Journal of Trade Science

ISSN 1859-3666

Volume 7 Number 1 March 2019

CONTENTS

Page

Journal of Trade Science 7:1 (2019) 36 - 44
ISSN 1859-3666

TRENDS OF BIG DATA APPLICATIONS IN ATTRACTING AND RETAINING TALENTS IN VIETNAM ENTERPRISES

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Received: *10th December 2018* ***Approved***: *17th December 2018*

The world is embarking on the fourth Industrial Revolution, a new production revolution associated with unprecedented breakthrough in technology related to Internet connection, artificial intelligence, robots, big data, cloud computing, virtual reality experience, etc. This revolution is expected to exert great impacts on every country, government, organization, enterprise and citizen worldwide in terms of working, production and daily communication modes. With the development of information technology, especially cloud computing platform, and the explosion of mobile devices, everything is uploaded to storage system and exploited via applications on smart phones. Each individual can become a producer of data with series of images, sounds, articles and personal comments posted on communication channels on the Internet. They exist there every day, every hour and are digitized, stored to create an enormous amount of data which exceed the processing capacity of traditional database. In this context, the new trend of Big Data is generated to deal with problems of storing and processing data.

Within the framework of this research paper, the authors generalize some fundamental theories of Big Data, talents attraction and retaining, analyze the current awareness and trend of Big Data application in attracting and retaining talents in Vietnam enterprises (via data collected by questionnaires and interviews), then propose some solutions for Vietnam enterprises to apply Big Data extensively to attract and retain talents.

Keywords: *Big Data, talents, attracting and retaining talents, human resource management.*

1. Introduction

Information value is the most important feature that Big Data brings to governments, organizations and enterprises. Thanks to this feature, enterprises can get the most useful information value from Big Data to build their business model, predict the habits and psychology, work out approaches to customer behavior. In this context, researching business strategies of enterprises has become an inevitable trend in the world.

In Vietnam, with the appearance of Big Data, the strong development of the Internet and the increasing popularity of smart mobile devices, the trend of digital multimedia communication is predicted to exploit in the coming time with over 50 million Internet users, 46 million social network users (by the end of 2017 - according to Dammio.com), therefore, possessing Big Data to optimize business performance becomes desires of many enterprises. In the field of human resources management, based on Big Data, organizations and governments can forecast the trends of the labor market such as unemployment rate, occupation tendencies to invest more in these areas, attract and retain talents, cut costs, increase revenues and profits. Applying Big Data in human resources management in Vietnam can bring many benefits to enterprises, but the challenge is where enterprises can start from to exploit and utilize

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these resources effectively when they do not have strong infrastructure and effective supporting tools.

Therefore, in this paper, the authors aim to give some proposals to apply Big Data in attracting and retaining talents in enterprises to help Vietnam enterprises make full use of these precious sources in human resources management and improve competitiveness via human resources.

2. Fundamental theoretical issues

2.1. Overview of related studies

Research on Big Data and its application has been carried out by various researchers. Matt Ferguson (CEO of CareerBuilder), Lorin Hitt (Wharton School, University of Pennsylvania) and Prasanna Tambe (Stern School, New York University) in their research project "The Talents Equation: Big Data Lessons for Navigating the Skills Gap and Building a Competitive Workforce" present the so - called milestone research on Big Data with 2,700 recruiters and 33 million application profiles. The researchers analyze the relations between market performance of enterprises, qualifications and working duration of employees to draw conclusions on the use of Big Data to help enterprises make sound decisions on labor force, also mention that enterprise leaders need to apply Big Data in setting up strategies for human resource capital. Park Joo Jung - Big Data: Insight for Better HR Policies - Focus Journal Vol. 04/2013 - highlights the roles of Big Data in dealing with personnel problems, including better adaptability and higher diversity to deal with personal demand of the labor force. It can help improve the working conditions and morale for employees, thereby increasing labor productivity. Rajan Duta - Big Data for HR - Proceedings of HR Strategy and Planning Excellence Essentials organized by HR.com in January 2014 - states: "Big Data, Big Changes, Big Opportunities" - enterprises should use Big Data to gain success. Personnel specialists also need to raise their critical thinking and analysis capacity to process lots of information at the same time, for example, why many employees quite jobs, the reasons may be long working hours, low salaries, difficult travel, not suitable work, etc. Specialists need to collect information to test these hypotheses to draw the final conclusions. David Angrave - HR and Analytics: Why HR is set to fail the big data challenge - University of Leeds - identifies that analyzing Big Data related to human resources plays a very important role. That is the future of human resource occupation, the strategic management function. Paul Fairhurst - Big data and HR analytics - IES Perspectives on HR 2014 - discusses the challenges of Big Data analysis in human resources as well as requirements for qualification, technology, procedures for Big Data analysis. On that basis, he suggests skills that human resource specialists need to master to analyze Big Data to make sound decisions.

In Vietnam, studies on Big Data are mostly conducted in the forms of application and transfer in the daily activities of enterprises. Tran Viet Trung (2015), Hanoi Technology University, does research on Big Data and mastering Big Data in Vietnam, which looks into the exchange of Big Data, the roles of Big Data and the capacity to master this technology in our country. The study by Nguyen Gia Luyen (2015) investigates and analyzes challenges faced by Vietnam's organizations when applying Big Data. Other scholars have also discussed Big Data but their studies are just limited to some overall views of Big Data and its application in life (Nguyen Ngoc Minh, 2014).

In this research, the authors inherit the research of Matt Ferguson et. Al to look into the applications of Big Data in attracting and retaining talents. However, amidst the current situation of Vietnam's enterprises, the main aspects for study are the awareness, interests and application of Big Data in their business reality.

2.2. Overview of Big Data

What is Big Data?

As defined by Gartnerresearch institute (the United States): *"Big Data is the high - volume, high - velocity and/or high - variety information assets that demand high technology of information processing that enable enhanced insight, decision making, and process automation*". Simply speaking, "Big Data" is a set of very big - volume data that normal computing technology cannot process. The term "Big Data" not only refer to data but also the structures of data, tools and related technology.

Big Data has 3 distinctive features: big volume, wide variety and high velocity in processing and

ISSN 1859-3666

analysis. Big Data has related components enabling organizations to put data into reality to deal with some business issues, consisting of necessary information technology infrastructure to support Big Data; analysis applied with data; necessary technology for Big Data projects; related skill sets; meaningful practical cases with Big Data.

Major sources to create Big Data

Black boxdata: This data is created by airplanes, both jets and helicopters. The black box data consists of information created by voices of flight crews, records and information about flights.

Social mediadata: This data is created and developed by social communication websites such as Twitter, Facebook, Instagram, Pinterest and Google+.

Securities transactions data: This data comes from stock markets created by decisions of customers to buy and sell securities.

Electricity data: This data is created by the electricity sector. It includes specific information from intersections of the used information.

Traffic data: This data consists of containing capacity and models of traffic vehicles, the readiness and travelling distance of each vehicle.

Search engine data: This data is created by search engines and this is the biggest source of information in Big Data. Search engines have extremely broad database when necessary information can be found.

Benefits created by Big Data

Generally, there are 4 benefits that Big Data can bring about: *cutting costs, reducing time, increasing productdevelopment and optimizationperiods, also helping people to make better decisions*. For example, thanks to the enormous data that enterprises collect when customers visit and interact on enterprise websites, enterprises can use them to make offers, research customer behavior, etc. If enterprises know how to utilize Big Data effectively, they can not only raise profits but also improve buying experience of consumers. Consumers can also save time when referring to recommendations rather than trying to find products and services suitable with demand and tastes by themselves.

In the field of human resource management, Big Data also has positive impacts as it helps to attract, create, maintain, develop and use human resources effectively, among these Big Data is especially useful in attracting and retaining talents.

2.3. Big Data application in attracting and retaining talents in enterprises

The history of establishment and protection, the destiny, the prosperity or poverty, the development or depression of a country largely depend on the process of finding, discovering and using talents, as prominent scholar Than Nhan Trung of King Le Thanh Tong put it: "Talents are a country's assets". In the current context, one of the comparative advantages of enterprises is the high - quality human resources with good knowledge, thinking, dynamism and creativity. Human capital has become increasingly valuable to organizations and investors as it cannot be denied that talents are rare, precious and hard to replace.

Who are talents?

Many researchers have shown that organizations which can attract, recruit and manage talented employees often operate more effectively than those who do not. As such, talents have become the top concern of enterprises, especially in the context of the current fourth Industrial Revolution.

Talents can be generally understood as people with good abilities and competence. In the context of enterprises, talents are understood as those with core competence in implementing development strategies of the enterprises.

Applicationsof Big Datain attracting talents

Attracting talents is understood as finding and taking measures to get talents to apply for jobs in the enterprises. Reality has shown that the recruitment philosophy of enterprises is gradually changing as they pay more attention to building and developing recruitment brands and developing modes of managing talents.

Applying Big Data helps enterprises to ease pressure in finding the right people, the right jobs, the right time, so they can save time and money. For laborers, their thinking has changed, the concept of 'looking for jobs' has been replaced by 'applying for' and 'selecting' preferred and suitable jobs. Therefore, applicants may refuse job interviews, hop jobs after a short period of time, which results in a waste of recruitment costs. Besides, recruiters

ISSN 1859-3666

may easily fall into such mistakes as halo effects, demographic errors, contrast effects, etc., causing the wrong choice of people. By contrast, applying Big Data can help managers to minimize subjective decisions. As technology enables storing and processing an enormous amount of information in the real time on the basis of cloud computing, analyzing on the basis of digital database becomes more popular in recruitments. Big Data provides recruiters with an overall picture about the demand and development orientations of job candidates even before the interviews; this helps recruiters to analyze and work out appropriate forecasts for any recruitment decisions. The automatically - calculated indictors such as the rate of job acceptance, the time of recruitment in each period, the rate of application accomplishment, the time of recruitment plan completion, the rate of satisfaction of recruiters, etc. can be integrated into Big Data of the enterprises, helping them to optimize their recruitment campaigns in the future.

Applications of Big Data in retaining talents

In present context, organizations and enterprises are facing three main pressures: fluctuations in human resources, fluctuations in capital and fluctuation in knowledge. Attracting human resources and capital represent the top priority for enterprises. Managing human resources is already difficult, managing talents is much more challenging. According to many researchers, to retain talents in organizations, it is necessary to attend to 2 groups of factors: human resources (consisting of the compatibility between humans and organizations, salaries, income, training, professional development, opportunities to take challenging tasks) and organizations (leader behavior, relationships within organizations, organizational culture and policies, working environment).

Applying Big Data in business activities helps enterprises analyze customers, operations, prevent fraud and optimize costs. Therefore it supports the activities of the laborers in general and talents in particular, helps to work out trends and forecasts about the future, retain customers, improve conversion rate, efficiency and labor productivity. These are the foundations for enterprises to have better treatments to talents. Besides, by combining analysis of big data and consumer experience, human resources experts can predict employee demand, therefore they can care about their attitudes, situation and deal with even small trouble employees are facing; as a result they can create bigger satisfaction among laborers.

Box 1: Examples of Big Data applications in attracting talents in China

In China, 'one out of five job advertisements prioritize male candidates,big companies like Alibaba try to attract male applicants by suggesting that they can work with attractive female colleagues when applying for jobs," said Sophie Richardson, director of Human Rights Watch, China (according to *VnExpress.net)*, or if enterprises see that most accesses are from applicants with low work experience while the companies target employees with good qualification and seniority of at least 5 years, it is necessary to change the advertisement message to attract applicants. Job candidates will feel more impressed with a recruitment page which pays more attention to images, has an automatically email system answering quickly or can connect with candidates via the Internet everywhere, every time, for example via Chatbot - the application we see commonly on Facebook, Google, Twitter, etc. Via Chatbot, enterprises can send specific messages to a group of subjects according to the levels of their interactions: after a certain period of time of interaction, they can receive a certain piece of information. The system can classify different subjects with interactions with Chatbot at different time and different contents. By interacting with candidates via Chatbot, the system can synthesize and filter candidate information via Big Data then make appropriate questions to get to know about them. At the same time, when answering questions from candidates, Chatbot can constantly update information to increase the later interaction effects. More importantly, to attract talents in the business areas of the enterprises, from Big Data, it is possible to exploit personal profiles of the candidates, understand their preferences, expectations of salaries, working environment, career path so as to find suitable ways to attract them effectively by posting job advertisements, actively inviting potential candidates to enterprises or seeking the talents with the expertise knowledge that enterprises need.

ISSN 1859-3666

3. Status - quo and trends of Big Data applications in attracting and retaining talents in Vietnam enterprises

3.1. Descriptions of data collection and processing methods

To investigate the status-quo and trends of Big Data application, the authors used data collection methods of interviews, sample survey, case study, statistic research of relevant agencies, institutes, organizations and enterprises. After collected, data were processed by analysis, synthesis and comparison methods.

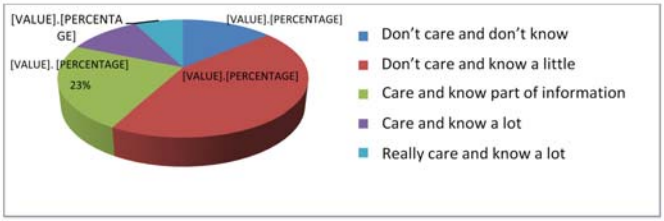
With sample survey, the ground to design questionnaires is the research by Matt Ferguson et. al to identify the practical aspects of Big Data in attracting and retaining talents to measure the awareness, attention and trends of using Big Data in Vietnam enterprises. The authors collected primary data by questionnaires with 150 questionnaires delivered and 107 collected back. Respondents to the survey questionnaires are heads of human resource department (88/107, equal to 82.24%), directors (19/107, equal to 17.76%) of enterprises operating in information technology - electronics - engineering (42/107, accounting for 39.25%); finance - banking - real estate (19/107, accounting for 17.76%); tourism - hospitality (15/107, accounting for 14.01%); trade - services (18/107, accounting for 16.82%); healthcare - education - consultancy (13/107, accounting for 12.16%).

3.2. Research findings

3.2.1. General awareness of Big Data

At present, Vietnam enterprises are making certain changes to adapt to the era of technology but these changes are not radical, many enterprises have not made use of advantages of technology due to technical and financial reasons. Therefore, many enterprises are facing difficulties applying technology in management. The main reason is most Vietnam enterprises just focus their resources on daily tasks, few of them apply technology in management.

The survey findings indicate that 62.58% of the respondents said that they do not care and know or just know a little of Big Data. These people do not really know the benefits that Big Data brings to management in their enterprises. 35.11% of the respondents said that they care and know about this application (know a part or a lot of information), only 8.8% said they really care and know a lot of information about Big Data). This illustrates that the level of care and awareness of Big Data remains limited, however, there has been positive signs in the awareness of people.



Source: the authors' survey results

Figure 1: *Research findings of awareness and understanding about Big Data*

The research findings of awareness of enterprises are presented in Table 1.

The results indicate that in the perception of many enterprises, Big Data is more useful in helping enterprises and government to predict unemployment rate, career trends in the future (4.12/5). It means Big Data has more impacts on macro administration. There is also opinion that Big Data is only applied in information technology related enterprises (4.05/5).

Respondents quite agree that data analysis from Big Data is just the foundation for managers to make decisions but cannot replace humans in making decisions (3.79/5).

3.2.2. Awareness of Big Data benefits in attracting and retaining talents

Researching findings in Table 1 show that among respondents who care and have information about Big Data (45 people), they have quite high awareness of the roles of Big Data in human resource management (3.67/5), they also believe that applying Big Data analysis will be the foundations for leaders to make decisions of recruiting and retaining talents in enterprises (3.34/5). As for the proportion, 17/45 respondents (37.78%) believe that Big Data has benefits in attracting and retaining talents while the remaining 63.22% do not see the clear benefits of Big Data application in the reality of human resource management of enterprises.

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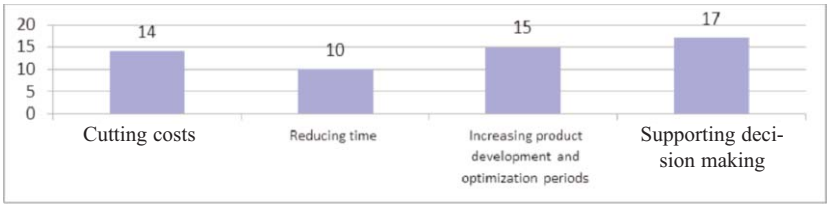
Table 1: *Research findings of Vietnam enterprises' awareness of Big Data*

No.	Items	Mean	SD
1	Big Data is only applied in information technology related enterprises?	4.05	0.827
2	Enterprises can absolutely own Big Data for their own?	3.43	0.652
3	Big Data will play an important role in human resource management in enterprises	3.67	0.231
4	Big Data will help enterprises and government to predict unemployment rate, career trends in the future?	4.12	0.937
5	Applying Big Data analysis will be the foundations for leaders to make decisions of recruiting and retaining talents in enterprises?	3.34	0.632
6	Data analysis from Big Data is just the foundation for managers to make decisions but cannot replace humans in making decisions	3.79	0.374
7	To use Big Data in human resource management, human resource management division must have abilities to analyze and predict based on the available database.	3.39	0.539
		3.68	0.543

Source: Authors' survey findings

For those who believe that Big Data brings about benefits, there is a quite high consensus on the benefits of Big Data in different aspects (cutting costs, reducing time, increasing product development and optimization periods, supporting decision making). The detailed results are presented in Figure 2.



Source: Authors' survey results

Figure 2: *Awareness of benefits of Big Data in attracting and retaining talents in enterprises*

3.2.3. Trends of applying Big Data in attracting and retaining talents

Applying Big Data in human resource management has become a quite popular trend in the world when recruitment divisions use social networks and multimedia communications to attract and retain talents extensively and gained efficiency. The changes in recruitment trends paying more attention to recruitment brands and talent management modes have also impacted on the application of Big Data in attracting and retaining talents.

The trends of applying Big Data in attracting talents

As shown by the authors' survey, mentioning the use of Big Data, up to 71.3% of respondents express agreement and absolute agreement that enterprises can build their own database to attract talents in an effective and time - saving manner.

The survey results (Table 2) reveals that the integration of candidate evaluation kits based on data collected from Big Data as well as working process, behavior of candidates on social networks, forums, personal emails, blog, etc., even feedback from their colleagues and friends on technology bases can help standardize the evaluation of candidates and enable many people to participate in the filter process. On that basis, decisions can be made scientifically and accurately.

To candidates, especially those with high quality and competence, recruitment brands of enterprises play an important role in attracting talents. By getting information from database, enterprises can create more relevant contents to readers. By analyzing and synthesizing internal data from personnel department, analyzing trends of candidates and trends of labor in the market from Big Data, enterprises can design and build job advertisements attractive to laborers' tastes, create job advertisements attractive to job seekers in each field to develop recruitment brands for enterprises. This conclusion gained high level of consensus from respondents (4.05/5).

ISSN 1859-3666

Table 2: *Research findings of trends of Big Data applications in attracting talents*

No.	Items	Mean	SD
1	Collecting candidate data from Big Data helps enterprises to access more diverse sources of candidates	4.19	0.832
2	Collecting data from Big Data helps enterprises to design and build attractive job advertisements	4.05	0.743
3	Behavior, attitudes and interactions on the Internet and personnel profiles of laborers can be found in Big Data?	3.98	0.648
4	Applying Big Data helps to evaluate candidates more scientifically and reduce subjectivity	3.86	0.256

Source: the authors' survey results

The trends of applying Big Data in retaining talents

Another equally important matter after recruiting talents is enterprises should have measures to retain talents as talents often have many opportunities to access better workplaces.

Reality shows that enterprises which apply high technology in talent management often have lower rate of staff turnover. For example, while HP Group has the rate of staff turnover at 10%, the rate in other enterprises in the same industry is 20%. From Big Data, big enterprises worldwide can build up programmes to collect and analyze the data of employees from email, Facebook, personal blogs, accounts on forums that they join, etc. to predict their behavior, on that basis make decisions based on Big Data rather than the subjectivity of the leaders.

As shown in the authors' survey (presented in Table 3), enterprises can set up Big Data base for employees from their behavior, attitudes, interactions on the Internet and personnel profiles (consensus level is 3.58/5). Besides, there is an opinion that enterprises need more tools and programmes in the future to deal with this data. Customization - understanding individual competence and demand of each employee - is an inevitable trend to retain talents and motivate them to work to their best capacity. Previously, enterprises usually copycat working patterns of each other, especially human resource divisions usually apply standards and procedures they learn from other enterprises without caring if they are suitable with their own operations. Now, human resource departments can base on Big Data to analyze and calculate the probability of how successful a personnel decision can be, if it receives the agreement from all staff, which groups of employees have the highest level of dissatisfaction (3.97/5). For example, it can help enterprises accurately estimate the motivations to boost each sales team to see what they hope from leaders to fulfil the strategies, or to survey the process of determining and assigning difficult goals in each situation, to each manager. Also based on their Big Data, enterprises can analyze to estimate the rate of staff turnover, adjust salaries and perks before deadline for these employees, especially to talents for whom income is still a prerequisite to retain them (3.34/5).

Thanks to the functions of social networks and Big Data analysis, the periodical evaluation work (mostly done twice a year) can become regular, even daily, activities (3.78/5). For example, it is possible to survey employees to see if they are satisfied with enterprises' policies, for those who are dissatisfied, it is necessary to identify the reasons for their dissatisfaction, on this basis enterprises can adjust policies

Table 3: *Research findings of trends of Big Data applications in retaining talents*

No.	Items	Mean	SD
1	Big Data helps to establish employee data from their behavior, attitudes, interactions on the Internet and personnel profiles	3.58	0.421
2	Human resource departments can base on Big Data to analyze and calculate the probability of how successful a personnel decision can be	3.97	0.620
3	Based on their Big Data, enterprises can analyze to estimate the rate of staff turnover	3.34	0.763
4	Big Data helps to shorten evaluation periods and cut costs	3.78	0.622
5	Big Data is the foundation for enterprises to optimize labor allocation	4.01	0.843
6	Big Data is the foundation for analysis to estimate the commitments of laborers to enterprises	3.26	0.837

Source: the authors' survey results

ISSN 1859-3666

for each group, thereby increasing understanding of each group, each individual and especially their group culture. These surveys can be conducted on the enterprises' social networks with questions expressing the enterprises' cares about desires and expectations of laborers, or via employee elections to show employees their importance in the organization (3.26/5). Besides, the posts, status, even comments of employees on social network or forums are also saved in Big Data to lay the foundations for analyzing trends to change working environment in accordance with demand of employees, or to build corporate culture which highly appreciates the roles of human resources, build mechanismfor training and promotion as desired by the talents in the enterprises.

Also according to the authors' survey, 87.2% of the respondents agree and absolutely agree that if enterprises make full use of data analysis and processing from Big Data, they can have stronger foundations to allocate laborers appropriately, avoid the situation where some work hard while others work little and complaints among employees. The survey results also reveal that the general awareness of Big Data of Vietnam enterprises has become better but not yet adequate and comprehensive. They have quite good awareness of Big Data benefits in aspects such as: cutting costs, reducing time, increasing product development and optimization periods, supporting decision making. Enterprises have developed positive recognition of the benefits and application trends of Big Data in attracting and retaining talents. But survey results also uncover that a large proportion of Vietnam enterprises are still confused about how to apply this tool in their real business situation.

4. Some proposals for Vietnam enterprises to apply Big Data in attracting and retaining talents

Big Data is considered a gold mine that enterprises have not fully utilized and exploited, especially when Vietnam possesses many advantages such as young population, high rate of technological update. To apply Big Data in human resource management, especially in attracting and retaining talents, it is necessary to take the following measures:

Firstly, enterprises should improve awareness for managers of various levels about the benefits of Big Data in general and in attracting and retaining talents in particular. Managers of different levels should develop accurate and adequate knowledge about the benefits of Big Data, the foundations and conditions to apply it successfully. Some solutions include: facilitating participation in conferences, learning trips to big international corporates, training courses, etc. It is noted that the key to successful Big Data application is the awareness of managers, especially leaders. This is a new but important thing, and to achieve it, it is necessary to raise the awareness and philosophy of work, procedures and organization.

Secondly, enterprises should restructure the human resource management system towards applying Big Data in business reality. The restructuring should be implemented in both hardware and software of the system (restructural models, policies and procedures of human resource management, among which policies and procedures of talent management should be cared of).

Thirdly, it is necessary to raise the competence of those in charge of applying Big Data in human resource management. Raising the competence of users is a crucial factor to fully exploit the benefits of Big Data in business reality. Activities that can be taken to raise the competence is recruiting new employees in combination with firing the old ones, training and transferring employees, etc. The new team need to have abilities to analyze and process Big Data. When people in charge have good competence of using the data, enterprises can use the supplemented data to support their decisions in seeking, attracting, selecting talents. However, this is a long process that needs investments.

Fourthly, enterprises should make adequate investments in new technology or renovation to facilitate Big Data application. They need to put aside budgets for these investments. Enterprises should also have sound investments options appropriate with their business strategies, operational sectors and financial capacities. In case they cannot invest in infrastructure, they can look for potential partners for cooperation.

5. Conclusion

Big Data can bring about many benefits to organizations and enterprises in Vietnam, especially human resource management is expected to go through considerable changes as the term HR 4.0 has become more common on mass media.

However, Big Data also poses lots of challenges to organizations and enterprises in the current digital era. Once they can master Big Data, organizations and enterprises can gain bigger success in the present competitive context. There are benefits in attracting and retaining talents when data can be extracted more accurately, effectively at lower costs.

ISSN 1859-3666

However, it should be noted that the exploitation and processing of information from Big Data is just a supporting tool which cannot replace humans in making decisions, especially decisions about human resource management.

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Summary

Thế giới đang bắt đầu bước vào cuộc cách mạng công nghiệp lần thứ tư, đây là một cuộc cách mạng sản xuất mới gắn liền với những bước đột phá chưa từng có về công nghệ, liên quan đến kết nối Internet, trí tuệ nhân tạo, rô bốt, dữ liệu lớn, điện toán đám mây, trải nghiệm thực tế ảo… và cuộc cách mạng này được dự đoán sẽ có những tác động to lớn đến mọi quốc gia, chính phủ, các tổ chức, doanh nghiệp và người dân trên toàn cầu về phương thức làm việc, sản xuất, giao tiếp hàng ngày.Với sự phát triển của công nghệ thông tin đặc biệt là nền tảng điện toán đám mây và sự bùng nổ của các thiết bị di động mọi thứ đều được đưa lên hệ thống lưu trữ và khai thác thông qua các ứng dụng trên điện thoại. Mỗi cá nhân đều có thể là một đơn vị sản xuất dữ liệu với hàng loạt những hình ảnh, âm thanh, thậm chí là các bài viết, bình luận cá nhân được đăng tải trên các kênh thông tin tồn tại trên Internet hàng ngày, hàng giờ và được số hóa, lưu trữ đã khiến thế giới sinh ra một lượng dữ liệu khổng lồ, vượt quá khả năng xử lý của các cơ sở dữ liệu truyền thống, từ đó xu hướng Big Data, hay còn gọi là dữ liệu lớn đã ra đời để giải quyết các bài toán về lưu trữ, xử lý dữ liệu.

Trong phạm vi của bài viết này, các tác giả dựa trên nghiên cứu một số vấn đề lý luận cơ bản về Big Data, về thu hút và giữ nhân tài, và phân tích thực trạng nhận thức và xu hướng ứng dụng Big Data vào thu hút và giữ nhân tài tại các doanh nghiệp Việt Nam (thông qua phương pháp thu thập dữ liệu bằng bản hỏi và phỏng vấn), từ đó đề xuất một số giải pháp cho các doanh nghiệp Việt Nam để ứng dụng rộng rãi Big Data trong công tác thu hút và giữ nhân tài.

MAI THANH LAN

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- Name: ***Mai Thanh Lan***
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