A CROSS-NATIONAL INVESTIGATION OF FIRST-GENERATION, ...

Sonfield, Matthew C;Lussier, Robert N;Pfeifer, Sanja;Manikutty, S;et al *Journal of Small Business Strategy;* Spring/Summer 2005; 16, 1; ABI/INFORM Complete pg. 9

STRATEGY

A CROSS-NATIONAL INVESTIGATION OF FIRST-GENERATION, SECOND-GENERATION, AND THIRD-GENERATION FAMILY BUSINESSES: A FOUR COUNTRY ANOVA COMPARISON

Matthew C. Sonfield

Hofstra University Matthew.Sonfield@Hofstra.edu

> Robert N. Lussier Springfield College rlussier@spfldcol.edu

Sanja Pfeifer

University of Josip Juraj Strossmayer Osijek, Croatia

S. Manikutty

Indian Institute of Management, India

Loïc Maherault & Louis Verdier

Ecole de Management, Lyon, France

ABSTRACT

This study compared first, second, and third-generation family businesses in the United States, Croatia, France, and India - countries with significant differences in cultures, economies, levels of entrepreneurial activity, and family business demographics. Contrary to much of the existing literature, the results indicate that owner-managers of all three generational categories of family businesses, in all four countries, generally shared the same managerial characteristics and practices. Implications for theory development and further research are presented.

INTRODUCTION

Family businesses constitute a highly important component of the American business setting. An estimated 80 percent of the total 15 million businesses within the American economy are family businesses (Carsrud, 1994; Kets de Vries, 1993). Family businesses contribute 50 (McCann, Leon-Guerrero & Haley, 1997) to 60 percent (Bellet et al., 1995) of the total Gross National Product, 50 percent of employment (Morris, Williams, Allen, & Avila, 1997), and have higher annual sales than non-family

businesses (Chaganti & Schneer, 1994). Estimates classify 35 percent of *Fortune 500* firms as family owned (Carsrud, 1994). However, much of the family business literature is non-quantitative and relatively few articles have been published in broadbased business journals (Dyer & Sánchez, 1998; Litz, 1997).

This article reports on an analysis of generational issues in family businesses in four significantly different countries: the United States, Croatia, France, and India. It investigates an especially limited segment of

the literature, the study of similarities and differences among first, second, and third-generation family businesses, as was suggested for further research by Morris et al. (1997). Furthermore, this study adds to the growing quantitative empirical body of family business literature and expands family business research beyond traditional geographical venues to global comparisons, as suggested by Hoy (2003).

More specifically, there are several important contributions of this study and its findings. Prior family business research has rarely focused specifically on comparisons of first, second, and third-generation firms. The few investigations of this issue have generally been conceptual, or otherwise qualitative, or a tangential empirical analysis within a larger family business study (Beckhard & Dyer, 1983; Davis & Harveston, 1999; Dyer, 1988; Hershon, 1975; Schein, 1983). Perhaps the most comparable prior research has been with regard to possible stages of family firm development. However, as will be further discussed, this is a different focus than that of generations, and here too, the body of literature is small. Thus, this study constitutes ground-floor empirical investigation of this specific issue and adds to the limited existing and primarily qualitative body of literature.

improved understanding of these generational similarities and differences might direct and enable entrepreneurship, small business, and family firm researchers to better focus their future investigations and development into these theory generational categories as separate entities; might strengthen the effectiveness advisors, consultants, and others who assist firms by allowing differentiate, as needed, between their first, second, and third-generation family business clients; and also might assist family business owner-managers in their understanding and self-analyses of their businesses.

A second important contribution of this study is its cross-national comparison. As will be discussed later in this article, most prior family business research has focused

on North American firms, although family business investigations in other countries have increased in recent years. Still, we have found prior research specifically comparing family firms in different countries, especially those countries with major differences in economies and/or cultures. While, as also discussed later in this article, there has been considerable analysis of cross-national and cross-cultural issues in the broader field of entrepreneurship, crossnational and cross-cultural considerations of family business topics are in their infancy. Thus, in this respect too, this study constitutes ground-floor investigation and is an early step in the development of this segment of the literature.

Finally, as will be discussed later, the findings of this study, with regard to generational comparisons, provide data that is contrary to the conclusions reached by most of the limited previous conceptual and empirical research. This raises questions about these earlier conclusions and indicates a need for further empirical research. And our cross-national comparison findings, also discussed later, also raise questions about many of the established conclusions reached in the literature on cross-national and crosscultural issues in entrepreneurship, particular with regard to the importance of factors national and cultural entrepreneurship.

FOUNDATIONS IN PRIOR RESEARCH

Family Business as a field of study has grown from modest beginnings to a substantial conceptual and theoretical body of knowledge at the start of the twenty-first century. Prior to 1975, a few theorists, such as Christensen (1953), Donnelley (1964), and Levinson (1971), investigated family firms, yet the field was largely neglected (Lansberg, Perrow, & Rogolsky, 1988). These early studies were generally conceptual rather than empirical, with a focus on the more fundamental issues, such as what makes a business a "family business" or a "family firm" (the terms are used interchangeably), the dynamics of intra-family conflict, succession, and

consulting to such firms (Handler, 1989; Sharma, Chrisman & Chua, 1997). In 1988, with the launching of the journal Family Business Review, the first and only scholarly publication devoted specifically to family business, the field reached a level of maturity to foster a significant progression and resulting body of research and findings.

Dyer and Sánchez' (1998) thorough analysis of all articles published in the first decade of Family Business Review provides a clear picture of recent directions in family business research. In descending order, the most frequent topics of articles published during this period were: Interpersonal family dynamics, Succession, Interpersonal business dynamics, Business performance growth, Consulting to family firms, Gender and ethnicity issues, Legal and fiscal issues, and Estate issues. In terms of types of articles published, Dyer and Sánchez found that, over the decade analyzed, proportion of articles involving quantitative research methodology increased, articles specifically describing the art of helping family businesses declined.

It should be noted that, even with this maturization of the field, a variety of definitions of "family business" continue to serve as the basis for the research and articles within this body of literature (Littunen & Hyrsky, 2000; Ward, 1986; Ward & Dolan, 1998). For the purposes of this study, a family business is one in which family members dominate the ownership and management of a firm, and perceive their business as a "family business." Furthermore, this research study recognizes all firstgeneration family firms as included in the definition. This definition is consistent with that of many prior studies (Chua, Chrisman & Sharma, 1999; Dreux & Brown, 1999; Gersick, Davis, Hampton & Lansberg, 1997; Litz, 1995).

First, Second, and Third Generation

This article reports on research that investigates an aspect of family business, which has generally been relegated to a secondary or peripheral focus in past studies.

Specifically, as family firms move beyond the first generation of family member ownership and involvement in management, do changes occur? If family firms involve a system of 1) the family, 2) the individual family members, and 3) the business unit, how do generational changes in the system components impact each other? Are there significant differences between Generation Family Firms (1GFFs), Second-Generation Family Firms (2GFFs), and Third-Generation Family Firms (3GFFs)? And if there are significant differences, do they extend to family businesses in other countries? For this research, a 1GFF is defined as a family-owned and managed firm, with more than one family member involved, but only of the first and founding generation of the family. A 2GFF and a 3GFF are defined as firms in which the second or third generations of the family are also involved in the ownership and the management of the company. In a 2GFF or 3GFF, the original founder(s) and/or other members of earlier generations may be retired from the firm or deceased; thus not all (two or three) generations need be currently participating. Furthermore, in a 2GFF or a 3GFF, the locus of managerial and family primary leadership may be located at any generational level. This working definition is consistent with previous studies that dealt with generational issues in family firms Dyer, 1983; Davis (Beckhard & Harveston, 1999; Dyer, 1988; Hershon, 1975; Schein, 1983) and with definitional issues (Handler, 1989; Kelly, Athanassiou, & Crittenden, 2000). The existing literature suggests a variety of possible differences between first-generation and subsequentgeneration family firms, but most studies' examinations of generational issues were only a small or tangential part of a larger focus on other or broader family firm issues, and these studies were most frequently limited to the United States or the United Kingdom.

This focus on *generations* should be compared with another focus within the family business literature – a focus on developmental issues or the *stages* of the evolution of family business growth. For

example, Gersick et al. (1997) present a developmental model of four typical stages in the growth of a family business, with significant analysis of the characteristics of the firm in each stage, and the implications regarding effective management in each stage. Others, such as Peiser and Wooten (1983), focus on the life cycle changes in family businesses. While this developmental focus is important, these researchers admit to the complexity of this focus and the resulting models. In contrast, it is proposed that a generational focus is a less complex way to measure the development of a family business and, therefore, a valid alternative method, and it is furthermore proposed that theory and future models based generations may be easier to use, especially for family business owner-managers and many of the consultants who assist such firms.

The objective of this study was to examine 1GFFs, 2GFFs, and 3GFFs in a multi-factor, multi-dimensional, and multi-national analsis, building upon the more limited-focused hypotheses, propositions, and findings of previous researchers, and also to expand the empirical body of family business research. As discussed below, the existing literature occasionally specifically compares firstgeneration versus subsequent generation family firms, but very rarely differentiates between second, third, or further generations. This study extends this limited theoretical analysis further. If a 2GFF may differ from a 1GFF, then does a 3GFF differ from a 2GFF in the same manner and to a further degree?

Thus, the following hypotheses derive from specific references in the family business literature to generations (1GFFs versus 2GFFs, and occasionally 3GFFs) and similarities proposed and differences between them. Because of the relatively limited prior research specifically focusing on generational issues in family business, it important to recognize that these hypotheses are based largely on previous findings, rather than on established theories.

GENERATIONAL HYPOTHESES

Dyer (1988) found that 80 percent of 1GFFs had a "paternalistic" management culture and style, but that in succeeding generations, more than two-thirds of these firms adapted a "professional" style of management. "Paternlistic" management was characterized by hierarchical relationships, top management control of power and authority, close supervision, and distrust of outsiders. "Professional" management involved the inclusion, and sometimes the predominance, of non-family managers in the firm.

McConaughy and Phillips (1999), studying publicly-owned founding-familycontrolled companies, concluded that descendent-controlled firms were more professionally run were founderthan controlled firms. These writers postulate that first-generation family managers entrepreneurs with the special technical or business backgrounds necessary for the creation of the business, but the founder's descendents face different challenges - to maintain and enhance the business - and these tasks may be better performed in a more professional manner, often by nonfamily members. Both Dyer (1988) and McConaughy and Phillips (1999) found an earlier basis in Schein (1983), who also suggested that subsequent generations in family firms tend to utilize more professional forms of management.

It can be argued that the size of a family business grows in subsequent generations and that it is the size factor, rather than the generation factor that influences the level of "professionalism" in the management of a family firm (and similarly influences many of the other factors dealt with in the following hypotheses). Clearly, as this and other studies show, the size of a family business tends to expand with subsequent generations. It is not the intention of this study to control for size, but rather to focus on generations as a possible simple, yet important measure by which to categorize family businesses. Thus, the above findings lead to:

H1: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to include non-family members within top management.

(For this and the following hypotheses, this phrasing means that 3GFFs are more likely than 2GFFs, and 2GFFs are more likely than 1GFFs.)

Studying gender issues in family firms, Nelton (1998) stated that daughters and wives are rising to leadership positions in family firms more frequently than in the past, and that the occurrence of daughters taking over businesses in traditionally maledominated industries is increasing rapidly. Focusing on societal trends rather than family firm generational issues, Cole (1997) found the number of women in family businesses increasing. More generally, U.S. Census Bureau data showed women-owned firms growing more rapidly than those owned by men (Office of Advocacy, 2001). While it might be argued that these societal trends would impact family businesses equally at all generational levels, Nelton's focus on daughters and succession more strongly relates to the focus of this study. Thus.

H2: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to have women family members working in the firm.

Another aspect of family business behavior is the distribution of decision-making authority in the firm. As previously discussed, Dyer (1988) found decisionmaking to be more centralized in firstgeneration family firms than in subsequentgeneration family firms. Aronoff (1998) developed this suggestion further and postulated that subsequent-generation family firms are more likely to engage in team management, with parents, children, and siblings in the firm all having equality and involvement participative in important decision-making, even if one family member is still the nominal leader of the business. Aronoff furthermore reported that 42 percent of family businesses are considering copresidents for the next generation. This leads to:

H3: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to use a "teammanagement" style of management.

As previously noted, interpersonal dynamics, including conflict and disagreement among family members, has been a major focus of family firm research (Kellermanns & Eddleston, 2004). Conflict can exist in firstgeneration family firms, when siblings, spouses, or other relatives participate in management and/or ownership, and conflict can also arise between members of different generations in subsequent-generation family firms. Beckhard and Dyer (1983) found that conflict among family members increases with the number of generations involved in the firm. Conversely, Davis and Harveston (1999, 2001) concluded that family member conflict increased only moderately as firms moved into the second-generation stage, but there was a more sizable increase from second to third-generation. This leads to:

H4: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to have conflict and disagreement between family members.

As also previously discussed, another major focus of the literature on family firms has been succession. The primary issues here involve the difficulties founders have in "letting go" and passing on the reins of control and authority, the lack of preparation leadership next-generation members often receive, and thus, the need for and importance of succession planning (Davis, 1983; Handler, 1994; Upton & Heck, 1997). Dyer (1998) investigated "culture and continuity" in family firms and the need for firm founders to understand the effects of a firm's culture and that culture can either constrain or facilitate successful family succession. Fiegener and Prince (1994) compared successor planning and development in family and non-family firms, and found that family firms favor more personal relationship-oriented forms of successor development, while non-family firms utilize more formal and task-oriented methods. Building upon these and other studies of succession in family firms, Stavrou (1998) developed a conceptual model to explain how next-generation family members are chosen for successor management positions. This model involves four factors which define the context for succession: family, business, personal, and market.

While these and other studies have dealt with various aspects of succession, none have specifically investigated succession planning and practices in first-generation versus subsequent-generation family firms. Still, given that the importance of succession has been well established and publicized and that family firms often experience the trials of succession as they move from one generation to the next, it would be expected that subsequent-generation family firms are more likely to recognize and respond accordingly to the importance of succession than are first-generation family firms. Thus,

H5: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to have formulated specific succession plans.

Several researchers of family firms have postulated that as these firms age and/or move into subsequent-generation family management and ownership, they also progress from one style of management to another. Informal, subjective, and paternalistic styles of leadership become more formal, objective and "professional" (Aronoff, 1998; Cole & Wolken, 1995; Coleman & Carsky, 1999; Dyer, 1988; Filbeck & Lee, 2000; McConaughy & Phillips, 1999; Miller, McLeod & Oh, 2001; Schein, 1983).

"Professional" management may involve the following: a) the use of outside consultants, advisors and professional services, b) more time engaged in *strategic* management activities, and c) the use of more sophisticated financial management tools. These conclusions lead to three hypotheses:

- H6: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to use outside consultants, advisors and professional services
- H7: Subsequent-Generation Family Firms spend more time engaging in strategic management activities than First-Generation Family Firms.
- H8: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to use sophisticated methods of financial management.

Another issue of interest in the investigation of family business is "generational shadow" (Davis & Harveston, 1999). In a multigeneration family firm, a generational shadow shed by the founder may be cast over the organization and the critical processes within it. In such a situation, "succession" is considered incomplete, may constrain successors, and may dysfunctional effects on the performance of the firm. Yet this "shadow" may also have positive impact by providing a clear set of values, direction, and standards for subsequent firm managers. Kelly et al. (2000) similarly proposed that a family firm founder's "legacy centrality" will influence strategic behavior of succeeding generations' family member managers with both positive and negative impact. Davis and (1999)investigated Harveston also generational shadow, but reached mixed conclusions regarding its impacts. shadow" "legacy "generational and centrality" are valid components of the family business system, then management in both first-generation family firms (with the founder in control) and in subsequentgeneration family firms (with the founder having strong presence even if not actually there) should be influenced by the objectives and methods of the founder. Thus,

H9: Top management styles and decisions in Subsequent-Generation Family Firms are neither more nor less likely than in First-Generation Family Firms to be influenced by the original

business objectives and methods of the founder.

Family firms need not always be privately owned. As they grow and/or move into generational involvement, subsequent opportunities and needs for "going public" may arise. The family may not be able, or may not choose, to provide sufficient management or financial resources for growth, and outsider ownership can resolve this situation. And even publicly owned companies can continue as "family businesses," if management or financial control is maintained by the family. McConaughy (1994) found that 20 percent of the Business Week 1000 firms are familycontrolled, while Weber and Lavelle (2003) report that one-third of S & P 500 companies founding families involved management. Thus,

H10: Subsequent-Generation Family Firms are more likely than First-Generation Family Firms to have considered "going public."

The capital structure decision is important for family business (Romano, Tanewski & Smyrnios, 2001). Following from the preceding discussion, subsequent-generation family firms may use equity financing rather than debt financing, as they grow through the sale of company stock. Cole and Wolken (1995) and Coleman and Carsky (1999) found that older and larger family firms use more equity financing and less debt financing than younger and smaller family firms.

On the other hand, other researchers have found that family businesses, and especially first-generation ones, are reluctant to use debt financing (Bork, Jaffe, Jane, Dashew, & Heisler, 1996; Gersick et al., 1997). Thus, with the literature pointing in both directions:

H11: Subsequent-Generation Family Firms are neither more nor less likely than First-Generation Family Firms to use equity financing rather than debt financing.

CROSS-NATIONAL ISSUES

Over the fifteen-year history of the Family Business Review and in other venues for reports on family firm research, most of this research has focused on family businesses in the United States, and sometimes Canada. However, in recent years about ten to twenty percent of FBR articles have been written by non-North American researchers who have drawn on examples or samples of family firms in their own countries. And although these articles have reported on family businesses in a variety of European and Asian nations, there has been limited discussion as to whether family businesses in other countries may be significantly different from their North American counterparts and whether conclusions reached from such studies may not be comparable with North American-based findings and resulting theories. Only very recently have a few family business researchers postulated that family businesses in other countries may be different from those in the United States. Morck and Yeung (2003) suggested that noneconomic benefits and rewards may be more important to family business owners outside of the United States and the United Kingdom. They also propose that family firms in the formerly planned economies of Central and Eastern Europe may be different from American and Western European family businesses. Hoy (2003), in an analysis of the current state of family business scholarship, concluded that there is a need to globalize this body of research.

Although there has been only a limited number of empirical studies on the subject of individual country characteristics culture, and their impact on entrepreneurship (Hayton, George, & Zahra, 2002), such characteristics and culture clearly have an influence on the nature and performance of entrepreneurship and small business in general, particularly upon family businesses (George & Zahra, 2002). It has been found that entrepreneurial cognitions are distinct from other types of business cognitions and that, while such cognition universally exists, it varies significantly from one country and culture to another (Mitchell et al., 2002).

Other researchers have confirmed the influence of national culture on entrepreneurial orientation and behavior, both at the individual, aggregate, and corporate levels (Ahlstrom & Bruton, 2002; Kreiser, Marino, & Weaver, 2002; Marino, Strandholm, Steensma, & Weaver, 2002). The Global Entrepreneurship Monitor (GEM) summary report lists "entrepreneurial activity" for 37 countries, with India and Thailand at the high end of the scale with about 18 entrepreneurial persons per 100 in the labor force, and Japan and Russia at the low end with about 2 persons per 100 (Reynolds, Bygrave, Autio, Cox, & Hay, 2002).

"Culture" is generally defined as a set of values, beliefs, and expected behaviors (Hayton, et al., 2002), while a commonly used taxonomy of cultural/ dimensions involves: entrepreneurial individualism-collectivism, 2) uncertainly avoidance, 3) power-distance, and 4) masculinity-femininity (Hofstede, 1980). And while "culture" and "nation" are generally used interchangeably in most of research, Tan (2002)compared Mainland Chinese, Chinese-Americans, and Caucasian Americans and concluded that "nation" has a greater impact on entrepreneurship than "culture."

Given this lack of a solid theoretical base regarding cross-national issues in family business, this null hypothesis can be added to the previously discussed generational hypotheses:

H12: The findings for Hypotheses 1-11 derived from United States data will not significantly differ from findings derived from comparable data ob-tained in other countries.

Country Comparisons

Data relating to Hypotheses 1-11 was gathered in the United States, Croatia, France and India. These four countries have different sized populations, different cultures, different economic characteristics and histories, and different GEM rates of entrepreneurial activity (Croatia = 3.6,

France = 3.2, India = 17.9, United States = 10.5). The following information may be of value.

Croatia. In 1991, the Republic of Croatia declared its independence from Yugoslavia and is today a parliamentary democracy with a population of about 4.4 million, about 57 percent of which is urban. Gross domestic product was estimated to be \$24.9 billion in 2000. Of a total 148,000 business enterprises in Croatia, about 90,000 are one-person operations, and another 54,000 are small (annual sales of 2 million U.S. dollars or less) (World Almanac, 2003). Familycontrolled businesses in Croatia have a long history in the country, prior to the institution of a socialist Yugoslavia following World War II. Today, most family firms are singlegeneration small businesses, oriented toward autonomy, self-employment and stability. Only since the 1991 independence have growth-oriented family-controlled businesses become a significant factor in the economy (Denona & Karaman-Aksentijevic, 1995; Galetic, 2002).

France. France has a population of about 60 million people. Seventy-five percent of the population lives in urban areas. In 2000, the gross domestic product was estimated at \$1.448 trillion (World Almanac, 2003). Family-owned and controlled businesses in France, called "patrimonial" businesses, play a major role in the economy: 98 percent of companies with less than 100 employees, "Experience of those with 100 to 30 cm employees, and 20 percent of those with over 3000 employees (Gattaz 2002; Lyagoubi, 2002; Mahérault, 1999).

India. Home to one of the oldest civilizations in the world, Britain relinquished control of the Indian subcontinent following World War II, and the Republic of India was established in 1950. India has a population of over one billion people and had an estimated gross domestic product of \$2.2 trillion in 2000 (World Almanac, 2003). The economy consists of a large state sector with a number of very large state enterprises, a relatively small number of multinational companies, and a large private sector. The private sector,

with few exceptions, is controlled by families who may or may not hold large shareholdings in their companies. Thus, most of the large Indian companies, though they may be publicly traded, are controlled by families, and their management succession is generally maintained within the family. Members of their boards of directors also hold their positions at the pleasure of the controlling family (Center for Monitoring Indian Economy, 2003; Manicutty, 2000).

METHODS

Samples

In the United States, survey instruments were randomly mailed or hand-delivered in 2001 to a variety of New York and Massachusetts companies which had been identified as family firms (primarily in listings of "family businesses" in local business newspapers). These surveys were addressed to the presidents or CEOs of these companies, with the instruction that the addressee complete the survey, but only if they were an "ownermanager" and if they viewed their firm as a "family business". There were 822 surveys mailed or delivered; of these 272 were no longer at the address or responded that they were not family firms. (The survey instrument included the question: "Do you consider your company to be a family business?" and the cover letter defined "family members" as parents, children, siblings, spouses, and other close relatives.) A total of 149 usable returned surveys provided a return rate of 27.1 percent. To increase the sample size and to test for nonresponse bias in the U.S., after a few months a follow-up request for surveys was made, and 12 more questionnaires were returned and used for a total of 161, providing a final return rate of 28.6 percent. An analysis of the United States data alone was published by Sonfield and Lussier (2002, 2004).

Because of varying difficulties in identifying and contacting family businesses in the three other countries, the survey methodologies were different in each. This data collection occurred in 2003 using the Sonfield and Lussier (2002, 2004) survey instrument, but

it was translated into the local language by experts as needed. In France and India, large survey mailings to identified family businesses were possible (France = 800, India = 312), and net response rates for France of 14.6 percent (n=116) and for India of 13.6 percent (n=40) were obtained. In Croatia, far fewer (70) family firms were identifiable, but an intensive contact effort by mail, telephone, and personal visit resulted in a response rate of 71.4 percent (n=50).

Identifying family firms from various listings is consistent with that of other family business researchers who have been constrained by the lack of national databases of family firms (Chua, et al., 1999; Teal, Upton, & Seaman, 2003). This is an acceptable sample size and response rate for family business, as it has been reported that 62 percent of prior family business studies included no sample at all or a sample with less than 100 family businesses, and 66 percent of these were convenience samples (Bird, Welsch, Astrachan & Pistrui, 2002). In the top three small business or entrepreneurship-oriented journals (Entrepreneurship Theory and Practice, Journal of Business Venturing, and Journal of Small Business Management), around one-third of the articles had a response rate of less than 25 percent (Dennis, 2003).

Measures

Dependent Variables. The dependent variables to test Hypotheses 1-11 were as follows. (H1) Does the firm have non-family managers?—the percentage of family to nonfamily managers. (H2) The percentage of male and female family members involved in the operation of the firm. Hypotheses 3-10 were Likert interval scales of: "Describes our firm" 7 6 5 4 3 2 1 "Does not describe our firm". (H3) full family involvement in decisions, (H4) level of family conflict, (H5) formulation of succession plans, (H6) use of outside advisors, (H7) long-range thinking decision-making, and (H8)use of sophisticated financial management tools, (H9) influence of founder, and (H10) considering going public. (H11) The use of debt or equity financing was a nominal measure of one or the other. Descriptive statistical data included number of years the firm was in business, the number of employees, industry (product or service), and form of ownership.

Independent Variable. The independent variable for the first 11 hypotheses was the number of generations involved in the operations of the family business. The nominal measure was one, two, or three or more generations.

Analysis of Variance

Hypotheses 1-10 compared the dependent variable among the three generations using one-way ANOVA. Hypothesis 11, having nominal measured variables, compared debt to equity by generations using chi-square. Hypothesis 12 was tested by comparing the statistical results within and between the four countries' data for Hypotheses 1-11. Because significant there were virtually no differences within countries (as discussed below, the only differences were found in the U.S. only, and only for succession planning and for debt to equity financing) and because no other differences were found between countries, additional statistical tests were not needed.

Control Variable Analysis of Covariance. Analysis of covariance (ANCOVA) was used to test for spurious relationships, i.e. the variance in the dependent variables being explained by a variable other than generation (number of employees, service versus manufacturing, years of operation, and legal form of business).

Discriminant Analysis

In addition, discriminant analysis was run with variables being reversed. The 11 dependent variables were used as independent variables to determine if they could predict the dependent variable generation. The descriptive statistical data was also tested for differences among generations.

RESULTS

Table 1 provides descriptive statistical results for all four countries. From the descriptive statistics, it can be seen that there are both similarities and differences in the characteristics of the family businesses surveyed in the four countries. The United States, France, and India are relatively similar in the distribution of generational categories, but Croatia, with its young market economy, has few 3GFFs. Similarly, Croatia's sample family firms are younger and have fewer employees. On the other hand, in India the sample consisted mainly of large privately-owned companies with many employees, as such companies are a major component of that country's economy. The variations between the countries, with regard to legal form of ownership (corporation, partnership, sole proprietorship), reflect the differing legal contexts of the countries.

Because it is to be expected that IGFFs, 2GFFs, and 3GFFs will differ in many ways within and between countries (years in business, number of employees, and form of ownership), the total sample was controlled for three other factors: all the surveyed firms (regardless of generation) were family businesses, the owner-manager company president or CEO completed the survey, and there were no significant generational differences with regard to type of business (service versus manufacturing) (p = .331). As discussed above and below, ANCOVA was also run to control these variables.

Hypotheses ANOVA Testing

See Table 2 for the results of the hypotheses tests. To conserve space in this table, the 11 hypotheses are denoted by summary phrases. In the actual survey instrument, the questions or statements used to collect the data were more substantial.

ANCOVA Testing. As discussed previously, to determine if spurious relationships exist, ANCOVA analyses were run for each hypothesis with regard to four control variables: 1) number of employees, 2) years in business, 3) service versus manufacturing

Table 1 - Descriptive Statistics (N = 367)

Variable	1GFF	2GFF	3GFF	Total
U.S.A. (n = 161) Generation (n/% of N)	51/32%	60/37%	50/33%	161/100%
Years in business (mean)	13	34	67	40
Number of employees (mean)	51	228	310	201
Service (%) vs.	78%	71%	76%	74%
Manufacturing	22%	29%	24%	26%
Ownership (corporation %,	53%	78%	88%	73%
Partnership,	16%	10%	6%	11%
Sole proprietorship)	31%	12%	6%	16%
Croatia (n = 50) Generation (n/ $^{\circ}$ % of N)	11/22%	35/70%	4/8%	50/100%
Years in business (mean)	8.5	12	34.5	13
Number of employees (mean)	14	15	9.5	14.5
Service (%) vs.	36%	49%	75%	48%
Product (%)	64%	51%	25%	52%
Ownership (Corporation %,	0%	0%	0%	0%
Partnership,	27%	9%	0%	22%
Sole proprietorship)	73%	91%	100%	88%
France (n = 116) Generation (n/% of N)	45/39%	38/33%	33/28%	116/100%
Years in business (mean)	24	45	78	46
Number of employees (mean)	53	103	118	88
Service (%) vs.	38%	47%	48%	44%
Product (%)	62%	53%	52%	56%
Ownership (Corporation %,	80%	80%	72%	78%
Partnership,	11%	14%	19%	14%
Sole proprietorship)	9%	6%	9%	8%
India (n = 40)				
Generation (n/% of N)	9/23%	16/40%	15/37%	40/100%
Years in business (mean)	18	36	56	39
Number of employees (mean)	1438	5240	5396	4443
Service (%) vs.	0%	25%	20%	17%
Product (%)	100%	75%	80%	83%
Ownership (Corporation %,	100%	100%	100%	100%
Partnership,	0%	0%	0%	0%
Sole proprietorship)	0%	0%	0%	0%

businesses, and 4) legal form of ownership. As expected, there was some covariance as years in business and number of employees increased with generations. However, increased years in business and number of employees are logical events in subsequent generations. But the ANCOVA testing found no illogical or spurious relationships that were inconsistent with the hypotheses and

should not influence the results of ANOVA testing.

Discriminant Analysis Testing. The results of the discriminant analysis also indicated a lack of differences between generations, as the hypotheses variables could not accurately predict generation as a model in any of the four countries.

Table 2 - One-Way ANOVA Hypotheses Generation Comparison by Country (N = 367)

	Hypotheses	U.S.A. (n=116) F/p	Croatia (n=50) F/p	France (n=116) F/p	India (n=40) F / p
1.	Use of non-family members within top mgt (% non-family)	.56/.574	.20/.818	1.93/.149	.82/.450
2.	Women family members working in firm (% of women)	2.55/.106	1.66/.201	.321/.726	1.88/.167
3.	Use of team-management style (7-1) ^a	1.82/.276	3.16/.051	.01/.990	.25/.781
4.	Having conflict between family members (7-1)	.72/.469	.16/.847	.02/.979	.59/.561
5.	Formulation of specific succession plans (7-1)	1.95/.000	2.82/.070	.98/.377	1.29/.287
6.	Use of outside consultants, advisors, and prof. services (7-1)	1.83/.191	.99/.379	.55/.576	.27/.762
7.	Time spent in strategic mgt activity (7-1)	.09/.984	2.66/.081	1.97/.145	.14/.870
8.	Use of sophisticated methods of financial mgt (7-1)	2.32/.133	.43/.653	.91/.405	1.87/.169
9.	Degree of influence by original business objective and methods of the founder (7-1)	1.66/.171	2.19/.123	.93/.396	.26/.771
10.	Consider going public (7-1)	.993/.371	.33/.718	.17/.842	1.51/.233
	Use of equity financing rather than debt (proportion) ^b	28.92/.000	.173/.917	3.37/.186	1.20/.548

^a Likert scales—Mean of Describes our firm 7 6 5 4 3 2 1 Does not describe our firm

DISCUSSION

Clearly, much of the existing literature findings regarding possible generational differences among family firms is not supported by this study. In most respects, 1GFFs, 2GFFs, and 3GFFs share the same characteristics and behavior patterns in the United States and in Croatia, France, and India as well. Thus, these current findings do not support the previous findings and conclusions of Aronoff (1998), Beckhard and Dyer (1983), Cole and Wolken (1995), Coleman and Carsky (1999), Davis and

Harveston (1999, 2001). Dyer (1988), Filbeck and Lee (2000), McConaughy and Phillips (1999), Miller, et al. (2001), and Schein (1983), all of whom found and/or postulated generational differences among

family businesses (as discussed in detail in the *Generational Hypotheses* section).

Similarly, these findings raise a question with regard to much of the prior research on cultural or national influences on entrepreneurship (Ahlstrom & Bruton, 2002; Geore & Zahra, 2002; Hayton, et al., 2002; Kreiser, et al., 2002; Mitchell et al., 2002; Marino, et al., 2002; Morck & Yeung, 2003; Reynolds, et al., 2002), as discussed earlier under *Cross-National Issues*. Do culture and/or nation influence entrepreneurship, and specifically family business, to the degree that has been indicated by these researchers?

In support of the limited generational findings of the earlier literature, only one significant generational difference was found and only in the United States - American 2GFFs and 3GFFs have formulated

^b Chi-square, not F value

succession plans to a greater degree than American 1GFFS; however 2GFFs and 3GFFs in that country do not differ in this respect. An explanation for this latter finding might be that the impetus for the formulation of such plans arises as a 1GFF moves toward becoming a 2GFF, but once such a plan has been developed (for the second generation), owner-managers see no need to expand that plan or develop further plans for the third generation - the existing plan is sufficient. However, the literature generally stresses the importance of succession plans at every generational level; thus such plans for the second to third-generation transition would be as important as for the first to secondgeneration changeover.

Also in support of the literature, 1GFFs, 2GFFs, and 3GFFs in all four countries were all equally influenced by the original business objectives and methods of the founder(s) of the firm. "Generational Shadow" and "Legacy Centrality", as promulgated in the literature, remain in force beyond the first, and even the second generation of a family firm. This finding is consistent with the conclusions reached by Davis and Harveston (1999), and Kelly, et al., (2000) and Crittenden (2000) with regard to this issue.

As for the use of debt versus equity funding, it has been noted that the literature provides mixed positions. This study found significant generational differences only in the United States. The study's findings indicated that while 40 percent of American 1GFFs used equity funding more than debt funding, only 11 percent of 2GFFs did, and 33 percent of 3GFFs did. The finding that American 1GFFs use the least proportion of debt financing might support Bork et al. (1996) and Gersick et al. (1997). Yet the greater use of equity financing by American 3GFFs than by 2GFFs could be seen as in support of Cole and Wolken (1995) and Coleman and Carsky (1999). Furthermore, no significant generational differences in debt versus equity financing were found in Croatia, France, or Clearly, further research generational issues and debt versus equity financing is needed.

The similarities and differences in the cultures, economies, and in the descriptive statistics of the four countries have been discussed above. Even though characteristics and demographics of family businesses in these countries are at times quite different, this analysis found broad generational similarities in all four countries. Perhaps the force of "familiness" and the system of the family firm are stronger, even in subsequent generations, than is the influence of "mainstream" non-family-firm forms of management thinking and behavior and the additional influence of significantly different national and cultural environments.

Limitations

As previously discussed, most prior studies' examinations of *generational* issues were only a small or tangential part of a larger focus on other or broader family firm issues. Thus, the hypotheses formulated for this study were based on limited research findings and conclusions. This lack of a strong existing empirical-based research literature is a limitation to this study, but it also increases the importance of this study's empirical methodology and its findings.

Another limitation of this study is the modest response rates and/or sample sizes in some of the countries surveyed. Yet, response rates and sample sizes are generally a problem and limitation in survey studies of smaller businesses, and especially so in countries with less developed economies and/or less of an existing history of small business research. A recent study by Dennis (2003) confirms this ongoing methodological limitation in small business research and concludes that varying or enhancing survey techniques does not improve response rates. Thus, this is a limitation of this study that must be accepted.

Further Research

Clearly, these current findings indicate a need for more focused and extensive analysis of similarities and differences among first, second, and third-generation family firms, along with their managerial implications, both in the United States and in a variety of countries. Are there primarily similarities or differences between 1GFFs, 2GFFs, and 3GFFs, and can conclusions reached with regard to family businesses in the United States also be reached for other countries - for those similar and for those different from the United States with regard to economy, culture, national characteristics, entrepreneurial cognition, and the nature of family businesses? Further research is also needed to clarify both the differences and overlaps between issues of family firm generations versus stages and the advantages and disadvantages of each of these focuses, along with their respective potential resultant theories and models.

Furthermore, this issue is important because both those who research and those who assist family firms need to know whether it is necessary and/or valuable to differentiate between generational categories within the total population of such firms. Are there significant differences, and do they in turn require that different forms of assistance will be most effective for first-generation versus second-generation versus third-generation family firms? And do the generational similarities or differences apply in other countries and for those who research and/or assist family firms in these countries?

Finally, a better understanding of the factor of generational categorization of family businesses, within and between countries, might be of benefit to the owner-managers of such businesses. While it might be difficult for an owner-manager to identify the developmental stage of his or her family business, or to analyze his or her firm with regard to some of the other issues raised in the academic literature in family business, an owner-manager can certainly categorize his or her business by generation. If future research results in a significant body of theory and managerial implications based on generation and/or by nation/culture, then this might enable family business managers in various nations to make better operational and strategic decisions on their own, when the intervention of professional assistance is not available.

REFERENCES

- Ahlstrom, D., & Bruton, G. (2002). An institutional perspective on the role of culture in shaping strategic actions by technology-focused entrepreneurial firms in China," *Entrepreneurship Theory and Practice*, 26(4), 53-70.
- Aronoff, C. E. (1998). Megatrends in family business, *Family Business Review*, 11, 181-192.
- Beckhard, R., & Dyer, W. (1983). Managing continuity in family-owned business, *Organizational Dynamics*, 12(1), 5-12.
- Bellet, W., Dunn, B., Heck, R., Parady, P., Powell, J., & Upton, N. (1995). Family business as a field of study, Retrieved September. 5, 2003 at http://www.fambiz.com/Orgs/Corne ll/articles/real/ifbpa.cfm.
- Bird, B., Welsch, H., Astrachan, J.H., & Pistrui, D. (2002). Family business research: The evolution of an academic field, *Family Business Review*, XV(4), 337-350.
- Bork, D., Jaffe, D., Jane, S., Dashew, L., & Heisler, Q. (1996). Working with Family Businesses, San Francisco: Jossey-Bass.
- Carsrud, A. (1994). Lessons Learned in Creating a Family Business Program, University of California, Los Angeles. Unpublished manuscript.
- Center for Monitoring Indian Economy (CMIE). 2003. Data Base.
- Chaganti, R., & Schneer, J.A. (1994). A study of the impact of owner's mode of entry on venture performance and management patterns, *Journal of Business Venturing*, 9, 243-261.
- Christensen, C. (1953). Management Succession in Small and Growing Businesses, Boston: Division of Research, Harvard Business School.
- Chua, J., Chrisman, J., Sharma, P. (1999).

 Defining the family business by behavior, *Entrepreneurship Theory and Practice*, 23(4), 19-40.

- Cole, P. (1997). Women in family business, Family Business Review, 10, 353-371.
- Cole, R., & Wolken, J. (1995). Financial services used by small businesses: Evidence from the 1993 National Survey Of Small Business Finances," Federal Reserve Bulletin, July, 629-666.
- Coleman, S., & Carsky, M. (1999). Sources of capital for small family-owned businesses: Evidence from The National Survey Of Small Business Finances, Family Business Review, 12, 73-85.
- Davis, P. (1983). Realizing the potential of the family business, *Organizational Dynamics*, 12(1), 47-56.
- Davis, P., & Harveston P. (1999). In the founder's shadow: Conflict in the family firm," *Family Business Review*, 12, 311-323.
- Davis, P., & Harveston P. (2001). The phenomenon of substantive conflict in the family firm: A cross-generational study, *Journal of Small Business Management*, 39(1), 14-30.
- Dennis, W. (2003). Raising response rates in mail surveys of small business owners: Results of an experiment, *Journal of Small Business Management*, 41(3), 278-295.
- Denona, N., & Kraman-Aksentijevic, N. (1995). Mogucnosti razvoja obiteljskog poduzetnistva U Republici Hrvatskoj, International Conference, SME's in the economic development," *Ekonomski fakultet Rijeka*, November, 16-17.
- Donnelley, R. (1964). The family business," *Harvard Business Review*, 42(4), 94-105.
- Dreux, D., & Brown, B. (1999). Marketing private banking services to family business. Retrieved September 5, 2003: http://www.genusresources.com/
- Dyer, W.G. (1988). Culture and continuity in family firms, *Family Business Review*, 1, 7-50.

Mark.Priv.Bank.Dreux 5.html.

- Dyer, W.G., & Sánchez, M. (1998). Current state of family business theory and practice as reflected in *Family Business Review* 1988-1997, *Family Business Review*, 11, 287-295.
- Fiegener, M. K., & Prince. R.A. (1994). A comparison of successor development in family and nonfamily businesses, *Family Business Review*, 7, 313-329.
- Filbeck G., & Lee, S. (2000). Financial management techniques in family business, *Family Business Review*, 13, 201-216.
- Galetic, L. (2002). Characteristics of family firms in Croatia," *MER Journal for Management and Development*, 1(1), 50-59.
- Gattaz, Y. (2002). Communication from Académie des sciences morale set politques, June 5.
- George, G., & Zahra, S. (2002). Culture and its consequences for entrepreneurship, *Entrepreneurship Theory and Practice*, 26(4), 5-8.
- Gersick, K., Davis, J. Hampton, M., & Lansberg, I. (1997). Generation to Generation: Life Cycles of the Family Business, Boston: Harvard Business School.
- Handler, W.C. (1989). Methodological issues and considerations in studying family businesses, *Family Business Review*, 2, 257-276.
- Handler, W.C. (1994). Succession in family business," *Family Business Review*, 7, 133-157.
- Hayton, J., George, G., & Zahra, S. (2002). National culture and entrepreneurship: A review of behavioral research, *Entrepreneurship Theory and Practice*, 26(4), 33-52.
- Hershon, S. (1975). The Problems of Succession in Family Businesses, Unpublished doctoral dissertation,: Harvard University, Cambridge, MA.
- Hofstede, G. (1980). Culture's Consequences: International Differences In Work Related Values, Beverly Hills, CA: Sage.
- Hoy, F. (2003). Legitimizing family business scholarship in organizational re-

- search and education, *Entrepreneurship Theory and Practice*, 27(4), 417-422.
- Kellermann, F.W., & Eddleston, K.A. (2004). Feuding families: When conflict does a family firm good, *Entrepreneurship Theory and Practice*, 28(3), 209-228.
- Kelly, L.M., Athanassiou, N., & Crittenden, W.F. (2000). Founder centrality and strategic behavior in the family-owned firm, *Entrepreneurship Theory and Practice*, 25(2), 27-42.
- Kets de Vries, M. (1993). The dynamics of family controlled firms: The good and bad news, *Organizational Dynamics*, 21(3), 59-71.
- Kreiser, P., Marino, L. & Weaver, K. (2002). Assessing the psychometric properties of the entrepreneurial orient-tation scale: A multi-country analysis, *Entrepreneurship Theory and Practice*, 26(4), 71-94.
- Lansberg, I., Perrow, E.L., & Rogolsky. S. (1988). Family business as an emerging field, *Family Business Review*, 1, 1-7.
- Levinson, H. (1971). Conflicts that plague the family business, *Harvard Business Review*, 49(2), 90-98.
- Littunen, H., & Hyrsky, K. (2000). The early entrepreneurial stage in Finnish family and nonfamily firms, *Family Business Review*, 13, 41-54.
- Litz, R. (1995). The family business: Towards definitional clarity, *Family Business Review*, 8, 71-81.
- Litz, R. (1997). The family firm's exclusion from business school research: Explaining the void; Addressing the opportunity, *Entrepreneurship Theory and Practice*, 22(2), 55-71.
- Lyagoubi, M. (2002). Controle, propriété et comportement de financement: étude des enterprises patrimoniales, doctoral dissertation Université Paris IX, Dauphine, CREFUGE.
- Mahérault, L. (1999). Comportement financeier des enterprises familiales: Approche empirique," *Economies et Sociétés, Série Siences de Gestion*, 26-2, 247-272.

- Marino, L., Strandholm, K., Steensma, H., & Weaver, K. (2002). The moderating effect of national culture on the relationship between entrepreneurial orientation and strategic alliance portfolio extensiveness, *Entre- preneurship Theory and Practice*, 26(4), 145-160.
- Manikutty, S. (2000). Family business groups in India: A resource based view of emerging trends, *Family Business Review*, 13, 279-292.
- McCann, J., Leon-Guerrero, A. & Haley, J. (1997). Family business with a capital "B:" Characteristics, priorities and performance of family firms," Paper presented at the *Academy of Management Meeting*, Boston, MA.
- McConaughy, D.L. (1994). Founding Family
 Controlled Corporations: An
 Agency-Theoretic Analysis of Corporate Ownership Structure and its
 Impact upon Corporate Efficiency,
 Value, and Capital Structure,
 Unpublished doctoral dissertation,
 University of Cincinnati, OH.
- McConaughy, D.L., & Phillips, G.M. (1999). Founders versus descendents: The profitability, efficiency, growth characteristics and financing in large, public, founding-family-controlled firms, Family Business Review, 12, 123-131.
- Miller, N., McLeod, H., & Oh, K. (2001).

 Managing family businesses in small communities, *Journal of Small Business Management*, 39(1), 73-87.
- Mitchell, R., Smith, J., Morse, E., Seawright, K., Peredo, A., & McKenzie, B. (2002). Are entrepreneurial cognitions universal? Assessing entrepreneurial cognitions, *Entrepreneurship Theory and Practice*, 26(4), 9-32.
- Morck, R., & Yeung, B. (2003). Agency problems in large family business groups, *Entrepreneurship Theory and Practice*, 27(4), 367-382.
- Morris, M. H., Williams, R.O., Allen, J.A., & Avila, R.A. (1997). Correlates of success in family business

- transitions, *Journal of Business Venturing*, 12, 385-401.
- Nelton, S. (1998). The rise of women in family firms: A call for research now, *Family Business Review*, 11, 215-218.
- Office of Advocacy (2001). Women-Owned Firms Continue Dramatic Growth, (SBA No: 01-03 ADVO), Washington, D.C.: U.S. Small Business Administration, April 4. Peiser, R., & Wooten, L. (1983). Life-cycle changes in small family businesses, Business Horizons, May-June, 58-65.
- Reynolds, P., Bygrave, W., Autio, E. & Hay, M. (2002). Global Entrepreneurship Monitor 2002 Executive Report, Babson College, London Business School, and the Ewing Marion Kauffman Foundation.
- Romano, C.A., Tanewski, G.A., & Smyrnios, K.X. (2001). Capital structure decision making: A model for family business, *Journal of Business Venturing*, 16, 285-288.
- Schein, E. (1983). The role of the founder in creating organizational culture, *Organizational Dynamics*, 12(1), 13-28.
- Sharma, P., Chrisman, J., & Chua, J. (1997). Strategic management of the family business: Past research and future challenges, *Family Business Review*, 10, 1-35.
- Sonfield, M.C., & Lussier, R.N. (2002).

 First-generation and subsequentgeneration family firms: A
 Comparison. Proceedings of the
 National Entrepreneurship and
 Small Business Educators Conference, 153-161.
- Sonfield, M.C., & Lussier, R.N. (2004). First, second and third-generation family firms: A comparison, *Family Business Review*, 17, 189-202.
- Stavrou, E.T. (1998). A four factor model: A guide to planning next generation involvement in the family firm, *Family Business Review*, 11, 135-142.
- Tan, J. (2002). Culture, nation, and entrepreneurial strategic orient-

- tations: Implications for an emerging economy, *Entrepreneur-ship Theory and Practice*, 26(4), 95-112.
- Teal, E., Upton, N., & Seaman, S. (2003). A comparative analysis of strategic marketing practices of high-growth U.S. family and non-family firms, *Journalof Developmental Entre-preneurship*, 8(2), 177-195.
- Upton, N., & Heck, R. (1997). The family business dimension of entrepreneurship, in *Entrepreneurship* 2000, Sexton, D. and R. Smilor (Eds) Chicago: Upstart Publishing, 243-266.
- Ward, J. (1986). Family ownership, business strategy and performance, Paper presented at the annual *Academy of Management* Meeting, Chicago, IL.
- Ward, J., & Dolan, C. (1998). Defining and describing family business ownership configurations, *Family Business Review*, 11, 305-309.
- Weber, J., & Lavelle, L. (2003). Family, Inc., *Business Week*, (Nov. 10), 100-114. *World Almanac* (2003). New York: World Almanac Books.
- Matthew C. Sonfield is the Robert F. Dall Distinguished Professor in Business at the Zarb School of Business at Hofstra University. He earned an A.B, M.B.A. and Ph.D. from Cornell, Harvard and New York Universities. His recent research and publications have focused on entrepreneurship, small business, family business and minority business.
- **Robert N. Lussier** is professor of management at Springfield College. He is the author of many publications including a management, leadership, human relations, entrepreneurship, and small business management textbook.
- **Sanja Pfeifer** is on the faculty of the University of Josip Juraj Strossmayer, Osijek, Croatia.
- **S. Manikutty** is on the faculty of the Indian Institute of Management, Vastrapur, Ahmedabad, India.

Loïc Maherault and Louis **Verdier** are on the faculty of the Ecole de Management, Lyon, France.