm age		17.00 (14.04)	29.73 (26.04)
FSTS		38.11 (34.51)	31.94 (31.83)
Ln (GDP per capita)		9.69 (0.29)	10.64 (0.36)
Binary variables		Frequency (percentage)	
Entry mode	Equity	112 (6.3%)	252 (12.5%)
	Non-equity	1670 (93.7%)	1757 (87.5%)
Industry	Manufacturing	580 (32.5%)	725 (36.1%)
	Retail	684 (38.4%)	703 (35%)
	Services	300 (16.8)	426 (21.2%)
	Industry	218 (12.2%)	155 (7.7%)
R&D cooperation	Yes	210 (11.8%)	361 (18%)
	No	1572 (88.2%)	1648 (82%)
Digital marketing	Yes	1449 (81.3%)	1748 (87%)
	No	333 (18.7%)	261 (13%)

Source: own elaboration.

Tables 2 and 3 present correlation matrix for the variables used in the study for our EU-13 and EU-15 samples, respectively.

**TABLE 2. Correlation matrix, EU-13 (N=1782)**

	1	2	3	4	5	6	7	8	9	10
1. size	1	0.289**	0.288**	-0.269**	-0.015	-.064**	0.061*	0.048*	0.165**	0.092**
2. age	0.289**	1	0.129**	-0.043	-0.041	0.092**	-0.079**	0.019	0.127**	0.032
3. manufac- turing	0.288**	0.129**	1	-0.548**	-0.313**	-0.043	0.151**	0.021	0.066**	-0.022
4.retail	-0.269**	-0.043	-0.548**	1	-0.355**	-0.010	-0.184**	-0.045	-0.024	-0.033
5.services	-0.015	-0.041	-0.313**	-0.355**	1	0.000	0.095**	0.054*	-0.034	0.075**
6. GDP	-0.064**	0.092**	-0.043	-0.010	0.000	1	0.021	0.034	0.077**	0.093**
7. FSTS	0.061*	-0.079**	0.151**	-0.184**	0.095**	0.021	1	0.032	-0.112**	0.023
8. R&D cooperation	0.048*	0.019	0.021	-0.045	0.054*	0.034	0.032	1	0.050*	0.192**
9. Digital marketing	0.165**	0.127**	0.066**	-0.024	-0.034	0.077**	-0.112**	0.050*	1	0.065**
10. Entry mode	0.092**	0.032	-0.022	-0.033	0.075**	0.093**	0.023	0.192**	0.065**	1

Source: own elaboration.

**TABLE 3. Correlation matrix, EU-15 (N=2009)**

	1	2	3	4	5	6	7	8	9	10
1. size	1	0.325**	0.196**	-0.235**	0.009	-0.080**	0.076**	0.043	0.108**	0.157**
2. age	0.325**	1	0.104**	-0.036	-0.059**	0.139**	-0.030	-0.020	0.082**	0.048*
3. manufac- turing	0.196**	0.104**	1	-0.551**	-0.390**	-0.056*	0.078**	0.002	0.028	-0.012
4.retail	-0.235**	-0.036	-0.551**	1	-0.381**	-0.037	-0.077**	-0.053*	-0.055*	-0.042
5.services	0.009	-0.059**	-0.390**	-0.381**	1	0.102**	0.025	0.074**	0.048*	0.017
6. GDP	-0.080**	0.139**	-0.056*	-0.037	0.102**	1	-0.052*	0.112**	0.102**	0.070**
7. FSTS	0.076**	-0.030	0.078**	-0.077**	0.025	-0.052*	1	0.164**	-0.007	0.155**
8. R&D cooperation	0.043	-0.020	0.002	-0.053*	0.074**	0.112**	0.164**	1	0.081**	0.222**
9. Digital marketing	0.108**	0.082**	0.028	-0.055*	0.048*	0.102**	-0.007	0.081**	1	0.084**
10. Entry mode	0.157**	0.048*	-0.012	-0.042	0.017	0.070**	0.155**	0.222**	0.084**	1

Source: own elaboration.

Table 4 present logistic regression analysis results for two samples: EU-13 and EU-15. Hypothesis 1 predicts a positive relationship between international R&D cooperation and the use of equity-based entry modes. We find strong support for this hypothesis in both samples, i.e. international R&D cooperation increased the likelihood of choosing equity-based entry modes in both EU-13 ( $p < 0.001$ ) and EU-15 ( $p < 0.001$ ).

Hypothesis 2 predicts a positive relationship between the use of digital marketing and the use of equity-based entry modes. There appears to be some support for this hypothesis in EU-15 sample, though at a lower level of significance ( $p < 0.05$ ). However, this hypothesis was not supported in our EU-13 sample, although we observe a positive relationship at a level of statistical tendency ( $p < 0.1$ ).

**TABLE 4. Logistic regression analysis**

	EU-13 N=1782					EU-15 N=2009				
	B	SE	Wald	Df	Signifi- cance	B	SE	Wald	df	Signifi- cance
Size	0.323	0.091	12.679	1	0.000	0.365	0.063	33.923	1	0.000
Age	-0.003	0.007	0.217	1	0.642	0.000	0.003	0.000	1	0.985
Manufacturing	-0.277	0.357	0.603	1	0.437	-0.976	0.247	15.633	1	0.000
Retail	0.083	0.347	0.057	1	0.811	-0.621	0.250	6.179	1	0.013
Services	0.541	0.358	2.286	1	0.131	-0.769	0.260	8.720	1	0.003
GDP	1.365	0.377	13.109	1	0.000	0.491	0.193	6.482	1	0.011
FSTS	0.002	0.003	0.450	1	0.502	0.012	0.002	31.330	1	0.000
R&D cooperation	1.482	0.220	45.395	1	0.000	1.156	0.155	55.496	1	0.000
Digital marketing	0.633	0.347	3.319	1	0.068	0.749	0.293	6.532	1	0.011
Constant	-17.883	3.725	23.054	1	0.000	-8.971	2.090	18.427	1	0.000
-2Log Likelihood	747.937					1334.979				
Nagelkerke R2	0.130					0.164				
Chi-square	88.678				0.000	182.286				0.000
Correct classification (%)	93.8%					87.4%				
Hosmer and Lemeshow test	5.766		0.673			6.670				0.573

Source: own elaboration

## Conclusions

In this paper we examined the organisational attributes allowing European SMEs to choose equity-based modes of entry to foreign markets. More specifically, we investigated the impact of two organisational-level variables, i.e. international R&D cooperation and digital marketing use on the likelihood of choosing equity-based modes of entry, thus becoming a mMNE.

Our findings reveal that, despite the liability of foreignness and the liability of smallness faced by SMEs, a number of European SMEs enter foreign markets using FDIs. This mode of entry was twice as popular in EU-15 than in EU-13 (12.5% and 6.3%, respectively, of the research sample). We conclude that the propensity of using equity-based entry modes is higher for SMEs originating from more developed economies. SMEs from EU-13 are limited, in their international expansion, not only by the liability of foreignness and the liability of smallness, but also by the 'liability of emerginness' [Ramachandran, Pant, 2010]. This liability is country-specific and arises from the mere fact of being an emerging economy where a firm, originates from weaker institutional and business environment.

To account for differences between EU-15 and EU-13 firms, we separately tested our research variables in the two samples, which both provide strong support for Hypothesis 1, which states that international R&D cooperation increases the likelihood of choosing equity entry modes. Our results are consistent with the notion that networks play a major role in choice of entry modes by SMEs [Coviello, Munro, 1997; Dimitratos et al., 2014]. More specifically, we conclude that access to the technological resources of partners can allow SMEs to offset their 'liability of smallness' and overcome resource constraints. Moreover, we conclude that participation in international networks reduces the 'liability of foreignness' faced by SMEs. This conclusion is consistent with the 'revised' version of the Uppsala model [Johanson, Vahlne, 2009], which indicates that the 'liability of outsidership' (as opposed to the 'liability of foreignness') is the major barrier to internationalisation.

We find partial support for hypothesis two; that the use of digital marketing increases the likelihood of choosing equity modes of entry. This hypothesis was fully supported only in the EU-15 sample. In EU-13 the relationship was at a relatively low level of significance ( $p < 0.1$ ). We conclude that digital marketing is a means to overcome entry barriers to foreign markets, especially in the case of SMEs originating from developed economies. The role of digital marketing in the international strategy of emerging market companies is less significant.

Based on our findings, we can formulate several recommendations to entrepreneurs and SME managers. As indicated by previous studies, FDIs undertaken by SMEs contribute to their financial performance [Lu, Beamish, 2001]. The benefits of equity-based entry modes result from a greater proximity to suppliers and clients. However, FDIs are risky, especially for SMEs under resource constraints [Buckley, 1989]. Our results indicate that

SMEs may overcome their liabilities in two ways. First, they may offset their resource constraint through the technological resources of their network partners. Second, they may benefit from digital marketing, thus decreasing entry barriers to foreign markets.

Our findings face two major limitations. First, we used cross-sectional data, and are therefore unable to test the effects of the studied variables on the choice of equity-based entry modes in a strict sense. While there are conceptual arguments in favour of these variables affecting foreign investment activity undertaken by SMEs, the other causal direction is possible. Second, we used a large dataset developed by the Flash-Eurobarometer project, thus providing cross-country evidence. While this approach allows the use of fully comparable, representative data, it does not allow a detailed measurement of variables, due to data unavailability. Thus, our main variables were binary and measured with single-item questions. For example, the use of digital marketing was measured with a question: “Is it possible to look at a website presenting your products and/or services?” However, digital marketing encompasses a number of activities, such as: “company website, interactive website, eCommerce, blog, search engine optimization (SEO), search engine marketing (SEM), online reputation management (ORM), email marketing, online advertising, online video, widgets or applications, online community, loyalty marketing, podcast, social media, relationship marketing, viral marketing, customer relationship management (CRM) and mobile marketing” [Medina et al., 2013, p. 351]. Our data did not allow a more detailed analysis of the relationship between these activities and the internationalisation strategy of SMEs. Therefore, we encourage future research to refine the measures of independent variables applied in this study (i.e. R&D cooperation, use of digital marketing) and ‘micro-multinationality’ (e.g. proportion of assets invested abroad, number of countries entered through FDI, number of foreign subsidiaries controlled by a SME).

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## Notes

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