

# **RESEARCH PROJECT PROPOSAL**

## **1-TITLE**

Explanatory factors of the environmental involvement of SMEs : A comparative study.

## **2- INTRODUCTION**

It appears to be essential to the sustainability and respect of the environment that, anywhere in the world, environmental matters become integral part of the activities of firms whatever their size. However, research on environmental management is mainly focussed upon large corporations, as there is a limited literature on the subject among small and medium-sized enterprises (SMEs).

Yet, SMEs affect the environment on a large scale, as according to some authors they were allegedly responsible for 70 percent of total pollution (Hillary, 2000; Smith and Kemp, 1998). Considering these adverse environmental consequences, it is relevant to ask why so few SME owner-managers integrate environmental matters into the management of their business.

The main purpose of this study is to obtain a better understanding of the environmental posture among SMEs, particularly by identifying the internal factors likely to foster a favourable attitude towards the environment. A better knowledge of these factors will allow for a better definition of the conditions for improvement both from the SMEs perspective, and from the authorities' perspective in order to develop programs and policies fostering a better management of the environment.

## **3- VARIABLES LIKELY TO INDUCE SMEs TO MANAGE IN AN ENVIRONMENTALLY FRIENDLY MANNER**

The internal factors likely to foster a favourable attitude towards the environment among SMEs were the object of several studies (del Brio and Junquera, 2003 ; McKeiver and Gadenne, 2005) which revealed three categories of internal variables : 1) resource-related variables : size, number of years in operation, and financial resources (Sharma, 2000 ; del Brio and Junquera, 2003 ; Russo and Fouts, 1997 ; Bowen, 2002 ; Lindsey, 1998 ; Nasi and al., 2006), 2) skills-related variables : innovation, exports and quality management practices (Lefebvre et al., 2003 ; Florida and Davidson, 2001 ; Kennelly and Lewis, 2002 ; Roy et al., 2001) and, 3) variables related to SME's owner-managers' knowledge about environmentally friendly technologies, environmental regulations and legislation, and available information sources (Zatschi and Sohal, 2002 ; Stokes and Rutherford, 2000 ; Howarth and Melton, 2000).

## **4- PROJECT PURPOSES**

This project will entail an empirical study of the variables likely to induce SME owner-managers to manage in an environmentally friendly fashion in four countries: Canada, France, Finland, and the Netherlands. The main purpose of the study is to obtain a better understanding of the environmental posture of SMEs. The specific objectives of this research are as follows:

- a- Examine the attitude and willingness of owner-managers relative to environment protection and respect for it.
- b- Evaluate to what extent SMEs have adopted business practices more environmentally friendly.
- c- Identify the factors likely to provoke a favourable commitment towards the environment.
- d- Identify barriers discouraging SME owners and managers to commit more towards environmentally friendly business practices.

## **5- METHOD**

### ***Sample selection and data collection***

The population surveyed will include SMEs from the countries involved in the project. The sectors selected for the study will have to be determined. The definition of an SME is to be discussed: for example, firms having more than 20 employees and less than 500 could be considered as such a definition ensures a minimum of activities related to environmental management. Subsidiaries of larger firms and newly formed ventures (less than five years of existence) will be removed from the sample.

There will be a need for an agreement on the data collection process: either by email/questionnaire with telephone reminder, or by telephone. Due to the wide array of themes to be discussed, the person to contact for the interview has to be the CEO/General Manager. If the interviews are done over the telephone, they should not be of more than fifteen minutes in duration.

### ***Variables under investigation***

The following table presents examples of instruments used in a similar study to measure the variables of interest: they have been grouped along the three aforementioned dimensions, resources, skills, and knowledge. A Likert scale was used (1 = Totally disagree, and 5 = Totally agree). These instruments could be a starting point and could be improved or modified according to our needs.

## Variables

Variables	Instrument
<b>Resources</b>	
Size of the firm	Number of employees
Age of the firm	Number of years since start up
Financial situation	Average of four items (Likert scales) 1. Sales growth 2. Net earnings 3. Return on sales 4. Return on investment
<b>Skills</b>	
Innovation	Average of four items (Likert scales) 1. Products innovation 2. Manufacturing processes innovation 3. R&D investments 4. New products-services introduced
Exports – geographical scope	Number of regions/countries where the firm exports
Iso 9000 (possibility of adding other quality management programs)	Dichotomous variable (yes – no)
<b>Knowledge</b>	
Environmental scanning activities	Average of ten items (Likert scale) 1. R-D 2. Communication with research labs and universities 3. Communication with industrial associations 4. Communication with consultants 5. Communication with government agencies 6. Awareness of market changes 7. Awareness of technological change 8. Communication with clients 9. Communication with competitors 10. Communication with suppliers
<b>Environmental commitment</b>	
	One item (Likert scale) Environmental strategy including a commitment beyond compliances with environmental legislation and regulations

## **6- SCHEDULE**

### **Tasks**

#### **Step 1:**

- Preparation of a detailed questionnaire
- Sample SME selection
- Questionnaire translation

### **Schedule**

May 15, 2007

**Step 2:**

- Contact, by telephone, the selected firms to invite them to participate into the survey
- Questionnaires mailing
- Telephone reminders

May 15 – Sept. 30, 2007

**Step 3:**

- Data analysis
- Presentation of results to a scientific conference
- Final report for publication

October 1, 2007 – August 30, 2008

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