

A Systematic Review of Methodologies in the Domain of Human Resource Management and Organizational Performance

Humyra Dawood* and Irfan Butt**

*Lahore School of Economics, Pakistan **

*Lakehead University, Thunder Bay, Canada***

Abstract: This paper reviews the literature on human resource management and its impact on organization performance. It traces evolution of research methodologies across geographical regions and timeframe. A total of 187 articles have been examined using systematic literature review. The paper analyses developments in research design choices such as data collection method, sample size, respondent type, unit of analysis, time horizon, statistical techniques, country of data collection, reliability and validity, etc. The results suggest that the field is characterized by empirical quantitative studies and triangulation is seen mainly in statistical analysis. The interest of North American researchers has declined whereas Asia has displayed considerable enthusiasm in recent years. The collaborations between regions are few and there are synergies to be explored in joint studies. The study concludes that research methodologies in the field are too narrow and it is an important concern if progress is to be made in the development of research. It acknowledges that a wider perspective in terms of research design is needed to achieve further advancement in the field. It is suggested that future researchers, especially in North America, amalgamate methodological rigor with a qualitative approach.

Keywords: *Human Resource Management, Performance, Review, Research Methodologies.*

Introduction

“Human Resource Management (HRM) comprises a set of policies designed to maximize organizational integration, employee commitment, flexibility and quality of work” (Guest, 1987). It consists of organizational practices to manage people in such a way that they become a strategic input and a source of competitive advantage (Schuler & MacMillan, 2006). This strategic perspective of HRM connects employees with corporate strategies to enhance organizational outcomes. Even though the discipline of HRM is more than a century old, the linkage between HRM and organization’s performance has only been studied exhaustively over the last 25 years. The focus of this paper is to review the vast literature available in this field. Though interrelationship of HRM and performance has become a significant sub-discipline of human resource, not many studies have synthesized the substantial advancements made in the field. The first systematic literature review was conducted by Boselie et al. (2005) and most recently Guest (2011) has highlighted some core issues facing this relationship. A number of researchers have conducted meta-analysis studies on various aspects of HRM and organizational outcomes.

Boselie et al. (2005) looked at numerous aspects of extant HRM and performance literature; however, their analysis of methodologies employed in the area was limited. It is necessary to assess research methods from time to time since more complex research questions in a maturing discipline require sophisticated methods (Crook et al., 2010). As a decade has elapsed since Boselie et al. (2005) published their findings, it is imperative to examine trends and developments “to assess the maturity and progress of the field” (Craighead et al., 2007). The HRM and performance field is ripe for such a review to chart the growth in research since the

impact of social science studies is influenced by choice of appropriate and rigorous research designs.

Therefore, the purpose of our paper is to update the literature by tracking the evolution and progress of research in this area with specific focus on methods and orientation of the research overtime, something not defined or presented in previous reviews. Moreover, none of the existing reviews have compared and contrasted developments in this field by different geographical regions nor has any paper looked at publication trends. Our analysis aims to uncover possible patterns in these areas so that we can provide insights to future researchers and also guide them towards methodological practices expected by top-tier journals. This paper reviews the literature across regions and over time and to answer two research questions:

What are the key developments in research methodologies and design in the area of HRM and Organization Performance?

How has research been conducted in different parts of the world and how it has evolved over time?

William & Plouffe (2007) emphasize that examination of knowledge development using systematic literature review of academic field “is a critical step in any discipline’s growth and maturity, review of articles published in peer reviewed journals is one of the most useful and relevant approaches for evaluating a field’s accrued knowledge”. Thus, for knowledge building it is essential to design future research on cumulative tradition of prior work.

Literature Review

The function of HRM has transformed from being one of traditional personnel management into one with a more strategic orientation that recognizes human resources as assets for an organization and a source of competitive advantage (Barney, 1991). Considerable research examining the specific impact of HRM practices and systems on organization performance has been carried out in the past 25 years. This vast body of empirical research suggests positive statistical relationship between HRM and performance of a firm (Arthur, 1994; Huselid, 1995; Guest et al., 2003). In the recent times, four meta-analyses and two literature reviews on this topic stand out.

Wall and Wood (2005) conducted meta-analysis of 25 studies published from 1994 to 2003. They determined that there was some sort of statistically significant relationship between HR practices and performance but the effect sizes were typically small. Combs et al. (2006) examined 92 studies (1985-2005) and discovered inconsistent relationship between HRM and organizational performance. Subramony (2009) looking at effect size of 65 studies, published from 1995-2008, reported “HRM bundles have significantly larger magnitudes of effects than their constituent individual practices, are positively related to business outcomes, and display effect sizes that are comparable to or larger than those of high-performance work systems”. Jiang (2012) analyzed 116 articles and found that “skill-enhancing practices were more positively related to human capital and less positively related to employee motivation than motivation-enhancing practices and opportunity-enhancing practices”.

Boselie et al. (2005) reviewed 104 empirical studies published in the period 1994-2003. The review broadly looked at methodologies, conceptualisation and operationalisation of HRM and performance, theoretical frameworks of articles, control and contingency variables, and the interaction of HRM policies and performance during the black box stage. However, as the review had a wider scope, the analysis of different methodologies and research designs used in the field was limited. The authors concluded that most studies displayed some sort of positive association between HRM in its system form and performance. As studies used different approaches to HRM and different measures of performance, it was not possible to compare results.

The most recent literature review by Guest (2011) stated that researchers still did not know which HR practice or mix of practices was the most important and which had the most impact

on performance. He reported “after over two decades of extensive research, we are still unable to answer core questions about the relationship between human resource management and performance”.

Hence, we can ascertain the domain of HRM and performance has received considerable prominence and attention, and a number of meta-analysis and some literature reviews have been published on this topic. However, none of the published studies have reviewed the literature to discern research methodologies and publication trends. Our paper aims to fill this gap by chronicling research trends which may help in providing some understanding of the possible future direction of research methodology (Scandura and Williams, 2000).

Structure of Paper

The paper begins with a description of the process and criteria used to determine the sample of articles for analysis. It then presents findings on research methodologies employed to determine the impact of HRM on organization performance. A detailed examination of trends in methodology is conducted in relation to different time periods and geographical regions as well as a combination of both. Advanced cross tabulations have been employed as analytical techniques to generate findings in literature that cannot be observed without analysis. The paper synthesizes the major findings and provides direction for future researchers in its conclusion.

Selection of Articles and Coding Methodology

The articles chosen for analysis in this paper were selected in a systematic manner. A preliminary keyword search was conducted on leading academic databases to identify relevant literature on human resources and organization performance in academic journals. The keywords ‘human resource’, ‘HRM’ and ‘performance’ were used in the search fields of ‘title’ and ‘abstract’. A total of 502 articles were generated from Business Source Premier, JStor and ScienceDirect.

The articles were then narrowed down for relevance by reading the abstract of every article and choosing only those articles that concentrated on the link between HRM and performance. Furthermore, articles that did not specifically focus on organization performance were also excluded. This reduced the number of appropriate articles to 187. Articles appearing in journals of all rankings and impact factors were chosen to provide a comprehensive overview of the domain. The time period of all these articles ranged from 1987 to 2015 since the first study in our sample analyzing the relationship between human resources and organization performance was published in 1987.

A web-based bibliography and database manager, RefWorks, was used to export the identified articles from the databases to Microsoft Excel. This helped in organizing all the details of the articles such as title, author name, publication name and volume, publication year, abstract, etc. in a systematic columnar form.

The next step was further classification of articles in four basic research designs: empirical quantitative, empirical qualitative, conceptual quantitative and conceptual qualitative. These typologies have been suggested by Nakata and Huang (2005) and Page and Schirr (2008). Empirical articles are those that use primary methods of data collection such as questionnaires, surveys, interviews and observations. Conceptual articles use ideas and models from prior extant research or analyze secondary data. Quantitative was defined as using numbers and statistical analyses to synthesize data whereas qualitative simply used words and narrative to describe the research. The methodology and conclusion sections of all 187 articles were read and every article was assigned to one of these four categories accordingly. Articles that used a combination of both quantitative and qualitative techniques were classified as mixed method. The above categorization resulted in 114 empirical quantitative, 4 empirical qualitative, 28 conceptual quantitative, 34 conceptual qualitative articles and 7 empirical mixed method articles. For the purpose of studying methodologies, 121 articles - 114 empirical quantitative

and 7 empirical mixed methods, were analyzed. However, analysis of publication trends was conducted on all 187 relevant articles.

The process of coding started with identification of extensive categories to analyze data collection and analysis methodologies as well as publication trends. All 187 papers were assigned a numeric identity and all data indicative of the research questions (26 coding dimensions) was then entered into Excel using unique string values. A listing of categories is given below is Table 1:

Table 1: Categories for Data Entry

N	Category
1	Research Type-Qualitative
2	Research Type-Quantitative
3	Research Type-Empirical
4	Research Type-Conceptual
5	Research Design-Survey, Model, Experiments, Simulations, etc.
6	Research Design-Cross Section/Longitudinal
7	Research Design-Data Collection Method
8	Research Design-Country of Data Collection
9	Research Design-Unit of Analysis
10	Research Design-Respondent Type
11	Research Design-Sampling Methods
12	Research Design-Sample size
13	Research Design-Pretest/Pilot
14	Research Design-Response Rate
15	Research Design-Statistical Techniques
16	Research Design-Reliability and Validity

Results

The results of methodological developments analysis are given in this section. However, the general overview of research studies is presented first.

Overview

An overall snapshot of 187 studies by research type and region is provided in this section. The 25 year time period starting from 1987 has been divided into two timeframes, pre-2005 (1987-2004) and post-2005 (2005-2015), to provide a comparable number of articles in each time period. Regions have been classified on the basis of number of studies published by authors from major continents, namely, North America (NA), Europe (EU), Asia, other continents of the world (Others), and collaborations between continents (Collab).

The distribution of studies by different regions in different time periods is given in Table 2. In the earlier time period, NA pioneered research in the field of HRM and performance and as the discipline was still developing, the focus in NA was on establishing a relationship between the two variables through quantitative analysis. Interest in the field has, however, declined significantly in North America, with Europe taking the lead in the later time period. Asians, on the other hand, have started actively conducting research to study the effect of HRM on performance.

Table 2: Studies by Region & Time

	1987-2004	2005-2015	Total
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NA	42%	18%	24%
EU	38%	37%	37%
Asia	8%	26%	21%
Collaboration	12%	12%	12%
Others	0%	7%	5%

Empirical studies dominate both time periods as reported in Table 3. In the beginning empirical quantitative research assumed an important role when Lengnick-Hall & Lengnick-Hall (1988) made a call for empirical research to study the influence of strategic HRM on organizational performance. In response to this call, there was an influx of quantitative studies to demonstrate the role of HRM in improving outcomes. The first study by Jeffrey B. Arthur (1994) provided empirical evidence of the link between HRM and performance. This was followed by Mark Huselid's ground-breaking study in 1995 which concluded that a firm's market value could increase substantially following a one standard deviation change in HR systems. Since this study reported a huge impact of HRM on outcomes, researchers in Europe and Asia responded by conducting empirical studies and the first study by a European was published by Liouville and Bayad in 1998.

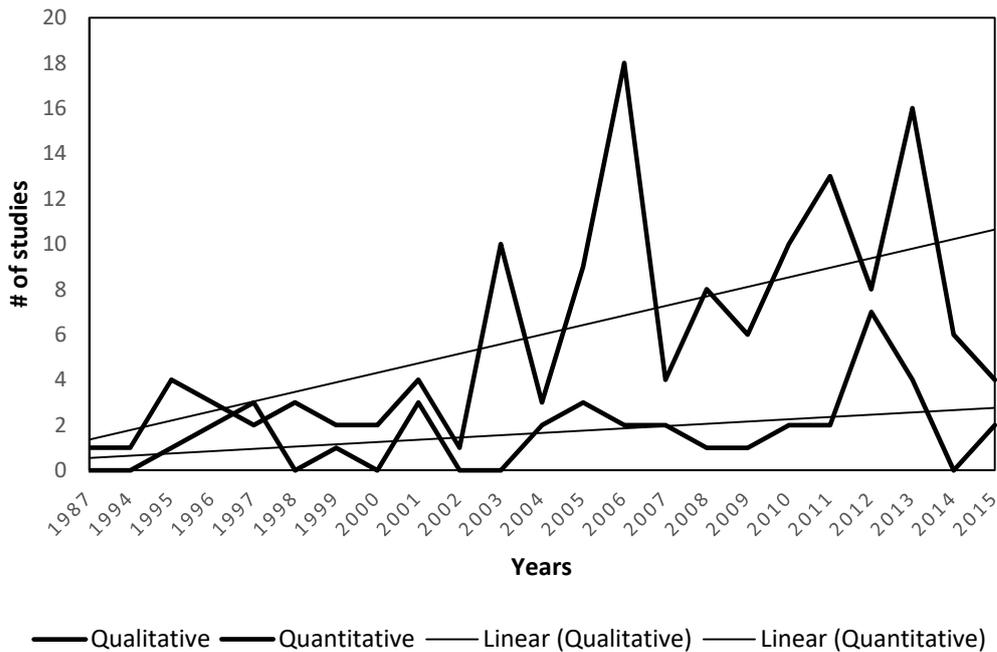
Table 3: Studies by Research Type & Time

	1987-2004	2005-2015	Total
Empirical Quantitative	56%	63%	61%
Conceptual Quantitative	20%	13%	15%
Empirical Qualitative	2%	2%	2%
Conceptual Qualitative	22%	17%	18%
Empirical Mixed Method	0%	5%	4%

The mix of qualitative and quantitative research by year is reported in Figure 1. It should be noted that qualitative research, contributing to theory development, is appropriate for early stage of research within a discipline. Quantitative research, used for theory testing, is primarily conducted as a discipline matures (Malhotra and Grover, 1998). In the first timeframe, 1987-2004, the proportion of qualitative and quantitative research is almost the same. Subsequently, there is a lot of fluctuation in quantitative studies but overall there are significantly more quantitative studies than qualitative. However, there is a pronounced decrease in quantitative studies since 2013 and qualitative studies seem to be on the rise since 2014, consequently there is not much difference between the two in 2015.

It can be seen from Table 3 that the interest in quantitative studies is apparent as 76% of all studies are quantitative compared to 20% qualitative and only 4% studies use mixed methods by combining qualitative work with quantitative tools. This trend is similar in both time periods with the exception that mixed method studies were conducted for the first time in 2006. A region-wise comparison shows that NA has shown an increase in qualitative studies only recently, post-2005, and the focus has shifted from quantitative studies to qualitative, showing that researchers are moving back to theory-building studies.

Figure 1: Research Cycle - Quantitative vs. Qualitative



Research Methodology Developments

The results of advances in research methodologies in HRM and performance from a comprehensive sample of 121 empirical quantitative and mixed method studies are discussed in this section. Appendix I summarizes the findings of the various design elements against time and different regions of the world.

Research Design

The research design in all studies is non-experimental and completely survey-based. All 121 studies have used non-experimental design as it is difficult to conduct experiments to study the relationship between HRM and performance. Non-experimental research design is normally used to describe relationship between variables of interest. Unlike experimental research, there is no deliberate manipulation of variables nor is the setting controlled. The dominant research design used is cross-sectional surveys with only four longitudinal studies.

Data Collection Method

Majority (62%) of the research studies have used mail questionnaires for primary data collection while personal interview (21%) and self-administered questionnaires (16%) are other popular data collection methods. Region-wise, NA has primarily used mail questionnaire, though recently, they have started using online and telephone surveys as well. The Europe, on the other hand, has significantly increased the use of mail survey, 29% to 59%, and reduced personal interviews from 57% in 1987-04 to 26% in 2005-15.

Countries of Data Collection

The countries of data collection are given in Table 4. The data collection from USA is in decline, in line with overall reduction of studies from USA. There is more emphasis on Asian countries – China, Taiwan and Malaysia, while a large number of studies were also conducted in European countries – UK, Spain and Greece. Researchers in this domain have primarily collected data from their own regions except in those instances where collaborations have been done across regions.

Table 4: Respondent Countries

Countries	1987-2004	2005-2015	Total
China	1	8	9
Greece	1	6	7
Malaysia	0	5	5
Spain	0	6	6
Taiwan	1	8	9
UK	2	7	9
USA	14	13	27
Others	11	42	53

Note: Countries with 5 or more studies in 2005-15 are shown

Unit of Analysis

The unit of analysis, the major object being studied in the research paper, is presented in Table 5. Overall eighty three percent of the studies have been conducted at the organization level. However, employee as a unit of analysis has been examined post 2005.

Table 5: Unit of Analysis

	1987-2004	2005-2015	Total
Organization	100%	78%	83%
Employee	0%	17%	13%
Both	0%	4%	03%

Respondent Type

Table 6 lists respondents chosen for surveys. Fifty eight percent of the studies have used HR managers as their point of contact. As researchers are studying the organization as a whole, the most popular choice of respondents is HR managers. The intended recipients of HRM policies, employees, were surveyed for the first time in 2006 and 20% of the studies have used employees as respondents in 2005-2015.

Table 6: Respondent Type

Respondent Type	1987-2004	2005-2015	Total
CEOs	15%	14%	14%
HR Managers	43%	39%	40%
Other Managers	38%	22%	26%
Employees	0%	20%	15%
Others	5%	5%	5%

Response Rate

Thirty six percent of the research studies have elicited a response rate of 21-40%, eighteen percent have response rates of 41-60%, and response rate of 61-80% have been reported by twelve percent of studies. This trend is constant across regions, and response rates above 60% have been obtained for the first time post-2005. Studies that have used employees as respondents have exhibited average response rate of 60% with a standard deviation of 26.68 while those with CEOs, HR managers and other senior managers as respondents have reported average response rates of 40% with a standard deviation of 25.87.

A study by Baruch and Holtom (2008) analyzing survey response rates in organization research studies in 2000-05 found average response rate of 52.7% from individuals with a standard

deviation of 20.4, while studies that collected data from organizations reported rates of 35.7% with a standard deviation of 18.8. Another study by Snow and Thomas (1994) on field research methods in strategic management revealed that strategy studies using employees obtained response rates of 72% while those surveying top managers produced rates of 59%. This shows that average response rates in HRM and performance discipline are higher than those of overall organization studies but are on the lower side as compared to specific disciplines.

Sample Size

Sample size plays an important role in survey research as it affects power of statistical tests to yield significant results. Pre-2005, a large number of studies from North America (47%) used smaller-sized samples of 100 and less, whereas the concentration in Europe was on sizes of 100-200. However, the trend in North America has changed and majority of the studies (57%) are focusing on large samples of 300 and above in 2005-15. Europe, on the other hand, is either using smaller sized samples of 0-100 (23%), or large sample size of 500 and above respondents (28%).

Statistical Techniques

The statistical techniques for data analysis determine if there is any association between HRM and performance, and predict the value of this relationship. Table 7 reports key statistical techniques used in this domain. Regression and factor analysis (CFA & EFA) have been prominent data analysis techniques in both time periods. However, there has been slight decrease in regression and significant increase in factor analysis in 2005-15. The latter time period has also seen a rapid rise in the use of more complex statistical technique like Structural Equation Modelling (SEM). SEM has been used more to determine the direction of cause between HRM and performance since Wright et al. (2005) identified that a reverse causal relationship might exist between the two variables. The use of SEM is seen most in Europe. All three regions are advancing in the use of sophisticated statistical techniques and 72% of all studies are employing triangulation in statistical techniques.

Table 7: Statistical Techniques

Statistical Techniques	1987-2004	2005-2015	Total
Analysis of Variance (ANOVA)	8%	3%	4%
CFA	20%	23%	23%
Descriptive	0%	4%	3%
EFA/FA	6%	13%	12%
Regression – Linear	29%	22%	24%
Regression – Hierarchical	10%	9%	9%
Regression – Others	4%	2%	3%
Structural Equation Modelling (SEM)	0%	11%	8%
Other Statistical Techniques	24%	13%	15%

Pre testing/Pilot & Validity/Reliability

Few studies have pretested or piloted their questionnaires in both time periods (Table 8). North America and Asia show a decline in pretesting and piloting in the latter time period unlike Europe which has registered an increase. Measures of reliability are found in 72% of studies whereas 55% of the studies report some degree of validity. More attention is given to construct validity (convergent and discriminant) as compared to other forms of validity.

Table 8: Pretesting, Piloting, Reliability & Validity

	1987-2004	2005-2015	Total
Pretesting of questionnaire	7%	6%	7%
Piloting of questionnaire	14%	15%	15%
Pretest/Pilot	7%	4%	5%
Reliability			
Cronbach's Alpha	64%	61%	61%
Others	0%	13%	10%
Not given	36%	26%	28%
Validity			
Convergent validity	9%	16%	15%
Discriminant validity	6%	19%	16%
Content validity	6%	18%	8%
Validity – Others	24%	14%	16%
Not given	53%	43%	45%

Results of Advanced Cross-Tabulations

Advanced cross tabulations were carried out in order to analyze data in more detail. Sample size was examined in relation to variables like pretest/pilot, reliability and validity, triangulation in statistical techniques, and prolific publications.

When sample sizes were cross-tabulated with pretest/pilot, triangulation in statistical techniques, reliability and validity, it was found that sample size of 101-200 displayed the most amount of rigor as 26% of studies made use of pretest/pilot, 73% employed triangulation in statistical techniques, 78% used reliability measures and 50% had tested for validity. None of the other sample sizes exhibited percentages higher than these.

Cross-tabulations between reliability, validity and advanced statistical techniques reveal that 92% of studies using SEM, 74% using hierarchical regression and 85% using CFA report reliability of results, while 83% using SEM, 37% using hierarchical regression and 52% using CFA report validity as well. The percentage of studies reporting both reliability and validity is 39%. This indicates that the domain of HRM and performance is characterized by adequate level of rigor in empirical studies. Also, use of advanced statistical techniques corresponds with more rigor in terms of reliability and validity.

To further test for rigor and high quality research, cross-tabs were run to identify studies conducting pretest/pilot, using reliability and validity measures, and employing multiple statistical techniques. Out of 121 publications, there were only 14 studies that fulfil the criteria, with 5 each from Europe and Asia, 3 from North America and one was collaboration. With the exception of one study, all the others have been published in A* and A-rated journals (ranking according to Australian Business Deans Council (ABDC) Journal Quality List 2013), notably 11 were published in recent times (2015-15) and six were published in International Journal of Human Resource Management.

Discussion on Research Findings

The field of HRM and performance has grown tremendously in the last twenty five years. Scholars and practitioners have realized that a firm cannot progress and prosper unless it aligns

its HRM strategy with corporate strategy. Human capital has been recognized as a crucial asset for organizations and it is essential to leverage this asset to maximize returns and enhance performance. Increased globalization, growing competition, technological change and slowing of economies has made it imperative for organizations to focus on this source of competitive advantage. Research has revealed that the strategic use of HRM can enhance corporate performance (Wright, Snell & Dyer, 2005).

This realization has brought forward a greater need to develop a clearer understanding of the nature of relationship between HRM and performance and to determine the direction of casualty. To further the debate on the ideal combination of approaches to HRM and measures of performance and reach a conclusion, a different research design and methodological approach may be needed.

Analysis of literature shows that the field is dominated by traditional, quantitative methods of research. Bulk of the studies have examined the research problem in the same manner and employed similar analysis techniques. A requirement of methodological and statistical rigor by top journals has led to the use of established measures by most researchers.

Since most of the research in this area has been published in last decade, the domain is still in its nascent stages and more qualitative studies are needed so that a grounded theory can develop. The domain of HRM and performance has witnessed a research cycle where early stages of research have been marked by quantitative methods, hypothesis testing and triangulation of statistical techniques. Qualitative studies have come at a later stage, with the first study being published in 1996. Interestingly, a quantum leap in the number of qualitative publications has been witnessed in 2011, and this surge has coincided with David. E. Guest (2011) publishing an article that emphasized the need for a sounder theory on the linkage between HRM and performance. Researchers have conducted very few empirical qualitative studies and rarely triangulated data collection methods. Majority of the research conducted has used cross-sectional data which makes it difficult to infer causality and to determine whether HRM impacts future performance, or whether past performance leads to implementation of HR practices.

Most of the studies have used only single respondents, usually the HR manager, as the primary data source. Thus, the ability of the respondent to judge the impact of HRM on performance could be questioned as personal bias comes into play. This problem can be resolved by using multiple respondents such as employees, HR managers and CEOs and using both surveys and in-depth interviews for data collection from these sources. This will increase robustness of findings and enhance validity of research.

Another key finding of this study has been the stress on research rigor. Compared to average response rates of organization studies, response rates are much higher in this discipline. Also, post-2005, a greater use of advanced statistical techniques has been made; however, sample size has remained at 101-200, which can limit the reliability and validity of empirical research findings (De Beuckelaer and Wagner, 2012).

The results of cross-tabulations show that the degree of variety of research methods used in the field of HRM and performance is highest in small to medium sample sizes and researchers need to use larger samples so that external validity of the studies can be enhanced and results can be extended to make more generalized predictions.

A comparison of regions reveals that Asian studies are not vastly inferior in rigor as compared to NA and European studies but still find it difficult to target higher-rated publications. However, there is no Asian study that has employed pretesting or piloting of questionnaires, reliability and validity measures, and use of multiple statistical techniques for data analysis together in a single research project. One might conclude that there is an opportunity for Asian researchers to publish in higher rated journals by designing even more rigorous studies.

Conclusion and Future Research Opportunities

The discipline of HRM has been studied in great depth over the last 100 years but research within the domain of HRM and performance has received increased attention in the last two decades. There have been limited literature reviews in this area and no study has looked at trends in methodologies and publications. This study was conducted with an objective of analyzing trends in research methodologies in the field of HRM and performance in different geographical regions of the world over almost three decades. Scholarly research is important for the intellectual development of any discipline, and methodologies determine robustness of findings that can be applicable for academics and practitioners alike.

Analysis shows research methodologies are primarily empirical and studies follow a similar pattern across regions. Use of questionnaire surveys, single respondents, organizational level analysis, cross-sectional data, and statistical techniques like multiple regression have become the standard protocol for researchers. A mix of research design will help in complementing the strengths of each method and minimizing its weaknesses. There is opportunity for researchers to use qualitative data collection methods like in-depth interviews, focus groups and case studies, and develop sophisticated techniques to analyze the data generated from these designs. Hesketh and Fleetwood (2006) have suggested using more qualitative techniques to find the direction of linkage between HRM and performance. Using a variety of methods to analyze this link will lead to findings that are more robust and generalizable.

Results indicate that researchers have focused on single raters and concentrated their efforts on investigating viewpoints of top management. Developing survey instruments that capture the perspective of lower level employees may provide an alternate view on HRM and performance. Researchers can also combine multi-respondent studies across multiple industries in order to obtain a comprehensive overview of the field. Efforts should be made in future to generate greater responses so that biasness in data is minimized and relevance and rigor of studies is improved.

The cross-sectional nature of majority of the studies poses another problem since it either compares past performance to prevailing HR policies, or asks respondents to recall past policies and comment on current performance. A longitudinal research design can solve this problem so that current performance can be compared to existing policies. A long-term horizon will help in explaining the dynamics of the impact of HRM on performance and enhance confidence in findings.

The analysis of HRM and performance can be extended to developing economies to generate a global perspective on HRM and performance. A few studies have analyzed HR systems of multinational companies and looked at the impact on outcomes but there is potential for more studies, especially for comparative studies across regions. Research designs can easily be replicated in these countries where culture and socio-economic factors are considerably different from those in North America and Europe and the linkage between HRM and performance can be studied from the perspective of these countries. As globalization increases and the benefits of HRM systems become apparent in lesser developed economies, researchers might be encouraged to study how similar practices in various countries affect organization performance differently. Presently, a small number of studies are collaborative in nature and increased alliances between authors of developed and developing countries can enrich the field and strengthen theory development and testing. A content analysis of Chinese HRM literature found that lower response rates and smaller sample sizes were found in studies conducted by Western scholars in China, however, Chinese researchers managed to get an average response rate of 81.6% and sample size of 681 (Liang et al, 2010). Thus, there are synergies to be found in greater collaborations between regions.

Our analysis shows that emphasis on methodological rigor seems to be a requirement of top-tier publication outlets and the more prolific journals in this domain like *IJHRM*, *HRM* and

AMJ publish studies that report measures of reliability, validity and triangulation of statistical techniques. The use of these procedures seems to have become the standard and leading academic journals expect research studies to incorporate these methods to qualify for publication. Future researchers aspiring for publications in these journals should design studies keeping in mind these requirements.

Since grounded theory about HRM, performance, and the connection between the two is yet to be developed (Guest, 2011), researchers need to widen their methodological base and consider an approach that looks at the interaction of longitudinal, multi-level analysis and qualitative data collection. This will serve to go a long way in helping to unlock the true relationship between HRM and performance.

Limitations

One limitation of this study is that only three databases were used to perform a keyword search to generate articles. The databases do provide a comprehensive source of articles but there is always the possibility of missing a study. Second, the articles are not categorized according to the three different perspectives of HRM so specific research methodology followed for each perspective is not analyzed. This further analysis could be an opportunity for future researchers.

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