

Export Intensity, Geographic Diversification and the Role of Public Support: The Evidence from Old and New Europe SMEs

Mariola Ciszewska-Mlinarič

ABSTRACT

Objective: The objective of the article is to investigate how public support (both financial and non-financial) affects the geographic scope and export intensity of SMEs originating from Old (EU15) and New Europe (the CEE12 region). In particular, the work considers the direct and indirect effects (via geographic scope) of public support on the export intensity of SMEs.

Research Design & Methods: The empirical analyses use a large, cross-country, cross-industry dataset of 2 375 European SMEs from 27 countries.

Findings: The study findings indicate that only financial public support is positively, directly and indirectly associated with the export intensity of European SMEs, regardless of the origin. The results related to non-financial public support are less conclusive. Additionally, the study reveals that despite significant, firm-level differences characterising internationally oriented SMEs from Old and New Europe, the examined relationships and effects of control variables are largely the same.

Implications & Recommendations: The article offers clear insights into the significance of financial vs. non-financial public support programmes for internationalisation activities of SMEs, encouraging further research to focus on the question which firms should receive public support and how to increase the awareness and propensity of the owners/managers of SMEs to consult public support providers.

Contribution & Value Added: The originality of this work lies in investigating the impact of public support for internationalisation efforts (export intensity and geographic diversification) of SMEs originating from different contexts of the EU15 and CEE12 countries.

Article type: research paper

Keywords: public support; export intensity; geographic diversification; SMEs; CEE

JEL codes: F23

Received: 13 December 2017

Revised: 29 January 2018

Accepted: 24 May 2018

Suggested citation:

Ciszewska-Mlinarič, M., (2018). Export Intensity, Geographic Diversification and the Role of Public Support: The Evidence from Old and New Europe SMEs. *Entrepreneurial Business and Economics Review*, 6(2), 45-69. <https://doi.org/10.15678/EBER.2018.060203>

INTRODUCTION

The role of small and medium sized enterprises (SMEs) for national economies is well recognized. They constitute majority of business entities, create new jobs, and are increasingly involved in international operations. However, in comparison with large firms, SMEs have limited managerial and financial resources, which makes the expansion into foreign markets more risky for them. Therefore, recognizing the role of SMEs for national economies, but also their resource deficiencies, governments and their agencies develop public programmes to support international efforts of SMEs.

Prior research on this topic offers several interesting insights that can be grouped under three main themes. Firstly, given that the awareness of public support programmes among SMEs is relatively low (European Commission, 2010), factors determining both the awareness and the use of such programmes are often examined (Fischer & Reuber, 2003a; Audet & St-Jean, 2007; Audet, Berger-Douce, & St-Jean, 2007; North, Smallbone, & Vickers, 2001). Secondly, a question concerning the effectiveness of public support is often asked (e.g. Liu, Jiang, Zhang, & Zhao, 2013; Bannò, Piscitello, & Varum, 2014; Yoo, Mackenzie, & Jones-Evans, 2012; Alonso-Nuez & Galve-Gorriç, 2012), although it is still not clear what type of support (financial versus non-financial) is of particular significance for SMEs. Thirdly, prior research has also provided some answers to the question which firms should receive support, and what allocation criteria should be used by the providers of public support. There are claims that from the economic point of view, public support programmes should be oriented on high-growth firms, as they are the most promising in terms of creating jobs (Fisher & Reuber, 2003b; Mason & Brown, 2013).

This study contributes to the second stream of research. In the light of often inconclusive, anecdotal, and contradictory evidence on the effectiveness of public support (Yoo *et al.*, 2012), reported by studies that are mostly undertaken within one-country samples, the question concerning the tangible outcomes of such support remains valid. Taking advantage of the broad context of 2 375 European SMEs originating from 27 countries, this study employs linear regression analyses to investigate the relationships between public support (financial and non-financial) and international activities of SMEs in terms of export intensity and geographic scope. Therefore, a key question in this study is: *Does public support enhance SME export intensity and geographic diversification? And what kind of public (financial and non-financial) is beneficial in this respect?*

The article is structured as follows. The first section presents the theoretical background to develop the research hypotheses. Next, methodological details are provided, followed by a presentation of results and analysis. The article concludes with a discussion of the implications and limitations of the findings.

LITERATURE REVIEW

Public Support for SMEs

A logic behind offering public support for internationally oriented SMEs was elegantly summarised by Fischer and Reuber (2003a, p. 69): 'internationalisation is good for small firms, and small firms are good for economies'. By definition, the role of public support is to enhance the performance of new and small firms (Yoo *et al.*, 2012), which means – in the con-

text of internationally oriented firms – to help them successfully enter and build the position on foreign markets. Public support programmes may include free or subsidised services in such areas as: business advice and consulting services, including access to information on foreign markets; training for employees; and financing (subsidies, loans, grants).

With an increase in public support programmes and their budgets, one of the most important research questions is whether public support pays off, helping the assisted firms to develop and making a good use of taxpayers' money. Indeed, the resulting answers are often contradictory (Yoo *et al.*, 2012). On the one hand, there is evidence that the use of public support enhances firm performance. For instance, Sarder, Ghosh and Rosa (1997) observed that firms using support services achieved higher performance (in terms of growth in sales, employment, and productivity) than their peers without support. More recently, Liu *et al.* (2013) observed that high level of domestic institutional effort exerted a positive moderating effect on the relationship between strategic flexibility and international venturing of Chinese firms. Also Bannò *et al.* (2014) investigated the impact of financial public support on outward FDI of Italian SMEs and found it to be beneficial for such performance indicators as domestic turnover and productivity growth.

On the other hand, there is also strong evidence that public support brings no gains or might be wrongly targeted. Ramsden and Bennet (2005) assessed the role of external business advice on 'soft' outcomes (improved ability to manage, ability to cope) and 'hard' outcomes (profitability, turnover, reduced costs) on satisfaction levels. They observed, however, that high level of owners/managers satisfaction from the advice was not necessarily associated with its specific 'hard' impact; they explained this phenomenon in terms of reassurance, which – in their opinion – was equally (if not more) important as specific 'hard' or 'soft' outcomes. Also Norman and Bager-Sjorgen (2006) found no significant effect of a financial support programme on the financial performance of new ventures. Examining the effectiveness of public support for technology-based SMEs, Yoo *et al.* (2012, p. 101) found that 'high performing firms benefited less from the public support services than low performers'. Finally, Alonso-Nuez and Galve-Gorriz (2012) found that public programmes that supported the creation of companies in Spain did not result either in higher survival rate or in higher net income among companies that received subsidy in comparison with those without such support. Similarly, in the context of Argentinian microenterprises, Berrone, Gertel, Giuliadori, Bernard and Meiners (2014) noticed that public policy may have a pro-poor character, as public support is directed to enterprises arising from unemployment, and these enterprises 'proved to be less successful in relation to the microenterprises' performance' (2014, p. 496).

These contradictory results may be explained by different methodologies, dependent variables, operationalisation of public support, and various contexts (country and sector differences). Taking advantage of cross-country, cross-industry dataset, we examine the role of public support for the internationalisation of SMEs. Recognizing that prior research offers mixed findings, in our theorising we follow the arguments highlighting the positive outcomes of public support for internationally oriented SMEs. As small firms suffer from resource deficiencies, including managerial and financial resources, the use of public support should help them to: gain information about foreign markets, including potential partners, buyers, distributors, suppliers, foreign law regulations, quality requirements; develop useful ties; leverage international opportunities; lower perceived risks; increase propensity to internationalise; and finally enhance internationalisation in-

tensity and geographical scope. Bannò *et al.* (2014) argue that financial support helps SMEs invest in foreign markets as it lowers one of the most significant barriers related to the lack of capital, but additionally they point out that financial support may be easily converted into other kinds of needed resources. Building on prior research (Kuivalainen, Puumalainen, Sintonen, & Kyläheiko, 2010; Wiklund & Shepherd, 2003; see also Yiu, Lau, & Bruton, 2007; Wach, 2012; Bruton, Lau, & Obloj, 2014), Bannò *et al.* (2014, p.24) indicate that: 'Improved internal organizational capabilities, especially financial, managerial, marketing, and technical capabilities, enhance firms' performance in a context of internationalization', and 'obtaining sufficient financing serves as a cushion against unforeseen setbacks' (2014, p. 25). Additionally, these authors mention that cooperation with a subsidising agency may result in organisational learning and eventually in 'an adjustment of management processes' (2014, p. 25).

In a similar vein, but in the context of export-oriented SMEs, this article builds on resource-based view (RBV), proposing that public support, both financial and non-financial, will have beneficial effects on SMEs' competencies (as it should enlarge the available resource pool), and in consequence help them to overcome the liability of foreignness (Zaheer, 1995; Johanson & Vahlne, 2009), liability of smallness (Kale & Arditi, 1998; Aldrich & Auster, 1986), liability of outsidership (Johanson & Vahlne, 2009), and/or liability of newness (Aldrich & Auster, 1986; Kale & Arditi, 1998). Following that logic, it is expected that public support will exert a positive impact upon international activities of SMEs, in particular export intensity and geographic scope:

- H1:** Public support (both financial and non-financial) positively impacts a degree of SME internationalisation (export intensity), regardless of the origin of SMEs.
- H2:** Public support (both financial and non-financial) positively impacts geographic diversification of SMEs, regardless of the origin of SMEs.

It is also argued that public support may have not only a direct effect (as predicted in H1) but also an indirect effect on export intensity, via geographic diversification. This notion is based on the assumption that firms using public support can expect to achieve higher intensity of exports by relying on more geographically diverse strategies. It should be noted, however, that geographic diversification increases the complexity of firms' operations. Indeed, prior research suggests that up to a point it is beneficial for performance, but at high levels geographic diversification may be associated with lower performance gains. In short, the relationship between diversification and performance may take the inverted U-shape (Driffield, Du, & Girma, 2008; Capar & Kotabe, 2003).

On the one hand, as summarised by Driffield *et al.* (2008), there are several reasons why increased geographic scope should lead to better performance. Those relevant also for smaller firms that operate in foreign markets through exporting include: (i) better access to technological knowledge and foreign product innovation; (ii) wider international networks and management structure to meet domestic competition; (iii) benefits from economies of scale and scope; (iv) dampening the impact of domestic business fluctuations by using foreign market outlets (Driffield *et al.*, 2008, pp. 145-146). It is also argued that a broader scope of export/destination markets allows SMEs to spread the risk (Dejo-Oricain & Ramírez-Alesón, 2009), particularly when markets are not perfectly interdependent in economic terms. Diversification of markets may

also trigger new opportunities to learn, and leverage knowledge/resources in a higher number of markets, leading to the growth of export sales.

On the other hand, the complexity that has to be faced by SMEs results from broader geographic scope, and differences in technology and culture existing between export markets (Zahra, Ireland, & Hitt, 2000). Prior studies offer several explanations as to why international expansion might not always bring performance gains. Summarising such arguments in the context of multinational companies from developed markets, Driffield *et al.* (2008, p. 146) point to: bounded rationality that lowers managers’ capacity to face greater complexity, which in turn has negative impact on performance (Grant, 1987); and performance decline that may result from spreading managerial capabilities and coordination problems (Hitt, Hoskisson, & Kim, 1997).

Analysing the sample of emerging market firms, Nachum (2004, p. 290) found a strong association between geographical diversification and firm performance, suggesting that ‘This route to growth, which until recently has been less developed by most developing country firms relative to the extent of their industrial diversification, is likely to prove rewarding’. In the context of developed market firms – British multinationals, Driffield *et al.* (2008) observed a strong non-linear relationship between performance and multinationality (defined by the number of markets).

To sum up, it is argued that public support enhances geographic scope, and broader geographic scope may in turn allow SMEs to spread risk and provide new learning and business opportunities, exerting a positive (but inverted U-shape) impact on export intensity. In other words, the geographic diversification will mediate the relationship between the usage of public support by SMEs and their export intensity (degree of internationalisation), thus:

H3: The scope of geographic diversification mediates the relationship between public support and degree of the internationalisation of SMEs, regardless of the origin of SMEs.

The hypothesised relationships are presented in Figure 1.

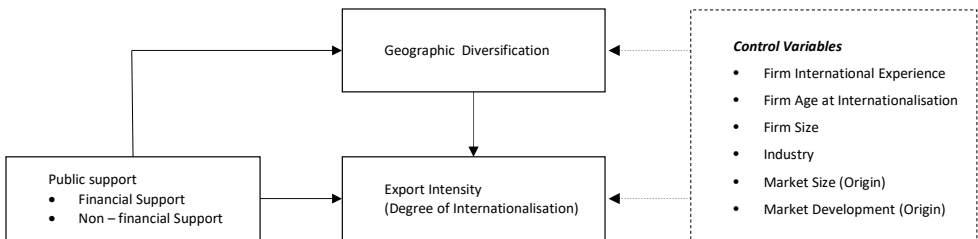


Figure 1. Conceptual model
Source: own elaboration.

MATERIAL AND METHODS

Data and Sample

This study uses the database of European SMEs originating from 33 countries, the 27 EU states plus Croatia,¹ Iceland, Lichtenstein, Macedonia, Norway and Turkey. As SMEs firms

¹ At the time of the survey Croatia, now the EU member, was a candidate for accession.

with between 1 and 249 employees were classified. The creation of the database was sponsored by the European Commission, within the scope of the research project *Internationalisation of European SMEs*, (European Commission, DG Enterprise and Industry, 2010). Directorate General for Enterprise and Industry of the European Commission commissioned the project, and Dutch EIM Business & Policy Research implemented it. In the spring of 2009, 9 480 SME owners or managers (key decision makers) were interviewed on their firms' international involvement (including, for example, propensity, intensity, and scope of foreign expansion). This database was also used in other studies, for instance by Hernández and Nieto (2015), to perform their analyses on the relationship between institutional distance and entry mode decisions.

Considering the objectives of this study (the role of public support targeted at internationally oriented SMEs for their international activities/performance), it focuses only on SMEs that reported to have been active exporters between 2006 and 2008, so the number of relevant cases was 3 669 SMEs (38.7% of the original 9 480 records). Then, SMEs from countries other than the EU15 or CEE12, thus those originating from Cyprus, Iceland, Malta, Liechtenstein, Norway and Turkey, were not included in the sample. Finally, the sample was further reduced by dropping all firm-records, in case of missing or unreliable values for such variables as export intensity (degree of internationalisation), the scope of geographic diversification, and time to internationalise. This reduced the total number of SMEs to 2 375. The size (in terms of the number of firms) and the scope (in terms of number of countries) covered by the database support the generalisability of the study results to different contexts.

The sample was next divided into two subsamples; the first one including 1 368 SMEs from the EU15 countries (Old Europe), and the second one – 1 007 SMEs from the CEE12 countries (New Europe). The EU15 sample comprises firms from 15 member countries in the European Union prior to the enlargement of the EU on 1st of May 2004, including the following ones: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

The term Central and Eastern Europe (CEE) or Central and Eastern European Countries (CEECs), denoting former communist states in Europe, was popularised in scholarly writings after the collapse of the Iron Curtain in 1989, but its roots can be traced to Winston Churchill's speech (1946). The CEE12 sample comprises firms from 12 countries belonging to the group of Central and Eastern Europe, which is defined by the former and shared communist past (OECD, 2007), including: former Eastern Bloc countries (Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia); three Baltic countries, prior republics of the Soviet Union (Estonia, Latvia, and Lithuania); and several states of former Yugoslavia (Croatia, FYR Macedonia, Slovenia).² This list of the CEE countries is congruent with the OECD (2007) definition with two exceptions. Firstly, OECD includes also Albania; but due to the fact that the original survey was not conducted in Albania, there are no Albanian SMEs in the sample. Secondly, although not listed by OECD (2007), FYR Macedonia is also counted as one of the CEE countries due to the fact that it is one of former Yugoslavia states, and at present one of candidate countries, on the way to the EU membership. Among the CEE12 countries in the sample, as of the beginning of 2009, 10 of them already joined the EU in two waves of

² Other states of former Yugoslavia include: Bosnia-Herzegovina, Kosovo, Montenegro, Serbia.

accession (in 2004, and 2007).³ The exact number of SMEs originating from each country is presented in Table 1, and the comparison of Old and New Europe samples across the key variables – in Table 2. As the samples are of different size, a non-parametric Mann-Whitney U test for independent samples was applied. Null hypothesis, that states that the distribution of the ‘variable’ is the same across groups, is rejected in case of all variables. In other words, the EU15 SMEs in comparison with the CEE12 SMEs are different in terms of: export intensity, geographic diversification, time to internationalisation, international experience, age and size. These findings are further discussed in the concluding section.

Table 1. The list of countries and the number of SMEs in the EU15 and CEE12 samples

<i>SMEs originating from EU15 countries</i>		<i>SMEs originating from CEE12 countries</i>	
Austria	64	Bulgaria	89
Belgium	68	Croatia	65
Denmark	68	Czech Republic	82
Finland	50	Estonia	105
France	111	Hungary	57
Germany	125	Latvia	80
Greece	76	Lithuania	89
Ireland	43	Macedonia	74
Italy	151	Poland	174
Luxembourg	45	Romania	57
Netherlands	115	Slovakia	71
Portugal	62	Slovenia	64
Spain	171	–	–
Sweden	76		
United Kingdom	143		
Total	1 368	Total	1 007

Source: own study.

Measures

Dependent Variables. Export Intensity and Geographic diversification. Export intensity, or degree of internationalisation, is one of the commonly employed operationalisations of firm international performance or international activities (Javalgi & Grossman, 2014; Gashi, Hashi, & Pugh, 2014; Nummela, Saarenketo, & Puumalainen, 2004; Kyvik, Saris, Bonet, & Felício, 2013; Rodríguez & Nieto, 2012; Reuber & Fischer, 1997; Ruigrok, Amann, & Wagner, 2007). According to Katsikeas, Leonidou and Morgan’s (2000) review of export performance measures, export intensity measured as a foreign-sales-to-total-sales ratio (FSTS) is the most popular performance indicator, used in 61% of studies selected for the review. Although export performance measures based on sales were criticised as they ‘can be affected by factors other than better exporting operations’ (Katsikeas *et al.*, 2000, p. 498), Sousa (2004) indicates that it is still appropriate to use FSTS ratio to evaluate the export performance of SMEs. Taking into consideration the sample size and the available data, in this study export intensity is operationalised in a typical way, as the share of foreign

³ Except for Croatia, which joined the EU in 2013, and Macedonia, which has been a candidate for accession since 2005.

sales in total sales, with values ranging from 0.01 to 1.00 in both samples. All respondents were asked to indicate the share of exports in total turnover for the enterprise in 2008.

Table 2. Comparison of samples: descriptive and non-parametric tests

Variables	Group	Mean	S.D.	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Degree of Internationalisation	EU15	0.29	0.29	1160.40	1587426.0	651030.0	-2.29	0.02
	CEE12	0.32	0.32	1225.50	1234074.0			
Geographic Diversification	EU15	3.56	3.22	1307.41	1788537.0	525435.0	-10.21	0.00
	CEE12	2.27	1.82	1025.78	1032963.0			
Firm Age at Internationalisation (years)	EU15	13.56	8.62	1288.23	1762294.0	551678.0	-8.41	0.00
	CEE12	6.05	9.71	1051.84	1059206.0			
Firm International Experience (years)	EU15	19.93	16.43	1383.75	1892964.5	421007.5	-16.23	0.00
	CEE12	10.45	7.95	922.08	928535.5			
Firm Age (years)	EU15	33.37	24.20	1444.42	1975971.0	338001.0	-21.25	0.00
	CEE12	16.41	12.16	839.65	845529.0			
Firm Size (no. of employees)	EU15	51.35	58.59	1150.01	1573214.5	636818.5	-3.15	0.00
	CEE12	56.89	59.71	1239.61	1248285.5			

Source: own study.

Geographic diversification of export markets. There are several operationalisations of geographic diversification, but those most popular include (Cieslik, Kaciak, & Welsh, 2012): the number of foreign markets where a firm exports (Driffield *et al.*, 2008, Wheeler, Ibeh, & Dimitratos, 2008); operationalisations based on regions, for example, concentration on the home region versus the host region; or indicators based on export sales, such as concentration of export sales on one key market (Nachum, 2004). Following the arguments put forward by Cieslik *et al.* (2012, p. 77) that 'there is also a growing interest in incorporating the regional dispersion of international sales of SMEs into the analysis', in this article we focus on regions instead of individual markets. Thus, the geographic diversification of the export strategy SMEs was measured as a continuous variable (range 1-15), representing the number of geographic regions where the firm exports. All the firms were asked to indicate whether they have or do not have exports to the following regions, coded respectively as '1' or '0': (1) cross border regions; (2) other European Union; (3) Russia; (4) other European countries; (5) Middle East; (6) North Africa; (7) Other Africa; (8) Japan; (9) China; (10) India; (11) other Asia; (12) North America; (13) Brazil; (14) other South and Central America; (15) Australia/New Zealand. After summing up all answers, the value '1' indicates that a firm exports only to one foreign region, and '15' – to all fifteen regions. In order to examine the non-linear (inverted U-shape) relationship between geographic diversification and export intensity, the index of geographical diversification is also squared. As explained by Driffield *et al.* (2008, p. 147), the quadratic specification allows the rate at which export intensity increases to vary with the degree of geographical diversification. In other words, the initially positive impact of diversification on export intensity may start to diminish once it has reached a critical level.

Independent Variable. Public Support. Similarly to Fischer and Reuber's (2003) approach, the use of public support programmes for internationalisation was operationalised according to the respondents' answers to the questions whether or not they used such support programmes, and if they did, - what kind, financial or non-financial, the support was. In order to operationalise the public support for internationally oriented firms, SMEs in both samples (EU15 and CEE12) were grouped into three categories representing different situations considering the usage of public support for internationalisation between 2006-2008: (i) firms that did not use any public support for internationalisation ('No support' coded as '1', otherwise '0'), (ii) firms that used only non-financial support, such as counselling, information, etc. ('Non-financial support' coded as '1', otherwise '0'), and (iii) firms that used financial support, for instance subsidies, guarantees, tax incentives ('Financial support' coded as '1', otherwise '0'). Thus, there are three dummy variables. A similar approach was also adapted by Bannò *et al.* (2014) to operationalise public support for the outward FDI of SMEs. In the regression analyses, the variable depicting firms that did not use any public support ('No support') is not included in the models, as it represents a reference level for the interpretation of the results for two other binary variables ('Non-financial support' and 'Financial support').

In the EU15 sample, only 9.14% (125 firms) used public support, including 2.27% (31 firms) that used only non-financial support, and 6.87% (94 firms) that used financial support. Among SMEs originating from the CEE region, only 7.84% (79 firms) used public support, including 1.19% (12 firms) that used only non-financial, and 6.65% (67 firms) that used financial programmes.

Control variables. The study employs several control variables that were previously found significant in explaining either export geographical diversification and/or export intensity. Firstly, the firm international experience is argued to be of great importance in explaining the firms' export behaviour (Dejo-Oricain & Ramírez-Alesón, 2009; Erramilli, 1991). For example, it has been hypothesised that it may lead to the development of: ties with foreign partners, such as customers, suppliers and other business partners (Johanson & Vahlne, 2003); foreign market knowledge accumulation (Musteen & Datta, 2011), and thus enhance firms' international operations in terms of export intensity or/and scope. It was captured by the number of years a firm has sales in foreign markets. Secondly, we also control for a time to internationalisation (firm age at internationalisation). It is measured with the number of years the firm had when incurring first international sales. Recent studies have pointed to the 'learning advantage of newness' phenomenon (Autio, Sapienza, & Almeida, 2000; Sapienza, Autio, George, & Zahra, 2006; Sapienza, De Clercq, & Sandberg, 2005; Zhou, 2007). It is based on the assumption that young firms that decide to expand into foreign markets early in their life cycle, in comparison with older peers, are likely to possess higher capacity in terms of the assimilation of new foreign market information, recognition of opportunities and rapidly acting on them. Zhou (2007, p. 285) summarises prior research (especially Sapienza *et al.*, 2005), arguing that 'early internationalizing firms tend to possess fewer deeply embedded routines, face fewer inertial constraints, and thus are in a forward-looking position to explore new opportunities in international markets'. In line with prior research (e.g., Cieřlik & Kaciak, 2009), time to internationalisation was operationalised by the number of years that passed since the firm founding and its first foreign sales. Third, the firm size is measured with the natural logarithm of

the number of employees. Although Bonaccorsi (1992) has found that the firm size is positively associated with export propensity, but not with intensity, the variable is still recognized as important. For instance, Hall and Tú (2004) indicate that (sunk) internationalisation costs, resulting for instance from market search, business negotiations, or accommodation to foreign regulations, may be too high for SMEs. Bannò *et al.* (2014) observed that the positive effect of public incentives on performance was stronger in the case of smaller and younger firms. Also Williams (2011) found that firm size was associated with its internationalisation. Fourth, industry was operationalised with dummy variables. The industries were divided into manufacturing (Industry 1), construction (Industry 2), wholesale (Industry 3), retail (Industry 4), transport and communication (Industry 5), business services (Industry 6), and personal services (Industry 7). In the analytical section of this article, the binary variable for manufacturing (Industry 1) is not included in the regression models as it represents a reference level for other industry variables. In both samples, majority of SMEs operate in manufacturing industry, respectively 43.5% (595 firms) in the EU15 sample, and 43.4% (437 firms) in the CEE12 sample.

Finally, the controls of the origin market size and market development are also included in the study. In line with a conventional theorising, it is argued that firms from smaller markets are more likely to be involved in international activities, achieving higher degrees of internationalisation as their domestic options might be limited, as small domestic market cannot support much growth (Reuber & Fischer, 1997; Ciszewska-Mlinarič & Mlinarič, 2010). Both the market size and the market development of the origin (that is domestic country), are measured respectively with the natural logarithm of the population size, and with the natural logarithm of the 2008 GDP per capita of the country. The data about the market size and development were collected from the UNCTAD STAT database.

Correlations and descriptive statistics for all variables in both samples are shown in Tables 3 and 4.

Methods of Analyses

The impact of public support for international activities of SMEs from Old and New Europe was examined according to the conceptual model (Figure 1). To test the significance of key independent variables (that is financial and non-financial public support) for dependent variables (that is export intensity and geographic diversification), a hierarchical regression approach was employed, separately in the EU15 and CEE12 samples. To test for the mediation effect of the geographic scope on the relationship between public support and export intensity, the study follows Baron and Kenny's (1986) approach that was adapted in a numerous studies (for example, Reuber & Fischer, 1997; Lee & Park, 2006; Rodríguez & Nieto, 2012). Additionally, the alternative framework of Cohen and Cohen (1983), based on Sobel and Aroian tests, is applied to check mediation.

To check for multicollinearity, the variance inflation factors (VIF) were calculated for all the variables in key models in both samples, and reported respectively in Table 3 and 4. The highest of average VIF was 1.57 and 1.22, respectively in the EU15 and CEE12 samples. Moreover, the VIFs for all the variables in both samples were below 1.60, which is substantially lower than the recommended cut-off, indicating that multicollinearity should not be a problem (Neter, Kutner, Nachtsheim, & Wasserman, 1996).

RESULTS AND DISCUSSION

Hypothesis 1 predicts that the use of public support (both financial and non-financial) positively impacts a degree of the internationalisation of SMEs regardless of the origin. In order to test H1, we employ a hierarchical regression analysis, entering the predictors in a theory-driven order and assessing the incremental 'change in R-squared. In other words, we compare the explanatory power of the baseline model, which examines only the effects of control variables, with the full model which includes independent variables, that is financial and non-financial public support. Two sets of regression models that are necessary to examine the mediation effect in both samples are presented in Table 5 (the EU15 sample) and Table 6 (the CEE12 sample). The baseline and the full models in both samples are significant at $p < 0.001$ (see Model 0 and Model 1 in Table 5 and Table 6).

In the case of the EU15 sample, the inclusion of public support variables increases the explanatory power of Model 1 in a statistically significant way (captured by the change in R-squared), although the effect is rather small (Model 1 in Table 5: change in R-squared = 0.011; F-change = 9.281, $p < 0.001$). Considering the direct effect of public support variables on export intensity, we found that financial support is positively associated with export intensity, supporting H1 ($p < 0.01$). However, contrary to the expectations, the use of non-financial support is actually significantly ($p < 0.1$) but negatively related to export intensity. This finding is further addressed in the discussion section. In the CEE12 sample, the inclusion of both public support variables does not significantly increase the explanatory power of Model 1 (Model 1 in Table 6: change in R-squared = 0.003; F-change = 1.907, $p = 0.149$). Only one of public support variables – financial support - occurred to be a significant ($p = 0.060$) predictor of export intensity. Therefore, our results provide partial support for H1 in both samples: regardless of the SME origin, the use of financial support programmes increases the likelihood of achieving higher level of export intensity.

In Hypothesis 2 it is argued that there is a positive relationship between public support (both financial and non-financial) and the scope of geographic diversification. As before, H2 is tested with hierarchical regressions, based on comparison of baseline Model A and full Model B, presented in Table 5 and Table 6. All models in both samples are statistically significant at $p < 0.001$.

In the case of SMEs originating from the EU15 countries, the inclusion of public support variables increases the explanatory power of Model B (Model B in Table 5: change in R-squared = 0.019; F-change = 15.669, $p < 0.001$). According to the results, the use of financial support is positively and significantly ($p < 0.001$) associated with the broader scope of geographical diversification of exports, supporting H2. However, the effect of non-financial support is not supported for Old Europe SMEs. Considering the second sample of SMEs from the CEE12 countries, both types of public support (that is financial and non-financial) occurred to be positively and significantly ($p < 0.05$) related to the geographic diversification. Therefore, H2 is supported in the CEE12 sample.

Finally, to test whether the geographic scope mediates the relationship between public support and export intensity (H3), the study follows Baron and Kenny's (1986) approach. This approach states that four conditions must hold to support the existence of the mediation (Baron & Kenny, 1986). Firstly, the independent variable (here, public support) must affect the mediator (here, geographic scope). As already discussed (see analysis on

Table 3. Correlations, Descriptives and Collinearity Statistics in EU15 Sample (N=1368)

Factor	1	2	3	4	5	6	7	8	9	Mean	SD	VIF ^a	VIF ^b
1 Degree of Internationalization	1									0.29	0.29		
2 Geographic Diversification	0.46**	1								3.56	3.22		1.19
3 No Public Support	-0.08**	-0.16**	1							0.91	0.29		
4 Public Financial Support	0.12**	0.16**	-0.86**	1						0.07	0.25	1.03	1.05
5 Public Non-financial Support	-0.04	0.03	-0.48**	-0.04	1					0.02	0.15	1.01	1.01
6 Firm Age at Internationalization	-0.19**	-0.04	0.00	0.00	0.00	1				13.56	18.62	1.07	1.08
7 Firm International Experience	0.27**	0.26**	-0.02	0.02	0.00	-0.05*	1			19.93	16.43	1.10	1.15
8 Firm Size	0.07**	0.23**	-0.11**	0.11**	0.03	0.19**	0.19**	1		3.17	1.38	1.15	1.19
9 Market Size (Origin)	-0.08**	0.11**	0.02	-0.03	0.02	0.08**	-0.06*	0.08**	1	9.99	1.20	1.52	1.55
10 Market Development (Origin)	0.06*	-0.03	0.06**	-0.04†	-0.04	-0.01	0.11**	-0.14**	-0.57**	10.70	0.28	1.56	1.57

Note: Correlation is significant: **at the 0.01 level (2-tailed); *at the 0.05 level (2-tailed); †at the 0.10 level (2-tailed). ^aRefers to Model B in Table 5; ^brefers to Model 2 in Table 5. Source: own study.

Table 4. Correlations, Descriptives and Collinearity Statistics in CEE12 Sample (N=1007)

Factor	1	2	3	4	5	6	7	8	9	Mean	SD	VIF ^a	VIF ^b
1 Degree of Internationalization	1									0.32	0.32		
2 Geographic Diversification	0.29**	1								2.27	1.82		1.11
3 No Public Support	-0.08**	-0.10**	1							0.92	0.27		
4 Public Financial Support	0.07*	0.08*	-0.92**	1						0.07	0.25	1.02	1.03
5 Public Non-financial Support	0.03	0.07*	-0.38**	-0.03	1					0.01	0.11	1.01	1.02
6 Firm Age at Internationalization	-0.12**	-0.03	0.01	0.00	-0.03	1				6.05	9.71	1.04	1.04
7 Firm International Experience	0.23**	0.19**	-0.01	0.00	0.02	-0.07*	1			10.45	7.95	1.07	1.10
8 Firm Size	0.18**	0.14**	-0.10**	0.11**	-0.01	0.11**	0.18**	1		3.36	1.31	1.13	1.14
9 Market Size (Origin)	-0.12**	-0.08*	-0.01	0.03	-0.04	0.08*	0.05	0.07*	1	8.71	1.12	1.03	1.04
10 Market Development (Origin)	0.01	0.09**	-0.01	0.03	-0.04	0.03	0.12**	-0.01	-0.09**	9.53	0.44	1.05	1.05

Note: Correlation is significant: **at the 0.01 level (2-tailed); *at the 0.05 level (2-tailed); †at the 0.10 level (2-tailed). ^a Refers to Model B in Table 6; ^b refers to Model 2 in Table 6. Source: own study.

Table 5. Linear Regression Results in EU15 Sample (N=1368)

Dependent Independent	Geographic diversification		Export Intensity (Degree of Internationalization)				
	Model A	Model B	Model 0	Model 1	Model 2	Model 3	Model 4
Public Financial Support (PFS)	n/a	0.14*** (5.57)	n/a	0.10*** (3.78)	0.04† (1.66)	0.03 (1.07)	0.01 (0.27)
Public Non-financial Support	n/a	0.02 (0.84)	n/a	-0.05† (-1.86)	-0.06* (-2.40)	-0.06* (-2.41)	-0.06* (-2.40)
Geographic Diversification	n/a	n/a	n/a	n/a	0.40*** (16.17)	0.70*** (8.89)	0.71*** (8.93)
Geographic Diversification ²	n/a	n/a	n/a	n/a	n/a	-0.32*** (-4.05)	-0.31*** (-4.00)
Time to Internationalisation (Firm Age at Internationalisation)	-0.08** (-3.08)	-0.08** (-3.00)	-0.19*** (-7.43)	-0.19*** (-7.43)	-0.16*** (-6.77)	-0.16*** (-6.82)	-0.10* (-2.27)
Firm International Experience	0.21*** (7.98)	0.21*** (8.07)	0.23*** (8.62)	0.22*** (8.66)	0.14*** (5.78)	0.14*** (5.81)	0.27*** (5.18)
Firm Size	0.20*** (7.38)	0.18*** (6.86)	0.06* (2.16)	0.05† (1.84)	-0.02 (-0.99)	-0.03 (-1.09)	-0.10† (-1.75)
Market Size (Origin)	0.15*** (4.80)	0.16*** (5.25)	-0.05† (-1.66)	-0.04 (-1.40)	-0.11*** (-3.79)	-0.11*** (-4.06)	-0.12*** (-4.10)
Market Development (Origin)	0.07* (2.10)	0.08* (2.50)	0.02 (0.51)	0.02 (0.70)	-0.01 (-0.33)	-0.01 (-0.49)	-0.01 (-0.45)
Industry 2	-0.04 (-1.50)	-0.03 (-1.22)	-0.09** (-3.44)	-0.08** (-3.30)	-0.07** (-3.06)	-0.07** (-2.97)	-0.07** (-3.03)
Industry 3	-0.08** (-3.12)	-0.08** (-2.87)	-0.14*** (-5.30)	-0.14*** (-5.22)	-0.11*** (-4.43)	-0.11*** (-4.45)	-0.11*** (-4.46)
Industry 4	-0.11*** (-4.06)	-0.10*** (-3.71)	-0.17*** (-6.36)	-0.17*** (-6.29)	-0.13*** (-5.21)	-0.12*** (-5.11)	-0.12*** (-5.15)
Industry 5	0.00 (0.14)	0.01 (0.20)	0.06* (2.32)	0.06** (2.44)	0.06* (2.58)	0.06** (2.75)	0.06** (2.74)
Industry 6	-0.02 (-0.79)	-0.02 (-0.73)	-0.08** (-3.02)	-0.08** (-3.05)	-0.08** (-3.01)	-0.07** (-2.88)	-0.07** (-2.82)
Industry 7	0.03 (1.03)	0.03 (1.19)	-0.01 (-0.45)	-0.01 (-0.46)	-0.02 (-1.03)	-0.02 (-0.88)	-0.02 (-0.96)
PFS x Time to Internationalisation	n/a	n/a	n/a	n/a	n/a	n/a	0.08† (1.75)
PFS x Firm International experience	n/a	n/a	n/a	n/a	n/a	n/a	0.15** (2.84)
PFS x Firm Size	n/a	n/a	n/a	n/a	n/a	n/a	-0.08 (-1.40)
<i>Model summary</i>							
<i>R-squared</i>	0.139	0.158	0.159	0.170	0.305	0.313	0.319
<i>Adjusted R-squared</i>	0.132	0.150	0.152	0.162	0.297	0.305	0.310
F	19.875***	19.592***	23.308***	21.391***	42.350***	41.066***	35.041***
<i>Change in R-squared</i>		0.019		0.011	0.134	0.008	0.006
<i>F-change</i>		15.669***		9.281***	261.351***	16.361***	3.688**

Note: Cell entries are standardized regression coefficients; t-statistics shown in parentheses.

†p<0.10; *p<0.05; **p<0.01; ***p<0.001

Source: own study.

Table 6. Linear Regression Results in CEE12 Sample (N=1007)

Dependent Independent	Geographic Diversification		Export Intensity (Degree of Internationalization)				
	Model A	Model B	Model 0	Model 1	Model 2	Model 3	Model 4
Public Financial Support	n/a	0.08* (2.46)	n/a	0.06† (1.88)	0.04 (1.38)	0.04 (1.35)	0.10* (2.19)
Public Non-financial Support	n/a	0.07* (2.32)	n/a	0.02 (0.57)	0.00 (0.07)	0.00 (0.12)	0.00 (0.13)
Geographic Diversification	n/a	n/a	n/a	n/a	0.21*** (6.95)	0.37*** (5.04)	0.38*** (5.05)
Geographic Diversification ²	n/a	n/a	n/a	n/a	n/a	-0.18* (-2.47)	-0.18* (-2.50)
Time to Internationalisation (Firm Age at Internationalisation)	-0.02 (-0.68)	-0.02 (-0.57)	-0.11*** (-3.70)	-0.11*** (-3.65)	-0.10*** (-3.61)	-0.10*** (-3.54)	-0.13* (-2.57)
Firm International Experience	0.16*** (5.02)	0.16*** (5.04)	0.17*** (5.75)	0.17*** (5.78)	0.14*** (4.75)	0.13*** (4.51)	0.31*** (3.69)
Firm Size	0.13*** (4.17)	0.13*** (3.93)	0.14*** (4.64)	0.14*** (4.42)	0.11*** (3.63)	0.11*** (3.47)	0.09 (1.43)
Market Size (Origin)	-0.09** (-2.94)	-0.09** (-2.91)	-0.14*** (-4.80)	-0.14*** (-4.81)	-0.12*** (-4.27)	-0.12*** (-4.10)	-0.12*** (-4.18)
Market Development (Origin)	0.07* (2.17)	0.07* (2.16)	-0.01 (-0.44)	-0.01 (-0.49)	-0.03 (-0.98)	-0.03 (-1.04)	-0.03 (-1.04)
Industry 2	-0.02 (-0.64)	-0.02 (-0.62)	-0.10** (-3.43)	-0.10** (-3.39)	-0.10** (-3.33)	-0.10** (-3.28)	-0.10** (-3.27)
Industry 3	0.01 (0.22)	0.01 (0.27)	-0.09** (-2.80)	-0.08** (-2.71)	-0.09** (-2.84)	-0.09** (-2.89)	-0.09** (-2.89)
Industry 4	-0.05 (-1.38)	-0.04 (-1.24)	-0.21*** (-6.81)	-0.21*** (-6.74)	-0.20*** (-6.62)	-0.20*** (-6.57)	-0.20*** (-6.56)
Industry 5	0.12*** (3.70)	0.12*** (3.91)	0.08** (2.82)	0.09** (2.94)	0.06* (2.13)	0.06* (2.15)	0.06* (2.19)
Industry 6	0.03 (0.96)	0.03 (0.94)	-0.15*** (-4.68)	-0.15*** (-4.69)	-0.16*** (-5.00)	-0.16*** (-5.00)	-0.16*** (-4.97)
Industry 7	0.09** (2.97)	0.10** (3.06)	-0.05† (-1.78)	-0.05† (-1.75)	-0.07* (-2.45)	-0.07* (-2.47)	-0.07* (-2.43)
PFS x Time to Internationalisation	n/a	n/a	n/a	n/a	n/a	n/a	-0.03 (-0.61)
PFS x Firm International Experience	n/a	n/a	n/a	n/a	n/a	n/a	0.197* (2.24)
PFS x Firm Size	n/a	n/a	n/a	n/a	n/a	n/a	-0.02 (-0.28)
<i>Model summary</i>							
<i>R-squared</i>	0.087	0.097	0.171	0.174	0.212	0.217	0.221
<i>Adjusted R-squared</i>	0.077	0.085	0.162	0.163	0.201	0.205	0.207
F	8.633***	8.229***	18.622***	16.079***	19.091***	18.316***	15.602***
<i>Change in R-squared</i>		0.010		0.003	0.038	0.005	0.004
<i>F-change</i>		5.575**		1.907	48.289***	6.098*	1.807

Note: Cell entries are standardized regression coefficients; t-statistics shown in parentheses.

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: own study.

H2, Model B in Table 5 and Table 6), the use of financial support is associated with an increase in geographic scope in both samples, but the effect of non-financial support was found significant only in the CEE12 sample. Secondly, the independent variable (public support) must affect the dependent variable (export intensity). The results of the analysis are presented in section concerning H1, and indicate that only the use of financial support is positively and significantly related to export intensity in both samples. Therefore, the effect of non-financial support on export intensity cannot be mediated by the geographic scope, either because the first condition (in the EU15 sample), or the second (in the CEE12 sample) is not fulfilled. Thirdly, the mediator (geographic diversification) must affect the dependent variable (export intensity), and fourth, the relationship between the independent variable (public financial support) and dependent variable (export intensity) is significantly reduced when the mediator (geographic scope) is included in regressions. These final conditions were tested in Model 2 and Model 3 (Tables 5 and 6). In Model 2 and Model 3 there is a positive and significant ($p < 0.001$) relationship between the geographic scope and export intensity in both samples. Additionally, recognizing previously presented arguments on a non-linear (inverted U-shape) character of this relationship, Model 3 includes also a squared term of geographic diversification, which is negative and significant in both samples (in EU15, $p < 0.001$; in CEE12, $p < 0.05$). After the inclusion of the geographic scope, the effect of financial support on export intensity has been either significantly reduced (EU15: $p < 0.1$, Model 2), or is no longer significant (EU15: $p > 0.1$, Model 3; CEE12: $p > 0.1$, Model 2 and Model 3). In order to validate the statistical significance of the mediation effect, the Sobel and Aroian tests were conducted (Table 7). The results provide significant evidence that geographic scope is a mediator between financial support and export intensity (EU15: Sobel-test statistic = 5.32, $p < 0.001$, the Aroian-test statistic = 5.32, $p < 0.001$; CEE12: Sobel-test statistic = 2.32, $p < 0.05$, the Aroian-test statistic = 2.30, $p < 0.05$). Thus, H3 is partially supported, suggesting the indirect effect only of financial support on export intensity.

Table 7. Tests of mediating role of geographic diversification

<i>Sample</i>	<i>Relationship</i>	<i>Test Name</i>	<i>Test Statistic</i>	<i>P-value</i>
EU15	<i>Financial Support – Geographic Diversification – Export Intensity</i>	Sobel Test	5.322	0.000
		Aroian Test	5.315	0.000
CEE12	<i>Financial Support – Geographic Diversification – Export Intensity</i>	Sobel Test	2.324	0.020
		Aroian Test	2.304	0.021
	<i>Non-financial Support – Geographic Diversification – Export Intensity</i>	Sobel Test	2.211	0.027
		Aroian Test	2.192	0.028

Source: own study.

Although the indirect effect of non-financial support (via geographic scope) on export intensity did not receive support according to the Baron and Kenny's (1986) approach, the alternative framework developed by Cohen and Cohen (1983) postulates that mediation exists when the relationships between (i) independent variable (non-financial support) and mediator (geographic scope) and (ii) mediator (geographic scope) and dependent variable (export intensity) are statistically significant. This alternative approach allows to test H3 in the CEE12 sample, as in that case both conditions are met. (The same analysis cannot be performed for the EU15 sample, as the first condition is not met, that is the relationship

between non-financial support and geographic scope is not significant). In order to examine the mediation effect, the Sobel and Aroian tests are used (see Table 7, CEE12: Sobel-test statistic=2.21, $p < 0.05$, the Aroian-test statistic=2.19, $p < 0.05$). These results imply that in the CEE12 sample, the geographic scope mediates the relationship between non-financial support and the export intensity. All key findings are summarised in Table 8.

Effects of control variables in both samples are shown in Table 9. Considering the effects of firm-level control variables (including firm age at internationalisation, international experience and size), no large differences were observed between samples.

Firm age at internationalisation is negatively associated with both dependent variables in both samples, indicating that SMEs that have decided to internationalise later in their life cycle have a more narrow scope of geographic diversification (in the case of the CEE12 sample, the effect is negative but insignificant), and achieve a lower level of export intensity. This finding is in line with an argument of learning advantages of newness (Autio *et al.*, 2000; Zhou, 2007). Nonetheless, firm international experience occurred to support the export geographic scope and export intensity in both samples, which indicate that experience and resulting knowledge is a valuable resource enhancing operations of SMEs in foreign markets. Similarly, firm size (which is often used as a proxy of firm resources) is also positively and significantly associated with both dependent variables in both samples (but in the EU15 sample this effect holds only in control Model 0 and Model 1; when geographic diversification is added, firm size becomes an insignificant predictor of export intensity).

Table 8. Summary of key findings

<i>Hypothesised Relationships</i>	<i>EU15</i>	<i>CEE12</i>
Public Support is Directly and Positively Related with Geographic Scope		
Financial Support	Supported	Supported
Non-financial Support	Not Supported	Supported
Geographic Scope is Directly Related with Export Intensity (Inverted U-shape)	Supported	Supported
Public Support is Directly and Positively Related with Export Intensity		
Financial Support	Supported	Supported
Non-financial Support	Not Supported ^a	Not Supported
Public Support is Indirectly Related with Export Intensity		
Financial Support	Supported	Supported
Non-financial Support	Not Supported	Supported ^b

Note: ^aSignificant ($p < 0.1$) but negative relationship (in contrary to H1, see Model 1 in Table 5). ^bSupported only by an alternative mediation framework of Cohen and Cohen (1983) (see Model B, Model 1, Model 2 in Table 6). Source: own study.

The final two control variables (market size and development), that refer to the origin of SMEs, exert more differentiated effects on dependent variables in the EU15 and CEE12 samples. In the case of market size of firm origin, it has a negative significant effect on geographic diversification in the CEE12 sample (thus firms originating from larger CEE economies followed more geographically focused strategy), while in the EU15 sample it has significant positive effect, revealing that SMEs originating from larger markets pursue more geographically diversified strategy. But when applied to explain export intensity, it is evident that no matter what sample, SMEs originating from larger economies are characterised by lower levels of

export intensity, therefore supporting the argument that SMEs originating from smaller domestic market (which offer more limited growth opportunities) are more likely to focus on foreign markets searching for growth (Reuber & Fischer, 1997; Ciszewska-Mlinarič & Mlinarič, 2010). Finally, SMEs originating from more developed domestic markets were also more likely to follow more diversified export strategies (in both samples), but there was no significant effect of the development of the domestic market for the export intensity in none of the samples. The implications of the findings are discussed in the next section.

Table 9. Comparison of control variables' effects in EU15 and CEE12 samples

Variables	Sample	Dependent variables	
		Geographic Diversification	Export Intensity
Firm Age at Internationalisation (Time to Internationalisation)	EU15	(-) Significant	(-) Significant
	CEE12	(-) Not Significant	(-) Significant
Firm International Experience	EU15	(+) Significant	(+) Significant
	CEE12	(+) Significant	(+) Significant
Firm Size	EU15	(+) Significant	(+) Significant ^a
	CEE12	(+) Significant	(+) Significant
Market Size (Origin)	EU15	(+) Significant	(-) Significant ^b
	CEE12	(-) Significant	(-) Significant
Market Development (Origin)	EU15	(+) Significant	(-/+) Not Significant
	CEE12	(+) Significant	(-) Not Significant

Note: ^aPositive and significant in Model 0 and Model 1, but insignificant in Model 2 and 3 (see Table 5).

^bNegative and significant in Model 0, Model 2 and Model 3, but insignificant in Model 1 (see Table 5).

Source: own study.

CONCLUSIONS

The study findings reveal that only a small portion of SMEs actively use the public support programmes (as already reported, only 9.1% and 7.9% of SMEs used them, respectively in the EU-15 and the CEE12 countries). This may be attributed to the low awareness of such programmes among SME owners/managers (Fischer & Reuber, 2003a; Orser, Fischer, Hooper, Reuber, & Riding, 1999; European Commission, 2010), which is a significant issue in itself, however, this article attempts to verify the relevance of such programmes for benefitting SMEs.

The study findings consistently support all hypotheses concerning the direct and indirect (via geographic scope) effects of the use of financial support on SME export intensity. Additionally, the study findings support the existence of the curvilinear (inverted u-shape) relationship between the geographic scope and export intensity in both samples. In line with the study expectations, it has been found that SMEs – regardless of their origin, be it Old or New Europe – that have used public programmes offering financial support (between 2006 and 2008) are likely to increase in 2008 the geographic scope of their exports, and increase their level of export intensity. Considering the broader debate whether or not private business should be supported by public funds (in the light of the mixed findings on the effectiveness of public support it is only reasonable to raise such questions), these findings provide some arguments for the intervention of the state, and are in line with

prior research (Bannò *et al.*, 2014). Undoubtedly, they suggest that public financial support programmes have a positive impact on SME export activities, so governments' and/or governmental agencies' assumptions behind such programmes seem to be well-justified.

Moreover, the current study supports the existence of the curvilinear relationship between export diversification and intensity in a new context of small and medium-sized firms, originating from developed and advanced emerging economies of Europe.

The situation is, however, much less clear when evaluating the impact of non-financial public support programmes. First, SMEs from the EU15 countries do not experience any significant and positive results for the geographic scope that could result from the use of non-financial support. On the contrary, such SMEs (using only non-financial support) are characterised by a lower level of export intensity than firms that use no public support at all. This effect is even stronger when we control for the mediating effect of the geographic scope (Model 2 in Table 5). Given that the overall usage of public support programmes by SMEs in the EU15 sample is relatively low (9.1%), it may indicate that SMEs using only non-financial support (2.3%) are those that experience problems trying to increase their foreign sales. Thus, they may see non-financial programmes as the means to improve international exposure. Unfortunately, due to the study design, it is not possible to answer the question whether in a longer term such support would occur beneficial. Secondly, SMEs from the CEE12 countries that use the non-financial export support programmes (only 1.2% of the sample) are likely to expect an increase in the geographic scope, however, only the alternative framework for mediation effect (Cohen & Cohen, 1983) supports the indirect relationship between non-financial support and export intensity. Therefore, according to the study results, it is not possible to formulate any direct and unequivocal recommendations for institutions providing non-financial support for internationally oriented SMEs.

In the background of the study findings there is, however, one additional important question: which firms should be supported by public money? Taking into consideration the death rate among new firms, limited growth potential and limited public funds, many researchers claim that public institutions should support not all, but only those most promising firms, usually categorised as high-growth firms, or 'gazelles'. Such arguments are well grounded in macro-level research. For instance, Onkelinx and Sleuwaegen (2010) found that SME export growth was 'driven by a small group of born global firms, accounting for 60 per cent of the total increase in SME exports between 1998 and 2005. (...) we find born globals to be more productive and characterized by a higher R&D spending and intangible asset intensity compared to other types of traders. (...) We find that born globals grow faster in terms of export sales, have a stronger commitment to export markets and are more likely to continue exporting' (Onkelinx & Sleuwaegen, 2010, p. 1). However, these authors also noticed that born-global firms were also characterised by a higher failure rate than traditional internationalisers.

Due to data limitations, the proper answer to the question which firms should be supported by public money is beyond the ambition of the current article. Nonetheless, the additional analysis of empirical data allows to identify the firm-level characteristics that shed some light on the relationships between public financial support and export intensity. Looking at the correlation Tables 3 and Table 4, it becomes quite obvious that firms which are bigger and operate in manufacturing industries are those most likely to use financial

support, regardless of their origin. However, the inclusion of several interaction terms⁴ revealed a few interesting effects. First, in both samples the positive effect of firm international experience on export intensity is accentuated by the use of financial support programmes. Additionally, in the EU15 sample, the negative effect of time to internationalisation (in other words, age at internationalisation) on export intensity was smaller in the case of SMEs using financial support programmes. Thus, it is possible to conclude that firms with a more pronounced prior international experience are better prepared to achieve benefits (in terms of export intensity) that result from the use of financial support. Such conclusions may be important for government agencies and other providers of export support that are in charge of the distribution of usually limited public funds. However, it is not argued here that prior international experience should be the only criterion taken into account. Interesting insights in this respect are offered by Fischer and Reuber (2003a), who argue that not only firms', but also managers/owners' personal experience should be considered by providers of export support so that programmes are customised in terms of product/service offerings, and the communication and distribution tactics. More broadly, Mion and Muûls (2014) recommended the UK government to develop policies enhancing domestic firms to capture the full potential of growing BRIC (Brazil, Russia, India, China) markets, as well as 'Policies to help ensure a continuing annual influx of new exporters, and to help ensure successful persistence in exporting among more of those who begin to export' (Mion & Muûls, 2014, p. 9).

In this article, the empirical analyses of the large, cross-country sample reveal that there are significant, firm-level differences characterising internationally oriented SMEs from Old and New Europe (Table 2). For instance, SMEs from the EU15 follow more geographically diversified export strategy but achieve slightly lower export intensity. They are also older, have longer international experience, decide to internationalise later in their life cycle, and on average are slightly smaller. Many of these differences can be explained by different institutional/historic background of Old and New Europe SMEs, communist heritage and transition period (from centrally planned communist economies to market driven economic system). Thus, it is not surprising that SMEs in the CEE12 sample are younger, or that their international experience is shorter. However, originating from 'late-comer' economies in terms of the global economic integration, international trade and investment flows, New Europe SMEs decide to internationalise much earlier in their life cycle than peers from Old Europe, and achieve a higher level of export intensity, but more narrow geographic scope (this can be also explained in terms of colonial ties that many Old Europe countries developed in their history). New Europe firms are pushed for earlier internationalisation to catch up with Old Europe SMEs. To sum up, it is evident that Old and New Europe SMEs are different. But from that it cannot be concluded that either international business or international entrepreneurship fields are in need of new theories.

⁴ In additional analyses, that are presented in Model 4 in Table 5 and Table 6, several interaction terms were added, such as: (i) financial support x time to internationalisation, (ii) financial support x firm international experience, (iii) financial support x firms size. All interaction terms were calculated by multiplying the corresponding components that were previously centered (time to internationalisation, firm international experience, firm size were standardised, while the dichotomous variable of financial support was recoded into -1.1). To understand the nature of the interaction properly, and comment on the findings, I plotted the effects of the three firm-level variables for the export intensity for different situations concerning the use of financial support programmes (support vs. no support).

When it comes to the comparison of the studied relationships, including the effects of control variables, the key findings across Old and New Europe SMEs are the same: public financial support has a direct and an indirect (via geographic scope) effect on export intensity; and relationship between the geographic scope and export intensity has an inverted U-shape. Moreover, as already mentioned, firm-level control variables (including time to internationalisation, firm international experience, and firm age) have the same effect on the geographic scope and export intensity, regardless of the SMEs' origin. Thus, recognizing differences existing between Old and New Europe SMEs, the relationships explaining the studied phenomena are indeed the same.

Although the article offers clear insights into the significance of financial vs. non-financial public support programmes for internationalisation activities of SMEs, the study suffers from several limitations. First, the operationalisation of export intensity as a FSTS ratio may be criticised on the grounds that variables other than public support or geographic scope may affect it. To deal with this issue, the study controls for many firm- and environment-level variables and employs the hierarchical regression modelling to validate the significance of key independent variables. Secondly, the operationalisation of public support as a dichotomous variable – though employed also in other studies (e.g. Bannò *et al.*, 2014) – led to obvious limitations, thus, future research should employ more nuanced operationalisations, including the issue of the size of the public support or the very character of the support programme.

Thirdly, the cross-sectional character does not make it possible to evaluate longer term effects of public support, especially non-financial support. Therefore, studies using longitudinal analytical methods are needed to examine the effectiveness of public support properly, indicating how it helps to overcome liabilities of smallness, foreignness, outsidership and/or newness. Most studies on public support effects, and/or on the link between the diversification of developed and emerging market firms, including this one, are based on one point in time, which obviously renders the generalisability of findings questionable (Nachum, 2004). The popularity of a single year studies results from the challenge to collect reliable longitudinal and firm-level data from many countries at the same and multiple points in time.

Fourthly, it should be also recognized that in the face of major changes in both internal and external processes of SMEs in the post-crisis time (after 2010), the presented results that cover the period before the crisis should be treated with caution. Thus, more recent research on internationally oriented SMEs is needed.

The question which firms should receive public support is still an interesting and practically important topic. Thus, further theoretical and practical considerations concerning the public support and firms benefiting from it may address the 'middle income dilemma'. According to prior research, policies developed by governments for capability advancement are 'a key determinant of upgrading in open economies, both at the country level and in the development of 'pockets of excellence'' (Paus, 2012, p. 115). The post-transition economies of the CEE12 are developing; the economic distance to Old Europe shrinks. After the economic-political transition, their next challenge is how to deal with a middle income trap, or 'how to move from commodity production to more knowledge-intensive activities' (Paus, 2012, p. 115). In this respect, the strategic public/government support may play a significant role by supporting industries (and firms within them) that contribute most to the development of knowledge-based economy. Additionally, future research may consider in a more

nuanced way the type of exporters (born-globals vs. traditional internationalisers). Finally, given that the awareness and propensity of owners/managers of SMEs to consult public support providers is reportedly shown as low the question how to change it is still relevant.

REFERENCES

- Aldrich H.E., & Auster, E. (1986). Even dwarfs started small: Liabilities of size and age and their strategic implications. *Research in Organizational Behavior*, 8, 165-198.
- Alonso-Nuez, M.J., & Galve-Gorriz, C. (2012). The impact of public programs on the survival and profits of startups: Evidence from a region of Spain. *Journal of Developmental Entrepreneurship*, 17(2), 1-23.
- Audet, J., Berger-Douce, S. & St-Jean, E. (2007). Perceptual barriers preventing small business owners from using public support services: Evidence from Canada. *International Journal of Entrepreneurship*, 11, 27-48.
- Audet, J., & St-Jean, E. (2007). Factors affecting the use of public support services by SME owners: Evidence from a periphery region of Canada. *Journal of Developmental Entrepreneurship*, 12(2), 165-180. <https://doi.org/10.1142/S1084946707000629>
- Autio, E., Sapienza, H.J., & Almeida, J.G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 909-924. <https://doi.org/10.5465/1556419>
- Bannò, M., Piscitello, L. & Varum, C.A. (2014). The Impact of Public Support on SMEs' Outward FDI: Evidence from Italy. *Journal of Small Business Management*, 52(1), 22-38. <https://doi.org/10.1111/jsbm.12029>
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Berrone, P., Gertel, H., Giuliadori, R., Bernard, L., & Meiners, E. (2014). Determinants of Performance in Microenterprises: Preliminary Evidence from Argentina. *Journal of Small Business Management*, 52(3), 477-500. <https://doi.org/10.1111/jsbm.12045>
- Bonaccorsi, A. (1992). On the relationship between firm size and export intensity. *Journal of International Business Studies*, 23, 605-635. <https://doi.org/10.1057/palgrave.jibs.8490280>
- Bruton, G.D., Lau, C.N., & Obloj, K. (2014). Institutions, Resources, and Firm Strategies: A Comparative Analysis of Entrepreneurial Firms in Three Transitional Economies. *European Journal of International Management*, 8(6), 697-720. <https://doi.org/10.1504/EJIM.2014.064905>
- Capar, N., & Kotabe, K. (2003). The relationship between international diversification and performance in service firms. *Journal of International Business Studies*, 34(4), 345-355. <https://doi.org/10.1057/palgrave.jibs.8400036>
- Churchill, W. (1946). *Speeches of Winston Churchill: Sinews of Peace*, March 5, 1946, Westminster College, Fulton, Missouri. Retrieved on February 1, 2016 from: <http://www.ntanet.net/sinewsofpeace.htm>
- Ciešlik, J., Kaciak, E., & Welsh, D. (2012). The impact of geographic diversification on export performance of small and medium-sized enterprises (SMEs). *Journal of International Entrepreneurship*, 10(1), 70-93. <https://doi.org/10.1007/s10843-012-0084-7>
- Ciešlik, J., & Kaciak, E. (2009). The speed of internationalization of entrepreneurial start-ups in a transition environment. *Journal of Developmental Entrepreneurship*, 14(4), 375-392. <https://doi.org/10.1142/S1084946709001375>
- Ciszewska-Mlinarič, M., & Mlinarič, F. (2010). Small Firms in a Small Country: Managerial Factors, Internationalization and Performance of Slovenian SMEs. *Managing Global Transitions*, 8(3), 239-259.

- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioural sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Dejo-Oricain, N., & Ramírez-Alesón, M. (2009). Export Behaviour: a Study of Spanish SMEs. *GCG: Revista de Globalización, Competitividad & Gobernabilidad*, 3(2), 52-67.
- Driffield, N., Du, J., & Girma, S. (2008). Optimal geographic diversification and firm performance: evidence from the U.K. *Journal of Productivity Analysis*, 30(2), 145-154.
- Erramilli, M.K. (1991). The Experience Factor in Foreign Market Entry Behaviour of Service Firms. *Journal of International Business Studies*, 22(3), 479-501. <https://doi.org/10.1057/palgrave.jibs.8490312>
- European Commission. (2010). *Internationalisation of European SMEs*. Entrepreneurship Unit Directorate-General for Enterprise and Industry, European Commission & EIM Business & Policy Research, Brussels.
- Fischer, E., & Reuber, A.R. (2003a). Targeting Export Support to SMEs: Owners' International Experience as a Segmentation Basis. *Small Business Economics*, 20(1), 69-82.
- Fischer, E., & Reuber, A.R. (2003b). Support for Rapid-Growth Firms: A Comparison of the Views of Founders, Government Policymakers, and Private Sector Resource Providers. *Journal of Small Business Management*, 41(4), 346-365.
- Gashi, P., Hashi, I., & Pugh, G. (2014). Export behaviour of SMEs in transition countries. *Small Business Economics*, 42(2), 407-435. <https://doi.org/10.1007/s11187-013-9487-7>
- Grant, R.M. (1987). Multinationality and performance among British manufacturing companies. *Journal of International Business Studies*, 18(3), 79-89. <https://doi.org/10.1057/palgrave.jibs.8490413>
- Hall, G., & Tú, C. (2004). Internationalization and size, age and profitability in the United Kingdom. In L.P. Dana (Ed.) *Handbook of Research on International Entrepreneurship* (pp. 596-613). Cheltenham: Edward Elgar.
- Hernández, V., & Nieto, M.J. (2015). The effect of the magnitude and direction of institutional distance on the choice of international entry modes. *Journal of World Business*, 50(1), 122-132. <https://doi.org/10.1016/j.jwb.2014.02.002>
- Hitt, M.A., Hoskisson, R.E., & Kim, H. (1997). International diversification: effects on innovation and firm performance in product diversified firms. *Academy of Management Journal*, 40, 767-798. <https://doi.org/10.2307/256948>
- Javalgi, R.G., & Grossman, D.A. (2014). Firm Resources and Host-Country Factors Impacting Internationalization of Knowledge-Intensive Service Firms. *Thunderbird International Business Review*, 56(3), 285-300.
- Johanson, J., & Vahlne, J.E. (2003). Business Relationship Learning and Commitment in the Internationalization Process. *Journal of International Entrepreneurship*, 1(1), 83-101. <https://doi.org/10.1023/A:1023219207042>
- Johanson J., & Vahlne, J.E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9), 1411-143. <https://doi.org/10.1057/jibs.2009.24>
- Kale S., & Arditi, D. (1998). Business failures: Liabilities of newness, adolescence, and smallness. *Journal of Construction Engineering & Management*, 124(6), 458-464.
- Katsikeas C.S., Leonidou, L., & Morgan, N.A. (2000). Firm-level export performance assessment: review, evaluation, and development. *Journal of the Academy of Marketing Science*, 28(4), 493-511.

- Kuivalainen, O., Puimalainen, K., Sintonen, S., & Kyläheiko, K. (2010). Organisational Capabilities and Internationalisation of the Small and Medium-Sized Information and Communications Technology Firms. *Journal of International Entrepreneurship*, 8(2), 135-155.
- Kyvik, O., Saris, W., Bonet, E., & Felício, J. (2013). The internationalization of small firms: The relationship between the global mindset and firms' internationalization behaviour. *Journal of International Entrepreneurship*, 11(2), 172-195.
- Lee, H-U., & Park, J-H. (2006). Top Team Diversity, Internationalization and the Mediating Effect of International Alliances. *British Journal of Management*, 17(3), 195-213. <https://doi.org/10.1111/j.1467-8551.2006.00501.x>
- Liu, H., Jiang, X., Zhang, J., & Zhao, X. (2013). Strategic Flexibility and International Venturing by Emerging Market Firms: The Moderating Effects of Institutional and Relational Factors. *Journal of International Marketing*, 21(2), 79-98.
- Mason, C., & Brown, R. (2013). Creating good public policy to support high-growth firms. *Small Business Economics*, 40(2), 211-225.
- Mion, G., & Muûls, M. (2014). Investigation into the Extensive and Intensive margins of Growth in the Value of UK Exports and the Role of SME Exporters. Research report available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/473293/2013_Extensive_Intensive_margins_FINAL_03_Dec_13.pdf
- Musteen, M., & Datta, D. (2011). Learning about foreign markets: A study of Czech SMEs. *Journal of International Entrepreneurship*, 9(2), 91-109.
- Nachum, L. (2004). Geographic and Industrial Diversification of Developing Country Firms. *Journal of Management Studies*, 41(2), 273-294. <https://doi.org/10.1111/j.1467-6486.2004.00432.x>
- Neter, J., Kutner, M.H., Nachtsheim, C.J., & Wasserman, W. (1996). *Applied Linear Regression Models*. Irwin Press, Illinois.
- Norman, C., & Bager-Sjorgen, L. (2006). Public support to innovative ventures: Does it have any impact?. paper presented at the Nordic Conference on Small Business Research, Stockholm, Sweden.
- North, D., Smallbone, D., & Vickers, I. (2001). Public Sector Support for Innovating SMEs. *Small Business Economics*, 16(4), 303-317. <https://doi.org/10.1023/A:1011164801073>
- Nummela, N., Saarenketo, S., & Puimalainen, K. (2004). A global mindset: a prerequisite for successful internationalization?. *Canadian Journal of Administrative Sciences*, 21(1), 51-64.
- OECD. (2007). *Glossary of Statistical Terms*. Organisation for Economic Co-operation and Development. Retrieved on February 1, 2016 from <http://stats.oecd.org/glossary/download.asp>
- Onkelinx, J., & Sleuwaegen, L.E. (2010). Internationalization Strategy and Performance of Small and Medium Sized Enterprises (National Bank of Belgium Working Paper No. 197). Available at SSRN: <https://ssrn.com/abstract=1692583> or <http://dx.doi.org/10.2139/ssrn.1692583>.
- Orser, B., Fischer, E., Hooper, S., Reuber, R., & Riding, A. (1999). *Beyond Borders*, Ottawa: Department of Foreign Affairs and International Trade.
- Paus, E. (2012). Confronting the Middle Income Trap: Insights from Small Latecomers. *Studies in Comparative International Development*, 47(2), 115-138.
- Ramsden, M., & Bennet, R.J. (2005). The benefits of external support to SMEs: "Hard" versus "soft" outcomes and satisfaction levels. *Journal of Small Business and Enterprise Development*, 12(2), 227-243.
- Reuber, A.R., & Fischer, E. (1997). The influence of the management team's international experience on the internationalization behaviors of SMEs. *Journal of International Business Studies*, 28(4), 807-825.
- Rodríguez, A., & Nieto, M.J. (2012). The internationalization of knowledge-intensive business services: the effect of collaboration and the mediating role of innovation. *Service Industries Journal*, 32(7), 1057-1075.

- Ruigrok, W., Amann, W., & Wagner, H. (2007). The internationalization-performance relationship at Swiss firms: a test of the S-shape and extreme degrees of internationalization. *Management International Review*, 47(3), 349-368.
- Sapienza, H.J., De Clercq, D., & Sandberg, W. (2005). Antecedents of international and domestic learning effort. *Journal of Business Venturing*, 20(4), 437-457. <https://doi.org/10.1016/j.jbusvent.2004.03.001>
- Sapienza, H.J., Autio, E., George, G., & Zahra, S.A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31(4), 914-933. <https://doi.org/10.5465/AMR.2006.22527465>
- Sarder, J.H., Ghosh, D., & Rosa, P. (1997). The importance of support services to small enterprise in Bangladesh. *Journal of Small Business Management*, 35(2), 26-36.
- Sousa, C.M.P. (2004). Export performance measurement: an evaluation of the empirical research in the literature. *Academy of Marketing Science Review*, 9(12), 1-23. <https://doi.org/10.12691/jbe-3-3-1>
- Wach, K. (2012). *Europeizacja małych i średnich przedsiębiorstw: rozwój przez umiędzynarodowienie*. Warszawa: Wydawnictwo Naukowe PWN.
- Wheeler, C.N., Ibeh, K.I.N., & Dimitratos, P. (2008). UK export performance research – review and implications. *International Small Business Journal*, 26(2), 207-239.
- Wiklund, J., & Shepherd, D.A. (2003). Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities. *Journal of Management Studies*, 40(8), 1911-1941. <https://doi.org/10.1046/j.1467-6486.2003.00406.x>
- Williams, D. (2011). Impact of firm size and age on the export behaviour of small locally owned firms: a fresh insight. *Journal of International Entrepreneurship*, 9(2), 152-174.
- Yiu, D.W., Lau, C.M., & Bruton, G.D. (2007). International venturing by emerging economy firms: The effects of firm capabilities, home country networks, and corporate entrepreneurship. *Journal of International Business Studies*, 38(4), 519-540.
- Yoo, S-J., Mackenzie, N.G., & Jones-Evans, D. (2012). Public sector support and technology-based SMEs in peripheral areas – The case of North Wales. *Journal of Enterprising Culture*, 20(1), 83-104.
- Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341-363. <https://doi.org/10.5465/256683>
- Zahra, S.A., Ireland, R.D., & Hitt, M.A. (2000). International Expansion by New Venture Firms: International Diversity, Mode of Market Entry, Technological Learning, and Performance. *The Academy of Management Journal*, 43(5), 925-950. <https://doi.org/10.5465/1556420>
- Zhou, L. (2007). The effects of entrepreneurial proclivity and foreign market knowledge on early internationalization. *Journal of World Business*, 42(3), 281-293. <https://doi.org/10.1016/j.jwb.2007.04.009>

Author**Mariola Ciszewska-Mlinarič**

Assistant Professor of Strategic Management and International Business Strategy at Kozminski University. She received Ph.D. in Economics, with specialisation in strategic management, from Kozminski University, and her M.A. in Management from University of Warsaw.

Correspondence to: Dr Mariola Ciszewska-Mlinarič, Kozminski University, Department of Strategy, Jagiellonska 59, 03-301 Warsaw, Poland, e-mail: mariolac@kozminski.edu.pl

Acknowledgements and Financial Disclosure

The author would like to thank the editor and anonymous reviewers for their insightful comments, guiding the improvement of the article.

Copyright and License

This article is published under the terms of the Creative Commons Attribution – NoDerivs (CC BY-ND 4.0) License
<http://creativecommons.org/licenses/by-nd/4.0/>

Published by the Centre for Strategic and International Entrepreneurship – Krakow, Poland



Ministry of Science
and Higher Education
Republic of Poland

The copyediting and proofreading of articles in English is financed in the framework of contract No. 845/P-DUN/2018 by the Ministry of Science and Higher Education of the Republic of Poland committed to activities aimed at science promotion.

