THE DECISION-MAKING PROCESS IN INTERNATIONAL BUSINESS STRATEGIES. FACTORS OF INFLUENCE ON SMALL AND MEDIUM ENTERPRISES

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Agenda

- Introduction
- Theoretical background
- Dimensions of the strategic decision-making process
- Factors influencing international strategic decision-making processes
- Research methodology and findings
- Conclusions, limitations and future research
INTRODUCTION OF SMALL AND MEDIUM ENTERPRISES (SMES)

The number of small firms operating on international markets has been growing in the last couple of decades and their activities have attracted a great deal of scholarly interest (Fletcher, 2001; Abebe & Angriawan, 2011).

In most countries small and medium enterprises (SMEs) represent the majority of firms and play an important role in the economic growth of these countries (Musso & Francioni, 2012).

However, the small business sector continues to be plagued by high failure rates and poor performance levels in international context and these unsatisfactory performances are often caused by poor and inadequate strategic decision-making processes (SDMPs) (Jocumsen, 2004).
STRATEGIC DECISION-MAKING PROCESS (SDMP)

One of the central aspects regarding the SMEs’ internationalization pertains to Strategic Decision-Making Process (SDMP) (Jocumsen, 2004).

but

• International business literature traditionally assumes that internationalization decisions are purely rational.

• The analysis of how non-rational factors affect foreign expansion decisions has been neglected (Brouthers & Hennart, 2007).

• Most of research related to SDMPs has been tailored to large firms (Driouchi & Bennett, 2011; Nielsen & Nielsen, 2011) with few studies focused on SMEs (Brouthers, Andriessen, & Nicolaes, 1998; Dimitratos, Petrou, Plakoyiannaki, & Johnson, 2011; Liberman-Yaconi, Hooper, & Hutchings, 2010).

• Some previous research also on internationalization process (Aharoni, Tihanyi, & Connelly, 2011; Dimitratos, et al., 2011; Nielsen & Nielsen, 2011), but lack of studies that examine the both the SDMP perspectives and the SMEs perspective.
OBJECTIVE OF THE RESEARCH

To explore the different dimensions of SMEs’ strategic decision-making processes in international business and, within these dimensions,

to understand if a relationship exists between SMEs’ decision-maker characteristics (e.g. international experience, nationality, skills), and the SDMP in international field.

Recovery of the behavioral theory:

the SDMP literature has benefited significantly from the behavioral theory of the firm. Behavioral theorists have primarily focused on decisions made by individuals and seemingly have no interest in decisions made in organizational contexts (Dean & Sharfman, 1993). Nonetheless, their ideas have often been transferred into organizational decision-making research (March & Shapira, 1982).
STRATEGIC DECISION-MAKING PROCESS

We followed the SDMP defined by Harrison (1996) adapted to the international field:

1. Definition of objectives: market development decisions in international field

2. Search for information, development and comparison of alternatives related to foreign markets: systematic International Market Selection (IMS) and Entry Mode Selection (EMS) methodologies

3. Implementation of the selected alternative: entering in a particular foreign market with a specific entry mode, and

4. Follow-up and control: control and evaluation of international activities
DIMENSIONS OF THE STRATEGIC DECISION-MAKING PROCESS

Characteristics of the SDMP can be conceptualized in terms of different dimensions, among which the most adopted in literature are:

- Rationality
- Formalization
- Hierarchical Decentralization and lateral communication
- Political Behaviour
Dimensions of the strategic decision-making process

RATIONALLY

Different definitions from SDM literature (Elbanna & Child, 2007; Langley, 1989; Schwenk, 1995):

“The use of information for the purpose of selecting a sensible alternative in the pursuit of one’s goals” (Hough & White, 2003).

“The extent to which decision makers attempt to make the best decision possible under the circumstances of incomplete information and bounded rationality” (Walter et al. (2008).

“The comprehensiveness of the planning process” (Fredrickson, 1984; Goll & Rasheed, 1997).

We adopted the definition of Dean and Sharfman (1993): “The extent to which the decision-making process reflects a desire to make the best decision possible under the circumstances. Such 'intended rationality' is characterized by an attempt to collect the information necessary to form expectations about various alternatives, and the use of this information in the final decision”.

Findings from previous research:

• positive relationship between procedural rationality and strategic decision effectiveness (Elbanna & Child, 2007).

• in international firms, one of the main obstacles to adopting rational decision processes is the decision-maker’s limited cognitive capabilities (Jones et al., 1992).
FORMALIZATION

Formalization defined:

“The extent to which organizational policies, rules, charts and plans are articulated explicitly and formally in SMDP” (Eisenhardt & Bourgeois, 1988)


“The use of rules in organization” (Hage & Aiken, 1968; 1967), with three sub constructs of formalization: job codification, rule observation and job specificity.

Findings from previous research:

Rationality is positively and considerably related to the notion of formalization (Langley, 1989; Papadakis, Lioukas, & Chambers, 1998).
HIERARCHICAL DECENTRALIZATION AND LATERAL COMMUNICATION

In SMEs decisions are often centralized in the person of entrepreneur. The related dimension is the participation to international SDMPs.

Participation can be seen from two different perspectives (Dimitratos, 2010):

- the degree of dissemination of power and authority during the SDMP and within the internal organization (Aiken & Hage, 1968; Dimitratos, et al., 2011).
- the degree of involvement of all departments and business units in international SDMPs (Aiken & Hage, 1968; Dimitratos, et al., 2011; Papadakis, et al., 1998).
POLITICAL BEHAVIOR

Political behavior defined:

Decisions are the result of a process in which decision makers have different goals, form coalitions to achieve these goals and the preferences of the most powerful decision makers prevail (Stone, 2002).

Two different perspectives:

• adoption of political tactics inside the organization (Dean & Sharfman, 1996; Pfeffer & Moore, 1980).

• influence from both internal actors and external parties.

In this study we adopted the latter approach.

It is commonly accepted that politicization exerts a negative influence on firm and decision outcomes (Elbanna & Child, 2007b; Nutt, 1998; Dean & Sharfman, 1996; Eisenhardt & Bourgeois, 1988).
FACTORS INFLUENCING INTERNATIONAL STRATEGIC DECISION-MAKING PROCESSES

Theoretical background

DECISION MAKER

PERSONALITY CHARACTERISTICS
• Need for achievement
• Risk attitude
• Locus of control
• Preference for innovation

GENDER ROLE
• Biological sex
• Stereotypical sex role

DECISION-MAKER’S TYPOLOGY
Manager or entrepreneur

INTERNATIONAL STRATEGIC DECISION MAKING PROCESS
Rationality
Formalization
Hierarchical decentralization
Lateral communication
Politcization

Definition of managerial international objective

Search for information, develop and comparison of alternatives related to foreign markets, selection of one alternative, and implementation of the selected alternative

Follow-up and control

BROADER CONTEXT

EXTERNAL CONTEXT
• Environmental heterogeneity
• Environmental hostility
• Environmental dynamism

INTERNAL CONTEXT
• Firm size
• International performance
PERSONALITY CHARACTERISTICS

Four main personality characteristics have been identified (Papadakis, 2006; Papadakis & Barwise, 2002; Papadakis, et al., 1998):

- Need for achievement
- Risk attitude
- Locus of control
- Preference for innovation.
PERSONALITY CHARACTERISTICS

Need for achievement (NACH): The aspiration of individuals to achieve better results of their action and feel responsible for these (Entrialgo, Fernandez, & Vazquez, 2000b; Watson & Newby, 2005).

*Decision-makers with high need for achievement express more desire to affect and control the situation in which they operate*

*Related to propensity to be appealed by more formalized and rational decision making (Lewin & Stephens, 1994; Papadakis & Barwise, 2002).*

We hypothesize that:

H1a-H1e. The decision-maker’s need for achievement will be positively related to (a) rationality and (b) formalization, and negatively related to (c) hierarchical decentralisation (d) lateral communication, and (e) politicisation.
PERSONALITY CHARACTERISTICS

Risk attitude (RA). A psychological disposition of individuals to show varying degrees of risk-taking or risk avoidance behaviour (Papadakis et al., 1998).

Manager usually take risks in the hope of realizing gains and better results (Forlani, Mullins & Walker, 2002).

Some researches (Taylor & Dunnette, 1974) stated that decision-maker with high risk-propensity tend to make rapid decisions and to operate more by intuition than by formal and rational analysis, while others (Papadakis, 2006) found a significant relationship between risk propensity and hierarchical decentralization.

We hypothesize that:

H2a-H2e. The decision-maker’s risk attitude is negatively related to (a) rationality, (b) rule formalisation and (c) politicisation. It is positively related to (d) decentralisation and (e) lateral communication.
PERSONALITY CHARACTERISTICS

**Locus of Control (LOC).** How individuals see their own action affecting events that surround their lives (Rotter, 1966).

In terms of SDM: how a person’s decision making ability is influenced (Srivastava, 2009).

The locus of control is internal or external:

- individuals with internal locus of control are those who make decisions principally on their own and consider that their own actions are the main reason for their business failure or success,

- decision-makers with an external locus of control are those who base their decision more on what others desire, and believe that the failure or success of their business depend on the external environment.

*Several researchers have observed that owners/managers with internal locus of control are more innovative, take more risks and are more proactive (Entrialgo, Fernandez, & Vazquez, 2000a; D. Miller, Kets De Vries, & Toulouse, 1982; D. Miller & Toulouse, 1986).*  
*Successful managers are more likely to be those with internal locus of control (Brockhaus, 1980).*
PERSONALITY CHARACTERISTICS

Locus of Control (LOC).

Positive links between decision-makers’ internal locus of control and their firm’s financial performance (Di Zhang & Bruning, 2011).

With specific reference to the relationship between locus of control and SDMP dimensions, several researchers found that CEOs with an internal locus of control prefer decentralization and do not favour extensive formal rules (D. Miller & Toulouse, 1986), even if they are more likely to take more rational decisions (Lewin & Stephens, 1994; D. Miller, et al., 1982).

We hypothesize that:

H3a-H3e. Internal locus of control is positively related to (a) rationality, (b) hierarchical decentralisation and (c) lateral communication. It is negatively related to (d) rule formalisation and (e) politicisation.
PERSONALITY CHARACTERISTICS

Preference for innovation (INN). Schumpeter (1934) stated that the innovative entrepreneur develops and implements competitive strategies in terms of introducing new product and services or methods of production, opening new markets or new sources of supply, or reorganizing industries (Carland, Hoy, Boulton, & Carland, 1984; Mueller & Thomas, 2001; Stewart, Watson, Carland, & Carland, 1999).

Although there are previous studies analyzing the preference for innovation within SMEs (Mueller & Thomas, 2001; Stewart, et al., 1999; Watson & Newby, 2005), there is a lack of evidence examining a possible relationship between the decision-maker’s preference for innovation and SDMP, especially in international field.

We hypothesize that:

H4a-H4e. The decision-maker’s preference for innovation is positively related to (a) rationality (b), rule formalization (c), hierarchical decentralisation (d), lateral communication (e) and politicisation.
GENDER ROLE

Biological sex (SEX).
Different studies have attempted to focus on the effects of biological sex on different aspects, such as strategic decision making behaviour (Sonfield, Lussier, Corman, & McKinney, 2001), psychological dimensions of SME owners (Bird & Sapp, 2004), SMEs’ market orientation and performance (Davis, Babakus, Danskin Englis, & Pett, 2010). However, there is a lack of researches attempting to discover a connection between biological sex and international SDMP dimension.

We hypothesize that:

H5a-H5e. Women are more likely to be less rational, to adopt less formalized rules and to have less political behavior than men. On the contrary, men are more likely to adopt less lateral communication and hierarchical decentralization than women.
GENDER ROLE

Stereotypical sex role (MAS, FEM, AND). Simply using biological sex may not be always appropriate discriminator. Stereotypical sex-roles (masculinity and femininity) have long been positioned at the two bipolar extremes of a single continuum (Bem, 1974; Fontayne, Sarrazin, & Famose, 2000; Lertwannawit & Gulid, 2010).

Costantinpole in 1973 introduced the concept of androgyny, that is the idea that women and men could possess similar characteristics (Hoffman & Borders, 2001; McGregor & Tweed, 2001).

This bi-dimensional vision permitted individual personalities to be measured on a two dimensional rather than a one dimensional scale (Vecchio, 2002).

No studies were found examining the existence of a possible relationship between stereotypical sex role and international SDMP dimensions.
GENDER ROLE

Stereotypical sex role (MAS, FEM, AND)

We hypothesize that:

H6a-H6e (MAS). The decision-makers masculine personality characteristics are negatively related to (a) hierarchical decentralisation and (b) lateral communication and will be positively related to (c) rationality, (d) formalization and (e) politicisation.

H7a-H7e (FEM). The decision-makers feminine personality characteristics are negatively related to (a) rationality, (b) formalization and (c) politicization, and positively related to (d) hierarchical decentralisation and (e) lateral communication.

H8a-H8e (AND). The decision-makers neutral personality characteristics are negatively related to (a) rationality and (b) formalization, and positively related to (c) hierarchical decentralisation, (d) lateral communication, and (e) politicisation.
TYPOLOGY OF DECISION-MAKER

Manager or entrepreneur (TD)

In smaller firms, SDMP is often concentrated in only one or two individuals: the entrepreneur or the manager. They usually adopt different SDMP, especially in international field, as the entrepreneur tends to be less rational and formalized than the manager.

We hypothesize that:

H9a-H9e. Managers are more likely than entrepreneurs to adopt more (a) rationality (b) rule formalisation (c) hierarchical decentralisation (d) lateral communication (e) and politicisation.
EXTERNAL CONTEXT

Environmental heterogeneity (EH). How a decision-maker perceive the corporate environment as complex.

Significant association between environmental heterogeneity and SDMP (Lindsay & Rue, 1980; Smart & Vertinsky, 1984): Miller and Friesen (1983) argued that an increase in perceived environmental heterogeneity is associated with more lateral communication. Grinyer et al. (1986) highlighted that environmental instability disadvantage the hierarchical decentralization. However, most of the studies (Papadakis, et al., 1998) did not found any significant relationship with the characteristics of SDMP.

Environmental hostility – munificence (EM). An environment ability to support sustained growth of an organization (Gool & Rasheed, 1997).

Environmental munificence received great attention in literature (Dess & Beard, 1984; Wan & Hoskisson, 2003) and can be considered as one of the most important factors influencing strategic behaviour (Castrogiovanni, 1991; Elbanna & Child, 2007). Nevertheless, very few studies (Elbanna & Naguib, 2009) have examined the specific impact of environmental munificence-hostility on SDMP, especially in international field.
Environmental uncertainty (EU). The amount of instability, turbulence and unpredictability of changes that are unknown to decision-makers and difficult to plan (Dess & Beard, 1984; Dimitratos, 2010).

Decision-makers perceive environmental uncertainty from two perspectives (Elbanna & Naguib, 2009). The former is international, focused on political and macroeconomic uncertainties. The latter is strategic, focused on the sector (technologies, inputs, demand and competitors). In this study we focused on both perspectives.

Dynamism and its relation with decision making has been studied by several researchers, with contradictory results.

We hypothesize that:

H10a-H10e (EH, EM, EU). Environmental heterogeneity, hostility and uncertainty are positively related to (a) rationality, (b) rule formalisation and (c) politicisation, and are negatively related to (d) hierarchical decentralisation and (e) lateral communication.
Firm size (FS).

The relationship between the size of the firm and SDMP has been subject of several empirical studies. The majority of these studies argued that firm size is positively associated with formalization and standardization (Entrialgo, et al., 2000a). Others revealed that firm size can positively affect politicisation (Papadakis, 2006) and rationality (Elbanna & Child, 2007; Fredrickson & Iaquinto, 1989). Others did not find any relation between firm size and hierarchical decentralisation and lateral communication (Papadakis, 2006; Papadakis, et al., 1998).

We hypothesize that:

H11a-H11e. Firm size is positively related to (a) rationality, (b) rule formalisation, (c) hierarchical decentralisation, (d) lateral communication and (e) politicisation.
INTERNAL CONTEXT

Firm international performance (IP).
International performance and its correlation with SDMP dimensions has been widely investigated. Most studies supported a positive relationship between rationality and performance (Eisenhardt & Bourgeois, 1988; Goll & Rasheed, 1997; Miller, 1987).

Others: A formalized SDMP is positively associated to firms' performance (Dimitratos, 2010; Papadakis, et al., 1998).
Participation (hierarchical decentralization) positively associated to firms' performance (Amason, 1996; Dimitratos, 2010).
Politicization negative effect on international performance (Dimitratos, 2010; Elbanna & Child, 2007; Elbanna et. al. 2009).

We hypothesize that:

H12a-H12e. International performance will be positively related to (a) rationality, (b) formalization, (c) hierarchical decentralisation, (d) lateral communication and negatively related to (e) politicisation.
METHODOLOGY OF THE RESEARCH

Interviews to 111 decision-makers of Italian SMEs belonging to the mechanical sector and manufacturing machinery and equipment.

Firms identified from the AIDA database: 9,282 contacted (by e-mail).

Telephone appointment to responded. Prior to the interview a questionnaire has been sent in order to give the interviewee the possibility to see the content of the entire questionnaire before the interview was done.

This methodology chosen due to the complex sequence of questions that would have been difficult to be managed with a simple telephone interview. The telephone support allowed to provide assistance during the compilation of the questionnaire to ensure a proper understanding of the questions.

The questionnaire was completed directly on a web-based platform.
**METHODOLOGY OF THE RESEARCH**

Main characteristics of the sample (N=111). Interviewee: 61 entrepreneurs and 50 general or export managers

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<th>Employment/Firm size</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
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<td>18</td>
<td>16.2</td>
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<td>11-25</td>
<td>31</td>
<td>27.9</td>
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<td>26-50</td>
<td>25</td>
<td>22.5</td>
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<tr>
<td>51-100</td>
<td>17</td>
<td>15.3</td>
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<td>101-250</td>
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<th>FREQUENCY</th>
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<tr>
<td>Under 5 (millions of euros)</td>
<td>27</td>
<td>24.3</td>
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<tr>
<td>5-10</td>
<td>42</td>
<td>37.8</td>
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<tr>
<td>11-20</td>
<td>14</td>
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<td>21-40</td>
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<td>10.8</td>
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<td>41-50</td>
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<td>14.4</td>
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<td>31-45</td>
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<td>46-60</td>
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<td>21.6</td>
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<tr>
<td>Above 60</td>
<td>13</td>
<td>11.7</td>
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<th>Years of international experience</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
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<td>1-15</td>
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<td>46-60</td>
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<td>1.8</td>
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<tr>
<td>Above 60</td>
<td>2</td>
<td>1.8</td>
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<th>Export weight on turnover</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
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<td>1% - 20 %</td>
<td>18</td>
<td>16.2</td>
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<tr>
<td>21% - 40 %</td>
<td>21</td>
<td>18.9</td>
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<tr>
<td>41% - 60 %</td>
<td>24</td>
<td>21.6</td>
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<tr>
<td>61% - 80 %</td>
<td>28</td>
<td>25.2</td>
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<tr>
<td>More than 80 %</td>
<td>20</td>
<td>18</td>
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<table>
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<th>Numbers of international markets served</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
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<tr>
<td>1-5</td>
<td>39</td>
<td>35.1</td>
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<td>6-10</td>
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<td>27.0</td>
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<td>11-15</td>
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<td>13.5</td>
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<tr>
<td>16-20</td>
<td>8</td>
<td>7.2</td>
</tr>
<tr>
<td>More than 20</td>
<td>19</td>
<td>17.1</td>
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The research

OPERATIONALIZATION OF VARIABLES

**SDMP dimensions** as **dependent** variables:

- Rationality (Cronbach a = 0.787)

  4 Likert type scales (5-points): search and gathering of relevant information in making international decisions, the examination of relevant information, the adoption of quantitative techniques, the effectiveness of decision makers in focusing the attention on an analytical rather than intuitive decision making processes.

- Formalization (Cronbach a = 0.864)

  5 Likert type scales (5-points): written procedures guiding the decision-making process; procedures to identify ways of action (roadmap); screening procedures; formal documents guiding the final decision; predetermined criteria for decision evaluation.

- Hierarchical decentralization (Cronbach a = 0.625).

  6 Likert type scales (5-points): degree of delegation in key international SDMP towards: main shareholders; top management; middle/lower management; other employees; customers; collaborating firms.
OPERATIONALIZATION OF VARIABLES

• Lateral communication (Cronbach a = 0.794).

6 Likert type scales (5-points): degree of balanced participation of all major functions (trade, marketing/sales, R&D, finance and accounting, production, HR and purchasing) in international SDMP.

• Political behaviour (Cronbach a = 0.605).

4 Likert type scales (5-points): It measure the extent of coalition formation, the degree of negotiation taking place among major participants, the degree of external resistance encountered, degree of process interruptions experienced in the process.
### Factors influencing strategic decision-making processes – DECISION MAKER

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
<th>Alpha</th>
<th>N. of items</th>
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<tbody>
<tr>
<td>Need for achievement</td>
<td>The items have been taken from Steers and Braunstein (1976) and Entrialgo et al. (2000). Composite variables consisted of six 5-point Likert type scales for measuring the desire of decision-makers to improve the results of their actions and feel responsible for these (Papadakis &amp; Barwise, 2002; Steers &amp; Braunstein, 1976; Watson &amp; Newby, 2005).</td>
<td>Cronbach a = 0.691</td>
<td>6</td>
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<tr>
<td>Locus of control</td>
<td>Measured with six 5-point Likert type scales. These items have been adopted by Lumpkin (1985) and later by Entrialgo et al. (2000), who used a shortened version of Rotter’s scale (1966).</td>
<td>Cronbach a = 0.468</td>
<td>6</td>
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<tr>
<td>Risk attitude</td>
<td>Measured adopting a reduced version of Jackson Personality Inventory (1976) designed by Hyrsky and Tuunanen (1999). Eight 5-point Likert type scales for assessing the psychological disposition and nature of decision-maker towards risk.</td>
<td>Cronbach a = 0.802</td>
<td>8</td>
</tr>
<tr>
<td>Innovation</td>
<td>The innovative scale of Mueller and Thomas (2001) has been used, which is based on a revised version of Jackson Personality Inventory (1994). Eight 5-point Likert type scales were used to measure the tendency to be creative in thought and action during international SDMP.</td>
<td>Cronbach a = 0.904</td>
<td>8</td>
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<tr>
<td>Sex</td>
<td>Biological sex role. Respondents had to indicate if they were male or female, coding as a binary variable (male = 0 and female = 1),</td>
<td></td>
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<tr>
<td>Sex role – masculinity - feminity</td>
<td>Stereotypical sex role. A short form of Bem Sex Role Inventory (Bem, 1981) adopted by Colley et al. (2009) and Gregory-Mina (2011) has been used. Based on a 5-point Likert scale and named: masculinity (comprising assertive, leadership ability, dominant, strong personality, forceful, aggressive, willing to take a stand, independent, defends own beliefs, willing to take risks), femininity (understanding, sympathetic, eager to soothe hurt feelings, sensitive to needs of others, compassionate, loves children, affectionate, gentle, warm, tender) and androgyny/neutral (conscientious, moody, reliable, jealous, truthful, secretive, adaptable, conceited, tactful, conventional).</td>
<td>Masculinity (Cronbach a = 0.836); Femininity (Cronbach a = 0.905 ); Neutral (Cronbach a = 0.712)</td>
<td>30 (10+10+10)</td>
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### Factors influencing strategic decision-making processes – EXTERNAL FACTORS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
<th>Alpha</th>
<th>N. of items</th>
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<tbody>
<tr>
<td>Environmental heterogeneity</td>
<td>Measured with four 5-point Likert-type scales, asking decision-maker to indicate the main differences between the products offered into foreign markets in relation to: (1) customer’s buying habits, (2) the nature of competition, (3) market dynamism, (4) market uncertainty (Papadakis, et al., 1998).</td>
<td>Cronbach a = 0.748</td>
<td>4</td>
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<tr>
<td>Environmental munificence-hostility</td>
<td>Three items were included from Dimitratos, et al. (2011): riskiness’ of the marketplace to the survival of the firm; poorness in opportunities of the environment; lack of control of the environment by the firm; and two more items: geographic and psychological distance between country of origin and foreign market.</td>
<td>Cronbach a = 0.616</td>
<td>5</td>
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<td>Environmental uncertainty</td>
<td>A revised version of Miller (1993) scale was adopted, asking the decision-makers to evaluate, referring to the country their firms most recently entered, how certain can they be about 22 environmental variable in the future. These variables regarded: political/government policies, macroeconomic, materials/infrastructure, product market and demand.</td>
<td>Cronbach a = 0.910</td>
<td>22</td>
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Factors influencing strategic decision-making processes – INTERNAL FACTORS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
<th>Alpha</th>
<th>N. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Measured by the log of full-time employees (Dimitratos, 2010; Elbanna &amp; Naguib, 2009; Fredrickson &amp; Mitchell, 1984).</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>International performance</td>
<td>Assessed adopting both objective and subjective measures (Wheeler, Ibeh, &amp; Dimitratos, 2008). According to Dimitratos (2010), subjective measures are more suitable for examining SMEs, mainly due to their reluctance to provide objective data on performance. Instead of indicators such as export intensity, five 5-point Likert type scales were adopted measuring the degree of perceived performance in the international market compared to that of the direct competitors in terms of sales level; market share; return on investment; profitability; overall satisfaction with performance (Dimitratos, et al., 2011; Sullivan, 1994).</td>
<td>Cronbach a = 0.816</td>
<td>5</td>
</tr>
</tbody>
</table>
# RESULTS

## Mean, standard deviations and correlation.

| Mean | SD  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   |
|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1. RA | 2.85 | .99  | 1    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2. FO | 2.96 | 1.04 | .590* | 1    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 3. LC | 2.77 | .92  |      | .311** |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 4. PB | 2.61 | .80  |      |      | .377** |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 5. HD | 2.55 | .67  | .314** | .246** | .523** | .330** | 1    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 6. NACH | 3.57 | .70  | - .036 | .132 | .104 | .214* | - .026 | 1    |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 7. LOC | 3.04 | .56  | .021 | - .011 | .080 | .123 | - .071 | 460** | 1    |      |      |      |      |      |      |      |      |      |      |      |      |
| 8. RA | 1.96 | .66  | .190* | - .023 | .153 | .225* | .281** | - .141 | .078 | 1    |      |      |      |      |      |      |      |      |      |      |      |
| 9. INN | 3.15 | .85  | .160 | .83 | .161 | .325** | .204* | .173 | .222* | .354** | 1    |      |      |      |      |      |      |      |      |      |      |
| 10. MAS | 3.68 | .62  | .139 | .161 | .138 | .365** | .167 | .401** | .137 | .084 | 452** | 1    |      |      |      |      |      |      |      |      |      |
| 11. FEM | 3.65 | .78  | - .033 | .041 | .117 | .089 | .033 | .375** | .352** | .059 | .429** | .402** | 1    |      |      |      |      |      |      |      |      |
| 12. AND | 3.21 | .57  | - .063 | - .131 | .026 | .189* | .063 | .222* | .155 | .111 | .328** | .465** | .603** | 1    |      |      |      |      |      |      |      |
| 13. SEX | .06  | .24  | - .063 | .011 | .215* | .044 | .075 | .234* | .036 | - .070 | .128 | .106 | .119 | .053 | 1    |      |      |      |      |      |
| 14. TD | .45  | .50  | .153 | .104 | .331** | .288** | .313** | .115 | .021 | .106 | 250** | .224* | .125 | .150 | .212* | 1    |      |      |      |      |      |
| 15. EH | 2.94 | .93  | .393** | .228* | .149 | .291** | .249** | .089 | - .056 | .224* | .219* | .142 | .024 | -.089 | .138 | .184 | 1    |      |      |      |      |
| 16. EM | 3.12 | .77  | .348** | .183 | .210* | .291** | .282** | .072 | .003 | .023 | .027 | .02* | .144 | .107 | .144 | .081 | 201* | 1    |      |      |      |
| 17. EU | 2.97 | .71  | .148 | .046 | -.018 | .103 | .221* | .134 | .208* | .104 | .103 | .060 | -.004 | .090 | .006 | .004 | -.013 | .022 | 1    |      |      |
| 18. FS | 2.91 | 1.35 | .255** | .258** | .046 | .194* | .301** | -.109 | -.063 | .202* | .159 | -.11 | .043 | -.041 | .232* | .196* | .227* | -.016 | -.14 | 1    |      |
| 19. IP | 3.10 | .81  | .244** | .136 | .127 | .309** | .120 | .040 | -.016 | .124 | .245** | .142 | .004 | -.011 | -.051 | .138 | .376** | -.044 | .130 | 195* | 1    |

*p<0.05; **p<0.01; RA=rationality; FO= formalization; LC= Lateral communication; PB= Political behavior; HD= Hierarchical decentralization; NACH= Need for achievement; LOC= Locus of control definition; RA= Risk attitude; INN= Preference for innovation; MAS= Masculinity; FEM= Femininity; AND= Androgyn; SEX= decision-maker sex; TD= decision-maker typology; EH= Environment heterogeneity; EM= Environment Hostility-Munificence; EU= Environment Uncertainty; FS= Firm Size; IP= International Performance
The research

## RESULTS

### Standard multiple regression analysis

<table>
<thead>
<tr>
<th>Decision-maker personality characteristics</th>
<th>Model 1: Rationality</th>
<th>Model 2: Formalization</th>
<th>Model 3: Lateral communication</th>
<th>Model 4: Hierarchical Decentralization</th>
<th>Model 5: Political behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for achievement</td>
<td>-.100</td>
<td>.130</td>
<td>.021</td>
<td>-.035</td>
<td>.147</td>
</tr>
<tr>
<td>Locus of control</td>
<td>.084</td>
<td>-.027</td>
<td>.049</td>
<td>-.108</td>
<td>.080</td>
</tr>
<tr>
<td>Risk propensity</td>
<td>.031</td>
<td>-.089</td>
<td>.143</td>
<td><strong>.169</strong></td>
<td>.098</td>
</tr>
<tr>
<td>Innovation</td>
<td>.051</td>
<td>.044</td>
<td>-.008</td>
<td>.033</td>
<td>.130</td>
</tr>
<tr>
<td>Gender roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masculinity</td>
<td>.098</td>
<td>.176</td>
<td>.022</td>
<td>.076</td>
<td>.155</td>
</tr>
<tr>
<td>Femininity</td>
<td>-.090</td>
<td>-.082</td>
<td>.076</td>
<td>-.032</td>
<td><strong>.260</strong></td>
</tr>
<tr>
<td>Androgyn</td>
<td>-.086</td>
<td>-.196</td>
<td>-.120</td>
<td>-.022</td>
<td>.142</td>
</tr>
<tr>
<td>Sex</td>
<td>-.100</td>
<td>-.005</td>
<td>.139</td>
<td>-.056</td>
<td>-.034</td>
</tr>
<tr>
<td>Typology of decision maker</td>
<td>.060</td>
<td>.008</td>
<td><strong>.270</strong></td>
<td><strong>.201</strong></td>
<td>.130</td>
</tr>
<tr>
<td>Broader context</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment Heterog.</td>
<td><strong>.248</strong></td>
<td>.087</td>
<td>-.038</td>
<td>.062</td>
<td>.061</td>
</tr>
<tr>
<td>Environment Hostility</td>
<td><strong>.318</strong></td>
<td>.159</td>
<td><strong>.175</strong></td>
<td><strong>.233</strong></td>
<td><strong>.257</strong></td>
</tr>
<tr>
<td>Environment Uncert.</td>
<td>.125</td>
<td>.044</td>
<td>-.055</td>
<td><strong>.227</strong></td>
<td>-.008</td>
</tr>
<tr>
<td>Size</td>
<td>.137</td>
<td><strong>.255</strong></td>
<td>-.016</td>
<td><strong>.224</strong></td>
<td>.114</td>
</tr>
<tr>
<td>Int. nal performance</td>
<td>.083</td>
<td>.021</td>
<td>.109</td>
<td>-.031</td>
<td><strong>.189</strong></td>
</tr>
</tbody>
</table>

**Notes:** Values shown in the table are the standardized regression coefficient, n=111. *p<0.10; **p<0.05, ***p<0.01, ****p<0.001
The research

RESULTS

• Decision-maker characteristics are not significantly related to rationality and formalization.

• Significant relationship between decision-maker characteristics and lateral communication, hierarchical decentralization and political behaviour.

• Significant relationship between risk propensity and hierarchical decentralization.

• For stereotypical sex role, masculinity and androgyny provide no significant relationship, while femininity constitutes a significant explanatory of decision-maker political behaviour.

• The biological sex is insignificant, but moderate relationship between sex and lateral communication.
The research

RESULTS

• The dummy variable measuring the typology of decision maker appears to be significantly and positively related to lateral communication and hierarchical decentralization: managers have more attitude than entrepreneurs to adopt hierarchical decentralization and lateral communication.

• Multiple regression revealed that broader context factors are significantly related with all SDMP dimensions in international field.

• With reference to external context, positive influence between the environmental hostility and four SDMP dimensions: rationality, lateral communication, hierarchical decentralization and political behavior.

• Environmental heterogeneity is positively related to rationality.

• Environmental uncertainty positively related to hierarchical decentralization.

• Regarding internal context, positive impact of firm size on two dimension of SDMP: formalization and hierarchical decentralization.

• Positive association between international performance and political behavior.
THE DECISION-MAKING PROCESS IN INTERNATIONAL BUSINESS STRATEGIES. FACTORS OF INFLUENCE ON SMALL AND MEDIUM ENTERPRISES

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