

The Advantages of Online Recruitment and Selection: A Systematic Review of Cost and Time Efficiency

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Abstract

This article aims to discuss the benefits of online recruitment and selection in organizations. The research shows how the key benefits of online recruitment and selection can be taken and used for the company's interest by finding the right person for the right job. This paper tends to content analysis focusing on the benefits of online recruitment process using meta-data. The present trends of recruitment and selection process is very unexpected. Additionally, the characteristics of online recruitment sites are also discussed briefly to illustrate a complete overview of newly formed recruitment system though the primary objective of the paper is to demonstrate the superiority of time and money saving approach. The researcher took social media to exemplify, describing both pros and cons, the present recruiting system. However, there are also some drawbacks to online recruitment and selection which are addressed in this paper. Online recruitment and selection can be a valuable tool for companies looking to reach a wider pool of candidates and streamline the recruitment process. It is important to be aware of the potential drawbacks and take steps to mitigate them in order to ensure the best results. Using meta-analysis, the researcher scratched the advantages of online recruitment and selection process. This paper indicates how the online recruitment process should be done in organizational practice.

Keywords: online, recruitment, selection, process, organization, candidate, benefit, drawback

1. Introduction

“We enter a new world.” (O’Reilly, 2007)

Before the beginning of the World Wide Web (WWW), two ground-breaking researchers Kiesler and Sproull (1986) discussed the possibility of using computers for collecting data in the future. Although they were optimistic about the potentiality of computers and the internet, they warned “Until such time as computers and networks spread throughout society, the

electronic survey will probably be infeasible”. Immediately after their prediction, the web revolution of the 1990s rose and vitalized the huge interconnection of tech-advanced societies via computers, and the internet, which made it possible to begin realizing the potential benefits envisioned by Kiesler and Sproull. This dramatic rise of the internet made the dot-com bubble in the 1990s and some of the competitors from the bubble time survived and reign in the tech world today. The Internet model offers a variety of mundanes, but it is practically significant. The benefits such as dispensing with the need for data entry are relatively inexpensive (Gosling et al., 2004).

1.1 Background

We have already entered a world where technology is changing rapidly. In today’s world, technology is being just doubled every twenty-four hours and this change is opening up new opportunities for organizations and for would-be employees to communicate with each other and work at a distance. This change and the growing opportunities have multiple effects because organizations and people both are accepting new technologies and the demands for newer ones are increasing. As a result, companies are enjoying the most advanced tech advantages. As a consequence, tech companies are offering newer and newer tech services with up-to-date supremacy. The most important result of the growing tech demands is the rise of Web 2.0. The idea of Web 2.0 came to the light from the brainstorming session between Tim O’Reilly and MediaLive International in 2001. The California-based computer book published by O’Reilly is considered to be one of the leading figures of Web 2.0. The main principle of Web 2.0 has also multiple effects and results. It has the active usages of the internet and the possibility to help shape the web which means the principle is a cycle. Active using will increase the possibility of shaping the web. So, it creates a cycle like “the more possibilities, the more users” and “the more users, the more possibilities”. The users do not only surf the internet, they also generate content. Most of the young people today, defined as the Y Generation, grew up with the computer and accept that electronic gadgets are part of daily life (Yeaton, 2008). This Y generation is connected to the internet 24 hours a day and 7 days a week. They spend plenty of time online and make use of a uncountable numbers of Web 2.0 applications. This popular term Web 2.0 is described as an arrangement of technical and social development that leads to change in the behavior of internet users. As a result, organizations take Web 2.0 in serious regard and use these applications, for example, for marketing or for recruiting new employees. Additionally, social media have become extraordinarily popular, and nowadays millions of internet users communicate through social media networks (Kim et al., 2012). For the availability and budget-friendly price of data, the internet has its popularity sky-high today. Young people, in particular, cannot pass a single day without the use of the internet. Moreover, communication became easier with the grace of the internet. Gosling et al. (2004) noted that internet samples are shown relatively diverse with respect to age, race, gender, socioeconomic status, geographic region, and more.

1.2 Research Problem

Although the financial crisis prevails in society, the recruitment authorities face the war of talent every time they approach to hire someone and it confuses organizations in finding the right person with the right qualifications for the company. It makes them expense more than they should. Online recruitment process saves their time and money because they do not need to hire or use any place for conducting traditional style recruitment activities, for example, paper-pencil drills. A company needs employees to survive, and talented people are the only source for a company to stay in the market because they are the potential elements of the competitive advantage of an organization. However, the problem is that there is always a scarcity of well-skilled and talented people. Job seekers with graduate certificates, sometimes, are ignorant about the necessary computerized office programs, e.g., Excel, or LaTeX, etc. So, the search for the best and the brightest employee is a continuous battle for companies, and this is the reason they have to develop meticulous strategies to find the cream out of the crowd. Michaels et al (2001) claim that there is a new business strategy. For all of those reasons, well-designed, strategic, and reasonable questions, and questionnaires of finding, attracting, and recruiting the best persons have become crucial issues for companies in recent years. Moreover, the internet has changed the way people communicate and work (Giles, 2010). The Internet has become a jungle of both feasible and implausible sources of recruitment materials. There are hundreds of millions of necessary and unnecessary questions, questionnaires, and other digital materials online. Companies have to face this ocean to find out the best materials for their recruitment process which is, too, a continuous journey because those sites are increasing every moment. The researcher was looking for some of those sites for research purposes but it was very confusing to choose one. Recruiting agencies or companies also get confused about finding the best site/s for their operation. Additionally, the recent addition is the social networking sites which are moving forward very fast, and it is too difficult to monitor their impact on recruitment. Finding out a trustworthy recruitment site with the availability of recruitment materials is a very time-consuming process and it is, sometimes, costly too.

Research objective

The principal objective of this study is to review and summarize the benefits, (time and money savings, in particular) of online recruitment and selection from the previously documented literature.

Research questions

1. To what extent the ‘online recruitment and selection ’is cost and time effective?
2. Is this process a better alternative to the traditional recruitment process? How?

In order to answer the central research questions, some sub-fields have to be examined and introduced. The characteristics of e-recruitment, social media recruitment, and its merits and

demerits are highly relevant to this study. Then researcher also makes a list of social media, as an example, that are used, in general, to recruit and select employees.

2. Literature Review

2.1 Online Recruitment and Selection

Rynes et al. (1991), Breugh (2008), and Barber et al. (2005) mentioned in their groundbreaking research that recruitment and selection is a critical issues for organizational success. So. The question arrives, what is online recruitment? Galanaki (2002) presented several terminologies for Online Recruitment and Selection (ORS); e-cruiting, cybercruiting, or internet recruiting. Another terminology can be added which makes it more vivid about the process; e-recruitment. Green recruitment can also be used as a synonymous phrase. All of the mentioned terminologies imply the formal sourcing of job information online from the candidates 'point of view and hiring people by using the internet from the perspective of recruiters. Recruitment is "those practices and activities carried on by the organization with the primary purpose of identifying and attracting potential employees" (Barber, 2006). With the emergence of WWW, it is fairly a new practice to hire people online for organizations. The first reference to ORS appeared in the articles of the mid-1980s (Gentner, 1984; Casper, 1985) but the use of the internet for recruitment was well-established in the 1990s. Due to the novelty of the term, authors have different concepts of what ORS consists of. ORS is a process in which the right candidates with the right qualifications are selected for the right job and all the processes are done using a computer connecting internet where the candidates do not know the people in front of the computer screens and vice versa. Everyone remains anonymous to each other. Whitehall (1991) mentions that recruitment is a source through which the right candidate is selected from the pool of candidates. So, ORS is an online process through which the right candidates are electrically selected from the crowd. Subhani et al. (2012) noted that the process cost of ORS is less than any other technique and this novel process makes the recruitment shorter and quicker. To make the process effective "companies need to become more aggressive and creative in their recruitment efforts to maintain a competitive edge (Adler, 2006).

2.2 Characteristics of ORS Sites

Lievens & Harris (2003) noted that over the last ten years, the internet has changed the way organizations do business. One way that numerous organizations are using internet technology is as a trusted platform for recruiting and selecting candidates (Giumetti, G & Perkl, 2009). Recruitment websites allow companies to process large numbers of applicants at a time and it also helps organizations save time and money (Anderson, 2003). Capelli, (2001) mentioned that the last five years witnessed a dramatic rise in ORS with an estimation of 90% of large US firms utilizing established organizational recruitment websites and this trend is most likely to increase in the near future (Bartram, 2000). While little is known about what characteristics of ORS websites are important to job seekers. Cober et al. (2004)

described a model of two condensed variables for ORS sites: aesthetics and usability. This model may affect applicant attraction.

2.2.1 Aesthetics

Aesthetics is conceptualized in terms of a motivational process based on the initial affective reactions to a form of media (Breugh & Starke, 2000; Cober et al., 2004). Aesthetics is thought to include color, font, picture, resolution, and the use of white space (Giumetti & Perkl, 2009). Cober et al. (2004) stated that before applying for a particular job, a job seeker thinks if he/she should invest cognitive effort in an employer's website or not. Aesthetics is also thought to have an influence on longer-term information recall by capturing initial attention (Childers & Houston, 1984). Giumetti & Perkl (2009) classified aesthetics in several sub-divisions: general aesthetics, aesthetic features, personableness, perceived attractiveness, and website quality. Thomas et al. (2004) said that the term personableness includes items that assess how friendly the company appeared to the applicant and how comfortable they were with the company based on their experience with the website. Konradt & Rack, (2006) includes a study that measured experienced website quality by rating it overall.

2.2.2 Usability

Braddy, Thompson, Wuensch, & Grossnickle (2003); Cober et al. (2003); Ehrhart et al. (2005) examined website usability characteristics and their impact on job seekers' attraction. Nielsen, (2000) typically defines usability as the perceived ease of acquiring information and using a website to meet desired objectives. While aesthetics predisposes users to process information, applicant attention is more affected by the availability of information (Cober et al., 2003). The website must be structured so that users can easily navigate through the web page to find the information they want (Cober et al., 2003). Since, users are free to navigate through organizational sites at will (Hoffman & Novak, 1996), the usability of a website will most likely impact a user's reactions to a website which may also impact the level of attraction an applicant feels toward an organization. Poor usability reflects negatively on an organization (Zona Research, 1998), whether the relatively ease of navigation of a website leads to higher user engagement (Hoffman & Novak, 1996; Webster & Ahuja, 2003). Lyons (2007) conceptualized usability as navigability.

2.3 *Advantages of ORS*

2.3.1 Low Cost

In her discussion of the advantages of ORS, Galanaki (2002) highlighted the low cost as a key benefit. The cost-effectiveness of ORS is affected by the method of e-mailing used. For example, posting job openings on the organization's website are inexpensive, while using dedicated recruitment sites may incur costs based on the site's reach. Additionally, ORS achieves cost savings through economies of scale in terms of the number of words used, as there are no limitations or charges for internet usage. Overall, ORS is seen to reduce costs

associated with recruitment, selection, and lost productivity caused by unfilled positions. (CIPD, 1999; Williams & Klay, 1997).

2.3.2 Shorter and Quicker Recruiting Cycle Time

It is widely believed that ORS can reduce HR time by 25-30% (Workforce, 2000a). Online recruitment streamlines the process and makes it faster. Rather than using traditional methods like newspaper ads, the internet allows for recruiting on a global scale, with the ability to reach a large pool of candidates from around the world (CIPD, 1999; Workforce, 2000a; Galanaki, 2002; Williams & Klau, 1997).

2.3.3 Reaches a Wider Range of Applicants

Because the internet has a global reach (CIPD, 1999), online recruitment advertisements can circulate worldwide, resulting in a larger pool of potential candidates for the organization. ORS is a borderless system, which allows companies to reach a large number of internet users to find the best candidates. Many companies have taken advantage of this aspect to make the recruitment process more efficient for their overseas operations. Tools such as online questionnaires, psychometric tests, or video-conferencing can be used at the early stages of the ORS process, making the whole international staffing effort more manageable from a distance.

2.3.4 Better Quality of Response

Applicants who use the internet to apply for jobs are typically young, computer-savvy, educated, and have some level of interest in the company they are applying to, especially when they apply through the company's website (Baillie, 1996; Frost, 1997). They are often more open to change and can potentially help the business grow and adapt (Thaler-Carter, 1998). Recently, the number of older, non-IT staff using the internet to find jobs has also been on the rise (Welch, 1999).

2.3.5 More Up-to-date Image (CIPD. 1999)

When creating a corporate recruitment website, ORS can contribute to the company's image as being innovative and adaptable (Fister, 1999). The fear of falling behind can drive many HR managers to recruit candidates through the internet (Hays, 1999).

2.3.6 Opportunity to Address Specific Labor Market Niches

Practices such as sending job openings as an email to specific discussion groups or electronic forums can increase the targeting capabilities of the medium (Baillie, 1996), and the existence of niche sites like bdjobs.com, bdjobstoday.com, or asia-net.com allows for unprecedented fragmentation of ORS labor market targets (Greengard, 1998; Thaler-Carter, 1998).

2.3.7 Attracts the Passive Job-Seekers

The ORS process serves as a tool to attract the attention of highly skilled individuals who are not actively looking for a job. These individuals are considered the most highly sought-after candidates by recruiters (Shane, 2000; Hansen, 1998) because of their interest in the company's activities.

2.4 *Disadvantages of ORS*

2.4.1 Needs to Be Applied as Part of an Integrated Recruitment Process

Many organizations may not have the resources or expertise to achieve this (CIPD, 1999). Organizations must be prepared to use relevant IT tools such as search engines, databases, or CV screening and undertake a change management effort to help employees become familiar with the implementation of the necessary tools (Workforce, 2000a).

2.4.2 Internet Is Not Yet the First Option for the Majority of Job Seekers

The assumption that all qualified young people have strong internet connections is not always accurate as the reality can be different. This unbalanced assumption should be revised in the near future.

2.4.3 Suitable for IT Jobs and for Young Graduates

Online recruitment (OR) may not be as effective for finding specialized or highly accomplished professionals, according to the Chartered Institute of Personnel and Development (CIPD, 1999). This perception dates back to the early and mid-1990s when few people had the skills or access to effectively search for work online (Baillie, 1996). Some believe that OR is best suited for initial evaluations of junior-level positions where little expertise is required for shifting candidates (People Management, 2000), and many companies that have recruitment websites only focus on graduate recruitment (Lamb, 2000). However, using OR for professional and managerial positions may give the impression that the company is in a desperate situation to fill the position (Useem, 1999).

2.4.4 Effective for Already-Known Companies (Greengard, 1998; Williams & Klau, 1997)

A study in 1996 highlighted the relationship between the success of online recruitment services and the use of advertising to promote the company's website. Additionally, it has been suggested that online recruitment is particularly beneficial for smaller businesses, particularly if they choose to use the services of online recruitment advertising companies or job boards instead of managing their own website (Hansen, 1998).

2.4.5 Involves Higher Risk of Overload of Answers

The absence of geographic and temporal limitations, as well as the ease of submitting candidate information, increases the risk of an excessive number of responses. Utilizing internal software for tracking resumes can aid in managing the volume of responses (Hays, 1999).

2.4.6 ORS Implementation Implies an Extra Effort

Indicatively, some large organizations have already found it necessary to officially dedicate one or more recruitment staff to focus exclusively on ORS (Thaler-Carter, 1998).

2.5 Interface Between Advantages and Disadvantages of ORS (Gosling et al., 2004)

Perception	Finding
Internet samples are not demographically diverse	The population reached through online recruitment methods is more diverse in many ways compared to traditional recruitment methods, but it is not completely representative of the entire population.
Internet samples are maladjusted, socially isolated, or depressed	The population of internet users is not significantly different from non-users in terms of economic conditions such as job market conditions and economic downturns.
Internet data do not generalize across presentation formats	The results of internet research were consistent when the Big Five Inventory was presented in two different formats.
Internet participants are unmotivated	Internet-based methods can be used to provide incentives or encouragement to participants, increasing their motivation to participate in a study or research.
Internet data are compromised by the anonymity of participants	However, Internet researchers can take steps to eliminate repeat responders
Internet-based findings differ from those obtained with other methods	This suggests that Internet-based research methods provide reliable and valid results that are comparable to those obtained through more traditional methods. However, it is important to consider the limitations of Internet-based research and take steps to eliminate potential biases and errors.

2.6 Social Networking Sites and ORS

2.6.1 A Short List of Social Networking Sites for ORS

- a. LinkedIn
- b. Dribbble (for designers)
- c. GitHub (for software developers)
- d. Pinterest
- e. Facebook
- f. Tweeter etc.

2.6.2 Social Media Recruitment (SMR)

Although researchers have at their disposal a variety of online recruitment methods, social media present unique opportunities for rapid, cost-effective data collection from populations with very specific demographics or interests. What's more, social media are no longer restricted to technology enthusiasts or younger generations (Oliveira, 2013). The omnipresence of social media and its growing integration into daily life make resources like Facebook uniquely positioned for recruitment, even from highly circumscribed populations.

2.6.3 Pros of SMR

Users tend to scroll through social media in times of boredom or when they need a brief distraction (Whiting & William, 2003). If a social media user possesses a smartphone, she/he receives real-time alerts, drawing attention to new messages, posts in interest groups, or tagged posts. Stokes et al. (2019) mentioned that the real-time messaging capacity enabled us to rapidly clarify eligibility requirements and assist with technical difficulties. These prompts are likely to facilitate immediate action because of the instant gratification they provide (Conner, 2014). Profiles in social networking sites allow recruiters to gain information about their education and professional career in general. In addition, recruiters have the possibility to contact potential candidates and communicate with them in a noncommittal manner. By using social networking sites, recruiters can search for possible candidates and build long-term relationships with them (Abel, 2011). Recruiters can filter and search for candidates with special backgrounds which can lead to a time reduction for the search and can also improve the chance of finding the right candidates. Besides this, companies can keep in touch with interns, alumni, and so forth (Abel, 2011). Facebook, for example, is a social community that offers a lot of features to recruiters for finding the right people for their vacancies, however, Eldon (2009) noted that Facebook is not the easiest way for recruiters to search for candidates, but a great opportunity. Applicants use social networking sites as a source of information about companies and vice versa. This has become a common procedure for the recruiting process (Jäger & Porr, 2008). Social networking sites, along with possessing the qualities of being cost-effective for the recruitment process and quick in hiring

and selecting also help in promoting employer branding effectively to prospective and current employees (Subhani et al., 1012).

2.6.4 Cons of SMR

First, the exploitation of information could be one disadvantage that the applicants and employers both can try where many of them are unaware of this corruption which means the employers may use social media to check the background of applicants and become biased before they recruit the job seekers (Clark & Roberts, 2010; Abel, 2011). They argue that applicants use social networking sites for social interaction and they are unconscious that employers use these sites to collect character information. Second, companies will face amendments and challenges to extend new strategies in order to take up the new recruitment techniques (Subhani et al., 1012). Third, the seclusion of data and ethics plays a great role but most organizations do not take these vital issues into contemplation. Fourth, many organizations work in a biased way while taking information from the online profiles of the applicants. Some companies may not prefer people from diverse regions which results the lacks of diversity in the organizational culture. Fifth, transparency of information is another issue. There is always a doubt about the information gained; fact or fake. Finally, in the profiles of social networking sites, the information is limited and restricted by the candidate and how much he/she wants to share can only be exposed. So, the judging the social media profile, it is sometimes difficult to judge the candidates but organizations may walk this way.

2.7 Time and Money Saving Approach

Galanaki, (2002) stated that the research did not agree with the eminent assumption that the ORS process saves time. She also mentioned that one manager characteristically said that the savings in time are probably exaggerated because the company has not experienced such an effect since they adopted the practice of e-cruiting. A general inference from the analysis is that the ORS decision is mostly a matter of cost. Low cost is the major factor of ORS attractiveness, since it eases the companies 'decision-making, by minimizing the risk involved in the difficult step of changing established recruitment practices. Galanaki, (2002) designs an equation about cost-effectiveness. Online Recruitment = Low Cost (OR=LC).

2.8 Trends and Usage of ORS in Bangladesh

In Bangladesh, most organizations have realized the importance of ORS and started taking it into practice. Internet access in Bangladesh existed since the beginning of the 1990s. Today, the number of internet subscribers is 123.74 million as of July 2021 (statista.com). Job seekers in this country were focusing on online sources extensively to obtain better job opportunities. The easy access to the internet in universities and offices enabled the individual to apply online and submit their credentials. The use of the internet by western organizations has completely changed the mindset of Bangladeshi employers. Generally, the ORS process is used to find out candidates with a high level of efficiency and productivity. A few organizations in Bangladesh, Public Service Commission, example, are not showing high interest to use technology for recruiting their employees through the Bangladesh

government's motto "Digital Bangladesh". This sector is accepting this new venture of recruitment very slowly. Before the rise of the dot-com bubble, each and every recruitment was done manually without doubt but this trend is reversing its way in Bangladesh too.

Bangladeshi ORS process can be divided into four phases. Phase 1 is from the 1990s to 2000. During the time of internet jumped up, western organizations operating in Bangladesh took the ORS opportunities and some of the regional organizations started following them. Phase 2 is from 2000 to 2010 when data and the internet started becoming available for every individual. In phase 3 from 2010 to 2020, it was the internet boom in this nation where 52.58 million people use the internet, 31.62% of the total population (statista.com). And finally, phase No. 4 started in 2020 and is continuing. This phase also can be defined as the post-Covid-19 phase. After Covid-19, almost every organization (small and large) is practicing ORS in Bangladesh.

3. Methodology

Qualitative research was conducted using meta-data from past research activities and scholarly articles. To identify previous research studies for inclusion in the meta-analysis, the researcher searched several databases, mostly business and computer oriented, as well as international conference programs and the available in-press sections of major journals using combinations of related keywords: Internet, website, online, attraction, work, online recruitment and selection, and applicant. The researcher is well aware of the content validity because it is one of the key concerns in meta-data analysis (Schriesheim et al., 1993). The deductive approach was used to generate the list of proposed items through the review of the previous literature (Aboul-Ela, 2014). The researcher specially searched ResearchGate, CrossMark, and some publishing platforms like Springer, Elsevier, academia.edu, Emerald Insight, and Sage Journals for relevant studies as well as doing a search through all available EBSCOHost databases. These platforms are used because of their resource diversity and authentication in research world. The journals published from the mentioned platforms have a wider acceptance. The researcher also reviewed the reference lists of other summaries (Chapman & Webster, 2003; Cober, et al., 2004) to identify relevant articles missed in the computerized search.

Using these search procedures, the researcher randomly identified over 110 studies, then screened them to determine their relevance. The researcher excluded most non-empirical studies and those which are repeated in the topics. Non-empirical studies were excluded because the analysis of data or information are well described in the empirical/original research works. So, from this point of view, those non-empirical published papers are repeated too. After evaluating the studies based on the inclusion criteria, 67 studies and a website were selected. All studies included in the meta-analysis are appended in the reference section and vice-versa. The journals for reference were selected manually depending on their scope of publications.

4. Findings

Cost and time are independent variables for ORS.

In comparison to traditional methods of recruitment and selection, i.e. the use of magazines and daily newspapers, as well as employment agencies, posting jobs and, enlisting and selecting candidates on the internet is essentially free (Shirazi, 2013). This method promotes efficiency as well as return on investment (ROI). The goal of ORS is to make the recruitment process more concise, compelling, and cost-effective (Afroz & Shafi, 2021). Afroz & Shafi (2021) stated that almost all interviews agreed that ORS is significantly more cost-effective and proficient than traditional methods because it reduces operational costs, printed material costs, and authoritative costs. Kumar & Priyanka, (2014) marked down that this method of finding candidates online replaces the traditional recruitment process of advertising, collecting resumes, and selecting the best candidates in a simple and cost-effective manner. ORS method also allows a significant amount of savings for the application process by the candidate's side.

Posting a job vacancy on the company's own website does not cost anything while putting on a job board usually costs thousands of dollars. For recruitment through head hunters, the consultant fee for a candidate could be anything up to 20% of the first year's salary, and advertising in a national newspaper can cost thousands, it is immediately noticed for cost savings with online recruitment for this purpose, the advertisement needs to be done in the own portal of the company (Islam, 2016).

ORS with the use of a dedicated platform offers not only benefits but also bears the cost of building such a platform. Significant savings are in terms of money allocated which are presented below.

Measuring the efficiency of savings.

Assuming that:

$C\tau$ = average time of traditional recruitment

Cg = average time of online recruitment

Kp = total cost of recruitment platform preparation

K = remuneration per hour for a recruitment specialist

Δ = per hour savings

N = number of potential candidates

The *per-hour savings* can be achieved with the use of ORS over the traditional one which can be expressed on the basis of an equation.

Equation 1.

$$\Delta = (C_{\tau} - C_g) \cdot K$$

Taking into consideration N taking part in the process of recruitment, *the total saving* (Δ^*) can be estimated as follows.

Equation 2.

$$\Delta^* = (C_{\tau} - C_g) \cdot K \cdot N$$

Including the total cost of creating the recruitment platform (K_p), *the total savings* (Δ^{**}) can be calculated as follows.

Equation 3.

$$\Delta^{**} = (C_{\tau} - C_g - K_p/N) \cdot K \cdot N$$

Assessing the break-even point of creating a recruitment platform, it makes sense when the number of potential candidates N meets the following criteria.

Equation 4.

$$N > (C_{\tau} - C_g) / \{(\Delta^{**} / K) + K_p\}$$

The numbers and the calculation state that ORS makes sense when a large pool of candidates is considered to be recruited. It saves organizational money because it allows recruiting a large number of employees in a short period of time.

An important factor of this process is the time it takes to finish the recruiting process from beginning to end. As in other sources, one must revise the schedule for advertisement constantly but it does not apply to the internet (Afroz & Shafi, 2021). They continue that this process reduces the amount of time it took to communicate with job seekers in the past. But today for the ORS process, recruitment occurs without any delay because the response is direct, faster, and immediate. Before the postal service, the fax was a one-way communication method that was time-consuming. The revolutionary two-way communication was brought about by the invention of the phone but résumé management and global communication were not possible. Since every procedure is done electronically in ORS system, paperwork or manual documentation has been reduced.

Veger (2006) said that recruiters can post jobs 24 hours a day and they can post it to more than one recruitment sources at a time, and also potential job applicants can post their resumes 24 hours. By using online application procedures, primary and basic requirements requirements can be checked electronically and so the first filtering of applicants is done to the application pool. Research by Bartram (2000) in the US indicated that a typical time from job posting online to hire a candidate takes 16 days from Internet-based recruitment as opposed to 32 days or more from traditional methods. The Internet has the capacity to make posting and updating job ads easy for recruiters (Bartram, 2000). Also, posting résumés and

reacting can be done faster by the the job applicant in the recruitment process. If online job postings are extended with an online application procedure, this can also save time by collecting, storing, and retrieving information about applicants centrally.

Mathematical Framework

The equation is:

$$V = A + BX$$

Where:

V = the value of the dependent variable (Adopting the ORS process)

A = (Alpha) the intercept or constant

B = the slope (Beta Coefficient) for X

X = independent variable (Minimizing recruitment Cost & Time)

The framework describes how dependent variables are related to independent variables.

5. Discussion

5.1 Discussion of the Finding

The first and foremost condition of ORS system is to recruit a large number of candidates from the pool. If a huge number can be selected at a time, only then the cost of website maintenance can be well utilized and only then it can bring the ROI. One the other hand, creating a website only for recruiting a nominal number of candidates can not be feasible and it can not reduce cost. So, the condition must be fulfilled to extract profit for ORS process.

When previous researchers were discussing about the money-saving approach, they most like tend to mention that the ORS is free of cost. It implies that the recruiters need not maintain a website or recruiting site. Based on their discussions, it can be noted that they are either discussing the one-sided effect leaving the other side aside, or ignoring it. This way of recruitment and selection is not free of cost at all. Creating a recruitment website and maintaining it, or posting an advertisement on social media network, it cost, sometimes, more than the traditional recruitment methods. Every year, thousands of millions of dollars are collected from internet gateways and online portals only from the recruitment activities. If there are goals, it is to be achieved. The goal of ORS is to reduce cost which implies that still there is cost. Researchers mentioned the material cost or resource limitation. Online method may have more word limit than the traditional ones but it is not unlimited.

While talking about the time reduction of ORS, researchers advocated that it reduced the time of recruitment and selection. Some executives shouted that “saving time” from ORS is somehow exaggerated because the online process, too, takes some time to be proceeded. It may screen faster than humans but it is not done within moments. If the professionals of a particular organization are not well skilled in technology, using the internet for ORS may

demand much more time than the traditional one. On the other hand, the fittest person for the organization with the right qualification may not have or may not be willing to have internet access. If so, this system would not work.

5.2 Limitation of the Study

This study has some general limitations. First of all, this paper deals with the overall ORS but not from the point of view of any particular country or company. A generalization may be found which, sometimes, may lead the reader to abstract observation. Second, the researcher focuses only on the time and money-saving approaches of ORS in findings but besides these two leading focuses (the title indicates), there are other variables related to this study that are kept aside. However, the researcher found literature and reviewed it briefly to make the sense of what is ORS and how it works. Third, the data and discussions were taken from the randomly chosen previously published research. Questions may arise about the validity of those studies although the researcher toiled to reduce the suspicion on the validity of literature. Fourth, this study was conducted on the theoretical level, not on the on-ground practice and it is not an empirical research work. Fifth, a limited number of research was chosen for analyzing meta-data, which can narrow down this study. Sixth, only meta-data are discussed and analyzed. No interview nor questionnaire approach to data collection was conducted.

5.3 Recommendations for Further Research

The current study presents an overall outline of to what extent the use of the internet for recruitment leads organizations to reduce time and money. However, the researcher of this study thinks that this field still needs further empirical research because the current knowledge on the tentative hazard of algorithm decision-making in HR is still in its primary stage (Köchling & Wehner, 2020), though recently fairness and discrimination attention has been identified. Thus, the question may arise about what the most future research should be. Most of the studies which were chosen for this research concerning ORS are non-empirical. One of the reasons for this scarcity of empirical research may be that it is a recent phenomenon in the field of HR. Köchling & Wehner (2020) noted that there is a need for more sophisticated, theoretically, quantitative studies, especially in HR recruitment, selection, and development process. However, most of the research is concerned about the advantages and disadvantages of ORS but a few studies were spotted which are discussing the fairness and discrimination made by the algorithm used for ORS. It implies that the awareness of fairness and biases in HR recruitment and selection receives little attention (Köchling & Wehner, 2020).

Another research field may focus on the individual's perspective and acceptance of the algorithmic decision. Only a few studies analyzed people's decisions about the acceptance of algorithms. Everyone may not be willing to accept the new trend, or it might be inconvenient to someone but the degree is unknown. The emotional reactions of candidates may differ

which may affect them severely in the future because the candidates react negatively to a decision taken by an algorithm (Kaibel et al. 2019).

Another recommended research avenue could be the liability and reliability of ORS. If the algorithm of the recruitment selection site is bugged, it could make a downfall in the ORS process. The more technology is advancing, the more its disadvantages are increasing. So, it is a continuous research area because of the continuous development of technology.

6. Conclusions

Most of the inspections on ORS that appear in this study are not new in the literature. The independent variables are actually traditional concerns of business scholars and business-savvy people. In reality, some factors are considered as the flaws of ORS because of its symptoms of poor recruitment practice. However, the internet helps recruiters to reach wider geographical, social, and culturally diverse contexts that traditional methods could not. It supplies better information for the applicant on the job description. Griffeth et al (1997) think that better job information creates a “realism hypothesis” which increases the effectiveness of recruiting resources. Galanaki (2002) thinks that ORS will hold its use in the future as it is doing now by following the advancement in the arena of technology. All these processes need more technical professionals for successful practice. With the multiple effects of technological development and HR advancement, the exercise of ORS is becoming more rapid, sophisticated, and accurate.

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