IMPACT OF E-RECRUITMENT ON HUMAN RESOURCE SUPPLY CHAIN MANAGEMENT: AN EMPIRICAL INVESTIGATION OF SERVICE INDUSTRY IN INDIAN CONTEXT

Synopsis of the thesis to be submitted in fulfillment of the requirements for the Degree of

DOCTOR of PHILOSOPHY
IN
MANAGEMENT

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FEBRUARY, 2010

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1. INTRODUCTION

1.1 INTRODUCTION

"We are witnessing a change in the nature of jobs. Muscle jobs are disappearing, finger and brain jobs are growing or, to put it more formally, labor-based industries have been displaced by skill-based industries and these in turn will have to be replaced by knowledge-based industries." -Charles Handy (1984)

Though Charles Handy tracked these radical changes long back in 1984, these touched India very recently. During the last few years, India has witnessed an unprecedented economic growth. The service sector is the lifeline for the social economic growth of a country. It is today the largest and fastest growing sector globally contributing more to the global output and employing more people than any other sector. In alignment with the global trends, Indian service sector too is one of the major contributors to both employment and national income in recent times. It is estimated that in the near future close to a million new jobs will be created in the services sector.

The hospitality and healthcare services are the largest and rapidly growing industries in India. Hospitality industry employs over 12 million people, accounting for 8.5 per cent of the total workforce, and generating over 4 per cent of GNP. Whereas, Healthcare is one of India's largest sectors, in terms of revenue and employment, and the sector is expanding rapidly. During the 1990s, Indian healthcare grew at a compound annual rate of 16%. Today the total value of the sector is more than $34 billion.

The global economy is fast becoming a reality where organizations will need to find ways to become more productive, more efficient and more competitive. Firms should entail themselves to prepare for the big global game and become more efficient and competitive to deliver high performance. A high-performance business starts with a high-performance workforce. Therefore, organizations should substantially focus on increasing their productivity, market share and shareholder value by ensuring that they have the right people, with the right skills in the right roles. With this significant focus becoming an area of concern, there is a need for due diligence in recruitment practices. Recruitment provides the first contact for an organization with its potential employees. An organization must have an effective recruitment policy and process to inform candidates about the job openings and persuade them to apply for the available positions.

Research interest in the topic of employee recruitment has increased substantially over the last thirty years. Recruitment is commonly defined as the process of discovering potential candidates and of generating a pool of qualified applicants by encouraging qualified

candidates to apply for actual or anticipated job vacancies within the organization [1]. In the contemporary business environment, companies are faced with a critical challenge to recruit and retain qualified employees [61]. As a result, the current trend demands a far more comprehensive and strategic perspective to recruit, utilize and conserve valuable human resources. There is a need for companies to have a conceptually sound framework (person: job-fit) and a cost-effective, speedy and convenient system (online testing) at their disposal to meet their personnel selection needs in a highly competitive environment [20]. These days, one way of doing so is via online recruitment, a method of attracting job candidates via the internet [25]. As a practice, it is agreed that e-HRM leads to considerable changes and therefore should be taken as an important development in the HR field [64, 63, and 40].

E-recruitment has been an issue of interest over the past ten years. Internet is considered as the latest tool in hiring. It is a real revolution spreading over the world of job hunting and hiring. The term online recruitment, e-recruitment, cybercruting, or internet recruiting, imply the formal sourcing of job information online. The first references to e-recruitment appear in articles of the mid-1980s [35 and 19]. While systematic reference to e-recruitment in the HR journals begins almost two decades later, in the mid-1990s, when IT companies and universities began to use the internet extensively. The closing of twentieth century has given rise to a vast debate concerning the response of HRM to the changing external and internal environment of the firm. Online job search and recruitment activity have vastly expanded since the year 2000. This was the period during which a truly distinct online recruitment paradigm emerged and first attained a level of critical mass. However, despite of its popularity, the research in the area has not as yet become as dominant as was predicted by many researchers and practitioners.

E-recruitment can be divided into two types of uses: corporate web site for recruitment and commercial jobs boards (such as monster.com) for posting job advertisements [79]. Corporate websites are a company's own website with a link for job posting/career options where candidates can log into for current openings. If the company advertises its vacant positions on other website that specialize in recruitment such as - naukri.com, timesjob.com, monster.com, etc., the companies would be adopting commercial job boards for recruitment. Firms generally adopt a recruitment method that suits their size and budget for recruitment. Further, the size and nature of the fraction that applies for an organization's vacancies will be affected by how (and to whom) the organization communicates its vacancies [23].

In times of fierce competition, being able to attract high-quality human resources is considered a true competitive advantage for organizations [34, 90, and 100]. This attraction of potential employees and to get them to accept offers of employment has given recent recognition to the important role that recruitment plays in assuring organizational success [8, 38, 75, and 83]. It presumes that the approach an organization takes to recruitment makes a difference and assumes that recruitment outcomes depend on something more than the existing dynamics of labor supply and demand.

With the advent of current organizational need for resourceful recruitment structure, companies are beginning to understand that recruiting is fundamentally an inventory problem [47].The transformation phase with the supply chain perspective, encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management activities (American professional association) and provides a source to integrate the discipline with human resource recruitment. Importantly, supply chain management also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers (various layers). Akin to this, human resource supply chain management (HRSCM) process also involves sourcing, procurement, conversion, and logistics activities with the help of coordination and collaboration with channel partners (head hunters, placement consultants, web sourcing etc.). In the supplier-customer business arrangement, the effective way for suppliers (placement agencies, web sources) to service customers (company), is to become more responsive. An important factor contributing to responsiveness is time compression in the supply chain [82]. Not only can the company (customers) be serviced more rapidly but also the degree of flexibility offered can be more and, furthermore, the cost should be less because the pipeline is shorter.

The present study is a modest effort in this direction. It aims to expand the existing body of knowledge in the area by describing the development of human resource recruiting discipline with a supply chain perspective that is fundamentally a different paradigm from the traditional approach. As noted by Cappelli (2008), those who study supply chain management ask questions like, 'Do we have the right parts in stock?' 'Do we know where to get these parts when we need them?' 'Does it cost a lot of money to carry inventory?' These questions are just as relevant to companies that are trying to manage their talent needs [18]. In other words, the principles of supply chain management can be applied to human resource management which takes human resource recruiting well beyond the scope that the originator of the discipline had visualized. This will provide new emphasis and scope to the notion that recruitment is an ongoing activity and that it is not a solitary errand rather a layered and multifaceted process with internet as a major facilitator.

Given the importance of recruitment, it is remarkable that little research has been conducted into the decision making processes in organizations that forms the basis of recruitment strategy.Previous research studies that have focused on e-recruitment may not hold true for an emerging market like India. To the best of the researcher's knowledge no such study has been conducted in Indian context that could bring out any strong empirical results. Hence, the research examines the impact of e-recruitment on human resource supply chain management

1.2 RELEVANCE OF THE STUDY

Irrespective of the research path followed, the majority of researchers have focused on the manufacturing sector. For example, Arthur (1994) focused on steel mini-mills, MacDuffie (1995) focused on the auto industry, and Katou and Budhwar (2006, 2007) focused on the industrial sector as a whole [5, 67, 51, and 52]. The literature also highlights that most

studies have been conducted in the USA and the UK. Recently, a few investigations have been initiated in other parts of the world, especially in emerging markets such as China [27 and 2] and transitional economies such as Slovenia [106].

Furthermore, there has generally been a tendency for the services sector to be overlooked in HRM research [94, 66, and 45]. This lack of research relating to services was due to the fact that the services sector was a very heterogeneous sector comprising financial companies, retailing operations, transport operation, and hospitality [46]. Thus, the heterogeneity of the sector was a serious obstacle to researchers and any attempt to investigate the services sector as a whole was meaningless unless specific control variables were properly developed and a representative sample of the organizations belonging to the services sector was selected [45]. Considering the above, i.e. "it seems unlikely that one set of HR practices will work equally well no matter what the context" [36, p.178], more research is needed in the services sector and in different contexts. To fill this gap and to further examine the impact of e-recruitment, it is important to conduct research in non-US/European contexts and in non-manufacturing sectors.

1.3 AIM OF THE STUDY

The aim of this research is to examine the impact of the e-recruitment on the quality of applicants, cost and time involved in acquiring applications, wider choice of applicants and employees job search behavior and the development of the resulting conceptual model. Indeed the majority of these variables have been examined as distinct entities and not simultaneously as components of a human resource system. The lack of research and knowledge in this area may have limited our understandings of why and how human resource systems impact recruitment outcomes. Nevertheless, although it is well accepted that e-recruitment leads to increase in the chance to find the right candidate [33], facilitates geographical spread [22, 71, 74], quicker turn-around time/cost savings [33, 80, 107] and higher quality of applicants [9], there is a great need for additional empirical evidence to understand the impact of e-recruitment.

The study undertaken looks at the issue from emerging markets perspective by focusing exclusively on Indian hospitality and healthcare services. The major objective of this research is to empirically examine the impact of e-recruitment on quality of applicants, cost and time taken for employee acquisition, wider choice of talent, and employee job search behavior.

2. REVIEW OF THE LITERATURE

There is a voluminous research base and bewildering volume of advice to guide the personnel practitioner on almost every other aspect of the recruitment role and the importance of recruitment process, yet if one peruses reviews of recruitment research [8, 13, 90, and 103]; one finds a mix of optimism and pessimism. This section on literature review is focused on various theories that are relevant to our study.

2.1 GENERAL ADVANTAGES AND DISADVANTAGES OF E-RECRUITMENT

ADVANTAGES

(i) Geographical spread [22, 71, and 74].
(ii) Larger audience [3, 10, 17, 50, 60, 80, 107].
(iii) Greater chance to find right candidate quicker/with greater effectiveness [33].
(iv) 24/7 - no waiting for issue dates [22, 80].
(v) Quicker turn-around time/cost saving [33, 80, 107].
(vi) Relatively cheap [7, 17, 31, 33, 57, 74, 92].
(vii) Higher quality of applicants [9]
(viii) Better match of workers - vacancies [32].
(ix) Shift from manual screening to using 'HRM expertise' [80].
(x) Positive effect on corporate image/up-to-date image [33, 80].
(xi) Efficiency gains
(xii) Cost saving/saving personnel costs [80].
(xiii) Access passive jobseekers [33].
(xiv) Target candidates/ Address niche markets [33, 80].
(xv) Reduction of unqualified candidates [80].
(xvi) More opportunities for smaller companies [80].

DISADVANTAGES

(i) Higher expectations regarding relocation costs [15].
(ii) Development fees for small companies
(iii) Name recognition required (buy banner space etc.) [7, 33].
(iv) Outdated résumés [99].
(v) Discrimination/privacy [9, 26, 30, 80, 81, 95].
(vi) Internet not the first option for applicants [31, 33].
(vii) Overwhelming number of candidates [15, 33, 42, 62, 9].
(viii) Huge number of unqualified candidates [53, 37, 48].
(ix) Time consuming sifting of application forms [73].
(x) Poor segmentation of the market [80].
(xi) Transparency of data [80].

2.2 QUALITY OF CANDIDATES

A study conducted by Berger and Ghei (1995) in his study on a facet of hospitality hiring concluded that the success of the hotel industry depends on the quality of its employees and their effective management in order to assist the organization to achieve its objectives [12].

Mencken & Winfield (1998) explored the advantages and disadvantages of informal and formal recruiting practices in external labour markets. The authors found that quality was a strong motivator than cost for informal recruiting. The findings from the regression analysis also demonstrated that the quality of applicants was more salient for hiring managers in the private sector [72].

Smith (1999) had worked upon e-recruitment where he had tried to conceptualise that internet helps employer's better target prospective employees. The author mentioned that the career web, which small companies may consider expensive, could still be less costly than multiple newspaper ads [95].

Galanaki (2002) had conducted a descriptive study on the decision to recruit online, involving 99 UK IT companies whose shares were traded in London stock exchange. A survey was carried out, in the form of a postal questionnaire, followed by an interview to which 34 companies replied. The author found that internet agencies provide the company with fewer but substantially better applicants than traditional recruitment agencies [33].

A study conducted by Connerley, Carlson, & Mecham (2003) on the evidence of differences in applicant pool quality addressed the research need by examining the attraction outcome of firms competing head-to-head for recruits for similar positions. Results of an analysis suggest that applicant quality can vary substantially within and across job families [24].

A research by Matthews (2006) on the recruitment of law students by the United States Internal Revenue Service described how by moving up the start data of its campus recruitment efforts it was able to fill jobs more easily and with better quality individuals [69].

2.3 WIDER CHOICE OF APPLICANTS

Mencken & Winfield (1998) had explored the advantages and disadvantages of informal and formal recruiting practices in external labour markets. The authors found that hiring managers do indeed view the volume of applicants as the central advantage of formal recruiting techniques [72].

Chapman and Webster (2003) in their survey research on the use of technologies in recruiting, screening, and selection processes for job candidates conducted in USA found that most organizations implemented technology based recruitment and selection tools to improve efficiency, enable new assessment tools, reduce costs, standardize systems and expand the applicant pool [21].

According to the Pew Internet Research reported by NAS insights (2006), about 72 per cent of American adults were online. That translated to over 145 million people. This was a wide audience, and the Internet proved to be an integral part of employee recruitment because there was no faster, simpler, or more cost effective way to reach thousands of qualified candidates. In fact, 44 per cent of online Americans were looking for information about a job. The Internet allowed HR Managers to reach these candidates 24 hours a day, 7 days a week [76].

2.4 TIME AND COST TAKEN FOR ACQUIRING APPLICATIONS.

A study conducted by Martinez and Martineau (1998) on rethinking human resources stated that when health reforms aims at efficiency savings or overall cost reduction, they go by changing the way in which staff are employed [68].

Galanaki (2002) had conducted a descriptive study on the decision to recruit online, involving 99 UK IT companies whose shares were traded in London stock exchange. A survey was carried out, in the form of a postal questionnaire, followed by an interview to which 34 companies replied. The author found that of the factors that influenced a companies' decision making, cost-effectiveness and high response rate came first, followed by access to passive job seekers and the marketing purpose of online recruiting [33].

The study conducted by Boswell, Roehling, LePine, & Moynihan, (2003) focused on opportunities to meet people and site visit arrangements. In terms of the timeliness of actions taken by an employer during the recruitment process, Boswell and other authors documented the importance of timely recruitment actions. Their results showed that receiving prompt responses from HR Managers resulted in job candidates having a more positive view of the employer [11].

A conceptual paper on Managerial challenges of e-recruitment: extending the life cycle of new economy employees by Smith and Rupp (2004), examined the application of technology to recruiting and retaining knowledge workers in an e-commerce, information-intensive environment. The authors reported that e-recruitment as a general process is job specific and offers computer-assisted screening interviews and statistical prediction to aid in reducing recruiting costs, time-to-hire and employee turnover [96].

Hadass (2004) in his research on the effect of internet recruiting on the matching of workers and HR Managers developed a model of recruitment in which job seekers have private information about their qualification for different jobs and firms possess imperfect screening technologies. The implications of the model were empirically examined using personnel data from US-based multinational manufacturing firm with more than 15000 employees. The adoption of e-recruitment was modeled as reducing application costs to workers and improving screening technology for firms. He concluded that firms may adopt e-recruitment strategies because of the direct reduction in recruiting costs and because of competition among HR Managers for qualified hires [41].

The meta-analysis of the research conducted by Chapman, Uggerslev, Carroll, Piasentin, & Jones, (2005) concluded that timely responses from HR Managers were linked to greater applicant attraction to a job with an organization [21].

As reported by Aqayo Research on efficient talent acquisition through e-recruitment (2008), a survey was conducted among several hiring managers at NRG Engineering Pte Ltd.; a consulting company specialized in the Oil and Gas industry, to identify how the E-Recruitment software they used enhanced efficiency of their recruitment activities. All

unanimously agreed that using Applicant Tracking Systems significantly reduced the time spent on each recruitment activity, and additionally smoothened the recruitment process [6].

A research conducted by Verhoeven and Williams (2008) reports on a study into internet recruitment and selection in the United Kingdom. The study discussed the advantages and disadvantages as identified in literature and considered those against the views of HR Managers in UK. It obtained its data from a survey through postal questionnaire followed by an administered questionnaire to 83 organizations. The author reported that a quarter of UK HR Managers found internet recruitment to be effective in delivering suitable candidates. Furthermore, one out of every five UK HR Managers perceived the tool to be efficient, and only a slightly higher percentage of HR Managers indicating cost-saving and acknowledging that internet recruitment tools as relatively cheap in comparison with more traditional tools [102].

A survey conducted by Williams (2009) on E-recruitment showed dwindling recruitment spends focused on web-based recruitment at the expense of traditional methods. The author also reported that online methods proved far more popular, as two-thirds (66 per cent) of the HR professionals surveyed said that the jobs section of their own company's website was used as a recruitment tool for most jobs [104].

2.5 EMPLOYEE JOB SEARCH BEHAVIOUR IN CONTEXT OF E-RECRUITMENT.

A study by Mau and Kopischke (2001) on job search methods, job search outcomes and job satisfaction of college graduates, found that there was significant correlation between the number of job search methods used and the number of interviews and suggested that the students used a variety of job search methods rather than relying on a single method [70].

Dineen, Ash, and Noe (2002) examined another aspect of web-based recruitment, namely the possibility of providing tailored online feedback to candidates. In this experimental study, students were asked to visit the career web page of a fictitious company that provided them with information about the values of the organization and with an interactive "fit check" tool. In particular, participants were told whether they were a "high" or a "low" fit with the company upon completion of a web-based person-organization fit questionnaire. Participants receiving feedback that indicated high P-O fit were significantly more attracted to the company than participants receiving no feedback. Similarly, participants receiving low fit feedback were significantly less attracted than those receiving no feedback [28].

A research on Internet job search and unemployment durations by Kuhn and Skuterud (2004) had tried to find out which types of unemployed workers looked for work online and whether internet searchers became reemployed more quickly. The authors concluded that internet job search is more common among workers with observed characteristics that are usually associated with faster reemployment and internet job search does speed reemployment. The authors pointed out that, internet job search might significantly

improve search outcomes on dimensions such as job quality that they had not measured in their research [58].

Jansen, Jansen and Spink (2005), gave implications for online job seeking and recruiting in their paper on using the web to look for work. The authors focused upon three specific research questions: how do people search for job-related information on the web? How effective are these searches? And how likely are job seekers to find an appropriate job posting or application? The data used to examine these questions come from job seekers submitting job-related queries to a major web search engine at three points in time over a five-year period. Results of their study indicated that individuals seeking job information generally submitted only one query with several terms and over 45 percent of job-seeking queries contained a specific location reference. Of the documents retrieved, findings suggested that only 52 per cent were relevant and only 40 per cent of job-specific searches retrieved job postings [49].

Ng and Burke (2006) in their study on the next generation at work explored the views, career expectations, and job search behaviors among a sample of business students. The authors conducted a field survey involving 20,771 students across Canada to understand the views of university students on jobs, organizations, careers and perception of their organizations. The study using multiple regression analysis found that cooperative students appear to have more realistic expectation, have better insights into their own abilities and desires, and report higher self-confidence. It also reported that the respondents had low expectations that their campus career offices would get them a job, and expected to use the internet more frequently in their job searches. This suggested a shift away from traditional recruitment mediums to more contemporary approaches such as internet [77].

Breaugh (2008) had discussed employee recruitment and its important areas for future research, where he had reviewed research on recruitment topics that had received considerable attention (e.g., recruitment methods, realistic job previews). He had also addressed topics (e.g., targeted recruitment, the site visit) that had received relatively little attention but that had the potential to be quite important. The author had found that many job applicants: (a) had an incomplete and/or inaccurate understanding of what a job opening involved, (b) were not sure what they wanted from a position, (c) did not have a self insight with regard to their knowledge, skills, and abilities, and (d) couldn't accurately predict how they would react to the demands of the new position [14].

1368 students and graduates were surveyed on their experiences of online applications, for the GTI online recruitment student user survey 2009. The questionnaires were sent online and comprised seven pages of quick to answer questions. 667 completed the questionnaires in full (55 per cent) while 1027 provided partial responses. The results highlighted that internet systems were now generally recognized as the mainstream way of making an application and that applicants were skilled in their use. The majority of comments were positive. When asked what they liked, students mentioned speed, convenience/cost-effectiveness, fairness and presentation [39].

2.6. ISSUES EMERGING FROM LITERATURE REVIEW

From the literature review, the following pertinent issues emerge:

(i) With the internet, all types of jobs and employees could be easily found and acquired to fill specific needs [59].
(ii) Internet recruitment improves corporate image, reduces recruitment cost, reduces administrative burden and employs better tools for the recruitment team [55].
(iii) Internet can assist employees in finding employment opportunities faster and easier than ever before [59].
(iv) Web sites are viewed as a very effective recruitment method and are perceived as generating a large number of job applicants at relatively low cost [20, 98].
(v) With the introduction of the internet, the recruitment process has become easier [102].
(vi) Complexity and the dynamic nature of recruitment practices require continuous updation of knowledge, skills and abilities.
(vii) Recruitment practices differ in different organizations classified based on organization type, size etc.
(viii) Better recruitment practices have impact on image of the organization and ability to fill the vacancies more promptly.
(ix) In service sector- recruitment and retention have been acknowledged to be problematic and increasingly a response has been to "cast the net more widely" [85].
(x) Most customers who defect from a service business "blame indifferent or unhelpful employees" [91].

According to a study conducted by Gerry Crispin, principal of staffing for CareerXroads, an HR consulting firm, "The use of the Internet for job searches has grown and will continue to grow." Online recruitment market today is worth over $7.1 billion, according to HR.com. Online recruitment was rated the preferred way to find a job, with 78 per cent satisfied with the outcome compared to 54 per cent who opted for the traditional methods.

The review of literature on e-recruitment brings forth the paucity of empirical studies especially in Indian context. A review of current literature indicates that the use of the Internet and thus Internet technology is changing [56]; transforming [81, 93, and 101] and revolutionising the way in which human resource departments recruit job candidates. Nevertheless, very limited research has been carried out in this area to date. Young and Weinroth (2003, p.11) refer in this respect to "the currently minimal field of E-recruitment literature [105], while Lievens et al. (2002, p.586) describe it as "very scarce" [64]. Furthermore, existent literature in the areas focuses mainly on the United States of America (USA) rather than on European and Asian countries. Reasons for this might be the relative newness of the topic, the rapid pace of change which makes information quickly out of date [9] and the advancement of the practice in the USA

The present study is oriented to examine the impact of internet e-recruiting on importance of quality, wider choice, resources and employee job search behaviour. The study makes a comparative analysis of e-recruitment practices in Indian service industry at two levels i.e.

organization type and organization size respectively. The results help to describe the phenomenon and thus aid in a process that is essential for theory building.

3. RESEARCH OBJECTIVES AND HYPOTHESIS:

3.1 RESEARCH OBJECTIVES

The study is focused on achievement of following five objectives:

1. To assess the impact of e-recruitment in terms of quality of the applicants.
2. To study the impact of e-recruitment on cost and time taken for employee acquisition.
3. To analyze the impact of e-recruitment in providing a wider choice of talent.
4. To analyze the impact of e-recruitment on employee job search behavior.
5. To develop a model on HRSCM with a decision-support capability in an Internet environment.

3.2 FORMULATION OF HYPOTHESES

Drawing on the existing conceptual and empirical framework, the present study attempts an empirical examination of the comparative analysis of E-recruitment practices and their relationship with perceived importance of quality, resources utilized and providing wider choice among top management and employees. The Hypotheses of the study are:

1. There is a significant difference about perceived importance of advantage, effectiveness, information and efficiency of e-recruitment between Hospitality and Healthcare Services; Small and large scale organizations; HR Managers and employees.
2. Advantage, effectiveness, information and efficiency of e-recruitment have significant impact on suitability, talented database, and targeting right people at all three levels
3. Advantage, effectiveness, information and efficiency of e-recruitment have significant impact on annual cost, external cost, overall time, processing applications and recruitment cycle time at all three levels.
4. Advantage, effectiveness, information and efficiency of e-recruitment have significant impact on entrants, international candidates, accessibility of candidates, and qualified pool at all three levels.
5. Among employees, HR managers and general managers/other senior managers, there is a significant difference in perceived importance of Suitability, talented database, and targeting right people; Annual cost, external cost, overall time, processing applications and recruitment process time; Entrants, international, accessible, and qualified pool

4. RESEARCH METHODOLOGY

This section discusses the research design and the methodology adopted in the present study. It also outlines the development of tools while standardizing them scientifically establishing validity and reliability. Quantitative analysis of data was done using statistical tools wherever applicable. This section further elaborates on the research design used in the present study including details of sample, development of research tools, instruments,

and extraction of variables, data collection procedure and the statistical techniques employed for data analysis.

4.1 RESEARCH DESIGN

A 2x2x2 factorial design was used as the research design. The research design is presented in Figure 1. In this study, structured questionnaires A, B, C were developed to identify and assess perceived quality of employees and wider choice through e-recruitment, resources utilized for e-recruitment, and employee job search behavior respectively. Detailed procedure for developing tool is explained in ensuing discussion.

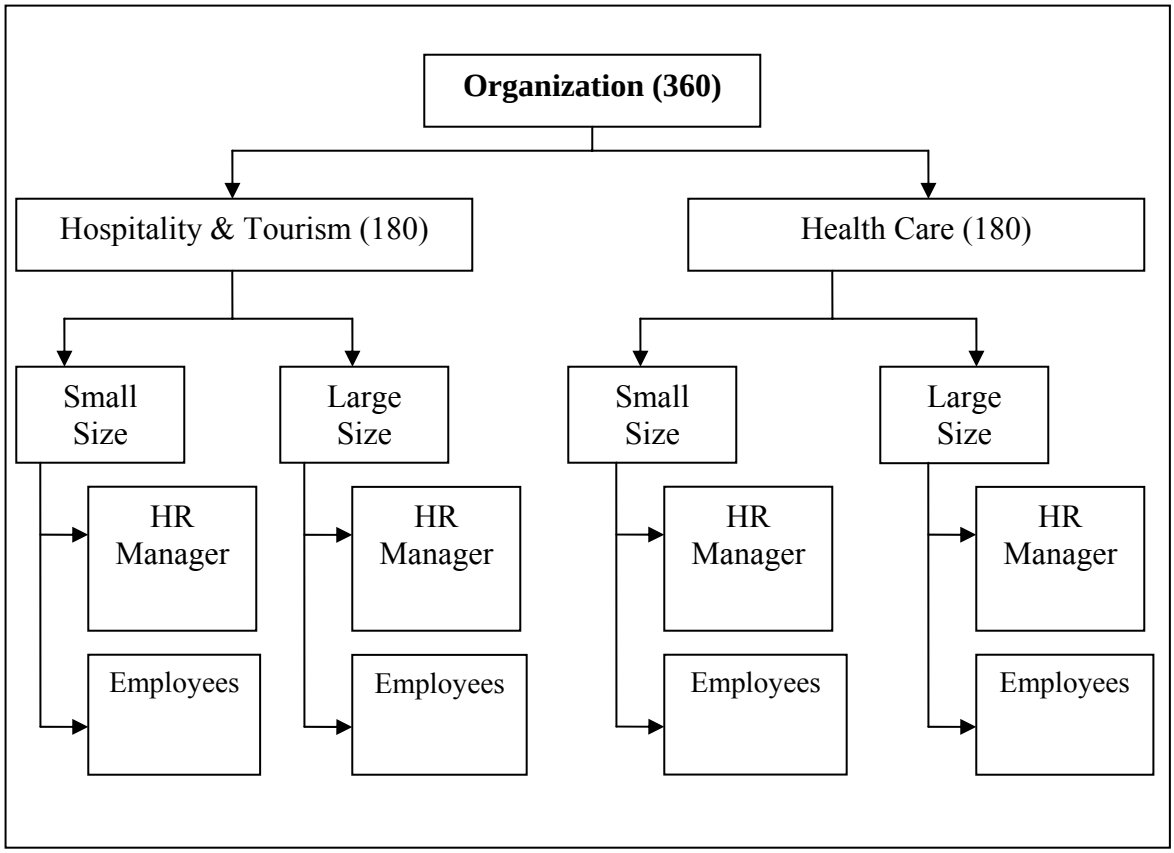


Figure 1: Research Design

4.2 THE DATA AND SAMPLE

4.2.1 THE DATA

The research is analytical and empirical in nature and makes use of secondary and primary data. The secondary data was sourced from Emerald, Jstor, Ebsco host, etc. Primary data was collected from HR managers/professionals, and employees. A third category of respondents (sample) was taken which constituted people who do not influence or participate in the process of recruitment directly but are significant stakeholders. They consisted of General Managers, and other senior functional managers of the organization.

4.2.2 THE SAMPLE

As derived from the literature, Indian service industry was classified using two criteria, viz; organization type: if the organization operates in hospitality or in health care services and organization size: if the organization is individual/small size or chain/large size. Size is measured in terms of the number of people employed by the company [95]. Respondents included employees, HR managers of the organizations and other general/senior managers to test different facets of e-recruitment and its impact on human resource supply chain management. In the present study, data was collected from the organizations located in National Capital Region of India.

4.2.3 SAMPLING CRITERIA

Equal distribution of respondents between Indian hospitality and health care organizations as well as between small and large organizations was ensured. All efforts were made to ensure that the organizations included in the present study met with the above criteria. Among respondents only those HR managers/professionals were selected who are responsible for the recruitment activity of the organization. Employees were the persons from the same organizations working at the level of 0-1 year, 2-5 years and 5 and above years of experience for comparison purpose. General and other senior managers were those senior managers who did not have links with HR department, however could be involved in recruiting activities especially in case of small organizations where no separate HR departments exist.

4.3. DEVELOPMENT OF RESEARCH TOOLS

As the present study aims at making a comparative analysis of e-recruitment and its impact on human resource supply chain management, one of the major tasks associated with this study was the development of questionnaires to be administered. Due to the non-availability of a valid tool and enough research in the Indian context, items for quality of employees, cost and time involved and wider choice through e-recruitment were consulted from various related articles and literature for the basic framework.

Three questionnaires were developed for the present study. *Survey Questionnaire A: Perceived quality of employees and wider choice through e-recruitment* was developed to measure perceptions about quality of employees to make sure a good fit with the company as well as getting ample number of applications from diverse geographical locations. *Survey Questionnaire B: Resources utilized for e-recruitment* was developed to measure all costs that are involved in acquiring applications from the prospective employees and the duration involved in acquiring applications from the prospective employees. *Survey Questionnaire C: Employee job search behaviour* was developed to measure employee job search behaviour about e-recruitment in terms of quality, wider choice, time and cost involved in e-recruitment. The questionnaire had high face validity. The content validity (which concerns the relevance of the questions asked to the quality being measured) of the questionnaire was ensured through the use of judges at different stages during its development.

4.3.1 PILOT STUDY

A pilot study was performed for all the three questionnaires on a sample of 100 respondents. A pilot, or feasibility study, is a small experiment designed to test logistics and gather information prior to a larger study, in order to improve the latter's quality and efficiency. A pilot study can reveal deficiencies in the design of a proposed experiment or procedure and these can then be addressed before time and resources are expended on large scale studies. For the purpose of the present study, the questionnaires were pre tested on a sample of 100 respondents. These respondents did not form a part of the sample of the main study. The aim of pre-testing was (i) to check the reliability and validity of the questionnaire (ii) to ascertain the time required to complete the questionnaire (iii) to check the adequacy of response categories formulated and (iv) to check the overall appropriateness of the questions. The questionnaire was discussed with respondents as well. Thereafter, the same sample was approached after three months to establish the consistency of the questionnaire. The questionnaire was also validated by conducting factor analysis and indentifying appropriate parameters.

4.3.2 SCORING OF THE QUESTIONNAIRES

Survey Questionnaire A was rated on a five point scale where strongly disagree was coded as '1', disagree was coded as '2', neutral was coded as '0', agree was coded as '3', and strongly agree was coded as '4'. Survey *Questionnaire B* was also scored on a five point scale where very high was coded as '1', high was coded as '2', neutral was coded as '0', low was coded as '3', and very low was coded as '4'. *Survey Questionnaire C* was also rated on a five point scale where responses were coded from 1 to 4 in order of their desirability.

4.3.3 VALIDATION AND STANDARDISATION

Nature of data and requirements of analysis dictated that data should be standardized. As survey questionnaire A and B were about the perception of people toward e-recruitment, quality, wider choice, cost and time involved in recruiting, it was imperative to use data

reduction methods to identify significant differentiating components/variables. Factor Analysis was used for this purpose.

4.3.4 FACTOR ANALYSIS

Factor Analysis is the technique primarily used for data reduction or structure detection. The purpose of data reduction is to remove redundant (highly correlated) variables from the data and replacing them with a smaller number of uncorrelated variables. The purpose of structure detection is to examine the underlying (or latent) relationships between the variables.

The principal components method of extraction was used in the present study as it finds a linear combination of variables (a component) that accounts for as much variation in the original variables as possible. It then finds another component that accounts for as much of the remaining variation as possible and is uncorrelated with the previous component, continuing in this way until there are as many components as original variables. Questionnaire Aa (Perceived quality of employees and wider choice through e-recruitment-E-recruitment), Questionnaire Ab (Perceived quality of employees and wider choice through e-recruitment-Quality), Questionnaire Ac (Perceived quality of employees and wider choice through e-recruitment-Wider choice), Questionnaire Ba (Resources Utilized for E-Recruitment-Cost), Questionnaire Bb (Resources Utilized for E-Recruitment-Time) were separately treated for extraction purpose.

4.4 RESEARCH TECHNIQUES

4.4.1 MULTIPLE ANALYSIS OF VARIANCE

A two step multivariate procedure was employed where the data was first subjected to a factor analysis and then multiple analysis of variance was performed on extracted factors. In the first step, a set of dimensions (unobservable attributes) were measured by relating them to observable variables using factor analysis. In the second step, the effect of different independent variables and their interaction was estimated using MANOVA. Advantage, effectiveness, information and efficiency were the dependent variables and organization type, organizational size and respondent category were the fixed factors.

4.4.2 MULTIPLE REGRESSION ANALYSIS

A two step multivariate procedure was employed where the data was first subjected to a factor analysis and then multiple regression was performed on extracted factors. In the first step, a set of dimensions (unobservable attributes) were measured by relating them to observable variables using factor analysis. In the second step, the relationship between dimensions of quality, cost, time and wider choice and dimensions obtained for e-recruitment was estimated using regression analysis with dummy variables. In the present study, dummy variables measured the two opposite options at three levels. Value 1 meant the practice coincides with that and value 0 meant the opposite case. Organizational

type referred to hospitality services (value 1) or healthcare services (value 0). Organization size referred to large size (value 1) or small size (value 0). Respondent category referred to HR Managers (value 1) or employees (value 0). Suitability of candidates, talented database, targeting right people, annual cost, external cost, overall time, processing applications time, recruitment cycle time, wider choice for entrants, wider choice for international candidates, accessibility of candidates, qualified pool were the dependent variables and advantage, effectiveness, information and efficiency were the independent variables.

5. DATA ANALYSIS AND DEVELOPMENT OF THE MODEL

5.1. FACTOR ANALYSIS

Table 1 (refer to Annexure 1) shows Kaiser-Meyer-Olkin measure of sampling adequacy values. It is the measure that judges the sampling adequacy. The value obtained is more than 0.60 which ensures that the sample size was adequate to apply Factor Analysis.

5.2 FACTOR EXTRACTION

Principal Component Analysis method was used to extract the factors. The Table 2 (refer to Annexure 1) shows the factor pattern matrix, which highlights variance exhibited by extracted factors. Generally, the identification of the factors is determined by the factor loadings, and the relationship of the factor with the variable is based on the signs of factor loadings. A factor loading is simply the correlation of an original variable with factor. As suggested by Dillion and Goldstein (1984), variables with factor loadings greater than absolute value of 0.30 or more are considered significant and, thus, used in labeling of factors. As shown in the factor pattern matrix a set of 4, 3, 4, 2, and 3 factors were extracted. These factors were labeled as Factor of e-recruitment, Factor of quality of applicants, Factor of wider choice of candidates, Factor of cost and, Factor of time.

5.3 MULTIPLE ANALYSIS OF VARIANCE

The Table 3 (refer to Annexure 1) shows the parameters for analysis, which highlight the dependent variables and fixed variables.

5.3.1 RESULTS FOR ORGANIZATIONAL TYPE

There was a significant effect of the organizational type (Hospitality and Healthcare services) on the combined dependent variable e-recruitment, $F\ (4,355) = 11.612,\ p < .05;$ *Wilks' Lamda = .000* (refer to table 4a, Annexure 1). The *Partial Eta Square* = .161 indicated a large effect of e-recruitment on organizational type. But, the four univariate ANOVA test statistics using Bonferroni adjusted alpha level of .013 (.05 / 4), showed no evidence of statistically significant differences by organization type in terms of the perceived importance of Effectiveness of e-recruitment (EFT_IR), $F\ (1,358) = 6.040,\ p > .013;$ Information through e-recruitment (INF_IR), $F\ (1,358) = 2.082,\ p > .013;$ and Efficiency of e-recruitment (EFC_IR), $F\ (1,358) = 3.990,\ p > .013.$ Only Advantages of E-

recruitment (ADV_IR), *F (1,358) =31.619, p<.013,* showed the significant difference between two groups (refer to table 4b, Annexure 1).

From the discussion it can be concluded that the null hypothesis that there is no significant difference about perceived importance of advantage of e-recruitment, effectiveness of e-recruitment, information through e-recruitment, and efficiency of e-recruitment between hospitality and healthcare services is accepted.

5.3.2 RESULTS FOR ORGANIZATIONAL SIZE

Organizational size (Small and Large) had a significant effect on the combined dependent variable e-recruitment, *F (4,355) =3.014, p<.05; Wilks' Lamda = .018* (refer to table 5a, Annexure 1). The value of *Partial Eta Square* = .33 indicates a large effect of e-recruitment on size of the organization. The four univariate ANOVA test statistics using Bonferroni adjusted alpha level of .013 (.05 / 4), showed that the two groups differed in terms of the perceived importance of Advantages of E-Recruitment (ADV_IR), *F (1,358) =1.709, p<.013;* Effectiveness of e-recruitment (EFT_IR), *F (1,358) =6.769, p<.013;* Information through e-recruitment (INF_IR), *F (1,358) =6.209, p<.013;* and Efficiency of e-recruitment (EFC_IR), *F (1,358) =5.210, p<.013* (refer to table 5b, Annexure 1).

Therefore, it can be concluded that the null hypothesis that there is no significant difference about perceived importance of advantage of e-recruitment, effectiveness of e-recruitment, information through e-recruitment, and efficiency of e-recruitment between small and large size organizations is rejected.

5.3.3 RESULTS FOR RESPONDENT CATEGORY

A significant effect of the respondent category (Employer and Employee) on the combined dependent variable e-recruitment was found, *F (4,355) =4.524, p<.05; Wilks' Lamda = .001* (refer to table 6a, Annexure 1). The value of *Partial Eta Square* = .49 indicates a large effect of e-recruitment on respondent category. The four univariate ANOVA test statistics using Bonferroni adjusted alpha level of .013 (.05 / 4), showed that the two groups differed in terms of the perceived importance of Advantages of E-Recruitment (ADV_IR), *F (1,358) =4.623, p<.013;* Effectiveness of e-recruitment (EFT_IR), *F (1,358) =7.939, p<.013;* Information through e-recruitment (INF_IR), *F (1,358) =2.957, p<.13;* and Efficiency of e-recruitment (EFC_IR)*F (1,358) =3.915, p<.013* (refer to table 6b, Annexure 1).

From the results achieved it can be concluded that the null hypothesis that there is no significant difference about perceived importance of advantage of e-recruitment, effectiveness of e-recruitment, information through e-recruitment, and efficiency of e-recruitment between HR Managers and employees is rejected.

5.4. MULTIPLE REGRESSION ANALYSIS

The Table 7 (refer to Annexure 1) shows the parameters for analysis, which highlights the dependent variables and independent variables.

5.4.1 RESULTS FOR QUALITY

5.4.1 (i) Results of regression on suitability of candidates (SUI_CAN)

The regression results have been reported in Table 8, 9, and 10 respectively (refer Annexure 1). The ANOVA (refer table 9, Annexure 1) depicts that a significant model emerged, $F\ (7,352) = 13.7932,\ p < .05$ at 5% level of significance. The regression results indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment (EFT_IR), Information through e-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR), are positively and significantly related to suitability of candidates (SUN_CAN). Regression coefficient is statistically significant at 5% level of significance. The four level of model can explain 20.1% of variation in the value of dependent variable, Adjusted R^2 = .201. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.827. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variables have also been introduced to take care of the three levels of responses that is organization type (Healthcare and Hospitality services), organizational size (Small and Large size), and respondent category (HR Managers and Employees). The dummy variable organization type had no impact on suitability of candidates. This implies that both healthcare and hospitality services gives equal importance to suitability of candidates. The dummy variable organizational size had a positive coefficient. This implies that the value of suitable candidates is significantly more in large size organizations as compared to small size. The variable respondent category had a positive coefficient, suggesting that the value of suitability is more for HR Managers.

5.4.1 (ii) Results of regression on talented database (TAL_DB)

The ANOVA (refer table 12, Annexure 1) depicts that a significant model emerged, $F\ (7352,) = 6.079,\ p < .05$ at 5% level of significance. The regression results have been reported in Table 11, 12, and 13 respectively (refer Annexure 1). The regression results indicate that Advantages of e-recruitment (ADV_IR), and Effectiveness of e-recruitment (EFT_IR) has regression coefficient, which is statistically insignificant at 5% level of significance. Both Information through e-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR), are positively and significantly related to talented database (TAL_DB). Regression coefficient is statistically significant at 5% level of significance. The four level of model can explain 10.8% of variation in the value of dependent variable, Adjusted R^2 = .108. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.841. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector had a positive coefficient. This implies that the value for talented databases is higher in hospitality services as compared to healthcare. In contrast, the dummy variable size had an insignificant coefficient. The variable respondent category had a positive coefficient, suggesting that the value for talented database is more for HR Managers.

5.4.1 (iii) Results of regression on targeting right candidate (TAR_RC)

A significant model emerged at 5% level of significance (refer ANOVA Table 15, Annexure 1), $F(7,352) = 3.288, p < .05$. The regression results (refer Table 14, 15, and 16, Annexure 1) indicate that Advantages of e-recruitment (ADV_IR), Information through e-recruitment (INF_IR), Effectiveness of e-recruitment (EFT_IR) and Efficiency of e-recruitment (EFC_IR) are positively and significantly related to targeting right candidate (TAR_RC). Regression coefficient is statistically significant at 5% level of significance. The four level of model can explain 10.4% of variation in the value of dependent variable, Adjusted $R^2 = .104$. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.869. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector had an insignificant coefficient. This implies that the value for targeting right candidate is as important for hospitality services as for healthcare. The dummy variable size also had an insignificant coefficient. In contrast, the variable respondent category had a positive coefficient, suggesting that the value for talented database is more for HR Managers.

5.4.2 RESULTS FOR COST AND TIME

5.4.2 (i) Results of regression on annual cost (ANN_CO)

The regression results have been reported in Table 17, 18, and 19 respectively (refer Annexure 1). The ANOVA (refer table 18, Annexure 1) depicts that a significant model emerged, $F(7,352) = 3.121, p < .05$ at 5% level of significance. The regression results indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment (EFT_IR) information through e-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR) has regression coefficient, which is negatively and statistically significant. The four level of model can explain 10.9% of variation in the value of dependent variable, Adjusted $R^2 = .109$. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.907. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector and respondent category had insignificant coefficient. This implies that the value for budgeted cost is equally important for hospitality and healthcare services as well as for HR Managers and employees. In contrast, the variable size had a positive coefficient, suggesting that the value for budgeted cost is more for large size organization as compared to small size.

5.4.2 (ii)Results of regression on external cost (EXT_CO)

The regression results indicate that Advantages of e-recruitment (ADV_IR) and Effectiveness of e-recruitment (EFT_IR) has regression coefficient, which is statistically insignificant at 5% level of significance. Both Information through e-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR), are negatively and significantly related to external cost (EXT_CO). The regression results have been reported in Table 20, 21, and 22 respectively (refer Annexure 1). The ANOVA (refer table 21, Annexure 1) depicts that a significant model emerged, $F\ (7,352) = 3.452,\ p < .05$ at 5% level of significance. Regression coefficient is statistically significant at 5% level of significance. The four level of model can explain 4.6 % of variation in the value of dependent variable, Adjusted $R^2 = .046$. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.713. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector had a positive coefficient. This implies that the value for external cost is higher in hospitality services as compared to healthcare. The dummy variable size had an insignificant impact on external cost. The variable respondent category had a positive coefficient, suggesting that the value for external cost is more for HR Managers.

5.4.2 (iii)Results of regression on overall time (OVE_TIM)

The regression results have been reported in Table 23, 24, and 25 respectively (refer Annexure 1). The ANOVA (refer table 24, Annexure 1) depicts that a significant model emerged, $F\ (7,352) = 5.110,\ p < .05$ at 5% level of significance. The regression results indicates that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment (EFT_IR), Information through e-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR), are negatively and significantly related to overall time (OVE_TIM). The four level of model can explain 7.4% of variation in the value of dependent variable, Adjusted $R^2 = .074$. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.979. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model. The dummy variable sector had a negative coefficient. This implies that the value for overall time is higher in healthcare services as compared to hospitality. In contrast, the dummy variable size and respondent category had a non significant coefficient, implying that the value for overall time is same for small and large size organizations as well as for HR Managers and employees.

5.4.2 (iv)Results of regression for time involved in processing applications (PRO_APP)

The regressions results indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment (EFT_IR), Information through e-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR), are negatively and significantly related to processing applications (PRO_APP). The four level of model can explain 3.8% of variation in the value of dependent variable, Adjusted $R^2 = .038$. The regression results have been reported in Table 26, 27, and 28 respectively (refer Annexure 1). The ANOVA

(refer table 27, Annexure 1) depicts that a significant model emerged, *F (7,352) =3.032, p <.05* at 5% level of significance. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 2.043. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector and size had insignificant coefficient. This implies that the value for time involved in processing applications is same at both levels. Whereas, the dummy variable respondent category had a significant impact implying that value for time involved in processing application is higher for HR Managers as compared to employees.

5.4.2 (v)Results of regression for recruitment cycle time (REC_CT)

The regression results have been reported in Table 29, 30, and 31 respectively (refer Annexure 1). The ANOVA (refer table 30, Annexure 1) depicts that a significant model emerged, *F (7,352) =2.364, p <.05* at 5% level of significance. The regression results indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of recruitment (EFT_IR), Information through e-recruitment (INF_IR) and Efficiency of e-recruitment (EFC_IR) are negatively significant to recruitment cycle time. The four level of model can explain 2.6% of variation in the value of dependent variable, Adjusted R^2 = .026. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.836. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector and size had significant coefficient. This implies that the value for recruitment cycle time is higher for hospitality and large size organizations. Whereas, the dummy variable respondent category had an insignificant impact implying that value for recruitment cycle time is same for HR Managers and employees.

5.4.3 RESULTS FORWIDER CHOICE

5.4.3 (i)Results of regression on wider choice for entrants (WC_ENT)

The ANOVA (refer table 33, Annexure 1) depicts that a significant model emerged, *F (7,352) =5.010, p <.05* at 5% level of significance. The regression results (refer Table 32, 33, and 34, Annexure 1) indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment (EFT_IR), Information through E-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR) has regression coefficient, which is positively and statistically significant. The four level of model can explain 7.3% of variation in the value of dependent variable, Adjusted R^2 = .073. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.794. This pointed out the insufficient evidence of autocorrelation at 0.05 level in the model.

The dummy variable sector and size had significant coefficient. This implies that the value for wider choice for entrants is more in large size and hospitality services. In contrast, the variable respondent category had a negative coefficient, suggesting that the value of wider choice for entrants is more for employees as compared to HR Managers.

5.4.3 (ii)Results of regression on wider choice for international candidates (INT_CAN)

The regression results have been reported in Table 35, 36, and 37 respectively (refer Annexure 1). The ANOVA (refer table 36, Annexure 1) depicts that a significant model emerged, *F (7,352) =2.338, p <.05* at 5% level of significance. The regression results indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment (EFT_IR), Information through E-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR) has regression coefficient, which is positively and statistically significant. The four level of model can explain 2.5% of variation in the value of dependent variable Adjusted R^2 = .025. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.889. This pointed out the insufficient evidence of autocorrelation at the 0.05 level in the model.

The dummy variable sector and size had significant coefficient. This implies that the value for wider choice for international candidates is more in large size and hospitality services. In contrast, the variable respondent category had a negative coefficient, suggesting that the value of wider choice for international candidates is more for employees as compared to HR Managers.

5.4.3 (iii)Results of regression on accessibility of candidates (ACC_CAN)

The regression results indicate that Advantages of e-recruitment (ADV_IR), Information through E-recruitment (INF_IR), and Efficiency of e-recruitment (EFC_IR) has regression coefficient, which is positively and statistically significant to Accessibility of candidates (ACC_CAN). Effectiveness of e-recruitment (EFT_IR) had a significant regression coefficient. The four level of model can explain 4.0% of variation in the value of dependent variable, Adjusted R^2 = .040. The regression results have been reported in Table 38, 39, and 40 respectively (refer Annexure 1). The ANOVA (refer table 39, Annexure 1) depicts that a significant model emerged, *F (7,352) =3.127, p <.05* at 5% level of significance. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.793, which is higher than the usual value of 0.80. This pointed out the insufficient evidence of autocorrelation at the 0.05 level in the model.

The dummy variable sector and respondent category had significant coefficient. This implies that the value for accessibility of candidates is more for HR Managers and healthcare services. In contrast, the variable size had an insignificant coefficient, suggesting that accessibility of candidates is equally important for large and small size organizations.

5.4.3 (iv)Results of regression on wider choice of qualified pool (QUA_POO)

The regression results have been reported in Table 41, 42, and 43 respectively (refer Annexure 1). The ANOVA (refer table 42, annexure1) depicts that a significant model emerged, *F (7,352) =4.173, p <.05* at 5% level of significance. The regression results indicate that Advantages of e-recruitment (ADV_IR), Effectiveness of e-recruitment

(EFT_IR), Feature of company website (INF_IR), and Efficiency of e-recruitment (EFC_IR) has regression coefficient, which is positively and statistically significant to Qualified pool (QUA_POO). The four level of model can explain 3.4% of variation in the value of dependent variable, Adjusted $R^2 = .034$. The value of tolerance is close to 1 which shows that there is no problem of multicollinearity in the data. The DW statistics is 1.793. This pointed out the insufficient evidence of autocorrelation at the 0.05 level in the model.

The dummy variable sector, size and respondent category had significant coefficient. This implies that the value for qualified pool of candidates is more for HR Managers, large size and hospitality services.

5.5 MULTIPLE ANALYSISOF VARIANCES: RESULTS FOR EMPLOYEE JOB SEARCH BEHAVIOUR

The Table 44 (refer to Annexure 1) shows the parameters for analysis, which highlights the dependent variables and fixed factors.

5.5.1 RESULTS FOR QUALITY

There was a significant effect of the respondent category (HR Managers, General Managers/ other Senior Managers) on the combined dependent variable quality of e-recruitment, *F (3,356) =2.276, p<.05; Wilks' Lamda = .008* (refer to table 45a, Annexure 1). The value of *Partial Eta Square* = .39 indicates a large effect of quality of e-recruitment on respondent category. The three univariate ANOVA test statistics using Bonferroni adjusted alpha level of .017 (.05 / 3), showed that the two groups differed in terms of the perceived importance of Suitability of Candidates (SUI_CAN) *F (1,358) =.805, p<.012;* Talented Database (TAL_DB) *F (1,358) =1.775;* and Targeting Right People (TAR_PEO) *F (1,358) =3.283, p<.012* (refer to table 45b, Annexure 1).

From the discussion it can be concluded that the null hypothesis that there is no significant difference about perceived importance of Suitability of Candidates, Talented Database and Targeting Right People between employees and HR Managers (HR Managers, General Managers/ other Senior Managers) is rejected.

5.5.2 RESULTS FOR COST AND TIME

Respondent category (HR Managers, General Managers/ other Senior Managers) had a significant effect on the combined dependent variable cost and time involved through e-recruitment, *F (5,354) =2.749, p<.05; Wilks' Lamda = .009* (refer to table 46a, Annexure 1). The value of *Partial Eta Square* = .37 indicates a large effect of cost and time on respondent category. The univariate ANOVA test statistics using Bonferroni adjusted alpha level of .025 (.05 / 2) for cost and .017 (.05 / 3) for time, showed that the two groups differed in terms of the perceived importance of Annual Cost (ANN_CO), *F (1,358) =1.279, p<.025;* External Cost (EXT_CO), *F (1,358) =5.509, p<.025;* Overall Time (OVE_TIM), *F (1,358) =.254, p<.017;* Processing Applications Time (PRO_APP), *F*

(1,358) =5.981, p<.017; and Recruitment Cycle Time (REC_CT), *F (1,358) =.681, p<.017* (refer to table 46b, Annexure 1).

From the discussion it can be concluded that the null hypothesis that there is no significant difference about perceived importance of Budgeted Cost, External Cost, Overall Time, Processing Applications Time, and Recruitment Cycle Time between employees and HR Managers (HR Managers, General Managers/ other Senior Managers) is rejected.

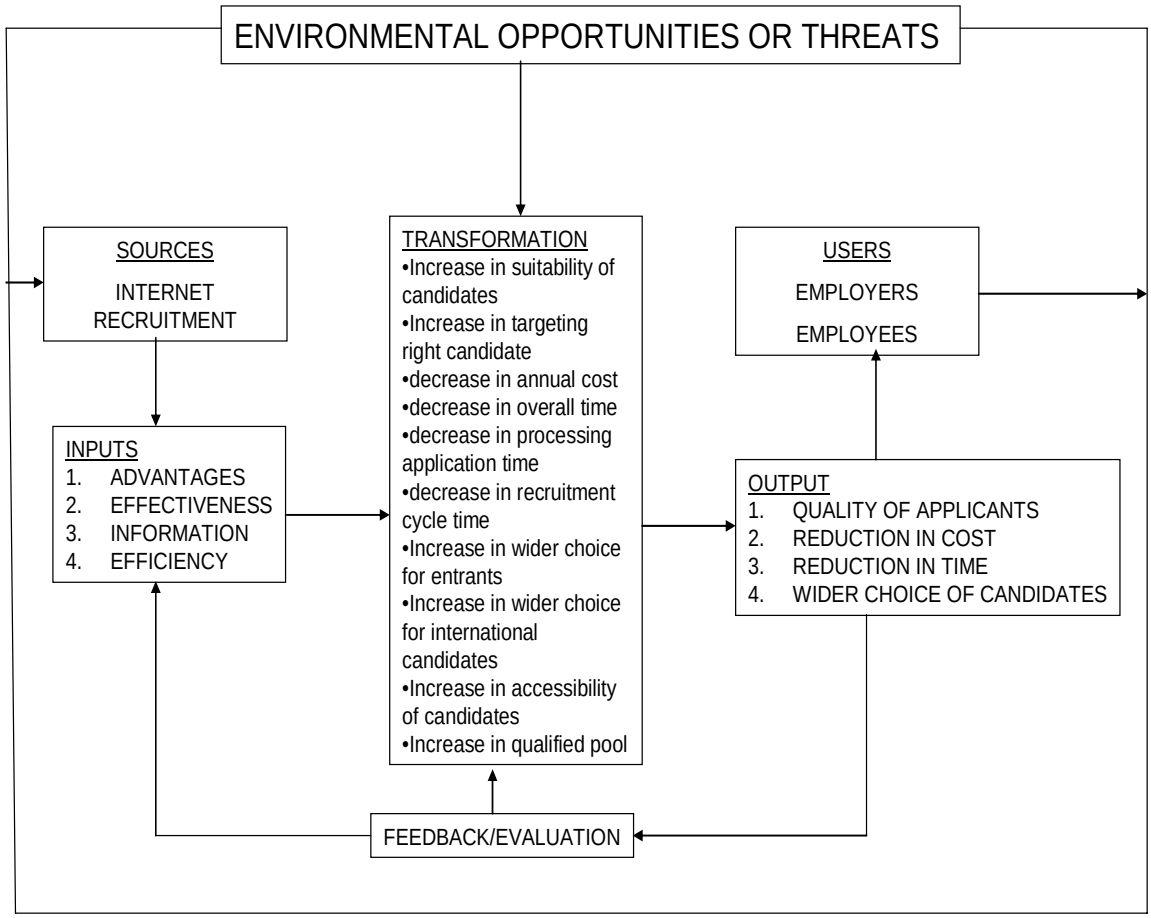
5.5.3 RESULTS FOR WIDER CHOICE

There was a significant effect of the respondent category (HR Managers, General Managers/ other Senior Managers) on the combined dependent variable wider choice, *F (5,354) =2.085, p<.05; Wilks' Lamda = .002* (refer to table 47a, Annexure 1). The value of *Partial Eta Square* = .32 indicates a large effect of wider choice on respondent category. The four univariate ANOVA test statistics using Bonferroni adjusted alpha level of .012 (.05 / 4), showed that the two groups differed in terms of the perceived importance of Wider choice for Entrants (ENT_WC), *F (1,358) =4.761, p<.012;* wider choice for International Candidates (INT_CAN), *F (1,358) =.387, p<.012;* Accessibility of Candidates (ACC_CAN), *F (1,358) =.723, p<.012;* and Qualified Pool of candidates (QUA_POO), *F (1,358) =2.197, p<.012* (refer to table 47b, Annexure 1).

From the discussion it can be concluded that the null hypothesis that there is no significant difference about perceived importance of wider choice for Entrants, wider choice for International Candidates, Accessibility of Candidates, and Qualified Pool of candidates between employees and HR Managers (HR Managers, General Managers/ other Senior Managers) is rejected.

5.6 DEVELOPMENT OF THE MODEL ON HRSCM WITH A DECISION-SUPPORT CAPABILITY IN AN INTERNET ENVIRONMENT.

The system approach to e-recruitment, as presented in Figure 2, provides a conceptual basis for undertaking recruitment practices within a managerial environment. Environmental analysis is the starting point for HRM. It entails the systematic identification and analysis of key trends and forces in the external environment. The key component of these respects is transformation. It is the process of converting the system's inputs into outputs through a series of patterned and interrelated activities. The utility of the inputs is enhanced through interdependent activities performed in sequence. Transformation at the centre of figure 2 represents an advantageous approach to recruitment in which stakeholders in the recruitment process are actively engaged in posting the vacancies and applying for a job. Therefore, facilitating the system to view the staffing procedure as an end-to-end process similar to that of a supply-chain.



A SYSTEM APPROACH FOR INTERNET RECRUITMENT

Figure 2

6. CONCLUSION AND IMPLICATIONS

This study has tested empirically the differences of significant importance of e-recruitment practices associates responses for organization type, organizational size and respondent category; impact of e-recruitment on quality, wider choice, time and cost in hospitality and healthcare sector, large and small size, and HR Managers and employees; and differences of significant importance of quality, wider choice, time and cost between HR Managers and employees.

The results as presented for the differences of significant importance of e-recruitment practices associate's responses for organization type, organizational size and respondent category imply that e-recruitment practices have significant differences across organizational size and respondent's category. In contrast, Organization type pays equal importance to e-recruitment. There is dearth of similar comparative studies on

Indian hospitality and healthcare service organizations. However, Lockyer and Scholarios (2004) have reported significant differences in recruitment context and practice across hotels of different size in their in-depth inquiry on selecting hotel staff [65]. Differences between small organizations and large size organizations can be explained in terms of their different requirements of skills and number of staff required. Since size is likely to create economies of scale, organization size may influence organizational effectiveness. By analogy, the results revealed that the perceived importance of internet to recruitment vary in terms of organizational size. The rationale is that large organizations have greater financial resources and invest more in e-recruitment applications, such as restructuring of recruitment process, greater database maintenance ability, and greater ability to handle a large volume of applications, greater information processing capability and greater power to increase the number of applications from potential employees. By contrast, small organizations lack the managerial resources and technical expertise required to adopt the new e-recruitment applications. Therefore small and large size organizations are likely to have different perceptions of importance of the internet to recruitment practitioners.

Explaining the results for organizational type we can say that hospitality and healthcare services had the same perception about the importance of e-recruitment. For many organizations e-recruitment has become a business resource. In particular, many organizations have realised that the internet can enhance communication and coordination with the potential candidates. Similarly, Ngai and et.al, (2008) reported that as internet technology continues to evolve; more organizations are finding ways of using the internet to support their HRM activities [78]. Budhwar and Sparrow (1997) and Raman, Budhwar and Balasubramanian (2007) have also found relative improvement in service companies in terms of Human Resource practices [16, 87].

For respondents' category, results reveal that the two groups differ in terms of perceived importance of e-recruitment. The pattern of differences is likely to exist and is incumbent upon the attitudes and expectations of HR Managers as compared to employees. The expectations of the employees with a particular organization can be unrealistic and those outside the control of the organization can be costly to the employer. Thus, understanding the attitudes and career aspirations of potential candidates is too important to be ignored. Therefore, HR Managers should make an effort to reduce unmet expectations by providing realistic job preview and managing such expectations. These results are supported by Ng and Burke (2006) who found that these characteristics are important because they have been linked to greater recruitment success [77].

Through the analysis of second objective it is found that the impact of e-recruitment on quality of applicants is partially accepted. Quality is receiving much attention from the hospitality and healthcare industries. People are one of the highest costs and also one of the main assets of contemporary organizations. In the contemporary business, customers are demanding quality and companies must provide it. Quality is now a competitive tool used to gain market share. Companies need to know the cost of providing quality services and its impact on their bottom line [84]. This becomes one reason for the increased use of the internet to support HRM. These technological changes are thought to increase the ability of HR practitioners to monitor the workforce, utilize employees' skills effectively

and even reduce labour costs [54]. The extent of a company's success in terms of its survival and competitive position is determined by workers' qualities [29]. Apart from the relatively rare scenario, the intangible resources of a firm, particularly its human resources are more likely to produce a real competitive advantage- because engaged and committed employees who render quality are difficult to competitors to emulate [44].

The analysis of third objective demonstrates that the impact of e-recruitment on time is accepted where as for cost it is partially accepted. E-recruitment allows companies to reach a greater number of job seekers in less time and for lower cost than traditional methods. As a consequence, resumes are being piped into companies at a rapid rate. Already companies that aggressively use the Internet for recruiting experience a reduction in time-to-hire, which saves recruitment costs and affects productivity and operational continuity. Job seekers find it less time consuming to use the internet than other traditional job hunting avenues and find that it presents them with more information about a company and specific career opportunities. With this information, they can then decide if they wish to contact the company to be considered for a position. This reduces the number of unqualified applicants that have to be processed by HR staff.

The analysis of the fourth objective reveals that the impact of e-recruitment on wider choice of applicants is accepted. As job seekers become increasingly more web literate and the growth of broadband makes web surfing easier and cheaper, the potential for e-recruitment to attract wider candidate pools is increasing. Attracting a larger or more diverse applicant pool was a key driver in implementing online recruitment amongst survey respondents with 74 per cent citing it as a key reason [88]. Similar findings are reported by Kerrin (2005) and CIPD (2005), stating that online advertising opens up a wider candidate pool, by providing 24/7 access to job seekers, at local, national and international locations, thus providing a better chance of finding the right candidate [55, 22].

The analysis of fifth objective revealed that there is a significant effect of the respondent category (HR Managers, General Managers/ other Senior Managers) on the combined dependent variable quality of e-recruitment; on the combined dependent variable cost and time involved through e-recruitment; and on the combined dependent variable wider choice. The feedback from candidates in relation to the online application process have been very positive, with large number of applicants for a recruitment campaign stating that the online application process was convenient for them and was their preferred method of application.

Heinl (2001) believed that, something like supply chain management is the next logical step in managing human resources. It is win/win for employers and employees to move in the direction of human resource supply chain recruiting [43]. Although people and products cannot be equated and subjected to the same exact metrics, nevertheless suitable common principles can be applied, albeit sensibly, to similar problems [4].

The findings of the research are very important as they help us comprehend the changes and developments in the discipline of human resource recruiting. The research undertaken

here indicates that the trend in recruiting shows a change starting as early as 2002 with the advent of internet in the process. If this trend continues, it is quite plausible that number of layers will increase in the process with the increase in demand to perform various functions involved.

It is important to note that a majority of the respondents felt that the supply chain perspective is the appropriate way to encourage employment, where stakeholders are actively engaged in providing the best talent to the organization at one functional level (sourcing, screening, short-listing and selecting) or the other. The research also reveals that, the multilayered recruitment is backed by the internet with the help of which variety of jobs and employees could be easily found and acquired respectively to fulfill specific needs.

It is interesting to find that as a consequence of recent downturn in the economy and increase in unemployment compared with the same period last year, the new approach can assist the employees in finding employment opportunities faster and easier than ever before. Moreover, by knowing which human asset is required, when and where, will allow the cultivation of value-based relationships.

The results from the study thus throw up a number of issues that are important for organizations seeking to maximize their manpower potential. The fact that both unwanted manpower and inventories are not good for companies, so there may be merit in adopting a human resource and supply chain concept in dealing with similar issues. Hence, the methodology and techniques can be learned from the supply chain and some suitable common principles can be applied, though sensibly, to related problems. These inclinations will be interesting to study and pursue in subsequent years, as the transformation is happening relentlessly.

6.1 CONTRIBUTION TO THE BODY OF KNOWLEDGE

The research undertaken is the first study in Indian context in hospitality and healthcare services. It highlights the differences in recruitment practices across the two sectors. This research brings new results that help the corporate in improving the quality of employee acquisition and trimming down the costs and time. New knowledge generated by this study helps in theory building efforts in the HR field, linking HR inputs and practices to meaningful organizational outputs and to have a competitive advantage.

The study is also useful to HR practitioners in making recruitment decisions. Human resource professionals can focus on productive ways to maintain and develop the talented and qualified database linked with recruitment practices. They could design and implement better recruitment decisions that ultimately influence important organizational outcomes.

6.2 RECOMMENDATIONS OF THE STUDY

- Test the system thoroughly before launch
- Keep it simple
- If recruiting international, make sure the system is not country/culture specific
- Respond promptly and sensitively to submitted forms
- Make the web link to the system easy to find.
- To provide training within HR to develop the capability to deliver e-recruitment.
- To facilitate the system and to view the staffing process as an end-to-end process, similar to that of a supply-chain.
- To evaluate and assess the post-hire performance levels of employees recruited.

6.3 FUTURE AREA OF THE RESEARCH

- The research can be extended taking sample from public and private organizations.
- Impact of e-recruitment on HRSCM could be compared with other countries' hospitality or health care services.
- Further research on employer behavior and adoption patterns can be conducted
- The study can be replicated with bigger sample size.
- The model developed can be tested empirically.
- Further research on employer behavior and adoption patterns.
- To further explore the impact of e-recruitment on the outcome, other advantages of e-recruitment can be studied empirically.

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ANNEXURE I

Table 1: Kaiser-Meyer-Olkin Measure of Sampling Adequacy

Questionnaire	Mean	Variance	Standard Deviation	Reliability Coefficient (Alpha)
Survey Questionnaire: A Part (a)	43.7350	41.261	6.4234	.711
Survey Questionnaire: A Part (b)	30.6333	19.275	4.3903	.916
Survey Questionnaire: A Part (c)	59.3077	61.231	7.8250	.821
Survey Questionnaire: B Part (a)	30.4800	18.622	4.3153	.789
Survey Questionnaire: B Part (b)	19.2333	9.633	3.1037	.756

Table 2: Factor Pattern Matrix

Parameters	Main Input Variables	LF	% of TVE
Advantages of Internet Recruiting (ADV_IR)	Internet recruiting facilitates ease in building and managing database of received applications	0.921	16.319
	Internet recruiting leads to restructuring of recruiting process	0.862	
	Your selected job boards provides measures to spread awareness of your vacancy to target groups	0.678	
Effectiveness of Internet Recruitment (EFT_IR)	Your organization uses Internet as a source of recruiting.	0.436	13.591
	Your organization uses placement consultants as a source of recruiting.	0.687	
	Your selected job board provides satisfactory service to you	0.672	
	Your organization uses campus placements as a source of recruiting.	0.528	
	Your selected job boards is able to maximize effectiveness of your recruitment process	0.474	
Information through Internet Recruitment (INF_IR)	Your company website deals with employment related inquiries of the candidates	.848	12.662

	Your company website provides relevant information about the job to the candidates	.842	
	Your company's website provides an interactive feature to the candidates	.515	
Efficiency of Internet Recruitment (EFC_IR)	Internet recruiting helps in improving the efficiency of recruitment process	.644	8.946
	Internet recruiting helps in developing positive image of the organization	.643	
	Your selected job board provides training to use their online services	.432	
Suitability of Candidates (SUI_CAN)	Internet recruiting reduces number of less qualified applicants	0.804	21.179
	Information provided about the organization helps the job searcher to make a better decision about how well they fit	0.697	
	Internet recruiting leads to attract individuals otherwise inaccessible	0.606	
Talented Database (TAL_DB)	Internet recruiting helps in locating better candidates	0.785	20.897
	Internet recruiting helps in maximizing the job match to ensure a good fit of employees with your company	0.726	
	Internet recruiting leads to decline the chances of rejecting the applications	0.473	
Targeting Right Candidate (TAR_CAN)	Internet recruiting leads to target the anticipated applicants	0.812	15.644
	Internet recruiting leads to placing right people to the right job	0.588	
Wider Choice for Entrants (WC_ENT)	Internet recruiting is useful for organizations that move in new locations	0.837	14.473
	Internet recruiting is useful for organizations that are beginning new activity	0.756	
	Internet recruiting is useful for organizations whose social network is incomplete	0.518	
Wider Choice for International Candidates (WC_INT)	Your company post jobs on multiple job boards at a time	0.810	12.916
	Your selected job board is able to locate the right candidate world wide	0.636	
	Internet recruiting offers an easy way to reach a broad audience of job seekers	0.519	
	Internet make jobs available to a world wide audience	0.432	
Accessibility of Candidates (ACC_CAN)	Internet allows employers to reach large pool of candidates 24 hours a day and 7 days a week	0.795	11.165
	Internet recruiting help ensure compliance with Equal Employment Opportunity (EEO)	0.647	

	standards		
Qualified Pool (QUA_POO)	Internet recruiting is useful for organizations that require recruiting for higher level	0.725	10.954
	Internet recruiting provides large pool of applicants who need minimal training	0.631	
	Internet recruiting is useful for organizations that require recruiting for entry level	0.418	
Annual Cost (ANN_CO)	Annual expenditure on recruitment through Internet recruiting	0.958	45.648
	Ongoing promotional costs of vacancies through internet recruiting	0.953	
	Cost of additional advertising services such as banners or link to your corporate website provided by internet recruiting	0.944	
External Cost (EXT_CO)	Finders fees for internet recruiting	0.755	24.471
	Average cost per recruitment campaign through internet recruiting	0.741	
	Cost of package deals (such as number of jobs posted and time period for advertising) offered by internet recruiting	0.689	
	Cost involved in posting a job on job board/company website	0.589	
Overall Time (OVE_TIM)	Overall time spend in recruitment through internet recruiting	0.918	31.889
	Time taken to fill each vacancy through internet recruiting	0.911	
	Time involved in maintaining database through internet recruiting	0.910	
Processing Application Time (PRO_APP)	Time taken for communication between job seeker and provider through internet recruiting	0.719	19.670
	Time involved in screening of resumes through internet recruiting	0.701	
	Time involved in searching resumes through internet recruiting	0.689	
Recruitment Process Time (REC_PRO)	Time involved in advertising a job on job board/company's website	0.821	18.050
	Time involved in recruitment process cycle through internet recruiting	0.797	

Table 3: Parameters for Analysis

Internet Recruiting (Dependent variables)	
ADV_IR	Advantages of Internet Recruiting
EFT_IR	Effectiveness of Internet Recruiting
INF_IR	Information through Internet Recruiting
EFC_IR	Efficiency of Internet Recruiting
Fixed Variables	
Organizational Type	hospitality services; healthcare services
Organizational Size	large size; small size
Respondent Category	employers; employees

Table 4: Summary of Multivariate Analysis of Variance of Internet Recruiting for Organizational Type

Table 4a: Multivariate Tests

Effect	F	Hypothesis df	Error df	Sig.	Partial Eta Square
Organizational Type Wilks' Lamda	11.612	4.000	355.000	.000	.161

Table 4b: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Organizational Type	ADV_IR	91.003	1	91.003	31.619	.000
	EFT_IR	53.669	1	53.669	6.040	.014
	INF_IR	7.803	1	7.803	2.082	.150
	EFC_IR	4.225	1	4.225	3.990	.047

Table 5: Summary of Multivariate Analysis of Variance of Internet Recruiting for Organizational Size

Table 5a: Multivariate Tests

Effect	F	Hypothesis df	Error df	Sig.	Partial Eta Square
Organization Size Wilks' Lamda	3.014	4.000	355.000	.018	.33

Table 5b: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Organization Size	ADV_IR	4.669	1	4.669	1.709	.011
	EFT_IR	60.025	1	60.025	6.769	.002

	INF_IR	23.003	1	23.003	6.209	.005
	EFC_IR	22.225	1	22.225	5.210	.007

Table 6: Summary of Multivariate Analysis of Variance of Internet Recruiting for Respondent Category

Table 6a: Multivariate Tests

Effect	F	Hypothesis df	Error df	Sig.	Partial Eta Square
Respondent Category Wilks' Lamda	4.524	4.000	355.000	.001	.49

Table 6b: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Respondent Category	ADV_IR	12.532	1	12.532	4.623	.005
	EFT_IR	70.173	1	70.173	7.939	.002
	INF_IR	11.052	1	11.052	2.957	.006
	EFC_IR	4.146	1	4.146	3.915	.009

Table 7: Parameters for Analysis

Internet Recruiting (Independent Variables)	
ADV_IR	Advantages of Internet Recruiting
EFT_IR	Effectiveness of Internet Recruiting
INF_IR	Information through Internet Recruiting
EFC_IR	Efficiency of Internet Recruiting
Dependent Variables	
Quality	
SUI_CAN	Suitability of Candidates
TAL_DB	Talented database
TAR_RP	Targeting right people
Cost and Time	
ANN_CO	Annual Cost
EXT_CO	External Cost
OVE_TIM	Overall Time
PRO_APP	Time involved in Processing Applications
REC_PRO	Time involved in Recruitment Process
Wider Choice	

WC_ENT	Wider Choice for Entrants
INT_CAN	Wider Choice for International Candidates
ACC_CAN	Accessibility of candidates
QUA_POO	Qualified Pool
Dummy Variables	
D1 (Nature of Business Activity)	= 1 for hospitality services; = 0 for healthcare services
D2 (Size of the Organization)	= 1 for large size; = 0 for small size
D3 (Respondent Category)	= 1 for employers; = 0 for employees)

Table 8: Regression Results on Quality (Suitability of Candidate)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.466	.217	.201	1.55831395	1.827

Table 9: ANOVA: Quality (Suitability of Candidate)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	236.823	7	33.832	13.932	.000
Residual	854.777	352	2.428		
Total	1091.600	359			

Table 10: Regression Coefficients of Quality (Suitability of Candidate)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.097	1.984	.048*	.905
EFT_IR	.132	4.458	.000*	.853
INF_IR	.101	2.205	.028*	.860
EFC_IR	.665	8.183	.000*	.959
D1 Sector	-.177	-.932	.352	.749
D2 Size	.341	1.871	.062**	.928
D3 Respondent	.344	1.890	.060**	.814

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 11: Regression Results on Quality (Talented Database)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.428	.183	.108	1.36245761	1.841

Table 12: ANOVA: Quality (Talented Database)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	78.986	7	11.284	6.079	.000
Residual	653.414	352	1.856		
Total	732.400	359			

Table 13: Regression Coefficients of Quality (Talented Database)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.016	.375	.708	.905
EFT_IR	.011	.407	.685	.853
INF_IR	.102	2.560	.011*	.860
EFC_IR	.284	3.994	.000*	.959
D1 Sector	.302	1.818	.070**	.749
D2 Size	-.001	-.008	.994	.814
D3 Respondent	.519	3.256	.001*	.928

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 14: Regression Results on Quality (Targeting Right Candidate)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.348	.121	.104	1.13055751	1.869

Table 15: ANOVA: Quality (Targeting Right Candidate)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	29.418	7	4.203	3.288	.002
Residual	449.912	352	1.278		
Total	479.331	359			

Table 16: Regression Coefficients of Quality (Targeting Right Candidate)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.032	.905	.006*	.912
EFT_IR	.038	1.748	.081**	.855
INF_IR	.029	.862	.089**	.866
EFC_IR	.192	3.259	.001*	.965
D1 Sector	-.022	-.176	.860	.884
D2 Size	.031	.254	.799	.965
D3 Respondent	.242	1.893	.059**	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 17: Regression Results on annual cost (ANN_CO)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.342	.117	.109	2.29321	1.907

Table 18: ANOVA: annual cost (ANN_CO)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	114.895	7	16.414	3.121	.003
Residual	1851.102	352	5.259		
Total	1965.997	359			

Table19: Regression Coefficients of annual cost (ANN_CO)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	-.157	-2.188	.029*	.912
EFT_IR	-.082	-1.878	.061**	.855
INF_IR	-.202	-3.016	.003*	.866
EFC_IR	-.044	-.373	.009*	.965
D1 Sector	.131	.509	.611	.884
D2 Size	.468	1.901	.058**	.965
D3 Respondent	.259	1.002	.317	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 20: Regression Results on external cost (EXT_CO)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.253	.064	.046	2.06031493	1.713

Table 21: ANOVA: external cost (EXT_CO)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	102.571	7	14.653	3.452	.001
Residual	1494.204	352	4.245		
Total	1596.775	359			

Table 22: Regression Coefficients of external cost (EXT_CO)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	-.087	-1.345	.180	.912
EFT_IR	.012	.298	.766	.855
INF_IR	-.135	-2.240	.026*	.866
EFC_IR	-.245	-2.291	.023*	.965
D1 Sector	.633	2.739	.006*	.884
D2 Size	-.118	-.533	.594	.965
D3 Respondent	.490	2.106	.036*	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 23: Regression Results on overall time (OVE_TIM)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.304	.092	.074	1.56352571	1.979

Table 24: ANOVA: overall time (OVE_TIM)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	87.452	7	12.493	5.110	.000
Residual	860.504	352	2.445		
Total	947.956	359			

Table 25: Regression Coefficients of overall time (OVE_TIM)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	-.146	-2.984	.003*	.912
EFT_IR	-.050	-1.698	.090**	.855
INF_IR	-.055	-1.199	.031*	.866
EFC_IR	-.251	-3.083	.002*	.965
D1 Sector	-.497	-2.835	.005*	.884
D2 Size	-.048	-.288	.774	.965
D3 Respondent	.072	.409	.683	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 26: Regression Results on time involved in processing applications (PRO_APP)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.238	.057	.038	1.58016203	2.043

Table 27: ANOVA: time involved in processing applications (PRO_APP)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	52.987	7	7.570	3.032	.004
Residual	878.913	352	2.497		
Total	931.900	359			

Table 28: Regression Coefficients of time involved in processing applications (PRO_APP)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	-.010	-.197	.044*	.912
EFT_IR	-.063	-2.092	.037*	.855
INF_IR	-.120	-2.594	.010*	.866
EFC_IR	-.166	-2.022	.044*	.965
D1 Sector	-.068	-.382	.703	.884
D2 Size	.037	.219	.827	.965
D3 Respondent	.480	2.690	.007*	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 29: Regression Results on recruitment cycle time (REC_CT)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.212	.045	.026	1.20326445	1.836

Table 30: ANOVA: recruitment cycle time (REC_CT)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	23.958	7	3.423	2.364	.003
Residual	509.642	352	1.448		
Total	533.600	359			

Table 31: Regression Coefficients of recruitment cycle time (REC_CT)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	-.014	-.384	.001*	.912
EFT_IR	-.038	-1.656	.009*	.855
INF_IR	-.020	-.578	.064**	.866
EFC_IR	-.066	-1.057	.091**	.965
D1 Sector	-.348	-2.578	.010*	.884
D2 Size	-.027	-.213	.031*	.965
D3 Respondent	-.129	-.948	.344	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 32: Regression Results on wider choice for entrants (WC_ENT)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.301	.091	.073	1.86846466	1.794

Table 33: ANOVA: wider choice for entrants (WC_ENT)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	122.434	7	17.491	5.010	.000
Residual	1228.888	352	3.491		
Total	1351.322	359			

Table 34: Regression Coefficients of wider choice for entrants (WC_ENT)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.012	.208	.036*	.912
EFT_IR	.028	.780	.036*	.855
INF_IR	.103	1.891	.059**	.866
EFC_IR	.458	4.716	.000*	.965
D1 Sector	.376	1.795	.074**	.884
D2 Size	.333	1.659	.098**	.965
D3 Respondent	-.379	-1.797	.073**	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table35: Regression Results on wider choice for international candidates (INT_CAN)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.211	.044	.025	1.67873775	1.889

Table 36: ANOVA: wider choice for international candidates (INT_CAN)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	46.130	7	6.590	2.338	.024
Residual	991.992	352	2.818		
Total	1038.122	359			

Table 37: Regression Coefficients of wider choice for international candidates (INT_CAN)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.124	2.355	.019*	.912
EFT_IR	.074	2.303	.022*	.855
INF_IR	.045	.910	.064**	.866
EFC_IR	.155	1.777	.076**	.965
D1 Sector	-.210	-1.114	.266	.884
D2 Size	-.021	-.115	.909	.965
D3 Respondent	-.050	-.263	.793	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 38: Regression Results on accessibility of candidates (ACC_CAN)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.242	.059	.040	1.20912700	1.793

Table 39: ANOVA: accessibility of candidates (ACC_CAN)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	32.002	7	4.572	3.127	.003
Residual	514.620	352	1.462		
Total	546.622	359			

Table 40: Regression Coefficients of accessibility of candidates (ACC_CAN)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.014	.372	.010*	.912
EFT_IR	.009	.394	.094**	.855
INF_IR	.078	2.194	.029*	.866
EFC_IR	.116	1.837	.067**	.965
D1 Sector	-.345	-2.545	.011*	.884
D2 Size	-.002	-.012	.990	.965
D3 Respondent	.255	1.865	.063**	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 41: Regression Results on wider choice of qualified pool (QUA_POO)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.212	.045	.034	1.17861453	1.793

Table 42: ANOVA: wider choice of qualified pool (QUA_POO)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	23.189	7	5.797	4.173	.003
Residual	493.142	352	1.389		
Total	516.331	359			

Table 43: Regression Coefficients of wider choice of qualified pool (QUA_POO)

Model	Regression Coefficients	t	Sig.	Tolerance (Collinearity Statistics)
ADV_IR	.014	.327	.044*	.912
EFT_IR	.004	.159	.074**	.855
INF_IR	.022	.562	.074**	.866
EFC_IR	.213	3.000	.003*	.965
D1 Sector	.151	.987	.024*	.884
D2 Size	.247	1.690	.092**	.965
D3 Respondent	.095	.618	.037*	.981

Note: * and ** indicates values significant at 5% and 10% level of significance respectively.

Table 44: Parameters for Analysis

Fixed Factor	
Respondent Category	Employers; employees
Dependent Variables	
Quality	
SUI_CAN	Suitability of Candidates
TAL_DB	Talented database
TAR_RP	Targeting right people
Cost and Time	
ANN_CO	Annual Cost
EXT_CO	External Cost
OVE_TIM	Overall Time
PRO_APP	Time involved in Processing Applications
REC_PRO	Time involved in Recruitment Process
Wider Choice	
WC_ENT	Wider Choice for Entrants
INT_CAN	Wider Choice for International Candidates
ACC_CAN	Accessibility of candidates
QUA_POO	Qualified Pool

Table 45: Summary of Multivariate Analysis of Variance of Quality of Internet Recruiting for Respondent Category

Table 45a: Multivariate Tests

Effect	F	Hypothesis df	Error df	Sig.	Partial Eta Square
Respondent Category Wilks' Lamda	2.276	3.000	356.000	.008	.039

Table 45b: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Respondent Category	SUITABLECANDIDATE	2.450	1	2.450	.805	.007
	TALENTEDDATABASE	3.612	1	3.612	1.775	.004
	TARGETINGRIGHTPEOPLE	4.356	1	4.356	3.283	.001

Table 46: Summary of Multivariate Analysis of Variance of Internet Recruiting for Respondent Category

Table 46a: Multivariate Tests

Effect	F	Hypothesis df	Error df	Sig.	Partial Eta Square
Respondent Category Wilks' Lamda	2.749	5.000	354.000	.009	.37

Table 46b: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Respondent Category	ANNUALCOST	7.001	1	7.001	1.279	.025
	EXTERNALCOST	24.200	1	24.200	5.509	.019
	OVERALLTIME	.672	1	.672	.254	.015
	PROCESSINGAPPLICATIONS	15.312	1	15.312	5.981	.015
	RECRUITMENTCYCLETIME	1.013	1	1.013	.681	.010

Table 47: Summary of Multivariate Analysis of Variance of Internet Recruiting for Respondent Category

Table 47a: Multivariate Tests

Effect	F	Hypothesis df	Error df	Sig.	Partial Eta Square
Respondent Category Wilks' Lamda	2.085	4.000	355.000	.002	.32

Table 47b: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Respondent Category	ENTRANTS	17.735	1	17.735	4.761	.000
	INTERNATIONAL	.968	1	.968	.723	.010
	ACCESSIBILITY	3.335	1	3.335	2.197	.009
	QUALIFIEDPOOL	.735	1	.735	.387	.004