The cultural models in international business research: A bibliometric study of IB journals

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ABSTRACT
Culture has been a widely researched topic in the International Business (IB) literature over the last decades. To better understand what culture actually means and its implication in firms’ IB operations, several cultural models and taxonomies have been put forward. In this paper we seek to scrutinize the use of three well known cultural models - Hall’s (1976), Hofstede’s (1980a) and Trompenaars & Hampden-Turner’s (1993) - in the extant research. Using bibliometric techniques of the papers published in the top ranked IB journals, we performed a citation and co-citation analysis to find out the most influential model and to examine the possible linkages between models and to the issues being researched. We conclude that Hofstede’s (1980a) taxonomy is the most cited and his taxonomy has strong linkages to several streams of research. Nonetheless, we also find that there are noticeable differences on how research in different journals make use of the cultural models, probably reflecting not surprising disciplinary emphases.

KEYWORDS: Cultural models, Hofstede, Trompenaars, Hall, bibliometric study.
INTRODUCTION

Culture has long been capturing scholars’ attention. Over the last decades, management scholars have delved into cultural and cross-cultural issues especially in the IB field. The impact of culture in the IB literature is recurrently focused upon, namely seeking to explain the impact of national and regional culture, and cultural variations, in management (e.g., Nes, Solberg & Silkoset, 2007; Ralston et al., 2008; Zutshi & Tan, 2009) and, more widely, on a variety of decisions regarding the choice of location and foreign entry modes deployed. The manner in which firms respond to cultural differences may help explain why firms differ and why there are performance differences between firms (Hawawini, Subramanian & Verdin, 2003; Mackey, Mackey & Barney, 2007; Sirmon, Hitt & Ireland, 2007).

Understanding the influence of culture in business practices and managerial decision making requires explaining the differences between cultures. Several models and classifications of culture have emerged to provide a comparable frame of reference. For instance, Hall (1976) developed a taxonomy establishing high and low context cultures, which takes into account the importance of context in decoding the communication and more broadly a set of aspects related to the interaction among individuals. Hofstede (1980a) presented a much cited cultural model comprising four main dimensions of culture: individualism-collectivism, uncertainty avoidance, power distance and masculinity-femininity, later added of one additional dimension – the confucian dynamism (Hofstede &Bond, 1988). Trompenaars and Hampden-Turner (1993) proposed a classification comprising seven cultural dimensions that characterizes a culture and may be used to distinguish one national culture from another. More recently, the GLOBE project presented a more extensive cultural model comprising nine dimensions (see House et al. (2004) for a description). These cultural frameworks are utilized to encompass the cultural variations that may bear a significant impact on the internationalization of firms, the manner in which firms are organized, the human resource management practices, and so forth. That is, they provide us with a comparable starting point for IB studies, focusing on a specific environmental dimension: culture.
Our starting point for this research was determining which of the cultural models available for analysis is most used in International Business (IB) research and how they are used. All the cultural models have received some degree of criticism. High and low context cultures (Hall, 1976) are pointed at for not being submitted to peer review and for being insufficiently confirmed by empirical works (Cardon, 2008). Hofstede’s four dimensions were considered overly simplistic, ignorant of the cultural differences within a country and for having a limited sample (Kirkman, Lowe & Gibson, 2006). The seven dimension model (Trompenaars & Hampden-Turner, 1993) was criticized for not being supported by Hofstede’s database and therefore not valid (Hofstede, 1996). Since no single model has received unanimity, we seek to understand which model is used the most in IB literature.

In this article we analyze the relevance of cultural models and we scrutinize its use in the extant IB research. Empirically, we use bibliometric techniques to ascertain the most influential model in the articles published in the top ten ranked IB journals (DuBois & Reeb, 2000): Journal of International Business Studies (JIBS), Management International Review (MIR), Journal of World Business (JWB), International Marketing Review (IMR), International Business Review (IBR), Journal of International Marketing (JIM), International Studies of Management and Organization (ISMO), Advances in International Marketing (AIM), Advances in International Comparative Management (AICM), International Journal of Research in Marketing (IJRM), Journal of Global Marketing (JGM) and Multinational Business Review (MBR). We seek to understand the intellectual structure of the extant IB research, by analyzing the citations and co-citations.

The article proceeds as follows. First, we briefly review the cultural models considered in this study. Second, we present the bibliometric method used, sample and key results. We conclude with a broad discussion and advancing some suggestions for future scholarly investigation.

**LITERATURE REVIEW**

The international business environment is the distinguishing factor between IB research and other management fields (Guisinger, 2000; 2001; Ferreira et al., 2009). Understanding the international business environment
in which firms operate, involves understanding that “every organization exists in a specific physical, technological, cultural and social environment to which it must adapt” (Scott, 2002: p. 21). One of the arguably primary building block of the international environment is culture. In fact, culture is a common element in several frameworks and taxonomies. For instance, Ghemawat (2001) identified the CAGE framework, composed of Culture, Administration, Geography and Economy. Guisinger (2000, 2001) identified the ECLIPTER, comprising eight environmental dimensions: Econography, Culture, Legal system, Income level, Political risk, Tax regime, Exchange rate, and Restrictions. The context, namely the cultural context, seems to be crucial in IB research.

Culture plays a major role in characterizing the environmental context in which firms operate and decide, chose strategies and structures. For instance, culture was shown by Lachman and colleagues (1994) to shape the organizational structures of firms, Shane (1993) related culture to entrepreneurial activity, Graham et al. (1994) noted that negotiation behaviors shifted with national culture. Without generalizability across space, we are dealt a set of domestic, uni-national, and narrow scope theories. Krathwohl (1985, p. 74) put it better when he asked a fundamental question for external validity of models, constructs and theories: 

"[w]ould this relationship replicate with people or other cultures, in other countries of the world?"

Culture and cultural models

Albeit there is no unanimous definition for culture, we may find a set of common components of what culture entails, ranging from a ‘subjective perception’ (Triandis, 1972), a ‘subconscious mechanism’ (Hall, 1983), to an ‘acquired behavior’ (Kroeber & Kluckhohn, 1952), or ‘learned attitudes’ (Spencer-Oatey, 2000). Hofstede (1980a: p. 25), for instance, defines culture as 

"[t]he collective programming of the mind which distinguishes the members of one human group from another, ... the interactive aggregate of common characteristics that influence a human group’s response to its environment". Gould and Grein (2009: p. 238) state that 

"[c]ulture consists of explicit and implicit patterns of historically derived and selected ideas and their embodiment in institutions, practices and artifacts; cultural patterns
may, on one hand, be considered as products of action, and on the other as conditioning elements of further action”. Regardless of the specific definition, cultural differences induce a substantial impact in such contexts as ethical behaviors (French, Zeiss & Scherer, 2001), advertising (Chang, 2006), organizational commitment (Gelade, Dobson & Auer, 2008), entry mode choice (Kogut & Singh, 1988) and even the international strategic options (Guisinger, 2001).

The central role of culture in IB studies has warranted the effort of many scholars. Ferreira, Li, Guisinger and Serra (2009) noted how much of the research published in top journals takes culture as the principal contextual factor. Some scholars delved into finding what culture means and what the major components of culture itself are. Three of such studies are Hofstede’s four cultural dimensions, Trompenaars’ seven elements of culture and Hall’s high and low context cultures.

Edward Hall’s high and low context culture

Edward Hall put forward the concepts of high context and low context cultures. Hall defends context is every situational surroundings including (but not limited to) the physical environment, the participants’ roles, power relationships, status’ differences and non-verbal communication (Hall, 1976). In high context cultures one has to consider the context of the message (e.g., non-verbal language, personal background) to decode the message: “in cultures in which people are deeply involved with each other... in which information is widely shared - what we will term high-context cultures - simple messages with deep meaning flow freely” (Hall, 1976, p. 30). Conversely, in low context cultures, the cultural surroundings lose their importance since the communication is more explicit and less dependent on the non-verbal communication (Samovar, Porter & McDaniel, 2009).

Trompenaars and Hampden-Turner’s seven dimensions of culture

Trompenaars and Hampden-Turner (1993) posit a cultural model with seven dimensions, arranged in a continuum. These dimensions are the answer the group gives to some common problems. The dimensions identified concern time, relation with others, with nature, with rules and
with affections. One continuum identified is **Universalism vs. Particularism**, focusing the relation of people of a group with rules and laws (Trompenaars & Hampden-Turner, 1993). Another continuum is **Individualism vs. Communitarianism** (Trompenaars & Hampden-Turner, 1993), focusing the relation of people with others. The continuum **Affective vs. Neutral cultures** describes the way people deal with and display their emotions (Trompenaars & Hampden-Turner, 1993). To understand how people see their own lives Trompenaars and Hampden-Turner (1993) advance the **Specific vs. Diffuse cultures** continuum. **Achievement vs. Ascription** represents the way society deals with accomplishment (Trompenaars & Hampden-Turner, 1993). A culture’s **Time perception** describes both the orientation of a society towards the past, the present or the future and the way people structure their time and schedules (Trompenaars & Hampden-Turner, 1993). **Relation to nature** deals with the relation between people’s lives and their attitude towards environment (Trompenaars & Hampden-Turner, 1993).

**Hofstede’s cultural dimensions**

In 1980, Geert Hofstede published his book on cross-cultural differences, *Culture’s consequences: International differences in work-related values*, revised in 2001 as *Culture’s consequences: Comparing values, behaviors, institutions, and organizations across nations*. In this work, Hofstede identifies four basic cultural dimensions which, according to the author, are able to explain half the variance in the countries’ scores on cultural values. The four dimensions were defined in a continuum that ranges from 0 to 120, which allows for a straightforward comparison between cultures. Hofstede’s work was path-breaking not only in presenting the role of culture on the different attitudes and values found across national cultures (1980a; 1984), but also on presenting a set of cultural dimensions empirically quantified that permits its use in future research. Hofstede’s cultural model is widely used today, both for academia and professionals for the simplicity to use and the comparability that a quantitative measure allows.

The four dimensions of culture identified by Hofstede were: individualism-collectivism, uncertainty avoidance, power distance and
masculinity-femininity. These are described below. **Power distance** is conceptualized as the degree to which individuals in a culture accept unequal distribution of power. Power distance reflects aspects such as the expectations of subordinates and managers regarding the manner in which decisions are taken, opinions are expressed, disagreements are manifested, the type of leadership in the organizations and so forth (Hofstede, 1980a; 2001). For instance, individuals in low power distance cultures tend to prefer more democratic power relations, while in high power distance cultures the subordinates prefer a more autocratic and paternalistic managerial style.

Another dimension is **uncertainty avoidance**, defined as the tolerance of members of the group to unstructured, ambiguous situations and whether the members of the group accept or try to avoid such situations. In high uncertainty avoidance cultures, people feel more anxious when facing ambiguous scenarios, and value well known formal rules, job and career stability and an overall conformity with the dominant standards of behavior. By contrast, low uncertainty avoidance cultures do not avoid unstructured situations, sometimes they may seek them as a way of personal challenge (Hofstede, 1980a). According to Hofstede (2001) uncertainty avoidance is not a synonym of risk avoidance, since uncertainty avoidance does not refer to the willingness to take, or avoid, risk, but instead of the broad preferences for specified rules.

Another dimension identified by Hofstede was **individualism-collectivism**, defined as the extent to which individuals in a national cultural setting "prefer to act as individuals rather than as members of groups" (Hofstede, 1994, p. 6). Individualism reflects one’s preference for acting as individuals rather than as members of groups. Individualism is "a loosely knit social framework in which people are supposed to take care of themselves and of their immediate families only" and collectivism "is characterized by a tight social framework in which people distinguish between ingroups and outgroups, they expect their ingroup to look after them, and inexchange for that they feel they owe absolute loyalty to it” (Hofstede, 1980b, p. 45). Hence, in individualist cultures people stand up for themselves and take the consequences of their own decisions. In
collectivist cultures, individuals guide their decisions according to the group they belong to - which is a life-long membership (Hofstede, 1980a).

Hofstede’s fourth dimension is masculinity-femininity, conceptualized as the degree to which traditionally ‘masculine’ values (e.g., performance, competition, success, assertiveness) prevail over stereotypically ‘feminine’ values (e.g., solidarity, care for the weak, cooperation, quality of life, personal relationships and friendship) (see Hofstede, 1994; 2001).

In later work Hofstede and Bond (1988) included a fifth cultural dimension, termed Confucian dynamism (a.k.a. long term orientation). Long or short term orientation relates to the culture’s time horizon, and the importance ascribed to the future or the past. Cultures long term orientated tend to value more aspect such as persistence, parsimony and the individuals’ sense of shame. In contrast, in short term oriented cultures, individuals value aspects related to personal stability, reciprocation of favors and gifts and there is a pressure for immediate spending (see Table 1). The long (or short) term orientation influences, for instance, strategy shaping decisions (Buck, Liu & Ott, 2010), control mechanisms (Ryu, Kabadayi & Chung, 2007) and ethical behaviors (Nevins, Bearden & Money, 2007).

<table>
<thead>
<tr>
<th>TABLE 1. Comparison of long term and short term orientation</th>
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<tr>
<td><strong>Short-term orientation</strong></td>
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<tr>
<td>▪ Effort should produce quick results</td>
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<tr>
<td>▪ Social pressure toward spending</td>
</tr>
<tr>
<td>▪ Respect for traditions</td>
</tr>
<tr>
<td>▪ Concern with personal stability</td>
</tr>
<tr>
<td>▪ Concern with social and status obligations</td>
</tr>
<tr>
<td>▪ Concern with “face”</td>
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Hofstede’s cultural taxonomy has seen inroads into a variety of issues namely in explaining differences in management practices, choice of
location for foreign production, entry mode choices, and so forth. For instance, power distance arguably impacts the leadership style (Kirkman et al., 2009) and the information flow in the organization (Wang & Nayir, 2009). Uncertainty avoidance has been seen to influence the adoption of specific information systems (Hwang, 2005), business ownership (Wennekers et al., 2007) and even public self-image (Merkin, 2006). The dimension individualism-collectivism has been deemed to drive the teams’ performance (Gundlach, Zivnuska & Stoner, 2006), the extent of workgroup cooperation (Koch & Koch, 2007) and decision making processes (Zhang et al., 2007). Masculinity-femininity has been shown to impact advertising decisions (Chang, 2006), management of partnerships, such as international joint ventures and strategic alliances (Hofstede, 2010) and organizational commitment (Gelade et al., 2008). Hofstede’s influence in latter research not only about cultures but also on international business matters generally delimited has been extensive. Ferreira, Li, Guisnger and Serra (2009), for instance, noted how scholarly research published in three major IB journals (JIBS, MIR and JWB) has seen cultural issues as the main international business environment dimension examined. Reviews by Taras, Rowney and Steel (2009) and Taras and Steel (2009), for example, stated that virtually all later models of culture have included Hofstede’s cultural dimensions.

**Beyond culture: The concept of cultural distance**

Some studies address the national cultures not only in terms of their idiosyncratic features but also in terms of the relative differences that actually distinguish one culture from another. Cultural distance (CD) was conceived by Luostarinen (1980, p. 131-132) as "the sum of factors creating, on the one hand, a need for knowledge, and on the other hand, barriers to knowledge flow and hence for other flows between the home and the target countries". The cultural differences across countries have been the focus of IB research in explaining foreign investment location (Loree & Guisinger, 1995; Hutzschenreuter, Voll & Verbeke, 2011), entry mode choice (Kogut & Singh, 1988; Brouthers & Brouthers, 2000), international diversification (Barkema et al., 1997; Tihanyi, Griffith & Russel, 2005),
subsidiary performance (Shenkar, 2001; Tihanyi et al., 2005) and explain affiliates’ performance (Hutzschenreuter et al., 2011; Shenkar, 2001).

One of the most common methods to assess CD between countries, or cultures, employs Kogut and Singh’s (1988) cultural distance index. The index measures the cultural distance between two given countries based on the Euclidean distances using the scores and variances of Hofstede’s (1980a) dimensions. This index is an extension of Hofstede’s taxonomy and is not free of recurrent criticisms (see, for instance, Shenkar (2001) and Kirkman et al. (2006)). Nonetheless, given its simplicity to use and the availability Kogut and Singh’s cultural distance is widely used (Kirkman et al., 2006).

**BIBLIOMETRIC STUDY**

**Method**

We conducted a bibliometric study following the overall procedure described by Ramos-Rodriguez and Ruiz-Navarro (2004). We aim at examining articles, published in top ranked journals dealing with international business issues, and at identifying the most used models and their influence in the IB field. Using bibliometric techniques, such as citation analysis, we are then able to identify the frequency with which a certain author/work is used and connection among works. A citation analysis uses the cited references (books, articles, reports and so forth) of an academic article to ascertain trends and uncover linkages, both theoretical and among authors. It is important to clarify the role of citations in research: a scholar refers to a prior work if it is important to his own research. Therefore, arguably the more a work is cited the more important and influential it is in a particular field of study (Tahai & Meyer, 1999).

There are numerous examples of studies using various bibliometric techniques with different purposes. Some studies scrutinize the extant published research as to the patterns of citations and co-citations to identify the intellectual structure of the field (Ramos-Rodriguez & Ruiz-Navarro, 2004), the most cited authors in the discipline (Chandy & Williams, 1994), the research productivity of scholars and universities (Morrison & Inkpen, 1991; Kumar & Kundu, 2004), the journals relative quality (DuBois & Reeb,
2000) and the stature of a single journal (Phene & Guisinger, 1998),
patterns of research and school rankings (Chan, Fung & Leung, 2006).

**Procedure and sample**

Our study initially considered ten leading and highly ranked IB journals
following DuBois and Reeb’s (2000) analysis. These were: Journal of
International Business Studies (JIBS), Management International Review
(MIR), Journal of World Business (JWB), International Marketing Review
(IMR), International Business Review (IBR), Journal of International
Marketing (JIM), International Studies of Management and Organization
(ISMO), Advances in International Marketing (AIM), Advances in
International Comparative Management (AICM), International Journal of
Research in Marketing (IJRM). However, only seven of these journals - JIBS,
MIR, JWB, IMR, IBR, JIM and IJRM - were available on the ISI Web of
Knowledge index and were thus included in the study.

Our objective was to know how many times the three cultural models
described were cited in the extant research. We searched the entire archive
of the seven journals available on ISI Web of Knowledge and retrieved
3,639 articles (see Table 2). The period analyzed for each publication was
different, since we only considered the archive of each journal that was
available. Regrettably, not all journals had the entire track record available.
For instance, the articles published in MIR were only available for the period
1966 to 1990 and from 2008 to 2010. That is there was an 18 years gap in
the archive of MIR available on ISI Web of Knowledge.

**TABLE 2. Articles considered in the study**

<table>
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<th>Journal</th>
<th>Period</th>
<th>Total of articles</th>
<th>% of total</th>
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<tbody>
<tr>
<td>Journal of International Business Studies</td>
<td>1976 - 2011</td>
<td>1176</td>
<td>32,3%</td>
</tr>
<tr>
<td>Management International Review</td>
<td>1966 - 1990, 2008 - 2010</td>
<td>891</td>
<td>24,5%</td>
</tr>
<tr>
<td>Journal of World Business</td>
<td>1997 - 2011</td>
<td>394</td>
<td>10,8%</td>
</tr>
<tr>
<td>International Marketing Review</td>
<td>1999 - 2010</td>
<td>315</td>
<td>8,7%</td>
</tr>
<tr>
<td>International Business Review</td>
<td>2005 - 2011</td>
<td>231</td>
<td>6,3%</td>
</tr>
<tr>
<td>Journal of International Marketing</td>
<td>1995 - 2011</td>
<td>319</td>
<td>8,8%</td>
</tr>
<tr>
<td>International Journal of Research in Marketing</td>
<td>1997 - 2010</td>
<td>313</td>
<td>8,6%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>3.639</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
From all the 3,639 articles included in this study we retrieved all the relevant information, namely: the journal name, title of the paper, identification of the authors, volume, issue, year, abstract and the all the references included in each article. The references were checked for typos and errors and corrected. For books with several editions, we considered the first edition every time. The corrected data was treated using Bibexcel¹ - a software that permits us organize the data and perform co-citation matrixes. The co-citation maps were drawn using UCINET.

RESULTS

The data retrieved from our research allowed us to assess the relative use of each cultural model. Table 3 presents a ranking of references to the cultural models considered in this study - Hall (1976), Hofstede (1980a) and Trompenaars and Hampden-Turner (1993) – and the cultural distance index (Kogut & Singh, 1988). It might not come at a surprise that in the journals examined in this study, Hofstede’s cultural taxonomy was consistently found in the top 10 most cited works in those journals, and in fact, we found it is the most important reference in three journals: JIBS, JWB and IMR. By contrast, Hall’s (1976) high and low context culture distinction was the least cited of the three models – and in none of the seven journals did it appear on the top 20 most cited. Trompenaars and Hampden-Turner (1993) seven cultural dimensions is highly cited in the papers published in the JWB but has relatively few citations in the remaining journals. Finally, Kogut and Singh’s (1988) cultural distance index is highly used in most of the journals ranking among the top 25, except in IJRM (810th most cited). In JIBS and in IBR it is the 3rd most cited article. It is evident that there are noteworthy differences on the content of these journals, as we could expect given their specific, in some cases disciplinary, emphasis. But we may also expect that the cultural models and the concept of cultural distance might also be employed in different manners in the research published in these journals – namely the context in which each of the cultural models in used.

¹ Available for download at http://www.umu.se/inforsk/Bibexcel
We performed a co-citation analysis to understand which works were cited together in each journal. We considered the 20 most cited references and the references to the cultural models scrutinized in this paper, if they were not in the top 20. This procedure is also interesting to assess the patterns of co-citations and, arguably, the relative importance within the discipline.

The graphic illustration of the pattern of co-citations also measures the strength of the ties binding authors. This analysis comprises only the top twenty most cited works plus the four studies we focus: Hofstede, Hall, Trompenaars and Kogut and Singh’s. The closer the authors (actually the data refer to a specific work, book or article, by an author) are shown in the figure, the more often they are co-cited in the extant research published in that journal. Also, the width of the line connecting the authors reflects the frequency of co-citations: the thicker the line the more frequent the co-citations of the two given authors.

Figure 1 depicts the co-citation map for JIBS. We should point out that this analysis was undertaken with the entire track record of papers published in JIBS. We may observe the co-citation of Hofstede (1980a) and Kogut and Singh (1988), as well as Kogut and Singh (1988) and Johanson & Vahlne (1977). Trompenaars and Hampden-Turner (1993) is seldom cited together with Hofstede (1980a) and is never cited together with Hall (1976).
We may thus assess the use of the cultural models jointly with other streams of research in articles, as shown by the co-citation patterns. For instance, in JIBS, Hofstede's (1980a) is used jointly with Dunning’s (1988, 1993) OLI framework, with cultural distance (Kogut & Singht (1988) - which is not surprising given that the cultural distance index is based on the cultural dimensions of Hofstede, on the internationalization process of firms (Johanson & Vahlne, 1977), but also on a variety of subjects pertaining to the multinationals and subsidiaries (Buckely & Casson, 1976; Prahalad & Doz, 1987; Bartlett & Ghoshal, 1989) and generally with conducting international business operations (Caves, 1971; Stopford & Wells, 1972; Rugman, 1981) and potential hazards or liabilities of foreignness (Hymer, 1976).

**FIGURE 1.** Co-citation map for JIBS

The analysis of MIR, shows a similar co-citation map (see Figure 2). The core associations among authors comprise the works by Hofstede (1980a), Kogut and Singh (1988) and Johanson & Vahlne (1977) which are co-cited very often, Hofstede (1980a) and Trompenaars and Hampden-Turner (1993) are co-cited on a few occasions and Hall (1976) is co-cited only with Kogut and Singh (1988). We also find some linkages with different streams of knowledge. Hofstede (1980a) is cited with works using a behavioral approach of the firm (March & Simon, 1958; Cyert & March,
an environmental approach (Farmer & Richman, 1965), and also emphasizing multinationals (Bartlett & Ghoshal, 1989).

FIGURE 2. Co-citation map for MIR

The co-citation map for IJMR shows that scholars who publish in IJRM did not cite Hall (1976) and only cited Kogut and Singh (1988) twice. Therefore, these references are not present in Figure 3 which shows some co-citation between Hofstede (1980a) and Trompenaars and Hampden-Turner (1993). Although culture still has a relevant role on the research published in IJRM, the connections to the extant research evidence a different focus in this journal. Both Trompenaars and Hampden-Turner (1993) and Hofstede (1980a) are co-cited with Steenkamp and Baumgartner (1998) which deals with measurement invariance. Hofstede (1980a) is also co-cited with works on several subjects such as cultural antecedents of behaviors (Steenkamp, Hofstede & Wedel, 1999), diffusion of new products (Bass, 1969), market orientation (Narver & Slater, 1990) and also on methodological issues (Fornell & Larcker, 1981).
The authors who publish on IBR (see Figure 4) often co-cite Hofstede (1980a) and Kogut and Singh (1988) and to a lesser extent Hofstede (1980a), Trompenaars and Hampden-Turner (1993) and Hall (1976). In IBR there is also strong co-citation of Hofstede (1980a), Kogut and Singh (1988) and Shenkar (2001) and, to a large extent, the connections to other streams of research seem to follow the analysis made for JIBS and MIR. This does not come at a surprise given that these are the three clearly IB journals per se, focusing on a broader perspective of issues pertaining to the internationalization of firms, multinationals and on conducting foreign operations.
DISCUSSION AND CONCLUDING REMARKS

In this paper we sought to understand not only which cultural model, or taxonomy, has been most used in IB-related research but also to identify the broad areas in which they are used. Our bibliometric technique resorts to ISI journals and entails the analysis of citation and co-citation patterns. We may thus observe, although for clarity limited to only the most often cited works, the intellectual links connecting authors and research topics, but also on the extent to which and partly on the how the cultural models are used. Therefore, this work contributes to complement extant research on cultural and cross-cultural issues by presenting the relative use of each cultural model in top ranked IB journals (DuBois & Reeb, 2000).

Given that culture is one of the key elements that provide the context for international business research (Boyacigiller & Adler, 1997; Guisinguer, 2000; Ghemawat, 2001; Ferreira et al., 2009), it is important to understand at least how the main cultural models are used in the extant research. The cultural models are used to explain the prevalent traits in the national culture of a country but very often are used in setting boundary conditions for differences across countries in a variety of issues, ranging from the

FIGURE 4. Co-citation map for IBR
entry modes (Brouthers & Brouthers, 2000) to the selection of location for foreign production (Hutzschenreuter et al., 2011), to explain the differences in managerial decisions and behaviors (French et al. 2001; Gelade et al., 2008), and consumers’ behaviors (Chang, 2006), among many other. Often, to depict the differences between countries and to ascertain the significance of the impact of culture, scholars prefer the use of the concept of cultural distance (Kogut & Singh, 1988) rather than the static characterization of the countries under scrutiny.

The examined cultural models offer both conflicting and complementing arguments in characterizing national culture. Some of Hofstede’s (1980a) four dimensions find some similarities in Trompenaars and Hampden-Turner’s (1993) seven dimensions, such as Individualism-collectivism that are Individualism vs. Communitarianism and Universalism vs. Particularism in Trompenaars’ model. Nonetheless, other dimensions are completely different, which makes it impossible to convert one model in the other. It is noteworthy that these differences go beyond mere semantics. For instance, whereas Hofstede analyzes the different variables of national culture, Trompenaars and Hampden-Turner deal with the process of culture creation (Hampden-Turner & Trompenaars, 1997). Also, Hall’s (1976) high and low context cultures are different from the other models, namely in that Hall’s work did not advance a quantification internationally comparable and analyzes one single variable (context) in a binary output. The differences and complementarities might therefore render useful the use of the different taxonomies to encapsulate diverse facets of culture. Albeit these differences among models may be interesting they were not our focus in this paper. Future research may focus on examining how the studies vary and the conclusions may be disparate influenced by the cultural model employed. The co-citation analysis (depicted in Figures 1-4) delves into the joint use of cultural models as well as the combined citation with other highly cited works in each of the top journals. A number of conclusions may be drawn. For instance, Hofstede (1980a) is often cited together with Johanson and Vahlne (1977), a seminal work on the internationalization process of the firm as a gradual incremental process, usually referred to as the Uppsala School’s model. In the evolutionary internationalization process
culture is an important factor that increases the perceived distance between two countries (Johanson & Vahlne, 1977), rendering that the farther the distance the latter an entry into that market. In IMR, Hofstede (1980a) is highly co-cited with Hall (1976) arguably because the authors seek to use two contrasting perspectives or it might be an artifact of the authors building up the importance and different perspectives on what constitutes culture. Trompenaars and Hampden-Turner (1993) on the other hand are co-cited either with Hofstede (1980a) and Hall (1976) but are rarely co-cited with other articles. This may occur to present different approaches to the cultural issues. Another frequent co-citation is Hofstede (1980a) and Kogut and Singh (1988). The cultural distance index (Kogut & Singh, 1988) was built on the four cultural dimensions (Hofstede, 1980a) which we believe helps partially explaining this pattern of multiple co-citation. Interesting is that fact, Kogut and Singh (1988) are frequently co-cited with Johanson and Vahlne (1977), probably to ascertain or to demonstrate the effect of culture on the foreign markets entry mode. In IBR, Kogut and Singh (1988) are also frequently co-cited with Shenkar (2001) an article which critically reviews and challenges the assumptions of the culture distance construct.

This paper faces some limitations. Some related to the bibliometric method, others derived from the sample chosen. In a bibliometric study it may not be straightforward understanding why a citation is used (Ramos-Rodrigues & Ruiz-Navarro, 2004), namely on distinguishing whether an author intends to build on existing knowledge or if he is criticizing a previous work. On the other hand, the co-citation analysis only deals with pairs of articles. It could be interesting to analyze the entire reference list of each article and scrutinize in depth the co-citation of the articles.

The sample chosen for the analysis also poses some problems. We used the data available on ISI Web of Knowledge which does not cover the entire archive of the journals (except for JIBS). For MIR there is an 18 year gap (1990-2008) in the data available and most journals’ data is only available from the mid 1990’s onward (JWB, IMR, JIM and IJRM). IBR has a recent coverage, from 2005 onward. It is possible to overcome these limitations through in-depth analysis of each article of each journal: on one
hand this analysis would allow to understand the context of the citations and co-citations; on the other hand, missing data from years not included in the ISI Web of Knowledge database could be retrieved. Future research may consider following these suggestions, as well as expanding the sample to other journals, eventually from other fields of management. We should also point out that by looking at the top journals we may be ignoring different perspectives not published in the mainstream journals (Inkpen, 2001). It is arguable whether the top journals focus on the more critical and innovative aspects in a field (Davis & Papanek, 1984). Nonetheless, our sample comprises multiple journals, rendering that this is at most a minor limitation here.

Culture is the environmental dimension that most attention has captured in the extant research (Kirkman, Lowe & Gibson, 2006; Ferreira et al., 2009), particularly after 1980. Ferreira and colleagues (2009) suggested that Hofstede’s quantifiable, understood, available, applicable for inter-country comparisons, largely replicable framework for categorizing ‘culture’ across countries, and generally accepted cultural taxonomy, permit its inclusion in research as the dependent, independent or moderating variable, driving to the upsurge of culture-related research. It may be the ability to measure cultural characteristics that is, at least partly, facilitating the inclusion of culture in IB studies.

It is undeniable the relevance of culture and of the existing cultural models in the IB literature. Hofstede’s (1980a) model is among the most cited references in the IB journals and it has been considered “a watershed conceptual foundation for many subsequent cross-national research endeavors” (Fernandez et al., 1997: p. 43-44). However, this is a topic far from being pacified, with more recent models being put forward (Trompenaars & Hampden-Turner, 1993; House et al, 2004) and the claim for research that delves deeper into each cultural concept (Boyacigiller & Adler, 1997), it is likely that culture will continue to play an important role in IB research for the coming years.
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