

# Global mindset and the internationalization of small firms: The importance of the characteristics of entrepreneurs

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**Abstract** Despite being a relatively new concept, the importance of the global mindset is already well-documented. So far research has primarily focused on multinational companies and therefore the operationalization of the concept is still a work in progress. Recognizing the importance of entrepreneurs in small companies, yet mindful of the gaps that exist, this paper addresses the factors that constitute the global mindset and their influence on the internationalization of small Portuguese companies. Using information-processing theory through a quantitative, survey-based study and Structural Equation Modeling (SEM), the results show the importance of the characteristics of both entrepreneurs and firms in explaining the global mindset, and confirm the impact they have on internationalization behavior. The entrepreneur's level of education, their satisfaction with company performance in the domestic market and the potential for growth in the domestic market all affect the global mindset model. The conclusions are useful for entrepreneurs and national authorities aiming to successfully implement internationalization practices, given the role of the global mindset in exploring global business opportunities and in the global success of companies. Replication of the research in different contexts is essential for the wider generalization of the results.

**Keywords** Global mindset · Small firms · Internationalization behavior · Characteristics of entrepreneurs

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## Introduction

Much of current literature examines the global mindset (GM) and how it develops in multicultural contexts (e.g., Bowen and Inkpen 2009; Levy et al. 2007), focusing primarily on multinational companies and on senior executive mindsets (Adler and Bartholomew 1992; Zahra 1998), to ensure conditions for success (Black and Gregersen 2000; Oddou et al. 2000). Very little attention has been given to small and medium-sized enterprises where the multidisciplinary role of entrepreneurs and their mindset become determinant, particularly in the internationalization behavior of companies. Therefore, to better deal with the constraints of globalization, managers must possess a GM (Kefalas 1998; Rhinesmith 1992) in order to be more aware of the diversity of knowledge between organizations, countries, cultures and markets (Beechler and Javidan 2007; Gupta and Govindarajan 2002).

GM refers to “a set of individual attributes that enable an individual to influence other individuals, groups, and organizations from diverse social, cultural and institutional systems” (Begley and Boyd 2003; Hitt et al. 2007). It is a relatively new field that “has become increasingly important because of its criticality to long-term competitive advantage in global markets” (Levy et al. 2007). Studies indicate that individuals who have a global orientation for business are endowed with an integrative mentality and approach, are sensitive to the needs and characteristics of the environment and local culture, and are able to act with a greater degree of perspicacity in complex situations (e.g., Kedia and Mukherji 1999; Kefalas 1998). Internationalization is a holistic process of adapting a firm’s operations (Welch and Luostarinen 1993; Fletcher 2001), which include information flows, physical goods, exchange of technology, know-how and skills (Havnes 2001). This research is based on information-processing theory (Leonard et al. 1999).

Even now, little is known about how to operationalize GM (Arora et al. 2004; Clapp-Smith and Hughes 2007) and its relationship with the characteristics of effective leadership (Bonet et al. 2011; Levy et al. 2007; Maznevski and Lane 2004). In general, existing literature deals with GM and its relevance to multinational companies (Javidan et al. 2007; Levy et al. 2007) but pays little attention to the processes and mindset of small-business entrepreneurs and how they behave and seize international opportunities (Chetty and Campbell-Hunt 2003; Kyvik 2006; Canina et al. 2012). And little is known about the effect of GM on the internationalization behavior of organizations (Bowen and Inkpen 2009; Chatterjee 2005; Erwee 2007; Levy et al. 2007).

The aim of the research is to study the factors that constitute the GM, observed in the multidimensional perspective of the organization, and their influence on the internationalization of small businesses. We define three objectives: firstly, to analyze the factors that constitute the GM; secondly, to investigate the influence of GM on internationalization effects for the firm, international know-how activities, international formal activities and international networking activities; and thirdly, evaluate the influence on the GM model of the entrepreneurs’ level of education, satisfaction with company performance in the domestic market as well as growth potential of companies in the domestic market.

The paper is organized as follows. After the introduction, the second section provides a theoretical background together with hypotheses. The third section

presents the methods. The fourth section deals with the empirical results. The fifth section deals with the discussion. The sixth section presents the conclusions and contributions. The last section describes the limitations and potential future research.

## Theoretical background and hypotheses

### Global mindset

Mindset refers to individual competence, namely the ability to handle the cognitive complexity combined with a certain cosmopolitan view of the world (Levy et al. 2007; Rhinesmith 1992; Yang and Li 2011). Mindsets therefore promote non-specific guidance for a particular task, representing the global predisposition to respond in a certain way (Freitas et al. 2004; Ramirez et al. 2010). In the opinion of Redding (2007), mindset is the repository of meaning, while global mindset, according to Kegan (1983), refers to how individuals become creators of more complex meanings by incorporating various cultural structures into their mental systems. Researchers often refer to individual and organizational global mindset (Begley and Boyd 2003; Govindarajan and Gupta 2001).

Information-processing theory (Leonard et al. 1999) supports the research. It is based on the limited ability of individuals to process information and the subordination of the interpretation process to the context of information. This limits the data and affects the action associated with the cognitive structures which include the GM. Hitt et al. (2007) suggest “a clear theory-based link between GM and effective global management”. They state that GM “has a powerful impact on information-processing patterns that may translate into superior managerial capabilities for firms operating in the global arena.”

GM can be seen in the multidimensional perspective of the organization and consists of global orientation, global knowledge and global aptitude (Yin et al. 2008). Global orientation (Bartlett and Ghoshal 1992; Gupta and Govindarajan 2002; Nummela et al. 2004) is associated with the commitment and endeavor to understand foreign markets, international networks and the importance of partnerships with other companies. According to Taylor et al. (2008), individuals with a global orientation acknowledge differing perspectives of evaluation regardless of culture. Global knowledge incorporates other social, cultural, political, economic and legal systems and perceives the business sector and market at a global level (Arora et al. 2004; Nummela et al. 2004). Global aptitude is identified as the ability to communicate in different languages and work with people from different countries and cultures (Arora et al. 2004; Maznevski and Lane 2004). Global managers therefore should have the skills and knowledge to enable them to appeal to both global and integrated perspectives (Kedia and Mukherji 1999). These authors argue that the basis of GM is acquiring the knowledge that allows us to recognize differences, and the skills to put them into action. Therefore, according to Gupta and Govindarajan (2002) as well as Harvey and Novicevic (2001), GM is advantageous because it allows the exploration of global business opportunities and positions it as the main driver of success in global markets.

Beechler and Javidan (2007) associate the importance of the GM to the stock of knowledge that constitutes the cognitive and psychological attributes of individuals and allows them to influence other individuals, groups and organizations from diverse socio-cultural systems. GM has to do, therefore, with the complexity of the cognitive structure characterized by openness and collaboration with multiple cultures and realities at both the global and local levels, and with the cognitive capacity to mediate and integrate multiplicity (Levy et al. 2007; Lane and Down 2010).

International experience, consisting of living and working in a foreign country for at least a year, allows executives to increase perception and teaches them how to adapt the competencies of the company to situations of global change (Akehurst et al. 2011; Black et al. 1999; Hotho and Champion 2011; Osland and Osland 2006). That is why the international option is considered to be one of the most powerful methods of developing the necessary skills and knowledge required for global leaders (Appelbaum et al. 2011; Crowne 2008). In this sense, the domain of languages and the resulting processes of verbal and non-verbal communication accelerate the perception capabilities and objectivity of international performance, and contribute to this cosmopolitan mentality (Nerlove and Snipper 1981; Kets de Vries and Florent-Treacy 2002; Rueda-Armengot and Peris-Ortiz 2012).

Several authors (e.g., Arora et al. 2004; Clapp-Smith and Hughes 2007; Govindarajan and Gupta 2001; McCall and Hollenbeck 2002) consider the individual's background, namely nationality, formal education, language skills, inquisitiveness about the world, international management training and experience abroad as elements that integrate GM and contribute to the knowledge and understanding of other cultures and markets. Arora et al. (2004) and Kefalas and Weatherly (1998) also mention the level of education and being the member of a family from a foreign country. However, Nummela et al. (2004) point out that education is not related to GM. Also, Kobrin (1994) and Arora et al. (2004) observed that the characteristics of the company do not relate to GM. In this context of diversity, GM is operationalized by the following factors: decision style, childhood, valuation of international experience, international background, technical expertise, international experience, global orientation of the firm, global orientation of the entrepreneur, firm characteristics and firm activities in the global market. Based on a review of existing literature, we put forward the following hypothesis:

**Hypothesis 1** Global mindset is explained by decision style, childhood, valuation of international experience, international background, technical expertise, international experience, global orientation of the firm, global orientation of the entrepreneur, firm characteristics and firm activities in the global market.

#### Internationalization behavior factors

Bell et al. (1992) and Etemad (1999) state that SMEs often lack the resources, experience, skills and knowledge to operate in the international market, which puts them at a disadvantage compared to large companies. In many cases, the focus on internationalization of SMEs is a result of the development of GM (Baron and Ensley 2006; Chetty and Campbell-Hunt 2003; Crowne 2008; Earley and Peterson 2004;

Giaglis and Fouskas 2011; Nandakumar et al. 2010; Reed and Storrud-Barnes 2010). GM is characterized by the ability to identify complex interrelationships (Kedia and Mukherji 1999). Therefore, relational capital plays an important role between intangible assets and the firm's success (Hormiga et al. 2011; Cambra-Fierro et al. 2011; Sharabati et al. 2010; Namvar et al. 2010). With GM being a prerequisite for internationalization (Fletcher 2000; Townsend and Cairns 2003) and increasing the ability of companies to compete abroad (Maznevski and Lane 2004; Andersén 2011; Fleck 2010; Houthoofd et al. 2010), the positive attitude of the entrepreneur distinguishes the exporting companies from the non-exporters (e.g., Harveston et al. 2000; Cavalcante et al. 2011). There are, however, difficulties in evaluating export performance which leads to the implementation of subjective or perceived measures, both financial and non-financial (Leonidou et al. 2002; Katsikeas et al. 2000). Some studies confirm the relationship between GM and the performance and the successful internationalization of firms (e.g., Arora et al. 2004; Tseng et al. 2004).

The analytical capacity resulting from GM facilitates flexibility and adaptation to the local environment and at the same time sensitivity to the context (Arora et al. 2004; Huang and Kung 2011). Nadkarni and Perez (2007), while studying the role of domestic mindsets in internationalization found that the entrepreneurs greatest capacity was the effective use of knowledge gained in the domestic market, in contrast to the complexity of the decision to internationalize. The results suggest that GM has a positive influence on the financial indicators of international performance (Arora et al. 2004; Kedia and Mukherji 1999; Nummela et al. 2004). However, different authors (Levy et al. 2007; Bowen and Inkpen 2009) note the need to deepen the effect of GM on internationalization behavior. The following are assumed to be factors of international behavior of small companies: the internationalization effects for firms, international know-how, international formal activities and international networking activities. The hypotheses are therefore as follows:

- Hypothesis 2a Global mindset has a positive influence on the internationalization effects for firms;
- Hypothesis 2b Global mindset has a positive influence on international know-how;
- Hypothesis 2c Global mindset has a positive influence on international formal activities;
- Hypothesis 2d Global mindset has a positive influence on international networking activities.

Companies that choose to internationalize their operations generally have a significant level of experience in the domestic market and are subject to strong competition from domestic firms and multinational companies alike (Nadkarni and Perez 2007). The internationalization of small firms stems partly from the need to diversify risks and broaden horizons to other markets, which in addition to requiring resources, depends on the entrepreneur's GM. Some companies have a strong competitive position in the domestic market with growth potential where they feel comfortable, and this should influence the internationalization conditions and choices. Furthermore, the type of education of entrepreneurs, among other factors, will also influence internationalization behavior. According to Nummela et al. (2004), education would not influence GM, but in this specific context, we assume that such a relation may indeed exist. Moderating variables are therefore as follows: the growth

potential of companies in the domestic market, the satisfaction with performance in the domestic market, and the entrepreneurs' level of education, and these lead us to the following hypotheses:

- Hypothesis 3a The firm's potential for growth in the domestic market influences the relationship between GM and internationalization behavior;
- Hypothesis 3b The satisfaction with performance in the domestic market influences the relationship between GM and internationalization behavior;
- Hypothesis 3c The entrepreneurs' level of education influences the relationship between GM and internationalization behavior.

## Methods

### Research model

The research model looks at the factors that constitute the GM, and its relationship with the internationalization effects for the firm, international know-how, international formal activities and international networking activities. The concept of GM is explained by ten factors supported in the literature: decision style (DEC\_STYLE), childhood (CHILDHOOD), valuation of international experience (VAL\_INTEXP), international background (INT\_BACK), technical expertise (TEC\_EXP), international experience (INT\_EXP), global orientation of the firm (FGL\_ORIENT), global orientation of the entrepreneur (EGL\_ORIENT), characteristics of the firm (F\_CHARACTER) and the firm's perspectives in the global market (GLOB\_PERS). There are a total of 41 variables. The following are endogenous variables: internationalization effects for the firm (INT\_EFFECT), international know-how activities (INT\_KNOW), international formal activities (IMP\_EXP), and international networking activities (INTERNET), a total of 19 variables. Three moderating variables were used: growth potential of companies in the domestic market (GROW\_POTEN), the satisfaction with performance in the domestic market (DOM\_SAT) and the entrepreneur's level of education (ED\_LEVEL) (Fig. 1).

### Factors and variables

Detailed information regarding the aforementioned factors and variables is presented in Table 1.

### Data collection and measures

To conduct the survey, Informa D&B (formerly Dun & Bradstreet) provided us with a database containing 2,816 small-sized Portuguese companies (EU criteria) whose operations include export or import activities in one of the following sectors: graphic arts, construction/real estate, metallurgy/metalworking, services, food, textile, trade, audiovisual, transport, industry, IT/new technologies, agricultural industry, chemistry and pharmaceuticals, research and development, footwear, ceramics, furniture, wine production and others. In addition to detailed information regarding the size and

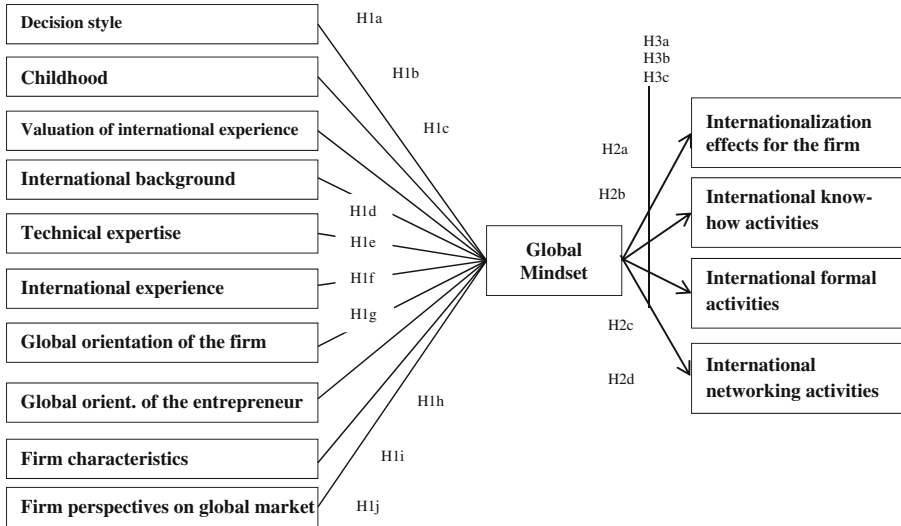


Fig. 1 Research model

sector of the companies, we were also provided with information about the age of the firm, the number of employees and entrepreneurs’ age. The survey was conducted on-line in 2009 between February-May. The entrepreneurs received an initial invitation to take part in the survey and, in addition to the e-mail reminders, they were called to confirm the reception of the e-mail. The final sample contains 211 small-sized companies (7.5 %) and reflects the Portuguese context.

GM was operationalized using a multidimensional construct. At the individual level, two primary measures were used: self-report questionnaires measuring individual attitudes and preferences (Arora et al. 2004; Gupta and Govindarajan 2002) and expectations (Murtha et al. 1998). This study utilized perceptual data of globalization-related organizational policies and practices (Gupta and Govindarajan 2002).

Statistical instruments

The study employed confirmatory analysis based on Structural Equation Modeling (SEM), which is suitable for this sample size. The comprehensive approach was employed to test the structural model with hypotheses on relations between observed and latent variables (Hoyle 1995). The study used the analysis of moment structures (AMOS) program (Arbuckle 2004) to estimate the measurement model and structural model path coefficients of relationships between the variables in the model.

The structural equation model examines the relationship between the latent variables, based on the model of Jöreskog and Sörbom (1993) with three matrix equations. The first is  $\eta = \beta\eta + \Gamma\xi + \zeta$  where  $\eta$  is the vector of the endogenous latent constructs,  $\beta$  and  $\Gamma$  are matrices of structural coefficients,  $\xi$  is the vector of exogenous constructs and  $\zeta$  is the vector of errors of the conceptual model. The second equation is  $y = \lambda_y \eta + \varepsilon$ , where  $y$  is the vector of the endogenous observed variables,  $\lambda_y$  is the matrix of structural coefficients for  $y$ ,  $\varepsilon$  is the vector of errors of the

**Table 1** Variables

Factors	Variables	Description
INT_EFFECT	INT_FINANC	Internationalization had a positive effect on the firm's financial results (1—totally disagree to 7—totally agree)
	INT_EXPERT	Internationalization had a positive effect on the firm's specialization and know-how development (1—totally disagree to 7—totally agree)
	INT_IMAGE	Internationalization had a positive effect on the firm's image (1—totally disagree to 7—totally agree)
	INT_CLIENTS	Percentage of international clients of the firm (1—20 %, 21–50 %, over 50 %, doesn't know)
	INT_SALES	Percentage of sales in the international markets (1—20 %, 21–50 %, over 50 %, doesn't know)
INT_KNOW	BUY_KNOW	We frequently contract services from international consultants and specialists (1—totally disagree to 7—totally agree)
	KNOW_SUPPL	We frequently attend congresses, conferences and trade fairs aiming to acquire new knowledge and establish contacts with new suppliers (1—totally disagree to 7—totally agree)
	SELL_KNOW	We sell services, knowledge and know-how to the international market (1—totally disagree to 7—totally agree)
	PRES_KNOW	We frequently attend congresses, conferences and fairs aiming to present our skills, technologies and products in the international market (1—totally disagree to 7—totally agree)
IMP_EXP	IMP_RAW	We import raw materials (1—totally disagree to 7—totally agree)
	IMP_PARTS	We import unfinished products, parts, etc. (1—totally disagree to 7—totally agree)
	IMP_PROD	We import finished products (1—totally disagree to 7—totally agree)
	EXP_RAW	We export raw materials (1—totally disagree to 7—totally agree)
	EXP_PARTS	We export unfinished products, parts, etc. (1—totally disagree to 7—totally agree)
	EXP_PROD	We export finished products (1—totally disagree to 7—totally agree)
INT_NET	NET_INFO	The firm collaborates with international networks primarily to acquire more information (1—totally disagree to 7—totally agree)
	NET_RESOURCE	The firm collaborates with international networks primarily to take advantage of the resources in the market (1—totally disagree to 7—totally agree)
	NET_CLIENT	The firm collaborates with international networks primarily to establish or maintain contacts with clients/customers (1—totally disagree to 7—totally agree)
	NET_SUPPL	The firm collaborates with international networks primarily to establish or maintain contacts with suppliers (1—totally disagree to 7—totally agree)
DEC_STYLE	INTER_COLLAB	I encourage interdisciplinary collaboration (1—totally disagree to 7—totally agree)
	LIST_OTHERS	I am capable of listening to others and change my opinion (1—totally disagree to 7—totally agree)
	CAN_INFLUEN	I believe that I can influence what happens around me (1—totally disagree to 7—totally agree)



**Table 1** (continued)

Factors	Variables	Description
	TEAM_PLAYER	I am an active member of a work group (1—totally disagree to 7—totally agree)
	RESULT_ORIEN	I am primarily motivated by the results of the firm (1—totally disagree to 7—totally agree)
	RISK_CAPABLE	I believe that others think of me as capable of risk taking (1—totally disagree to 7—totally agree)
	CURIOSITY	I am a person with a great deal of inquisitiveness (1—totally disagree to 7—totally agree)
	INT_COMPLEX	I generally consider internationalization to be a complex process (1—totally disagree to 7—totally agree)
CHILDHOOD	PORT_PARENT	Both parents are Portuguese (Yes, No)
	FAM_MOVING	During childhood/adolescence, how many times the family moved house (Never, 1 to 3 times, more than 3 times)
	PAR_ABROAD	During childhood/adolescence, for professional reasons, either of the parents travelled abroad (Yes, No)
	VISIT_COUNT	During childhood/adolescence you visited other countries (Yes, No)
	REL_ABROAD	You have or had relatives (grandparents, uncles, cousins, etc.) living abroad (Yes, No)
VAL_INTEXP	STUD_INTEXP	I recommend teenagers to study abroad (1—totally disagree to 7—totally agree)
	PROF_INTEXP	I value a professional's international experience (1—totally disagree to 7—totally agree)
INT_BACK	STUD_ABROAD	Studied abroad (Yes, No)
	INT_ASSOC	Is or was a member of any international association, whether professional or social (for example, AIESEC, IAESTE, ISU, Rotary, Lion's Club, Red Cross) (Yes, No)
	LANG_SKILLS	Proficiency in Portuguese, English, German, French, Spanish, Italian (1—no knowledge to 7—fluent speaker)
TEC_EXP	ENG_EXP	Engineering experience (1—none to 7—very high)
	MARK_EXP	Sales and marketing experience (1—none to 7—very high)
	MNGT_EXP	Managerial/administration experience (1—none to 7—very high)
INT_EXP	INT_CONTACT	At work, I contact international clients, suppliers and employees on a daily basis (1—never to 7—very often)
	INT_EXPTRAV	I have experience of international travel (1—none to 7—very high)
	INT_OTHEXP	Other international experience (1—none to 7—very high)
	WORK_ABROAD	I have worked abroad for more than 6 months (Yes, No)
FGL_ORIENT	GROW_OBJ	Internationalization is the only way to achieve the firm's growth objectives (1—totally disagree to 7—totally agree)
	TAKE_FIRM	The manager/owner is willing to take the firm to the international market (1—totally disagree to 7—totally agree)
	TIME_PLAN	Management spends a considerable amount of time planning international operations (1—totally disagree to 7—totally agree)
	UN_MARKET	Management sees the world as a single, large market (1—totally disagree to 7—totally agree)

**Table 1** (continued)

Factors	Variables	Description
	PLAY_SCHOOL	Management sees the world as both a playground (i.e., a market to explore) and a school (i.e., a source of new ideas and knowledge) (1—totally disagree to 7—totally agree)
EGL_ORIENT	OPEN_IDEAS	I accept the ideas of other countries and cultures just as I accept the ideas and culture of my own country (1—totally disagree to 7—totally agree)
	WILL_ABROAD	In general, I am willing to work abroad (1—totally disagree to 7—totally agree)
F_CHARACTER	SERV_ORIENT	The firm is mainly focuses on the service/market (1—totally disagree to 7—totally agree)
	PROD_ORIENT	The firm is mainly focuses on the production process (1—totally disagree to 7—totally agree)
	PRSERV_VAR	The firm provides a variety of products and/or services (1—totally disagree to 7—totally agree)
	TECH_ADVANC	The products/services are technologically advanced (1—totally disagree to 7—totally agree)
	OWN_R&D	The firm does its own research and development (1—totally disagree to 7—totally agree)
	RES_GROWTH	The firm has access to resources that enable future growth (1—totally disagree to 7—totally agree)
GLOB_PERS	CLIENT_NEEDS	The client's needs are constantly changing (1—totally disagree to 7—totally agree)
	GLOB_MARKET	The firm's market is by definition, a global one (1—totally disagree to 7—totally agree)
	INT_COMPET	Our competitors are international (1—totally disagree to 7—totally agree)
	GROW_POTEN	Growth potential in the domestic market (High, Low)
	DOM_SAT	Satisfaction with the performance of companies in the domestic market (High, Low)
	ED_LEVEL	Level of education of entrepreneurs (12 years or less, more than 12 years (degree))

measurement model and  $\theta\varepsilon$  is the covariance matrix of these errors. The third equation is  $x = \lambda_x \xi + \delta$  where  $x$  is the vector of the observed exogenous variables,  $\lambda_x$  is a matrix of structural coefficients for  $x$ ,  $\xi$  is the vector of exogenous latent constructs, and  $\delta$  is the vector of measurement errors of the model.

## Empirical results

The first stage of data analysis consisted of the normality test of the variables (not rejected), followed by a descriptive analysis and finding correlations between variables to analyze the intensity of relationships and how the variables were grouped. Factorial analysis was then carried out on all variables to assess the factors and constructs involved in explaining the international behavior of the firms. Taking into

account the existence of latent variables, we used the SEM and prepared the measurement model followed by confirmation of the structural model. Latent variables did not verify the assumptions of internal validity, resulting in a lack of adequate results so we therefore proceeded to attempt to explain the endogenous variables based on the factors under consideration.

We then proceeded to carry out an exploratory factor analysis to regroup some of the factors into new latent variables and applied the SEM methodology. Results obtained were then more substantial and satisfactory, and we continued with the readapted confirmatory analysis model.

Based on the hypotheses, supported in theory, it was revealed that the initial constructs did not have a high adequate fit. Consequently, the variables of the constructs were adjusted, which resulted in the exclusion of some variables as well as the international formal activities construct (IMP\_EXP). The model's latent exogenous variables with internal consistency, reliability validity and unidimensionality validity were determined (Hair et al. 1998; Tabachnick and Fidell 2001) (Table 2). The following goodness of fit results of the SEM model were obtained:  $\chi^2=946.31$ ,  $df=565$ ,  $\chi^2/df=1.675$ , CFI=0.895, TLI=0.877, RMSEA=0.057.

In the case of exogenous latent variables, some explanatory variables were eliminated and others, because they have similar variance, grouped together in “Global orientation” (GLOBORIENT) latent variable (“Firm global orientation” (FIRMGLOR) and “Manager global orientation” (MANGLOR)). The latent variable “Education and language skills” (EDULSK) was also eliminated due to lack of consistency. The importance of the explanatory variable “Languages” (LANGUAGES) was significant due to the influence on the endogenous latent variables.

**Table 2** Correlation between latent variables and internal consistency

	Alpha	AVE	1	2	3	4	5	6	7	8	9	10	11	
Firm perspectives on the global market	1	0.55	0.37	0.61										
Technical expertise	2	0.68	0.52	0.28	0.72									
International know-how activities	3	0.63	0.46	0.27	0.34	0.70								
International networking activities	4	0.92	0.76	0.37	0.33	0.68	0.87							
Childhood	5	0.45	0.32	0.23	0.21	0.40	0.26	0.57						
Valuation of international experience	6	0.74	0.61	0.06	0.26	0.39	0.23	0.13	0.78					
Firm characteristics	7	0.65	0.38	0.22	0.36	0.49	0.29	0.27	0.06	0.62				
Global orientation	9	0.84	0.43	0.48	0.44	0.64	0.44	0.33	0.30	0.29	0.66			
International experience	10	0.70	0.56	0.34	0.62	0.56	0.37	0.17	0.30	0.32	0.60	0.75		
Decision style	11	0.76	0.39	0.29	0.48	0.35	0.23	0.04	0.24	0.42	0.47	0.42	0.62	
Internationalization effects for the firm	12	0.87	0.58	0.50	0.41	0.42	0.39	0.21	0.16	0.23	0.63	0.32	0.36	0.76

SQRT of AVE on diagonal

Discriminant validity was confirmed (Fornell and Larcker 1981; Kline 2005) among latent variables ( $r < 0.85$ ) and the square root values of AVE (Average Variation Explained) of each latent variable were always higher than the correlation between that variable and other latent variables.

The content validity or face validity of the latent variables was verified, consistent with the concepts and definitions in the literature, and the convergent validity with loadings of latent variables always higher than 0.4/0.5 ( $p$ -value  $< 0.01$ ) (Anderson et al. 1987 ; Garver and Mentzer 1999). The second-level latent variable GLOBAL MINDSET is explained by the first-level latent variables DEC\_STYLE, CHILDHOOD, VAL\_INTEXP, TEC\_EXP, INT\_EXP, GL\_ORIENT, F\_CHARACT and GLOB\_PERS and the variable LANG\_SKILLS. The structural model explaining the cause-effect relationships associates the GLOBAL MINDSET with the latent variables INT\_EFFECT ( $\beta=0.65, R^2=0.42$ ), INT\_KNOW ( $\beta=0.70, R^2=0.48$ ) and INT\_NET ( $\beta=0.55, R^2=0.30$ ) (Fig. 2). With goodness of fit, the model obtained  $\chi^2=1008.673, df=635, \chi^2/df=1.588, CFI=0.900, TLI=0.899, RMSEA=0.053$  as well as unidimensionality validity (Hair et al. 1998; Tabachnick and Fidell 2001).

Bearing in mind the moderating variables, new models for the global mindset were obtained, the principal results for education level above 12 years, low satisfaction in the domestic market and low growth potential were: ED\_LEVEL ( $\chi^2=1015.609, df=635, \chi^2/df=1.599, CFI=0.853, TLI=0.837, RMSEA=0.068$ ), DOM\_SAT ( $\chi^2=1009.691, df=635, \chi^2/df=1.590, CFI=0.854, TLI=0.839, RMSEA=0.064$ ), GROW\_POTEN ( $\chi^2=957.445, df=635, \chi^2/df=1.508, CFI=0.889, TLI=0.877, RMSEA=0.055$ ) respectively, which confirms the expectations concerning this variables influencing the global mindset model through the type of variables and intensity of relationships. In the case of entrepreneurs with a level of education greater than 12 years, the latent exogenous variables CHILDHOOD, VAL\_INTEXP

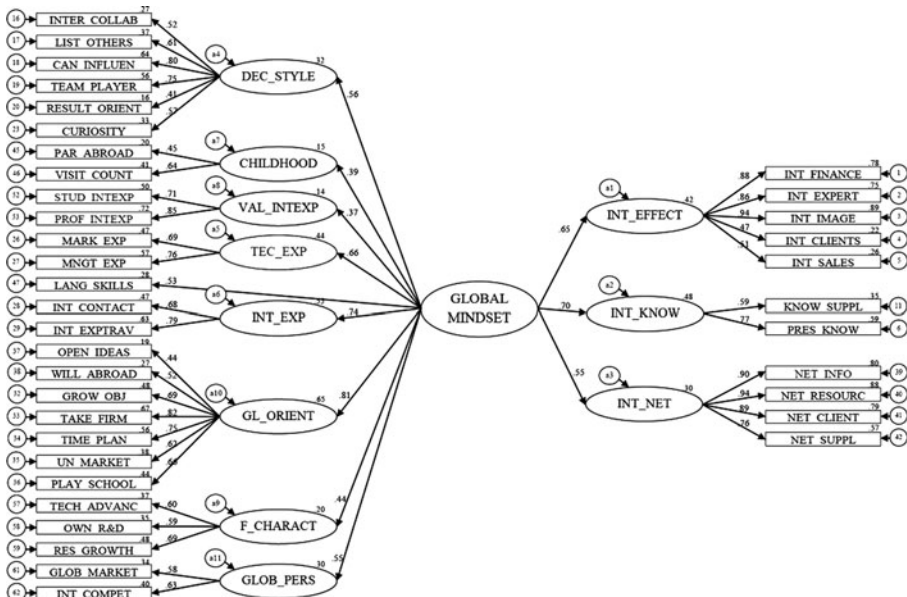


Fig. 2 Structural SEM model

and TECH\_EXP do not comply with the significance criteria. There are some characteristics of the Portuguese sample that may influence the GM. One of those is the level of education. According to OECD data, Portugal has one of the lowest percentages of population with an academic degree, and this influences some of the variables. For companies with low DOM\_SAT or GROW\_POTEN, there is no significance in the model of the latent exogenous variables CHILDHOOD and VAL\_INTEXP, with high levels of endogenous explanation of the latent variables of the model. When the growth potential of the company is high, the moderating effect causes the weight variation of the coefficients of the factors that constitute the GM, positively for factors GLOB\_PERS ( $\beta=0.71$ ,  $R^2=0.51$ ) and CHILDHOOD ( $\beta=0.51$ ,  $R^2=0.26$ ) and negatively for factors DEC\_STYLE ( $\beta=0.46$ ,  $R^2=0.21$ ), TEC\_EXP ( $\beta=0.59$ ,  $R^2=0.34$ ) and F\_CHARACTER ( $\beta=0.35$ ,  $R^2=0.12$ ).

## Discussion

Based on literature, the global mindset research model was built. It was found that the international background latent variable (as it was defined in this study) does not influence the GM and that the global orientation joins the perspectives of the organization and of the entrepreneur. Hypothesis H1 was not confirmed in this specific context. However, the detailed analysis of the eight factors that constitute the global mindset reveals the major importance of five factors, namely GL\_ORIENT ( $\beta=0.81$ ,  $R^2=0.65$ ), INT\_EXP ( $\beta=0.74$ ,  $R^2=0.55$ ), TEC\_EXP ( $\beta=0.68$ ,  $R^2=0.44$ ), DEC\_STYLE ( $\beta=0.56$ ,  $R^2=0.32$ ) and GLOB\_PERS ( $\beta=0.55$ ,  $R^2=0.30$ ). It also verified the importance of the LANG\_SKILLS variable ( $\beta=0.53$ ,  $R^2=.28$ ). With lower coefficients but also influential are the following three factors: F\_CHARACTER ( $\beta=0.44$ ,  $R^2=0.20$ ), CHILDHOOD ( $\beta=0.39$ ,  $R^2=0.15$ ) and VAL\_INTEXP ( $\beta=0.37$ ,  $R^2=0.14$ ).

The factors with the highest coefficient help determine that global mindset can be greatly explained by the overall orientation of companies to the international market, the recognition by entrepreneurs of the importance of this market and the international business experience, something which is in keeping with several authors (Arora et al. 2004; Kedia and Mukherji 1999; Nummela et al. 2004; Taylor et al. 2008).

Global mindset stems from the fact that entrepreneurs have a strong interest in conducting business abroad, are open to new ideas and knowledge and want to take advantage of international opportunities. It is also related to the importance of strong commercial expertise together with concentrated contacts and travel abroad, the use of language skills, and a management style that is inquisitive in nature and the mobilization of the working group and a results-focused approach. In this sense, Gupta and Govindarajan (2002) and Harvey and Novicevic (2001) emphasize the importance of exploring global business opportunities derived from GM, which Beechler and Javidan (2007), Osland and Osland (2006) and Kets de Vries and Florent-Treacy (2002) associate with open-minded entrepreneurs and the perception of multiple cultures and realities, international experience and language skills. Levy et al. (2007) and Lane and Down (2010), e.g., emphasize the value of the cognitive ability to integrate the multiplicity.

As far as the factors with lower coefficients were concerned, the results reveal that the global mindset is influenced by company-specific conditions, the entrepreneurs'

childhood events and appreciation of international experience, once again in keeping with existing literature (Arora et al. 2004; Clapp-Smith and Hughes 2007; Govindarajan and Gupta 2001; McCall and Hollenbeck 2002). It also shows the importance of investment in research and development associated with technologically-advanced products resulting from access to resources, the fact that the entrepreneurs, while growing up, had contact with other cultures, due to their parents residing in or traveling to different countries, and appreciation of international experience.

GM influences the internationalization behavior identified by the factors INT\_KNOW ( $\beta=0.70$ ,  $R^2=0.48$ ), INT\_EFFECT ( $\beta=0.65$ ,  $R^2=0.42$ ), and INT\_NET ( $\beta=0.55$ ,  $R^2=0.30$ ). The IMP\_EXP factor was excluded. Therefore, hypotheses H2a, H2b and H2d were confirmed while hypothesis H2c was not.

GM has a strong positive effect on the firms' financial results, on the specialization and know-how development and on its image. The results support the influence of the GM in the success of small businesses, the propensity to share knowledge and the choice to participate in international networks as a way to explore the features of the market and maintain contacts with customers and suppliers, presenting their own competences. The literature highlights the importance of GM in the internationalization options especially for large firms (Baron and Ensley 2006; Crowne 2008; Earley and Peterson 2004; Kedia and Mukherji 1999; Townsend and Cairns 2003), in this case successfully applied to small businesses.

GM's relationship with internationalization behavior is moderated by the growth potential of companies in the domestic market and the satisfaction with the performance in the domestic market, confirming the hypotheses H3a and H3b. The moderating effect is not however confirmed in the case of low growth potential.

The decrease results stem from a lower importance given to commercial and management experience, less access to resources and a decrease in research and development of technologically-advanced products and the low level of importance given to management style, particularly in encouraging team work and motivation by results.

The moderating effect in the model caused by the entrepreneurs' satisfaction with the performance in the domestic market stands out for the greater importance of the factors GLOB\_PERS ( $\beta=0.73$ ,  $R^2=0.54$ ) and CHILDHOOD ( $\beta=0.49$ ,  $R^2=0.24$ ) and the lower value of the factors TEC\_EXP ( $\beta=0.60$ ,  $R^2=0.36$ ), INT\_EXP ( $\beta=0.67$ ,  $R^2=0.45$ ) and VAL\_INTEXP ( $\beta=0.28$ ,  $R^2=0.08$ ). It reflects a greater understanding of the effect of the global market and the influence of foreign travel during childhood with less importance given to international experience, training abroad and international contacts. If the entrepreneurs are not satisfied with performance, there are changes in the composition of the factors that explain global mindset having less of an effect in the case of factors GLOB\_PERS and CHILDHOOD. The following factors reinforce its importance: DEC\_STYLE ( $\beta=0.64$ ,  $R^2=0.41$ ), TEC\_EXP ( $\beta=0.78$ ,  $R^2=0.61$ ) and INT\_EXP ( $\beta=0.85$ ,  $R^2=0.75$ ) and the variable LANG\_SKILLS ( $\beta=0.62$ ,  $R^2=0.39$ ) with a fall in the value of the FIRMARKET factor ( $\beta=0.24$ ,  $R^2=0.06$ ).

The moderating effect of the level of education is confirmed (H3c). In the case of education greater than 12 years (degree) the global mindset loses three factors which are in the initial model and these are CHILDHOOD, VAL\_INTEXP and TEC\_EXP. Simultaneously, the importance of the factors GL\_ORIENT ( $\beta=0.88$ ,  $R^2=0.77$ ), F\_CHARACTER ( $\beta=0.60$ ,  $R^2=0.32$ ) and GLOB\_PERS ( $\beta=0.90$ ,  $R^2=0.82$ ) increase while the factor INT\_EXP ( $\beta=0.65$ ,  $R^2=0.42$ ) and the variable LANG\_SKILLS ( $\beta=$

0.34,  $R^2=0.12$ ) fall. It appears that entrepreneurs with higher education are more prone to the global orientation of the company and for the global market and invest in research and technologically-advanced products but are less prone to language skills, undertaking intensive international contacts and do not prioritize travel abroad. In the case of a lower education levels, the global mindset factors (compared to the initial model) do not show major changes except for factors F\_CHARACTER ( $\beta=0.38$ ,  $R^2=0.11$ ) and GLOB\_PERS ( $\beta=0.36$ ,  $R^2=0.13$ ) which decrease in importance, which means that they are less likely to understand the global market or invest in research and development or technologically-advanced products. In all these cases the literature is sparse, and so these findings make an important contribution.

## Conclusions and contributions

The results of this research show that in small companies with internationalization behavior, entrepreneurs are heavily endowed with global mindset giving them conditions to develop international networks. In turn, the global mindset of entrepreneurs consists of a multitude of factors, strongly explained by the global orientation of companies to the international market, the effect of international experience, management styles and other individual factors. This study also shows the influence of GM on the internationalization behavior of small businesses, particularly in terms of financial results and business growth.

It was shown that the GM model is moderated by the growth potential in the domestic market, satisfaction with the performance in the domestic market and especially the level of education of entrepreneurs.

This research has important contributions to literature and for companies. Besides contributing to a better understanding of the constitution of GM, it is a pioneer in the study of GM as applied to small businesses and the results clearly show differences from the large multinational companies dealt with in other papers. It expands the knowledge of the influence of GM factors in the internationalization behavior of small businesses, something that is very important given the effect of market globalization. It also highlights the moderating effect of the level of education of entrepreneurs in the GM model, but that could be a specific characteristic of small firms (e.g., could be a characteristic of Portuguese context). This study provides small businesses with a greater understanding of the effect of entrepreneurs' GM in internationalization. And for national authorities trying to stimulate the internationalization of companies, this work provides some valuable insights.

## Limitations and future research

The focus of research in the Portuguese context is a limitation, and does not allow for the generalization of the results. Future work should continue to study the GM model in different contexts, as well as meet the essential properties of GM, expanding the analysis of the constitution of GM at various levels, according to multi-level theory, and verify their effects on internationalization behavior.

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