

# An overview of contemporary international human resource management studies

## Themes and relationships

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### Abstract

**Purpose** – The purpose of this paper is to identify the evolution of the intellectual structure of international human resource management (IHRM) studies and to propose a theory of an invisible network of knowledge (INK).

**Design/methodology/approach** – Researchers can also use this methodology to explore the knowledge network of their own fields so as to gain a vantage position with respect to their field and conduct seminal research.

**Findings** – The results help to profile the INK production in IHRM and provide important insights with implications for current and future research directions of IHRM studies for management scholars and practitioners.

**Originality/value** – This study examines the status of contemporary IHRM research over the last decade. This study examines the status of contemporary IHRM research over the last decade. With Social Sciences Citation Index citation data from the top IHRM journal, *International Journal of Human Resource Management*, this study used citation and co-citation analysis to identify the most important publications, scholars, and research themes in the IHRM area, and then mapped the intellectual structure of IHRM studies.

**Keywords** Co-citation analysis, Social network analysis, Data mining, Article co-citation matrix, International human resource management, Invisible network of knowledge

**Paper type** Research paper

### Introduction

International human resource has an important role in the global economy, and most companies are now engaged in interactions across national borders (Cheng and Lin, 2009). The past decade has seen a growth in research on international human resource management (IHRM), and thus produced an impressive array of IHRM-related studies. However, no study has examined how recent IHRM research has evolved, what the status of current IHRM studies is, and what the key research themes are. The objective of this study is therefore to provide IHRM researchers with an overview of contemporary IHRM-related publications in the last decade, and to map the intellectual structure of different research topics and relationships in the development of this field. This study also attempts to help identify the linkages among different publications and confirm their status and positions with regard to their contributions to the development of IHRM. The principal methods used are citation and co-citation analysis, social network analysis, plus a factor analysis which is performed to identify the invisible network of knowledge (INK) generation underlying the IHRM literature.

The Social Sciences Citation Index (SSCI) is used for the analysis. This is a widely used database, which includes citations published in over 2,000 of the world's leading scholarly social sciences journals, covering more than 50 disciplines. The SSCI thus provides the most comprehensive and widely accepted database of IHRM publications. Among the journals included in the SSCI, the *International Journal of Human*



*Resource Management (IJHRM)* is arguably the most influential one publishing *IHRM*-related papers, and so is used as the core source for analysis. The advantage of using journals instead of keywords to generate the needed citation data is the “guaranteed quality” of their published papers, and their clear boundaries with regard to the acceptable methods and topics as defined by their specific editorial policies. This study thus included all the papers published in *IJHRM* from 2007 to 2016. The results included 1,640 journal articles in total, which further cited 109,864 other publications as references. The cited publications in these papers include both books and published journal articles.

The study is divided into four main sections. The first section is a review of the author co-citation analysis (ACA) literature; the second section contains a description of the methodology employed in this work; the third section presents and discusses the results of the empirical study; and the fourth section presents a summary and discussion of the conclusions to be drawn from this investigation, including its limitations and suggestions for future research.

### Review of the academic literature on the ACA

ACA is a widely applied bibliometric technique that uses a matrix of co-citation frequencies between authors as its input (McCain, 1990). The ACA, which uses seminal authors in a discipline as the units of analysis, is based on the idea that the conceptual similarity in the works of such authors would increase the likelihood of their being cited together regularly (McCain, 1990). The frequency of co-citation is therefore a measure of the proximity between authors (White and Griffith, 1981).

The ACA’s unit of analysis is an individual author rather than a specific paper or journal, although it must be noted that the name of author is merely a label for the central conceptual theme or idea that he or she represents (Culnan, 1986). The intellectual map is thus a representation of ideational interactions among authors established through the frequency of co-citation and overall distribution of co-citations that they share with one another (McCain, 1990; White and McCain, 1998). This makes the ACA eminently suitable for explicating the subfields that fall within the overall disciplinary domain of *IHRM*. More specifically, the ACA’s ability to reveal patterns of association between authors based on their co-citation frequency makes it a potentially useful methodology for understanding the evolution of an academic discipline (White and McCain, 1998). Moreover, the versatility of the technique and its acceptance by many different disciplines make it appropriate for this study.

The ACA has been shown to be able to describe, from an empirical standpoint, the intellectual structure of one academic discipline using an objective method. It has been applied in many academic areas, such as management and social sciences (Neeley, 1981), information systems management (Culnan, 1986), organizational behavior (Culnan *et al.*, 1990), consumer research (Hoffman and Holbrook, 1993), advertising (Pasadeos *et al.*, 1998), information science (White and McCain, 1998), management (Tahai and Meyer, 1999), production and operations management (Pilkington and Liston-Heyes, 1999), strategic management (Ramos and Ruiz, 2004), knowledge management (Ponzi, 2002; Ma and Yu, 2010), international management (Acedo and Casillas, 2005), management of technology (Pilkington and Teichert, 2006), family business (Casillas and Acedo, 2007), R&D Management (McMillan, 2008), conflict management (Ma *et al.*, 2008), international business (Griffith *et al.*, 2008), human resource management (Mariluz and Antonio, 2009), electronic commerce (Ma, 2009a), business ethics (Ma, 2009b), decision analysis (Lee *et al.*, 2010), international ethnic entrepreneurship (Ma *et al.*, 2012), global branding (Chabowski *et al.*, 2013), and expatriate studies (Wang *et al.*, 2013). The use of such a bibliometric approach has

contributed to the identification of research and future areas of study in these disciplines. This study also aims to provide a quick reference for new researchers so that they can become familiar with the field of IHRM.

### Research methodology

In order to provide an overview of contemporary IHRM research, this study explored the intellectual structure of IHRM between 2007 and 2016. Citation and the ACA were the main methods used for this. With citation and the ACA, this research proceeded in four stages, each of which required different approaches to examining the evolution of IHRM studies (see Figure 1).

In the first stage, databases were identified as the sources of IHRM publications. Then, data collection and analysis techniques were designed to collect the desired information about the topics, authors, and journals on IHRM research. In the second stage, citation analysis was tabulated for each of the 109,864 source documents using the MS Excel software.

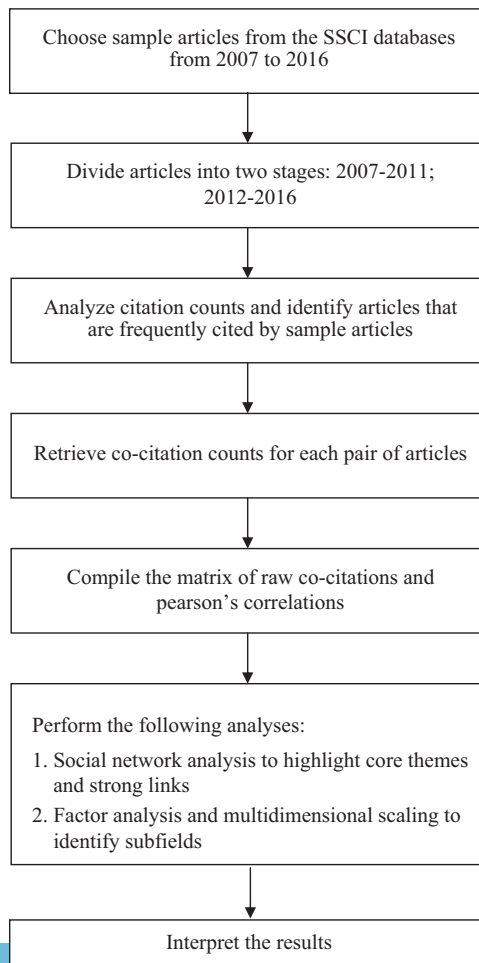
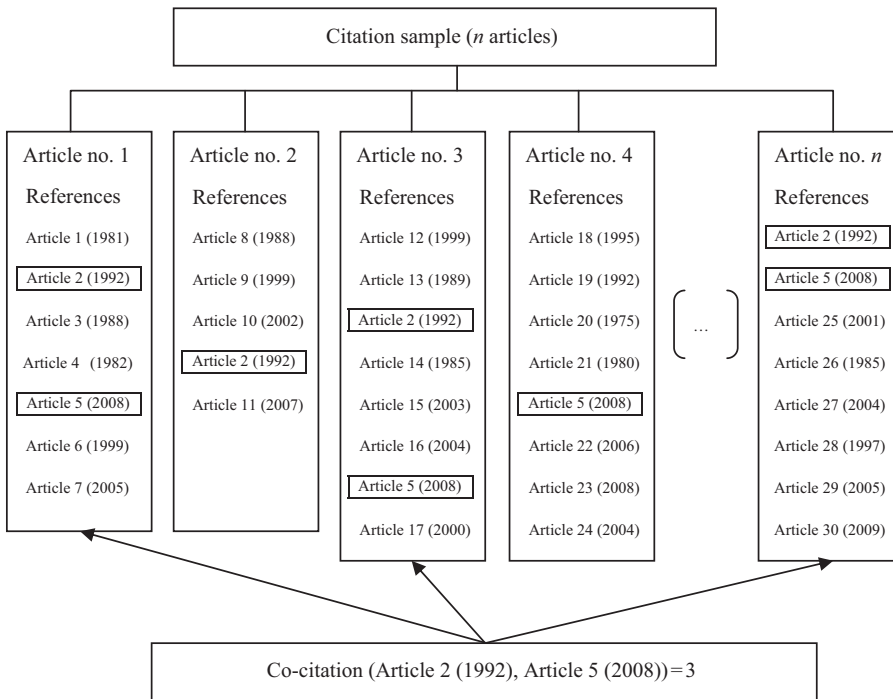


Figure 1.  
Design of the study

After a series of operations, key nodes in the knowledge network in IHRM studies were identified and the structures developed.

The third stage was to perform an article co-citation analysis based on the most cited article of each sub-period, to trace the relationships among them and identify schools of thought and key topics of research. The results of the article co-citation analysis were also tabulated for each of the source documents using Excel. Article co-citation analysis is based on the distribution frequencies obtained from the citation count, and this is obtained by examining all the possible pairs from the 50 most frequently cited articles and counting all the articles that cite both of these (see Figure 2). The top articles were identified on the basis of the total number of citations in the selected articles, and then a co-citation matrix was developed before a pictorial map was drawn to describe the correlations among different articles (see Table I). In the final stage, the ACA was conducted to carry out social network



**Figure 2.**  
Article  
co-citation count

	Article 1	Article 2	Article 3	Article 4	Article 5	Article 6	Article 7	Article 8	Article 9
Article 1		23	30	18	15	13	9	7	17
Article 2	23		40	11	3	7	21	6	6
Article 3	30	40		12	7	11	20	6	14
Article 4	18	11	12		8	6	1	3	15
Article 5	15	3	7	8		7	3	4	12
Article 6	13	7	11	6	7		3	0	9
Article 7	9	21	20	1	3	3		1	3
Article 8	7	6	6	3	4	0	1		1
Article 9	17	6	14	15	12	9	3	1	

**Table I.**  
Article co-citation  
matrix (extract)

analysis and factor analysis in order to map the intellectual structure of IHRM studies and to explore the invisible knowledge nodes that have contributed most to such studies and their possible evolutionary patterns.

## Results and discussions

### Citation analysis

Data mapping was conducted, and an intellectual structure of IHRM research was revealed by using the ACA. To identify the key publications and scholars that have laid down the groundwork of IHRM research, citation data were tabulated for each of the 109,864 source documents using MS Excel. The citation analysis produced some interesting background statistics, as shown in the following tables. Table II lists the most cited journals in IHRM studies in the last decade, among which are *IJHRM*, *Academy of Management Journal*, *Journal of Applied Psychology*, *Human Resource Management*, and *Academy of Management Review* are the top five, followed by *Journal of Management*, *Journal of Organizational Behavior*, *Journal of Vocational Behavior*, and *Journal of International Business Studies*. Many of the articles had very few co-citations, and were either unlikely to have had a significant impact on the development of the field, and/or were too recent to have had the time needed to impact the literature. The 50 most highly cited articles in two different periods, 2007-2011 and 2012-2016, were selected, as shown in

2007-2011	Citations	2012-2016	Citations
<i>IJHRM</i>	2,709	<i>IJHRM</i>	3,862
<i>Academy of Management Journal</i>	2,255	<i>Academy of Management Journal</i>	2,438
<i>Human Resource Management</i>	1,497	<i>Journal of Applied Psychology</i>	2,353
<i>Journal of Applied Psychology</i>	1,476	<i>Human Resource Management</i>	1,543
<i>Academy of Management Review</i>	1,202	<i>Academy of Management Review</i>	1,367
<i>Journal of Management</i>	902	<i>Journal of Management</i>	1,293
<i>Journal of International Business Studies</i>	697	<i>Journal of Organizational Behavior</i>	1,039
<i>Personnel Psychology</i>	669	<i>Journal of Vocational Behavior</i>	775
<i>Strategic Management Journal</i>	654	<i>Journal of International Business Studies</i>	763
<i>Administrative Science Quarterly</i>	563	<i>Personnel Psychology</i>	758
<i>Journal of Organizational Behavior</i>	556	<i>Journal of World Business</i>	687
<i>Human Relations</i>	445	<i>Human Relations</i>	655
<i>Journal of World Business</i>	436	<i>Journal of Management Studies</i>	598
<i>Journal of Management Studies</i>	425	<i>Strategic Management Journal</i>	595
<i>Industrial Relations</i>	413	<i>Administrative Science Quarterly</i>	581
<i>Journal of Vocational Behavior</i>	359	<i>Human Resource Management Journal</i>	477
<i>Personnel Review</i>	336	<i>Personnel Review</i>	459
<i>British Journal of Industrial Relations</i>	312	<i>Organization Science</i>	414
<i>Academy of Management Executive</i>	296	<i>Journal of Business Ethics</i>	412
<i>Organization Science</i>	291	<i>Journal of Personality and Social Psychology</i>	389
<i>Industrial and Labor Relations Review</i>	277	<i>British Journal of Industrial Relations</i>	344
<i>Journal of Personality and Social Psychology</i>	243	<i>Journal of Occupational and Organizational Psychology</i>	342
<i>Psychology Bull</i>	243	<i>Human Resource Management Review</i>	340
<i>Harvard Business Review</i>	238	<i>Psychology Bull</i>	328
<i>Organization Studies</i>	186	<i>The Leadership Quarterly</i>	279
<i>Work, Employment and Society</i>	181	<i>Harvard Business Review</i>	277
<i>Organization Dynamics</i>	179	<i>Career Development International</i>	267
<i>Journal of Occupational and Organizational Psychology</i>	164	<i>Industrial Relations</i>	249
<i>American Sociological Review</i>	162	<i>Organization Studies</i>	247
<i>International Journal of Manpower</i>	153	<i>Industrial and Labor Relations Review</i>	243

**Table II.**  
Top 30 most cited  
journals in IHRM  
literature: 2007-2016

Tables III and IV, respectively. The authors of these papers were then used as key nodes before conducting social network analysis and factor analysis, following the procedures recommended by White and Griffith (1981).

### *Co-citation analysis*

Co-citation analysis is a bibliometric technique used by information scientists to map the intellectual structure of a research field. It involves counting co-cited documents from a certain field and compiling co-citation counts in matrix form, then statistically scaling these to capture a snapshot of the field at a distinct point in time. The co-citation correlation matrix was factor analyzed in this study using varimax rotation, a commonly used process which attempts to fit a maximum number of articles on a minimum number of factors, with the diagonals considered missing data (McCain, 1990).

The results of the factor analysis of the co-citation matrix yielded many insights on the evolution of IHRM research, and the core research clusters were identified along with representative articles that received high citations over the period examined. The following discussion focuses on these clusters in each of the two stages in order to describe the changing patterns of IHRM research.

### *Network analysis of articles*

Social network analysis tools can be used to graph the relations in the co-citation matrix and identify the strongest links and the core areas of interest in IHRM (Pilkington and Teichert, 2006). A co-citation matrix is inherently very similar to social networks, a network of linked papers. The core division of the co-citation matrix representing the key publications from the IHRM research can be shown diagrammatically as a network with locations determined using Euclidian distances. Using the graphing programmer NETDRAW Version 2.0, which comes

ID	Publication	Citations	ID	Publication	Citations
1	Huselid (1995)	130	26	Podsakoff <i>et al.</i> (2003)	34
2	Delery and Doty (1996)	74	27	Bowen and Ostroff (2004)	33
3	Delaney and Huselid (1996)	72	28	Wright <i>et al.</i> (2001)	33
4	MacDuffie (1995)	71	29	Eisenberger <i>et al.</i> (1986)	31
5	Arthur (1994)	67	30	Guest <i>et al.</i> (2003)	31
6	Barney (2001)	66	31	Hair <i>et al.</i> (1998)	31
7	Hofstede (1980)	65	32	Pfeffer (1998)	30
8	Youndt <i>et al.</i> (1996)	60	33	Black <i>et al.</i> (1991)	29
9	Becker and Gerhart (1996)	59	34	Soskice and Hall (2001)	29
10	Baron and Kenny (1986)	55	35	Nunnally (1978)	29
11	Huselid <i>et al.</i> (1997)	48	36	Wright <i>et al.</i> (2001)	29
12	Podsakoff and Organ (1986)	48	37	Allen and Meyer (1990)	28
13	Becker and Huselid (1998)	46	38	Boxall and Purcell (2003)	28
14	Guest (1997)	46	39	Mowday <i>et al.</i> (1979)	28
15	Guthrie (2001)	46	40	Cooke <i>et al.</i> (2005)	27
16	Ichniowski <i>et al.</i> (1997)	44	41	Rhoades and Eisenberger (2002)	27
17	Hofstede (2001)	43	42	Delery (1998)	26
18	Pfeffer (1994)	43	43	Mathieu and Zajac (1990)	26
19	Aiken <i>et al.</i> (1991)	42	44	Nahapiet and Ghoshal (1998)	26
20	Wright and McMahan (1992)	41	45	Rosenzweig and Nohria (1994)	26
21	DiMaggio and Powell (1983)	38	46	Grindley and Teece (1997)	26
22	Anderson and Gerbing (1988)	37	47	Lawler <i>et al.</i> (2000)	25
23	Batt (2002)	35	48	Lepak and Snell (1999)	25
24	Datta (2005)	35	49	Meyer and Allen (1991)	25
25	Appelbaum <i>et al.</i> (2000)	34	50	Tsui <i>et al.</i> (1997)	25

**Table III.**  
Top 50 publications  
selected for the  
co-citation analysis:  
2007-2011

**Table IV.**  
Top 50 publications  
selected for the  
co-citation analysis:  
2012-2016

ID	Publication	Citations	ID	Publication	Citations
1	Podsakoff <i>et al.</i> (2003)	146	26	Hu and Bentler (1999)	37
2	Baron and Kenny (1986)	89	27	Lepak and Snell (1999)	37
3	Blau (1964)	84	28	Arthur (1994)	36
4	Huselid (1995)	84	29	Wright <i>et al.</i> (2001)	36
5	Aiken <i>et al.</i> (1991)	75	30	Delaney and Huselid (1996)	35
6	Hofstede (1980)	60	31	Hair <i>et al.</i> (1998)	35
7	Hofstede (2001)	59	32	Meyer and Allen (1997)	35
8	Delery and Doty (1996)	58	33	Bhaskar-Shrinivas <i>et al.</i> (2005)	32
9	Barney (2001)	54	34	Appelbaum <i>et al.</i> (2000)	31
10	DiMaggio and Powell (1983)	52	35	Cropanzano and Mitchell (2005)	30
11	Anderson and Gerbing (1988)	48	36	Meyer <i>et al.</i> (1993)	30
12	Eisenberger <i>et al.</i> (1986)	48	37	Spector (2006)	30
13	Allen and Meyer (1990)	47	38	Wayne <i>et al.</i> (1997)	30
14	Bowen and Ostroff (2004)	46	39	Becker and Gerhart (1996)	29
15	MacDuffie (1995)	45	40	Boselie <i>et al.</i> (2005)	29
16	Rhoades and Eisenberger (2002)	43	41	Eisenhardt (1989)	29
17	House <i>et al.</i> (2004)	42	42	Griffeth <i>et al.</i> (2000)	29
18	Fornell and Larcker (1981)	40	43	Schaufeli and Bakker (2004)	29
19	Meyer and Allen (1991)	40	44	Becker and Huselid (1998)	28
20	Podsakoff and Organ (1986)	40	45	Black <i>et al.</i> (1991)	28
21	Gouldner (1960a)	38	46	Cohen <i>et al.</i> (2003)	28
22	Guthrie (2001)	38	47	Collings <i>et al.</i> (2007)	28
23	Meyer <i>et al.</i> (2002)	38	48	Combs <i>et al.</i> (2006)	28
24	Miles and Huberman (1994)	38	49	Lepak and Snell (2002)	28
25	Nunnally (1978)	38	50	Rousseau (1995)	28

with the social network software suite UCINET (Borgatti *et al.*, 2002), we select the 50 most highly cited articles in the two different periods 2007-2011 and 2012-2016. The cutoff points are 25 and 28 for stages 1 and 2, respectively. We employ these articles as key nodes before conducting a factor analysis (see Tables V and VI for the list). Similarly, we also mapped the co-citation networks of the top 50 articles in each stage (see Figures 3 and 4). These graphs show only those links with at least two co-citations, and factor loadings of at least 0.7, in order to keep that diagram relatively uncluttered and easier to interpret.

#### *Stage 1 (2007-2011)*

Table V and Figure 3 report the results of the factor analysis of the IHRM publications for the period 2007-2011. Four research clusters were extracted from the data, and together they explained over 75.4 percent of the variance. Table V also lists the four most important clusters along with the articles that had factor loadings of 0.40 or above. As is common in this type of analysis, articles with loadings of less than 0.40 or with cross-loadings were removed from the final results (White and Griffith, 1981). The results clearly showed that the most influential articles on IHRM clustered together, and the first major research cluster was “strategic human resource management.” Most of the empirical research evaluating the impact of strategic human resource management (SHRM) practices on performance focused on the organizational level of analysis, and examined the effect of systems of SHRM practices on organizational outcomes (e.g. Guest *et al.*, 2003; Pfeffer, 1994; Huselid, 1995; Delery and Doty, 1996; Delaney and Huselid, 1996; Youndt *et al.*, 1996). For instance, Huselid (1995) and Youndt *et al.* (1996) used factor analysis procedures to group individual HRM practices into scales. These scales or indexes were then used to estimate the effects of the HR system on performance. In particular, Youndt *et al.* (1996) compared the universalistic and contingency perspectives of SHRM in a study conducted using a sample of 97 plants in a manufacturing setting. They found that the



ID	Factor 1: SHRM		ID	Eigenvalues: 23.88% Variance: 47.4	
30	Guest <i>et al.</i> (2003)	0.96	36	Wright <i>et al.</i> (2001)	0.89
18	Pfeffer (1994)	0.95	27	Bowen and Ostroff (2004)	0.88
1	Huselid (1995)	0.95	23	Batt (2002)	0.87
2	Delery and Doty (1996)	0.95	48	Lepak and Snell (1999)	0.84
3	Delaney and Huselid (1996)	0.94	13	Becker and Huselid (1998)	0.77
8	Youndt <i>et al.</i> (1996)	0.94	50	Tsui <i>et al.</i> (1997)	0.76
11	Huselid <i>et al.</i> (1997)	0.94	16	Ichniowski <i>et al.</i> (1997)	0.75
47	Lawler <i>et al.</i> (2000)	0.93	46	Grindley and Teece (1997)	0.71
15	Guthrie (2001)	0.93	17	Hofstede (2001)	0.69
25	Appelbaum <i>et al.</i> (2000)	0.93	24	Datta (2005)	0.69
42	Delery (1998)	0.92	31	Hair <i>et al.</i> (1998)	0.61
28	Wright <i>et al.</i> (2001)	0.91	10	Baron and Kenny (1986)	0.60
14	Guest (1997)	0.90	44	Nahapiet and Ghoshal (1998)	0.49
32	Pfeffer (1998)	0.89			
ID	Factor 2: HRM systems		ID	Eigenvalues: 9.18% Variance: 13.2	
9	Becker and Gerhart (1996)	0.97	4	MacDuffie (1995)	0.95
20	Wright and McMahan (1992)	0.96	38	Boxall and Purcell (2003)	0.93
5	Arthur (1994)	0.96	12	Podsakoff and Organ (1986)	0.92
6	Barney (2001)	0.96	29	Eisenberger <i>et al.</i> (1986)	0.72
ID	Factor 3: organizational support theory		ID	Eigenvalues: 3.23% Variance: 6.4	
35	Nunnally (1978)	0.74	49	Meyer and Allen (1991)	0.59
41	Rhoades and Eisenberger (2002)	0.71	19	Aiken <i>et al.</i> (1991)	0.57
22	Anderson and Gerbing (1988)	0.66	26	Podsakoff <i>et al.</i> (2003)	0.57
7	Hofstede (1980)	0.62			
ID	Factor 4: organizational commitment		ID	Eigenvalues: 1.72% Variance: 3.4	
43	Mathieu and Zajac (1990)	0.88	39	Mowday <i>et al.</i> (1979)	0.84

**Table V.**  
Top 50 articles' factor loadings at 0.40 or higher: 2007-2011

interactions between business strategies and HRM practices are an important factor in organizational effectiveness. Similarly, Huselid *et al.* (1997) studied the effects of HRM on the performance of 293 US firms. Their results showed that there is a positive link between strategic HRM effectiveness and firm performance, but technical HRM effectiveness is not related to firm performance. Huselid *et al.* (1997) concluded that there is a relationship between HRM effectiveness and productivity.

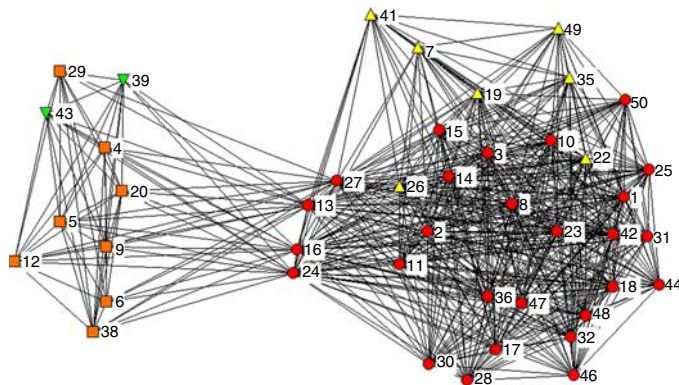
The second cluster was related to "HRM systems." HRM systems and practices have often been examined as a method of impacting turnover (Arthur, 1994). On the one hand, Becker and Gerhart (1996) and Wright and McMahan (1992) argued that for an organization's human resources to be considered as representing a sustained competitive advantage, competitors should be unable to duplicate or imitate them. Wright and McMahan included the concepts of unique historical conditions, causal ambiguity, and social complexity in their analysis, while Becker and Gerhart used causal ambiguity and path dependency in examining the inimitability of human resources. Becker and Gerhart (1996) noted that researchers have often measured HRM philosophies, policies, and practices without clearly articulating the differences among these. They identified three levels of HRM systems at which researchers have measured concepts related to HRM practices. They argued that much of the research to date has focused solely on such practices, but it may be equally important to focus on HRM policies and what they termed the HRM system architecture.

The third cluster in IHRM research focused on the "organizational support theory." For instance, Rhoades and Eisenberger's (2002) meta-analytic review found that perceived organizational support (POS) was positively related to in-role and extra-role performance, and negatively related to withdrawal behaviors such as absenteeism, tardiness, and turnover. They found that fairness, supervisor support, organizational rewards, and favorable job conditions had a positive association with POS. Further, they found support



**Table VI.**  
Top 50 articles' factor loadings at 0.40 or higher: 2012-2016

ID	Factor 1: organizational commitment	ID	Eigenvalues: 17.98% Variance: 35.5
32	Meyer and Allen (1997) 0.90	13	Allen and Meyer (1990) 0.85
23	Meyer <i>et al.</i> (2002) 0.87	36	Meyer <i>et al.</i> (1993) 0.82
19	Meyer and Allen (1991) 0.87	42	Griffeth <i>et al.</i> (2000) 0.62
ID	Factor 2: SHRM	ID	Eigenvalues: 13.78% Variance: 27.2
8	Delery and Doty (1996) 0.97	34	Appelbaum <i>et al.</i> (2000) 0.92
28	Arthur (1994) 0.97	14	Bowen and Ostroff (2004) 0.92
22	Guthrie (2001) 0.97	29	Wright <i>et al.</i> (2001) 0.92
15	MacDuffie (1995) 0.96	39	Becker and Gerhart (1996) 0.91
30	Delaney and Huselid (1996) 0.96	9	Barney (2001) 0.90
40	Boselie <i>et al.</i> (2005) 0.95	27	Lepak and Snell (1999) 0.88
44	Becker and Huselid (1998) 0.95	49	Lepak and Snell (2002) 0.86
48	Combs <i>et al.</i> (2006) 0.94	10	DiMaggio and Powell (1983) 0.66
4	Huselid (1995) 0.94	ID	Eigenvalues: 4.36% Variance: 8.6
ID	Factor 3: international research design	1	Podsakoff <i>et al.</i> (2003) 0.76
37	Spector (2006) 0.88	5	Aiken <i>et al.</i> (1991) 0.74
11	Anderson and Gerbing (1988) 0.88	2	Baron and Kenny (1986) 0.67
18	Fornell and Larcker (1981) 0.86	46	Cohen <i>et al.</i> (2003) 0.67
20	Podsakoff and Organ (1986) 0.84	50	Rousseau (1995) 0.63
25	Nunnally (1978) 0.81	43	Schaufeli and Bakker (2004) 0.58
26	Hu and Bentler (1999) 0.81	ID	Eigenvalues: 2.63% Variance: 5.2
31	Hair <i>et al.</i> (1998) 0.81	6	Hofstede (1980) 0.80
ID	Factor 4: cross-cultural theory	ID	Eigenvalues: 1.72% Variance: 3.4
17	House <i>et al.</i> (2004) 0.90	21	Gouldner (1960b) 0.76
7	Hofstede (2001) 0.81	35	Cropanzano and Mitchell (2005) 0.70
ID	Factor 5: organizational support theory	3	Blau (1964) 0.67
16	Rhoades and Eisenberger (2002) 0.83	ID	Eigenvalues: 1.56% Variance: 3.1
12	Eisenberger <i>et al.</i> (1986) 0.82	33	Bhaskar-Shrinivas <i>et al.</i> (2005) 0.73
38	Wayne <i>et al.</i> (1997) 0.82		
ID	Factor 6: international adjustment		
45	Black <i>et al.</i> (1991) 0.92		
47	Collings <i>et al.</i> (2007) 0.78		



**Figure 3.**  
Top 50 articles:  
the co-citation map  
(2007-2011)

for unfavorable job conditions (e.g. role stressors) having a negative association with POS. Additionally, Anderson and Gerbing (1988) proposed that in undertaking LISREL-based theory testing, researchers should first assess the validity of the building blocks of the theory (i.e. confirm the falsifiability of the constructs and variables embedded in the related propositions and hypotheses) by separate estimation and, where necessary, re-specification



emotional connection, identification, and involvement of the individual with the organization (Allen and Meyer, 1990).

The second major research cluster was also about "SHRM," and the majority of works in this group were also very influential in the first stage. For instance, Delery and Doty (1996) measured HRM practices for a particular group of employees performing the same or similar job within the firm. Similarly, Arthur (1994) proposed that specific combinations of policies and practices were useful in predicting differences in performance and turnover. In particular, Arthur's study marked the beginning of a stream of research on HR systems and the search for bundles of HR practices and high-performance work systems that influence organizational performance. In addition, MacDuffie (1995) used a 1989-1990 survey of 62 international automotive assembly plants to test whether HR bundles affected plant productivity and quality, and found that they did achieve this. Furthermore, he indicated that innovative HRM bundles have a greater effect on operational performance. Using a sample of 1,000 firms, Huselid (1995) examined the relationship between high-performance work systems and firm performance, finding that the relationship between such systems and corporate financial performance was mediated by turnover and productivity. More specifically, high-performance work systems reduce turnover and increase productivity, thus having a positive effect on corporate financial performance.

The third cluster in IHRM research focused on "international research design." For instance, Fornell and Larcker (1981) concluded that the square root of the average variance extracted (AVE) value of the construct must be greater than any of its correlations with other constructs to ensure the proper discriminant validity of the construct. They also calculated the AVE to rigorously test the measurement validity. In addition, Fornell and Larcker (1981) suggested that AVE can be used as a measure of reliability for the latent variable component score. Accordance to Anderson and Gerbing (1988), the data analysis process used with structural equation modeling should be divided into two steps: measurement model analysis, which involves following the initial analysis with a confirmatory factor analysis to measure the reliability and validity of the latent variables; and structural model analysis, in which hypotheses are tested by examining path coefficients and their significance. According to Podsakoff and Organ (1986), anonymous survey completion is the optimal form of data collection in this context, and no questions should be included which require respondents to judge situations as right or wrong. However, they also noted that there is a possibility that common method bias could affect the results of such work, since the data have been collected from the same respondents (such data could be used to examine issues such as cross-cultural adjustment, cultural similarity, and comparisons among multinational enterprises).

The fourth cluster of IHRM in this period was the topic of "cross-cultural theory." The national culture perspective (Hofstede, 1980, 2001; House *et al.*, 2004) point out that cultures reflect deep-rooted values and mindsets which differ across the globe and are only changeable over the long run. As a result, theoretical frameworks and concepts cannot be readily applied to different cultural contexts without limitations arising (Hofstede, 2001). Hofstede's (1980, 2001) book on culture gave the expatriate management field some background cultural knowledge to work with, so that scholars could draw on this empirical work to articulate the impact of culture, in terms of cultural distance or cultural novelty, on expatriate adjustment. The goal of the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project was to develop a cultural model, similar to that of Hofstede (1980, 2001), and apply to it to a range of important leadership questions. Although GLOBE researchers started with solid definitions of the various cultural dimensions, they felt that the five dimensions identified by Hofstede did not fully explain differences between organizational leadership across cultures. However, Hofstede's (2001) cultural dimensions are based upon social anthropological assumptions of the basic problems that every society faces.

They reflect the different ways people react to such fundamental problems, as well as the different solutions that are used to solve them. While Hofstede's cultural conceptualization remains one of the most cited approaches in the social sciences, project GLOBE measures culture at both societal and organizational levels.

The fifth research cluster was also centered on the "organizational support theory." According to this (Eisenberger *et al.*, 1986; Rhoades and Eisenberger, 2002), in order to fulfill their socio-emotional needs and determine the extent to which the organization is willing to reward increased effort, employees form a general belief concerning the extent to which the organization values their contributions and cares about their well-being. Eisenberger *et al.* (1986) addressed the psychological processes underlying the consequences of POS. Specifically, this theory supported the view that POS should contribute to overall job satisfaction by meeting socio-emotional needs, increasing performance-reward expectancies, and signaling the availability of aid when it is needed. This support could generate positive attitudes toward their jobs among employees, making them feel more satisfied. Many studies have found that organizational support is positively related to job satisfaction, and these works were brought together in Rhoades and Eisenberger's (2002) meta-analysis, which indicated that POS is related to a range of behaviors and attitudes, including job satisfaction. Moreover, Wayne *et al.* (1997) found a positive relation between the quality of the exchanges that occur at work and job satisfaction. In high-quality relationships, members receive preferable treatment which includes both formal and informal rewards, more open access to supervisors, support, and increased communication. Wayne *et al.* (1997) reported that leader-member exchange has a positive relationship with performance, organizational citizenship behaviors (OCB), and favor doing actions that benefit the leader-member relation. Follower performance can thus be looked at as another type of currency in the social exchange process. In addition, based on the social exchange theory (Blau, 1964), when employees perceive a positive organizational approach with regard to their well-being, they tend to reciprocate this support in the form of positive work attitudes and behaviors, such as organizational commitment and OCB. Since employees seek a balance in their exchange relationships with organizations, they are willing to return the employers' care and consideration by engaging in positive work attitudes and behavior (Eisenberger *et al.*, 1986).

The last research cluster in this period focused on "international adjustment." For instance, Black *et al.* (1991) presented a comprehensive integrated model of international adjustment, which focused on several major sets of factors that influence these dimensions as determinants of adjustment. According to Black *et al.* (1991), international adjustment has three aspects: adjustment to work; adjustment to interacting with host nationals; and adjustment to the general non-work environment. Their model has been extensively tested and received much empirical support. It is clear that these three articles overlap with each other, in authorship or topic, in areas other than the exploration of cross-cultural adjustment issues. Black *et al.*'s (1991) theoretical framework also guided and greatly influenced the expatriate management field in the last two decades (Bhaskar-Shrinivas *et al.*, 2005). According to Collings *et al.* (2007), direct visits and expatriates serve as a means of addressing the agency issues that arise from the separation between ownership and management due to the distance between the parent company and the foreign affiliate. Reliance on domestic managers trusted by family members to act in the interests of the owner family is another approach to minimizing agency problems.

## Conclusions and suggestions

### *The evolution of IHRM research issues*

The past decade has seen extensive research on IHRM. This study investigates IHRM research using citation and co-citation data published by *IJHRM* in SSCI between 2007 and 2016.

With the help of social network analysis tools and a factor analysis of the co-citation data, this study maps the intellectual structure of IHRM over the past decade. A factor analysis of the co-citations suggests that the field is organized into six different concentrations of interest in stage 1 (2007-2011): SHRM, HRM systems, the organizational support theory, and organizational commitment, with some discussions on the development of IHRM. In addition, the field is organized into six different concentrations in stage 2 (2012-2016): organizational commitment, SHRM, international research design, the cross-cultural theory, the organizational support theory, and international adjustment, with some discussions on the development of IHRM. Future IHRM studies will probably continue to focus on SHRM, organizational commitment, and the organizational support theory. These results help to profile the INK production in IHRM and provide important insights with implications for current and future research directions of IHRM studies for both management scholars and practitioners.

#### *The pattern of development in the IHRM field*

Research into expatriate management plays a significant role in the development of the IHRM literature, and provides important guidelines for multinational corporations. This paper presents the most influential scholars, identifies the links among them, and confirms the status of each scholar with regard to their contributions to the IHRM field. This paper also profiled the major themes, concepts, and relationships discussed within each domain, and the results show the scope of IHRM research has been broad, and that many research opportunities are now emerging in the field. The contributions of this paper are thus that it provides valuable research directions for scholars investigating IHRM, and also proposes an objective and systematic means of determining the relative importance of different knowledge nodes in the development of this field. In addition, the research procedures applied in this work can be also used with other fields of research. This work could also function as a concise reading list for PhD students and assist them by economically providing material that acts as a roadmap when preparing for exams or undertaking research work. Further, it could guide students in deciding their future research streams. Moreover, the so-called research procedures provided in the INK model can be applied to other fields of research. This methodology can easily be applied to other disciplines and provides a powerful research tool for understanding the epistemology of a field as it evolves. By tracing the research path of a specific field in which they are interested, researchers would be able to navigate through time to discover how certain ideas may have evolved into respected scientific concepts, theories, or practices. Researchers can also use this methodology to explore the knowledge network of their own fields so as to gain a vantage position with respect to their field and conduct seminal research.

#### *Limitations*

This study only briefly reviewed IHRM studies that appeared on the highly cited list for each developmental stage. Due to the limitations of the database used, *IJHRM* in SSCI, the results of our study should be taken with some caution. In addition, the research method could not eliminate self-citation, so this study hypothesized that each article faced the same situation in this regard. Moreover, many recent articles did not appear to be highly cited in the co-citation network, and it is expected that for some this is simply because they have not had enough time to be cited by many other works. Our study thus offers more of a historical review of the development of the IHRM field, rather than an objective judgment of the importance of different authors or articles. As discussed above, future work is encouraged to combine the method of the ACA with content analysis. With a methodology combining both these approaches, future research will present a more comprehensive view of the evolution of research in the IHRM field.



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### Further reading

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