Identifying and Mapping the Scientific Landscape of Contemporary International Marketing Studies: Themes, Concepts and Relationships

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ABSTRACT

The aim of this research was to explore the theoretical essentials of knowledge production in international marketing reports from a dataset of 682 journal articles. A computer-aided co-citation network analysis of 15,960 citations, meticulously voted on by more than 10,000 authors, traces the historical timeline of the developmental paths and paradigm shifts in international marketing studies. We ranked overall first-author, article and journal citations for the ten-year period 1997–2006 and mapped this co-citation network of knowledge by analyzing the centrality of the top 30 articles during this period. This study not only traces international marketing development more clearly but also offers potentially useful information for researchers in planning their future studies in this area.

Key Words: international marketing, network of knowledge, co-citation analysis

當代國際行銷研究之科學景觀：理論、觀念與關係

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摘　要

本研究之目的為探索當代內含在國際行銷研究文獻之知識結構。研究方法係採用書目計量學和社會網路分析技術，主要以 1997 年至 2006 年發表在 SSCI 及 SCI 期刊有關國際行銷議題的研究文獻為對象，總計分析 682 篇文獻及 15,960 筆參考文獻資料。研究結果呈現有關當代國際行銷研究領域中最具影響力的過去理論基礎；更進一步描繪出未來國際行銷領域的泛知識網路及闡明其研究領域的關係及發展。

關鍵詞：國際行銷，知識網路，共引用文

I. INTRODUCTION

The globalization of the marketplace and how this process is shaping the cultural characteristics of people around the world is arguably the most critical issue facing international marketing managers today (Cleveland & Laroche, 2007). Consequently, international marketing (IM) studies have addressed a wide range of problems and issues inherent in firms' involvement in and commitment to foreign market operations. This paper examines the development of contemporary IM studies between 1997 and 2006. A review of the literature reveals several broad streams of research that have been pursued (see review articles by Malhotra, Wu, & Whitelock, 2005; Werner, 2002), for example, one stream of studies has focused on exporting issues including export initiation, barriers, the development process, distribution channels, marketing strategy, and competitive advantage and performance (e.g., Leonidou & Katsikeas, 1996; Leonidou, Katsikeas, & Samiee, 2002; Zou & Stan, 1998). The second research stream concerns international joint ventures (IJVs), strategic alliances, and networks of collaborative arrangements (e.g., Aulakh, Kotabe, & Sahay, 1996; Dyer & Chu, 2000; Johnson, Cullen, Sakano, & Takenouchi, 1996). The third stream of research addresses globalization phenomena and examines marketing strategies and policies of multinational corporations, with particular emphasis on the issue of standardization versus customization and subsidiary-headquarter interactions (e.g., Hewett & Bearden, 2001; Jain, 1989; Samiee & Roth, 1992). The fourth stream of research focuses on country-of-origin effects and international consumer behavior issues (e.g., Balabanis & Diamantopoulos, 2004; Papadopoulos & Helsop, 1993; Samiee, Shimp, & Sharma, 2005).

In international marketing, the relevant assets and skills of a multinational firm include the firm's international experience, size, and ability to develop differentiated products (Dunning, 1988; Agarwal & Ramaswami, 1992). Lim, Thomas, and Kim (1993) indicated firms' competitive advantages influence their international marketing strategies. Additionally, foreign direct investment (FDI) is a long-term endeavor in which relationships established within a foreign country provide a foundation for repeated transactions between the headquarters and the subsidiaries, between the subsidiaries and local firms, and between affiliates in different countries (Chen, T. J., Chen, H., & Ku, 2004). Consequently, firms' capabilities profoundly influence their choice of marketing strategies and entry modes (Aaker, 1988; Stopford & Wells, 1972; Dunning, 1988; Kim & Hwang, 1992) and various issues along

globalization of marketing (Chen, 1999)[1]. Albaum and Peterson (1984) provided the following definition of international marketing (IM): "marketing activities relevant to products or services that directly or indirectly cross national borders" (p. 162). This definition offers the benefit of being succinct and highlights the distinction between international marketing and marketing in general; in other words, it highlights the cross-national nature of IM. In the current study, we employ an author co-citation analysis (ACA) (Garfield, 1963; Small, 1974) to objectively examine the structure of citation relationships among IM studies and to map the IM field with a network approach to explore the importance of authors and to identify other peripheral but influential articles that deserve attention for future exploration.

Using the network approach, the current paper chronicles the results of IM research journals from a database developed from the citations in Social Science Citation Index (SSCI) and Science Citation Index (SCI) over a ten-year period, 1997-2006. Based on the author co-citation analysis of ten years of research in IM, this paper first reports the relative academic importance of authors, articles, and journals (in terms of number of citations) in the IM literature, and then points out the historical stages in the field development, This paper further maps the co-citation networks and reveals the centrality of top 30 articles in ten-year, and predicts the future directions of this field. Specifically, this paper focuses on the following three objectives: (1) ascertain important papers and books in IM based on objective citation analyses; (2) identify the underlying network among scholars and articles in the IM field; (3) identify different streams of studies to provide future directions of this field. To address these issues, we will firstly introduce the invisible network knowledge (INK) theory, which will be used to guide our ACA; secondly, we will use INK approach to examine the relative contributions of authors and articles to the field of IM; thirdly, we use network analysis technique to map the network among authors and articles to evaluate the disciplinary trends in IM. Finally, we provide a discussion of our analyses and provide some directions for future studies in this field.

II. THEORY BUILDING OF THE INVISIBLE NETWORK OF KNOWLEDGE

Knowledge is power, and knowledge itself is simply the output of a learning (or knowing) process, similar to how plans are the output of a planning process. It is a complex concept that, before it was presented, it is stored in the learner's mind

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[1] See more related review article by Chen (1999).

and is unobservable to the eye of voters (Doyle, Authurs, McAulay, & Osborne, 1996). Since people harbor their own views on knowledge, there can be a lack of clarity concerning specific actions to be taken in the quest for knowledge. Therefore, there is a need for a channel that helps people to visualize knowledge and develop and maintain a common visualization and representation (Price, 1965). Gibbons, Limoges, Nowwotny, Schwartzman, Scott, and Trow (1994) hold that the terms of science and knowledge are often interchangeably used or combined to form scientific knowledge and the scientific knowledge is usually presented in journal articles, books, and monographs as mentioned above. These pieces of knowledge in a particular field are developed based on each other and connected with each other through citations and co-citations. These citations and co-citations form a knowledge network within which there are subsystems or clique networks connected with each other; and this knowledge network is also a part of a broader and more general system (Chandy & William, 1994). From this network perspective, the knowledge network of any single discipline, such as IM, could be viewed as an offshoot of the interaction of its foundational domains, such as marketing strategy, cross-national market segments, internationalization strategy, consumer behaviors and standardized advertising, which are well-established subsystems of IM (i.e., different streams of IM studies). We believe that further development of the IM research can benefit from a network analysis, i.e., author citation and co-citation analysis, of the field. This analysis will help us to combine knowledge gained from previous studies and to explore the nature, potential uses, and evolution of the field over time.

1. Concept of Invisible Network of Knowledge (INK)

Networks have long been used in engineering and science for managing complex systems where they commonly refer to systems (webs) of interlinked subsystems (or components), each of which is optimally designed to effectively perform a designated task. Each subsystem is highly specialized and generally draws on high quality (Jones, Binn, & Pendlebury, 1996) of accumulated knowledge and IM. By the optimal interlinking of these subsystems, a considerably broader and more complex range of functions and capabilities than that of individual subsystems is realized. Theoretically, the system as a whole may not be truly optimal; however, it can be adequately effective and flexible to execute tasks significantly better than its individual parts.

In the knowledge creation world, network concept has also been used to identify the role of invisible colleges in knowledge acquisition, which can be traced back to Price's (1963; 1965) proposal. He opined that research networks (made up of linkages connecting researchers with each other) link

scholars form invisible colleges working in a research area through such informal media of communication as telephone calls, conversations at professional meetings, and preprint distributions. Mullins (1972) also corroborated Price's view and stated that researchers are stimulated by relatively small groups of colleagues working on the same issues and building on each other's work. Francis and Peter (1993) proposed that invisible colleges can be beneficial to a researcher in the following aspects: (1) identifying colleagues working on the same or related areas, (2) acquiring the knowledge from peers and enquiring about relevant topics in person or through the literature, and (3) formulating answers to these questions and communicating views via professional media, such as journals. These journals (particularly famous or major journals in each discipline) function elegantly and smoothly in the academic world, just like the market system works in the economic world, which was described as an "invisible hand" by the father of economics, Smith (1976), to influence the locus of development and diffusion of knowledge in each academic field.

Based on the above understandings, Etemad and Lee[2] (2003) first metaphored and analogized a knowledge network as an airline map, and defined the network in knowledge creation as an "interlinked" web of "knots and nodes" that is "loaded" with "concentration of resources" scattered over a landscape that constitutes the domain of that subject. Later on, Ma, Lee, and colleagues (Ma, Lee, Lee, & Yu, 2007; Ma & Wang, 2007) created a new concept of "an invisible network of knowledge production in a discipline (an INK Model)", which will be used for this study. In addition to the advantages of the traditional concept of a knowledge network, the INK is a more comprehensive model developed by co-citation network analysis to represent the invisible college in a field. An INK of a field will help us to gain an initial understanding of the nature, potential uses, and the evolution of that field over time. It can be viewed as a repository of broad and complex sets of expertise, experience, and accumulated knowledge of various aspects; further, it has certain key nodes and is enhanced by many linkages, from which both internal and external members can draw. Therefore, an INK is formed after (1) "nodes and knots" become loaded with knowledge resources (i.e., articles, authors, or journals), (2) these "nodes and knots" develop ties and linkages among themselves through co-citations (Podolny, Stuart, & Hannan, 1996), and (3) these ties synergistically

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[2] In Science in Action, Latour-B used discovery of unknown island and defined knowledge as familiarity with this island over time. Etemad and [Mc] Lee were inspired by KLM advertisement of airline map to metaphor knowledge network as airline map.

amalgamate their resources, which in turn results in strengthening, broadening, and deepening the functional capabilities of both the network and its members (the research field).

A given INK embodies both the knowledge content of its nodes and the inter-linkages among the nodes within its. It can be viewed as the organized and the de facto representation of the knowledge content of a field. Chandy and William (1994) maintain that any localized knowledge network (in this study, the authors replaced knowledge network with INK) is a part (or subsystem) of a broader and more general system. From this perspective, the INK-IM, as an example of an emerging discipline with established origins, and which can be viewed as an offshoot of the interaction of its foundational domains. In the case of IM research these foundation disciplines include internationalization strategy, cross-national market segments, marketing strategy, consumer behaviors and standardized advertising. In the current study, we will use the INK to develop a network portrait of IM field in order to reveal a comprehensive and objective understanding of the evolvement of this field.

III. RESEARCH METHODOLOGY

Based on the objective of this study, the authors explored the intellectual structure of international marketing between 1997 and 2006. This study chose this time period because the international marketing studies of the last decade represent the most important and the most updated research in international marketing area.

1. Identification of Databases and Design of Search Processes

IM research field builds its structure on its constituent disciplines. Most of these disciplines, such as cross-national market segments, internationalization strategy, marketing strategy, consumer behaviors and standardized advertising as mentioned previously, are well established and have their own publication media. In the scenario marked by an absence of well-established media (a particular journal designated for IM exclusively), the researchers in this field published their work in the publication avenues of their own disciplines, which posed some challenges for this research. Most IM-related developments advanced considerably beyond what was drawn from its constituent disciplines, with the integration and coordination of raw materials from other different disciplines for the purposes of application and development. This phenomenon widened the field for search of raw materials in IM and rendered the identification of boundary conditions extremely difficult. To deal with these challenges, we used a key-word search approach to examine the SSCI and SCI for IM-oriented raw materials to identify our sources of databases. Therefore, the results reported in this study are not limited to any specific field or area, which confirm the true interdisciplinary nature of the IM field.

With the identification of the potential databases containing IM-related raw materials, appropriate search procedures needed to be adopted. Historically, three search strategies could be used to build the databases for citation and co-citation analysis: the key-word approach (using keyword to search relevant literature), the journal approach (using all publications from certain journals for certain area as boundaries to collect relevant raw materials), and the title approach (using the titles of publications to identify raw materials). We adopted key-word search strategy as mentioned above to deal with the challenges of dispersed publications of IM studies in a variety of avenues. To acquire published studies related to IM, we searched the SSCI and SCI online with all possible derivatives and combinations of the following twelve terms: international business, international marketing, international brand/branding, international advertising, global business, global marketing, global brand/branding, global advertising, world business, world marketing, world brand/branding, world advertising. The reason to include these many key words is that the work of IM has been expended to a variety of terms as listed above. In order to reflect these changes, we coauthors have discussed with each other and came up with this comprehensive (not necessarily exclusive) list of terms related to IM studies. This search strategy yields 682 journal articles with 15,960 citations.

2. Data Set and Co-citations Analyses

Citations are considered to be an authentic and reliable indicator of scientific communication (Small, 1978; Garfield, 1979) and a basis for the identification of "invisible colleges," i.e., research networks that refer to each other in their documents without being linked by formal organizational ties (Price, 1965; Crane, 1972; Lievrouw, 1989). Co-citation is frequency with which two documents or authors are cited together by more recent papers (Alger, 1996). The basic assumption behind co-citation is that documents that are frequently cited together by succeeding works are related in subject matter. The essential notion is that the more frequently the two publications are co-cited, the stronger is their linkage. In co-citation analysis, the data compiled are counts of the number of times two works-individual documents, authors' oeuvres, and/or journal titles-are jointly cited in later publications (McCain, 1991). Therefore, co-citation analysis has been considered an efficient method to measure relationships and linkages between authors, papers, and

journals to describe mainstream, or at least the leading edge, in science (Tsay, Xu, & Wu, 2003).

To start our analyses, based on the data set of 682 articles and 15,960 citations published between 1997 and 2006, we developed graphs to reflect the development of the IM studies field by draw the numbers of articles (and citations) from this data set against the years (see Figure 1 and 2). In Figure 1 and 2, it is clear that the field of IM studies has been developed dramatically in the past ten years.

In these analyses, we employ bibliometrics (Etemad and Lee, 2003) to accomplish the following goals: (1) map the co-citation networks of the IM research at ten years; (2) examine the centrality (the influence) and the structure holes (the connection with different fields) of individual articles on IM research; and (3) assess the impact of a variety of research journals on IM research, which is a natural by-product of this analysis. The general procedure for co-citation analysis include four steps: (1) compilation of a raw co-citation matrix; (2) conversion of the data matrix to a correlation matrix; (3) analysis of the correlation matrix through non-metric multidimensional (MDS), cluster analysis, and/or network analysis; and (4) interpretation and validation of the results (Alger, 1996; McCain, 1991). The software we used to conduct these analyses is Ucinet 6.0 for Windows (Borgatti, Everett, & Freeman, 2002). The results are described below.

IV. RESULTS

The results list the highly cited authors, books and journal articles, and the academic journals in the field of IM research. As mentioned above, we will report our analysis
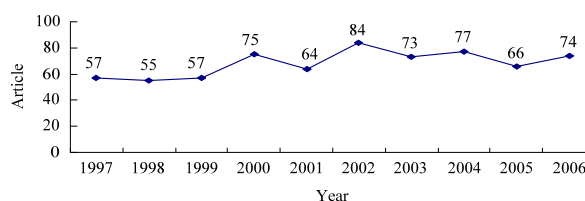

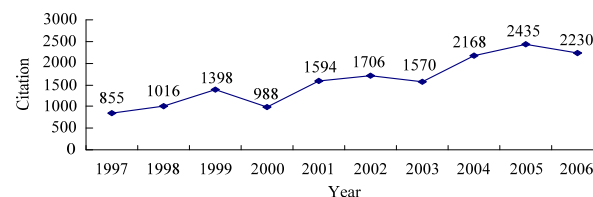**Fig. 1. Source sampling distribution of article samples in IM**

Fig. 2. Source sampling distribution of citation samples in IM

results in the same fashion by presenting them between 1997 and 2006.

1. Citation and Co-citation Frequency

First of all, we analyzed all of the references and then selected the best cited 30 authors (the first author of articles) in the past 10 years (see Table 1 for the list; the years beside the scholars' names are the publication years of his/her representative and the mostly cited study). Second, we selected about 30 (cutting off at 9 citations) most influential articles/books based on their citation rankings for 10 years. We listed these articles in Table 2. Third, for top journals, we used the same strategy to select top 34 (cutting off at 41 citations) journals that published papers on IM. Table 3 shows the top 34 journals.

Table 1. Top 30 scholars selected for the co-citation analysis from 1997 to 2006 (citation frequency ≥ 10)

Author	Citations	Author	Citations
Hofstede G (Hofstede, 1980)	53	Buckley PJ (Buckley & Casson, 1976)	13
Douglas SP (Douglas & Wind, 1987)	40	Morgan RM (Morgan & Hunt, 1994)	13
Cavusgil ST (Cavusgil & Zou, 1994)	34	Szymanski DM (Szymanski , Bharadwaj, & Varadarajan, 1993)	13
Levitt T (Levitt, 1983)	33	Ferrell OC (Ferrell & Gresham, 1985)	12
Porter ME (Porter, 1986)	33	Hall ET (Hall, 1976)	12
Johanson J (Johanson & Vahlne, 1977)	32	Buzzell RD (Buzzell, 1968)	11
Anderson JC (Anderson & Narus, 1990)	22	Kohli AK (Kohli & Jaworski, 1990)	11
Backus Dk (Backus et al., 1992)	20	Moorman C (Moorman, Deshpande, & Zaltman, 1993)	11
Bartlett CA (Bartlett & Ghoshal, 1989)	19	Onkvisit S (Onkvisit & Shaw, 1987)	11
Yip GS (Yip, 1989)	19	Roth MS (Roth, 1995)	11
Jain SC (Jain, 1989)	18	Tse DK (Tse, Belk, & Zhou, 1989)	11
Samiee S (Samiee & Roth, 1992)	18	Wind Y (Wind, 1986)	11
Quelch JA (Quelch & Hoff, 1986)	16	ArmstrongJS (Armstrong & Overton, 1977)	10
Vernon R (Vernon, 1966)	16	Baxter M (Baxter & Crucini, 1995)	10
Inkpen AC (Inkpen & Beamish, 1994)	15	De George RT (De George, 1993)	10

Table 2. Top 30 articles selected for the co-citation analysis from 1997 to 2006 (citation frequency ≥ 9)

Articles and Books	Citations
Hofstede-G-1980-Cultures' consequences	35
Levitt-T-1983-The globalisation of markets	33
Bartlett-CA Ghoshal-S-1989-Managing across border	19
Jain-SC-1989-Standardization of international marketing strategy	18
Johanson-J Vahlne-JE-1977-The internationalization process of firm	18
Samiee-S Roth-K-1992-The influence of global marketing standardization on performance	18
Cavusgil-ST Zou-SM-1994-Marketing strategy-performance relationship	17
Quelch-JA Hoff-EJ-1986-Customizing global marketing	16
Douglas-SP Wind-Y-1987-The myth of globalization	15
Inkpen-AC Beamish-PW-1994-An Analysis of Twenty-Five Years of Research in the JIBS	15
Backus-Dk et al-1992-International Real Business Cycles	14
Porter-ME-1990-The competitive advantage of nations	14
Morgan-RM Hunt-SD-1994-The commitment-trust theory of relationship marketing	13
Szymanski-DM et al-1993-An analysis of the market share-profitability relationship	13
Douglas-SP Craig-CS-1989-Evolution of global marketing strategy	12
Yip-GS-1989-Global strategy...in a world of nations?	12
Buzzell-RD-1968-Can you standardize international marketing?	11
Kohli-AK Jaworski-BJ-1990-Market orientation	11
Onkvisit-S Shaw-JJ-1987-Standardized international advertising	11
Vernon-R-1966-International investment and international trade in the product life cycle	11
Wind-Y-1986-The myth of globalization	11
Armstrong-JS Overton-TS-1977-Estimating nonresponse bias in mail surveys	10
Baxter-M Crucini-MJ-1995-Business cycles and the asset structure of foreign trade	10
De George RT-1993-Competing with Integrity in International Business	10
Porter-ME-1986-Competition in global industries	10
Albaum-G Peterson-RA-1984-Empirical research in international marketing	9
Porter-ME-1980-Competitive strategy	9
Prahalad CK Doz YL-1987-The Multinational Mission	9
Toyne-B Nigh-D-1997-International Business	9
Walters-PGP-1986-International marketing policy	9

Table 3. Top 34 main core journals of international marketing: Impact factors and reference distribution from 1997 to 2006 (Citation Frequency ≥41)

Journal	Fq	Weight (%)	Accum. (%)	Journal	Fq	Weight (%)	Accum. (%)
J MARKETING	586	3.7	3.7	AM ECON REV	79	0.5	21.3
J INT BUS STUD	538	3.4	7.1	ADMIN SCI QUART	64	0.4	21.7
STRATEGIC MANAGE J	266	1.7	8.7	INT J RES MARK	61	0.4	22.1
HARVARD BUS REV	232	1.5	10.2	SLOAN MANAGE REV	61	0.4	22.5
J MARKETING RES	201	1.3	11.5	J MANAGE	56	0.4	22.9
J CONSUM RES	187	1.2	12.6	CALIF MANAGE REV	55	0.3	23.2
J BUS ETHICS	174	1.1	13.7	ORGAN SCI	51	0.3	23.5
INT MARKET REV	163	1.0	14.7	CULTURES CONSEQUENCE	49	0.3	23.8
ACAD MANAGE REV	158	1.0	15.7	MANAGE INT REV	49	0.3	24.1
ACAD MANAGE J	124	0.8	16.5	IND MARKET MANAG	46	0.3	24.4
J ACAD MARKET SCI	113	0.7	17.2	J MONETARY ECON	45	0.3	24.7
J INT MARKETING	112	0.7	17.9	J PERS SOC PSYCHOL	45	0.3	25.0
J ADVERTISING RES	107	0.7	18.6	J MANAGE STUD	44	0.3	25.3
J ADVERTISING	98	0.6	19.2	MANAGE SCI	43	0.3	25.5
COLUMBIA J WORLD BUS	96	0.6	19.8	SEMIOTICA	42	0.3	25.8
J BUS RES	84	0.5	20.3	INT J ADVERTISING	41	0.3	26.0
EUR J MARKETING	83	0.5	20.8	J CROSS CULT PSYCHOL	41	0.3	26.3

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Just take a glance at the article numbers published in the last 10 years (see Figure 1), it is obvious that the development of IM field has enjoyed a long history and experienced an exponential development in the last decade or so. According to the results of Figure 1 and Table 1, the INK of IM in a given time period emerges as clear as twinkling stars in the cloudy sky of knowledge that symbolizes the historical timeline. Influential authors appeared in the last 10 years. Between 1966 and 1980, Hofstede (1980), Johanson and Vahlne (1977) were the major scholars; between 1983 and 1990, Douglas and Wind (1987), Porter (1986), Levitt (1983), Anderson and Narus (1990), Bartlett and Ghoshal (1989), Yip (1989), and Jain (1989) emerged as the brightest stars, and along the historical timeline, in 1992-1995, Cavusgil and Zou (1994), Backus, Kehoe, and Kydland (1992), Samiee and Roth (1992) were the most prominent researchers.

2. Network Analysis of Articles

To further explore the pattern of development in the IM field, using Ucinet 6.0, we mapped the co-citation networks of the top 30 articles in ten-year (see Figure 3) and analyzed the centrality of each article in the respective network (see

Table 4). We used "degree" centrality and "betweenness" centrality to measure the position attribute of each article (Freeman, 1979). Considering each article as a node in the co-citation network, the degree centrality means a count of the number of paths at length 1 that emanate from a particular node reaching to other alternative nodes; the betweenness centrality is number of times that any alternative node needs a particular node in order to reach any other node (Borgatti, Carley, & Krackhardt, 2006; Freeman, 1979). These two measures highly correlate with each other (Bonacich, Oliver, & Snijders, 1998). In the current analysis, we used both measures to measure the centrality of each article in the co-citation network of IM studies, but in the following discussion, we will focus on betweenness centrality only. In sociology, high betweenness centrality means that the individual positioned in the high-centrality node of a communication network have more control of information flow and more people need this particular individual to reach or contact another person in the network (Freeman, 1979). A high betweenness (and degree) of centrality of a particular article in a co-citation network indicates that this article has been co-cited with more other

Fig. 3. Top 30 of article co-citation map (1997-2006)

Table 4. Network analysis results for influential articles/books (1997-2006)

Article and Book	Degree	Betweenness	Article and Book	Degree	Betweenness
Levitt-T-1983	24	30.573	Cavusgil-ST Zou-SM-1994	22	2.856
Baxter-M Crucini-MJ-1995	3	28.000	Quelch-JA Hoff-EJ-1986	22	2.808
Douglas-SP Wind-Y-1987	23	26.704	Porter-ME-1990	17	2.559
Hofstede-G-1980	25	25.625	Prahalad CK Doz YL-1987	8	2.520
Johanson-J Vahlne-JE-1977	23	14.949	Kohli-AK Jaworski-BJ-1990	11	2.236
Morgan-RM Hunt-SD-1994	16	8.511	Szymanski-DM et al-1993	22	1.847
Bartlett-CA Ghoshal-S-1989	21	8.465	Wind-Y-1986	22	1.847
Armstrong-JS Overton-TS-1977	21	8.331	Jain-SC-1989	21	1.416
Albaum-G Peterson-RA-1984	20	8.050	Buzzell-RD-1968	21	1.416
Vernon-R-1966	18	7.001	Walters-PGP-1986	21	1.177
Porter-ME-1986	23	6.650	Inkpen-AC Beamish-PW-1994	5	0.917
Yip-GS-1989	22	4.221	De George RT-1993	4	0.881
Porter-ME-1980	20	3.632	Douglas-SP Craig-CS-1989	19	0.768
Samiee-S Roth-K-1992	23	3.430	Onkvisit-S Shaw-JJ-1987	16	0.338
Toyne-B Nigh-D-1997	6	3.275	Backus-Dk et al-1992	1	0.000

different articles in the field than those ones with low centrality. In other word, the centrality represents the importance of an article in the IM literature and the outreach of this article to peripheral studies in the field.

A glance at Figure 3 tells us that along with the development of IM literature, the co-citation of top 30 articles has become denser and articles have become more connected with each other from 1997 to 2006, further confirming our differentiation of 10 years and indicating an increasing awareness of the studies between scholars in this field; the field has become more concentrated. From Table 4, the betweenness centrality has become more evenly distributed among articles in the 10 years. More specifically, one article (Levitt, 1983) stood out as the most influential and outreached article in the field followed by Baxter and Crucini (1995), Douglas and Wind (1987), and Hofstede (1980), and the range of betweenness centrality number is from 0 to 30.57, indicating that more nodes will need these four articles to reach other nodes, or the top articles are cited by different articles that have no connections in the co-citation network.

V. DISCUSSION OF RESULTS

As revealed by our co-citation network analysis, the IM research has experienced rapid development and has become an independent research field during the last decade. In the following, we will briefly review the articles with top betweenness centrality to describe the activities in the last decade.

The four top centrality articles at the last decade are basically different and cover different aspects of international marketing. Among the four articles, one is a theoretical paper

in the globalization of markets (Levitt, 1983). The point of the global strategy is to produce a standardized product globally and sell them in the same way. Levitt argued the multinational and the global corporation are not the same thing. The multinational corporation operates in a number of countries, and adjusts its products and practices in each-at high relative costs. The global corporation operates with resolute constancy-at low relative cost-as if the entire world (or major regions of it) were a single entity, it sells the same things in the same way everywhere.

The second article is one which empirically explored the business cycles and the asset structure of foreign trade (Baxter & Crucini 1995). Baxter and Crucini argued that the international real business cycle (IRBC) model with incomplete markets solves the quantity anomaly because of an important differential wealth effect. In the complete markets model, a rise in home productivity generates a small increase in wealth at home and a large increase in wealth abroad. This arises because complete international only a small increase in wealth abroad. This arises because complete financial markets do not ensure perfect risk sharing. The result is that home and foreign consumption fluctuations need not be highly correlated.

A third foundation article in the field which has discussion about the myth of globalization, such as the traditional perspective on international marketing strategy, the global standardization philosophy, requisite conditions for global standardization, and operational constraints to effective implementation of a standardization strategy (Douglas & Wind, 1987). Douglas and Wind focus on the economic benefits and the ease of administering standardized marketing programs make this strategy an attractive choice for multinational

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corporations.

Finally, the last article is a book of cultures' consequences: international differences in work-related values (Hofstede, 1980). Hofstede identifies two dimensions of national culture that can be related to consumer involvement: uncertainty avoidance and masculinity. Hofstede's national-cultural dimensions are widely accepted and have been used by marketing researchers to locate and compare countries (e.g., Dawar & Parker, 1994; Steenkamp & Baumgartner, 1998). For example, Dawar and Parker (1994) find that the relative importance of brand name, price, physical appearance and retailer reputation as signals of quality for consumer products do not change across cultures.

Other articles discussion of international marketing, the key consideration is whether the marketing strategy should be standardized or adapted to the conditions of the foreign market (Douglas & Craig, 1989). The degree of marketing adaptation versus standardization is a function of product, industry, market, organization, and environmental characteristics (Buzzell, 1968; Cavusgil, Zou, & Naidu, 1993; Jain, 1989; Walters, 1986). Standardization (as opposed to adaptation) of components of the strategic resource mix has long been recognized as a method of reducing the transaction costs associated with foreign market entry (Jain, 1989; Samiee & Roth, 1992; Szymanski et al., 1993). Additionally, Jain (1989) points out that a standardization strategy across markets should be applied if a firm occupies the same competitive position in these markets (e.g., a "leadership" position in terms of market share) or if it competes with the same companies with similar shared positions across market.

Additionally, global competition is present in almost every market in the largest economies in the world (Yip, 1989). The national character concept is important to research in international marketing because it offers a mechanism for explaining national differences in marketing phenomena. It also promises a framework for the integration of individual cross-cultural studies. Market characteristics are another major antecedent of product adaptation strategy. They include culture, political, legal, and economic similarities, and the degree of difference in consumer values and lifestyles between the home and foreign markets (Cavusgil et al., 1993). However, international advertising campaigns often ignore cultural values in foreign markets, as multinational firms continue to opt for a cost-effective, standardized advertising message. Thus, it is understandable that international advertisers remain concerned with whether to standardize or to adapt their advertising program across national markets (Agrawal, 1995). Localization strategies for advertising in international markets (strategies incorporating local or national ideals and norms) have seen

their share of supporters and critics. Supporters believe that differences among local regions are substantial and deserve different types of advertising (Douglas & Wind, 1987; Wind, 1986).

We also ranked the most influential authors and journals in the field of IM. As mentioned previously, these authors' publications are cornerstones of the filed that lead the IM studies to develop in a variety of directions. From the Table 3 of top journals in ten-year, we can see that studies in IM have been published in top-tier journals and the major international-oriented journals, such as Journal of Marketing, Journal of International Business Studies, Strategic Management Journal, Harvard Business Review, Journal of Marketing Research and Journal of Consumer Research have become the major vehicles for IM research.

1. Implications and Future Directions

In accordance to the metaphor of choice of citations as an assiduous voting process (Doyle et al., 1996), a meticulous manual and computer-aided analysis of 15,960 citations resulting from the votes of ten-thousands of authors traces the development paths and paradigms of IM studies in this paper. Instead of doing a detailed review of each article in our database, we used co-citation network analysis technique to map the evolution of the IM field. There have been recent studies in the culture value field (Schwartz, 1994) that can be used to facilitate studies in IM field. It would be interesting to see how value congruence or cultural distance measured by the newly developed cultural values would influence international consumer behavior. As is pointed out by Cleveland and Laroche (2007), international consumer research fundamentally focuses in one of two areas: (1) understanding consumer differences from the perspective of cultural, social, economic, and other marketing environment elements; and (2) the search for common groups of consumers across countries, for international market segmentation purposes. The latter focus suggests the possibility of the existence, or imminent emergence, of global consumers. Additionally, online advertising is a new service in the international business and marketing industry. The application of the web has become one of the most important issues in international marketing and advertising research. Consequently, we believe that future studies should focus on the cross-cultural, online advertising and cross-national consumer behavior research.

2. Limitations

As is pointed out by White and McCain (1998), the author co-citation analysis has its limitations. First, the citation image reflects only the use of a scholar's work by subsequent writers (including the scholar him-/her-self). Second, the author

co-citation analysis only enables one to see a literature-based counterpart of one's own overview of a discipline. In other words, the author co-citation analysis only allows one to have an overview of a given field based on its literature. An in-depth analysis of the research contents of the field is not available from the author co-citation analysis. Thirdly, the publication process is overwhelmed with time lags; author co-citation analysis shows the way a field looked some time ago, not necessarily how it looks today or will look tomorrow. Finally, computational limits constrain this analysis to authors only with citation records of a certain magnitude and those authors with fewer citations are left out in the analysis. Therefore, author co-citation analysis of IM literature may only identify highly co-cited authors and display their interrelationships from the citation record. Other approaches, especially qualitative analysis and reviews, should be used for an in-depth and comprehensive examination.

In our study, we only reviewed briefly IM studies that appeared on our top centrality list of the last decade. Due to the limitation of our database (we only used SSCI and SCI); the results of our study should be taken cautiously. Moreover, due to the time lag, many recent articles did not show high centrality in our co-citation network. Our study offers more of a historical review of the development of IM field, rather than judging the importance of different authors or articles. The omission of the recent works is not due to their lack of importance, but purely our methodological limitations.

VI. CONCLUSIONS

The research in IM plays a significant role in the development of international business management literature and provides important guidelines for the multinational corporations (MNC). In order to understand the state of IM research and the linkages between IM studies, this paper provides a co-citation network analysis to map the evolving patterns of the IM field in ten-year. While there have been many review articles with different methodologies (literature review and meta-analytic review) as discussed previously. The current study contributes to the field by adopting the INK model to map the underlying structure of co-citations to reveal the patterns of development. We not only present the citation rankings of ten years, but also analyze the centrality positions of different articles in ten-year.

This study constructs the INK of IM for the period between 1997 and 2006. In addition, it discusses the key nodes or most important articles in this phase. These nodes and linkages provide considerable knowledge resources for new researchers who desire to study the disciplines related to IM. This study identifies the most popular and highly cited journal articles, books, and researchers in the field of IM. The result derived from citations can provide the direction of research in IM.

The contribution of this paper is to provide a valuable research direction in the IM and propose an objective and systematic mean of determining the relative importance of different knowledge nodes in the development of the IM field. Useful value added is offered by this study, not only because it is the first study to apply bibliometric techniques to IM research literature, but also because it complements and improves the findings of other studies that have approached the subject from the qualitative perspective.

REFERENCES

Aaker, D. A. (1988). *Strategic market management* (2nd ed). New York: John Wiley & Sons.

Agarwal, S., & Ramaswami, S. N. (1992). Choice of foreign market entry mode: Impact of ownership, location, and internalization factors. *Journal of International Business Studies*, *23*(1), 1-27.

Agrawal, M. (1995). Review of a 40-year debate in international advertising: Practitioner and academician perspectives to the standardization/adaptation issue. *International Marketing Review*, *12*(1), 26-48.

Alger, J. (1996). Can RANK be used to generate a reliable author list for co-citation studies? *College & Research Libraries*, *57*(6), 567-574.

Anderson, E., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working relationships. *Journal of Marketing*, *54*(1), 42-58.

Aulakh, P. S., Kotabe, M., & Sahay, A. (1996). Trust and performance in cross-border marketing partnerships: A behavioral approach. *Journal of International Business Studies*, *27*(5), 1005-1032.

Balabanis, G., & Diamantopoulos, A. (2004). Domestic country bias, country-of-origin effects, and consumer ethnocentrism: A multidimensional unfolding approach. *Journal of the Academy of Marketing Science*, *32*(1), 80-95.

Bonacich, P., Oliver, A., & Snijders, T. A. B. (1998). Controlling for size in centrality scores. *Social Networks*, *20*(2), 135-141.

Borgatti, S. P., Carley, K. M., & Krackhardt, D. (2006). On the robustness of centrality measures under conditions of imperfect data. *Social Networks*, *28*, 124-136.

Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002). *Ucinet 6 for Windows*. Harvard: Analytic Technologies.

Cavusgil, S. T., Zou, S., & Naidu, G. M. (1993). Product and promotion adaptation in export ventures: An empirical

investigation. *Journal of International Business Studies*, *24*(3), 479-506.

Chandy, P. R., & William, T. G. F. (1994). The impact of journals and authors on international business research: A citation analysis of JIBS articles. *Journal of International Business Studies*, *25*(4), 715-728.

Chen, H. (1999). International performance of multinationals: A hybrid model. *Journal of World Business*, *34*(2), 157-170.

Chen, T. J., Chen, H., & Ku, Y. H. (2004). Foreign direct investment and local linkages. *Journal of International Business Studies*, *35*, 320-333.

Cleveland, M., & Laroche, M. (2007). Acculturaton to the global consumer culture: Scale development and research paradigm. *Journal of Business Research*, *60*, 249-259.

Crane, D. (1972). *Invisible colleges: Diffusion of knowledge in scientific communities*. Chicago: University of Chicago Press.

Dawar, N., & Parker, P. (1994). Marketing universals: Consumers' use of brand name, price, physical appearance, and retailer reputation as signals of product quality. *Journal of Marketing*, *58*(2), 81-95.

Doyle, J. R., Authurs, A. J., McAulay, L., & Osborne, P. G. (1996). Citation as effortful voting: A reply. *Omega*, *24*(5), 603-606.

Dunning, J. H. (1988). *Explaining international production*. London: Unwin Hyman.

Dyer, J. H., & Chu, W. (2000). The determinants of trust in supplier-automaker relationships in the U.S., Japan, and Korea. *Journal of International Business Studies*, *31*(2), 259-285.

Etemad, H., & Lee, Y. (2003). The knowledge network of international entrepreneurship: Theory and evidence. *Small Business Economics*, *20*(1), 5-23.

Ferrell, O. C., & Gresham, L. G. (1985). A contingency framework for understanding ethical decision making in marketing. *Journal of Marketing*, *49*, 87-96.

Francis, W. W., & Peter, M. S. (1993). Research administrators as "Invisible College" facilitators. *SRA Journal*, *24*(4), 27-34.

Freeman, L. C. (1979). Centrality in social networks: Conceptual clarification. *Social Networks*, *1*, 215-239.

Garfield, E. (1963). Citation indexes in sociological and historical research. *American Documentation*, *14*, 289-291.

Garfield, E. (1979). Is citation analysis a legitimate evaluation tool? *Scientometrics*, *1*, 359-375.

Gibbons, M., Limoges, C., Nowwotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. London: Sage.

Hall, E. T. (1976). *Beyond culture*. New York, NY: Anchor Books.

Hewett, K., & Bearden, W. (2001). Dependence, trust, and relational behavior on the part of foreign subsidiary marketing operations: Implications for managing global marketing operations. *Journal of Marketing*, *65*(4), 51-66.

Johnson, J. L., Cullen, J. B., Sakano, T., & Takenouchi, H. (1996). Setting the stage for trust and strategic integration in Japanese-Us cooperative alliances. *Journal of International Business Studies*, *27*(5), 981-1004.

Jones, M. J., Binn, T., & Pendlebury, M. (1996). Judging the quality of research in business schools: A comment from accounting. *Omega*, *24*(5), 597-602.

Kim, W. C., & Hwang, H. (1992). Global strategy and multinations' entry mode choice. *Journal of International Business Studies*, *23*(1), 29-53.

Leonidou, L. C., Katsikeas, C. S., & Samiee, S. (2002). Marketing strategy determinants of export performance: A meta-analysis. *Journal of Business Research*, *55*(1), 51-67.

Leonidou, L., C., & Katsikeas, C. S. (1996). The export development process: An integrative review of empirical models. *Journal of International Business Studies*, *27*(3), 517-551.

Lievrouw, L. A. (1989). The invisible college re-considered. *Communication Research*, *16*(5), 615-628.

Lim, J. S., Thomas, W. S., & Kim, K. I. (1993). Determinants of international marketing strategy. *Management International Review*, *33*(2), 103-120.

Ma, Z., & Wang, Y. (2007). *An Invisible Network of Knowledge Production: 12 Years of Tourism Management Studies (1994-2005)*. Paper presented at the annual meeting of the Administrative Sciences Association of Canada (ASAC), Ottawa, Canada.

Ma, Z., Lee, Y., Lee, Y., & Yu, K. (2007). *An invisible network of knowledge production: 10 years of human resources management studies*. In J. R. Carrière (Chair), *50 years of Leadership in Management*. Proceedings of the annual meeting of the Administrative Sciences Association of Canada (ASAC), Ottawa, Canada.

Malhotra, N. K., Wu, L., & Whitelock, J. (2005). An overview of the first 21 years of research in the international marketing review. *International Marketing Review*, *22*(4), 391-398.

McCain, K. W. (1991). Mapping economics through the journal literature: An experiment in journal co-citation analysis. *Journal of the American Society for Information*

Science, *42*(4), 290-296.

Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing*, *57*(1), 81-101.

Mullins, N. C. (1972). The development of a scientific specialty. *Minerva*, *10*(1), 51-82.

Papadopoulos, N. G., & Heslop, L. A. (1993). *Product-country images: Impact and role in international marketing*. New York: International Business Press.

Podolny, J. M., Stuart, T. E., & Hannan, M. T. (1996). Networks, knowledge, and niches: Competition in the worldwide semiconductor industry. *American Journal of Sociology*, *101*, 1224-1260.

Price, D. J. D. S. (1963). *Little science, big science*. New York: Columbia University Press.

Price, D. J. D. S. (1965). Networks of scientific papers. *Science*, *149*, 510-515.

Roth, M. S. (1995). Effects of global market conditions on brand image customization and brand performance. *Journal of Advertising*, *24*(4), 55-75.

Samiee, S., Shimp, T. A., & Sharma, S. (2005). Brand origin recognition accuracy: Its antecedents and consumers' cognitive limitations. *Journal of international business studies*, *36*, 379-397.

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, *50*(4), 19-45.

Small, H. G. (1974). Multiple citation patterns in scientific literature: The circle and hill models. *Information Storage and Retrieval*, *10*, 393-402.

Small, H. G. (1978). Cited documents as concept symbols.

Social Studies of Science, *8*, 327-340.

Smith, A. (1976). *An inquiry into the nature and causes of the wealth of nations*. Oxford: Oxford University Press.

Steenkamp, J. B. E. M., & Baumgartner, H. (1998) Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research*, *25*(1), 78-107.

Stopford, J. M., & Wells, L. T. (1972). *Managing the multinational enterprise*. New York: Basic Book.

Tsay, M. Y., Xu, H., & Wu, C. W. (2003). Author co-citation analysis of semiconductor literature. *Scientometrics*, *58*(3), 529-545.

Tse, D. K., Belk, R. W., & Zhou, N. (1989). Becoming a consumer society: A longitudinal and cross-cultural content analysis of print Ads from Hong Kong, the people's Republic of China, and Taiwan. *The Journal of Consumer Research*, *15*(4), 457-472.

Werner, S. (2002). Recent developments in international management research: A review of 20 top management journals. *Journal of Management*, *28*(3), 277-305.

White, H. D., & McCain, K. W. (1998). Visualizing a discipline: An author co-citation analysis of information science, 1972-1995. *Journal of the American Society for Information Science*, *49*(4), 327-355.

Zou, S., & Stan, S. (1998). The determinants of export performance: A review of the empirical literature between 1987 and 1997. *International Marketing Review*, *15*(5), 333-356.

Appendix (Articles Used for Analyses)

Albaum, G., & Peterson, R. A. (1984). Empirical research in international marketing: 1976-1982. *Journal of International Business Studies*, *15*(1), 161-173.

Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, *14*(3), 396-402.

Backus, D. K., Kehoe, P. J., & Kydland, F. E. (1992). International real business cycles. *The Journal of Political Economy*, *100*(4), 745-775.

Bartlett, C. A., & Ghoshal, S. (1989). *Managing across border: The transnational solution*. Boston, MA: Harvard Business School Press.

Baxter, M., & Crucini, M. J. (1995). Business cycles and the asset structure of foreign trade. *International Economic Review*, *36*, 821-854.

Buzzell, R. D. (1968). Can you standardize international marketing? *Harvard Business Review*, *46*(6), 102-103.

Cavusgil, S. T., & Zou, S. M. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, *58*(1), 1-21.

De George R. T. (1993). *Competing with integrity in international business*. New York: Oxford University Press.

Douglas, S. P., & Craig, C. S. (1989). Evolution of global marketing strategy: Scale, scope and synergy. *Columbia Journal of World Business*, *24*(3), 47-59.

Douglas, S. P., & Wind, Y. (1987). The myth of globalization. *Columbia Journal of World Business*, *22*(Winter), 19-29.

Hofstede, G. (1980). *Cultures' consequences: International differences in work-related values*. Beverly Hills: Sage.

Inkpen, A. C., & Beamish, P. W. (1994). An analysis of twenty-five years of research in the Journal of International Business Studies. *Journal of International Business Studies*, *25*(4), 703-713.

Jain, S. C. (1989). Standardization of international marketing strategy: Some research hypotheses. *Journal of Marketing*, *53*(1), 70-79.

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, *8*(1), 23-32.

Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing*, *54*(April), 1-18.

Levitt, T. (1983). The globalisation of markets. *Harvard Business Review*, *61*(3), 92-102.

Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20-38.

Onkvisit, S., & Shaw, J. J. (1987). Standardized international advertising: A review and critical evaluation of the theoretical and empirical evidence. *Columbia Journal of World Business*, *22*(3), 43-55.

Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York: Free Press.

Porter, M. E. (1986). *Competition in global industries: A conceptual framework*. Boston: Harvard Business School Press.

Porter, M. E. (1990). *The competitive advantage of nations*. New York: Free Press.

Prahalad, C. K. & Doz, Y. L. (1987). *The multinational mission: Balancing local demands and global vision*. London: The Free Press.

Quelch, J. A., & Hoff, E. J. (1986). Customizing global marketing. *Harvard Business Review*, *64*(3), 59-68.

Samiee, S., & Roth, K. (1992). The influence of global marketing standardization on performance. *Journal of Marketing*, *56*(2), 1-17.

Szymanski, D. M., Bharadwaj, S. G., & Varadarajan, P. R. (1993). An analysis of the market share-profitability relationship. *Journal of Marketing*, *57*(3), 1-18.

Toyne, B., & Nigh, D. (1997). *International business: An emerging vision*. Columbia: University of South Carolina Press.

Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, *80*(May), 190-207.

Walters, P. G. P. (1986). International marketing policy: A discussion of the standardization construct and its relevance for corporate policy. *Journal of International Business Studies*, *17*(2), 55-69.

Wind, Y. (1986). The myth of globalization. *Journal of Consumer Marketing*, *3*(Spring), 23-26.

Yip, G. S. (1989). Global strategy... in a world of nations? *Sloan Management Review*, *31*(1), 29-41.