

Business Intelligence in Contemporary Organizations: Potential Opportunities to Improve Human Resource Management for Competitive Advantage

Mohammed Ali Al Aufer
Sohar College of Applied Sciences
Sohar, Sultanate of Oman
Email: alofi.soh [AT] cas.edu.om

ABSTRACT---- *The current study aimed to identify the potential opportunities could be provided by business intelligence to improve human resource management. Data was collected via the review of literature and the analysis of previous studies. Findings showed that in general, the application of business intelligence in a contemporary organization could support the improvement of the activities of human resource management. The implications of the current study put more emphasis on creating a suitable work context to enable HR department take advantage of the business intelligence practices.*

Keywords- business intelligence, human resource management, contemporary organizations, competitive advantage

1. INTRODUCTION

Business and industry all over the world have witnessed innovative changes provided by globalization. One of these significant changes is the appearance of advanced Information Technology (IT) in contemporary organizations. “Constant development of Information Technologies (IT) and globalization are the main factors that give an international aspect to competition. Today’s firms must deal with a complex perceived environment where unpredictability rhymes with uncertainty” [1].

Management in contemporary organizations has been motivated to adopt the concept of Business Intelligence (BI). The concept of business intelligence deals with data management in organizations to create a realistic and clear information context to fulfill the business objectives. “Business intelligence is a broad field that combines people skills, technologies, applicants, and business processes to make better strategic and tactical business decisions” [2]. Business decisions based on business intelligence supports the plan and effort provided by an organization to maximize competitive advantage.

The use of business intelligence in an organization creates a productive information environment to serve all business areas. For example, Human Resource Management can take advantage of the collection and storage of data. This data will support HRM’s effort to promote the quality of services and to achieve their goals. Yet, “While many organizations are starting to use business intelligence in many areas of their business and make substantial gains, they have not taken advantage of this in Human Resource Management area” [2].

The question is to what extent that business intelligence could contribute to the improvement of human resource management? The current study focuses on identifying the areas of human resource management that could be benefitted from the adoption of business intelligence. The aim of the study is to contribute to the competitive advantage of an organization by promoting the relationship between business intelligence and human resource management.

2. LITERATURE REVIEW

Contemporary organizations focus on reaching a high level of competitive advantage in a global business market. To achieve that goal, these organizations try to take advantage of globally accelerating changes and the new concepts in business and IT. One of new concepts that has been adopted in organizations is ‘Business Intelligence’.

What does business intelligence mean and deal with? Serbanescu (2009) states that business intelligence is “a powerful instrument that the companies can use to improve the organizational performance offering valuable information for all the parties involved in the business” [3]. Ranjan (2009) defines business intelligence as “a broad category of applications and technologies for gathering, providing access to, and analyzing data for the purpose of helping enterprise users make better business decisions” [4]. Business intelligence prepares a convenient and accessible data environment to be used for a purpose of achieving competitive advantage.

Business intelligence could consist of the following components:

1. **Olap (On-line Analytical Processing):** It provides multidimensional, summarized views of business data and is used for reporting, analysis, modeling and planning for optimizing the business.
2. **Advanced Analytics:** It is referred to as data mining, forecasting or predictive analytics by using statistical analysis techniques.
3. **Corporate Performance Management (Portals, Scorecards, Dashboards):** It usually provides a container for several pieces to plug into so the aggregate tells a story.
4. **Real Time Business Intelligence:**It allows for the real time distribution of metrics through email, messaging systems and/or interactive displays.
5. **Data Warehouse and Data Marts:** It supports the physical propagation of data by handling the numerous enterprise records for integration, cleansing, aggregation and query tasks [4].

In recent times, organizations have adopted business intelligence to enhance their productivity and reputation. One of the most important areas that contemporary organizations should focus on is the improvement of human resources. Worth (2011) demonstrates that “Companies should use business intelligence (BI) to transform and maximize the potential of their human capital. The use of human capital based business intelligence (BI) has increasingly become one of the vital strategic components for world class companies” [5]. Muryjas, and Wawer (2014) believe that “Highly competitive markets require the definition of the HR strategy and monitoring of its performance. These processes may be supported by the use of business intelligence that is a contemporary concept in management allowing organizations to have better insight into their HRM strategy realization” [6].

In which areas of human resources can business intelligence contribute to? “Human resources already maintains and has access to large volumes of employee data, including census information, performance appraisals, benefits elections and compensation. The strategic application of business intelligence to any one of these areas can yield key insights that translate into better decisions-making and streamlined processes’ [7]. Human Resource Management can use business intelligence to improve the performance of the roles and activities that are practiced in contemporary organizations. The management is able to take advantage of the business intelligence functions in the improvement of planning, recruitment, selection, compensation, retention, training and development.

To investigate a potential relationship between business intelligence and human resource management, it is important to explore relevant previous studies. For example, Guechtouli (2014) conducted a field study in a big technological firm, Omega, to identify the HR functions that could play a role in enhancing business intelligence activities; the study used Hannon’s (1997) motivational model focusing on five HR functions: The performance evaluation system, the compensatory system, the carries’ planning system, the employees benefit system and the disciplinary and separation system. Guechtouli concluded that both HR and BI managers could take benefit of the study: HR managers are able to support and develop the business intelligence system, and BI managers could focus more on employees’ motivation to contribute to HR functions [1].

Furthermore, Serbanescu (2009) conducted a case study focusing on a company which employs a business intelligence solution implemented by the means of QlikView application that is used for human resource administration. The study concluded that the implementation of the business intelligence solution influences the business process, both from a financial and operational point of view and offers the managers a complete image of the resources, costs and personnel performance throughout the whole organization [3].

From above, it is indicated that the results of previous studies reported a particular relationship between business intelligence and human resource management. This relationship shows potential influences of the implementation of business intelligence on the improvement of HR activities and practices.

3. METHODOLOGY

3.1 Research focus

The study aims to identify the potential relationship and potential contribution from business intelligence to human resource management in contemporary organization.

3.2 Method

The current study is considered a descriptive and analytic study adopting a qualitative research design. This study pursued secondary data by navigating and analyzing theoretical background and the results of previous studies in the domains of business intelligence and human resource management. The study discussed the potential relationship between business intelligence and human resource management in order to identify beneficial influence on the latter domain.

3.3 Limitations

The current study dealt only with the areas of business intelligence and human resource management and data was collected from literature and previous studies.

4. FINDINGS AND DISCUSSION

The review of literature and analysis of previous studies point out that business intelligence provides human resource management with potential opportunities to improve their activities and functions. The following points discuss the examples of some HR areas and/or roles that could be improved by the implementation of business intelligence in an organization.

4.1 HRM strategy realization

Any organization has to set the strategy and all departments are required to set their strategies compatible with the company strategy. The application of business intelligence could contribute to HRM strategy in the following features:

1. Giving the possibility to measure business.
2. Acquiring information previously unavailable.
3. Discovering the behavior patterns.
4. Simulating and optimizing employees' activities for the future. [6].

4.2 Workforce planning

It is critical to set a realistic and clear plan for workforce, and business intelligence could promote this domain by the analysis of:

1. Monitoring workforce demographic in line with the recruitment and retention objectives
2. Analyzing efficiency of the entire recruitment process lifecycle.
3. Understanding and preventing the drivers of employee turnover [2].

4.3 Compensation and benefits

Human resource Management should deal with this critical area by using appropriate system(s) to ensure the smoothness of salaries, rewards, benefits and any other payments. The implementation of business intelligence could improve payment practices in an organization by the following factors:

1. Saving time in calculating the salary rights and getting various statements required by the legislation in force.
2. Diminishing the efforts of the salary department in calculating salaries.
3. The possibility to run 'what if' simulations regarding the evolution of the salary funds and of the taxes paid by the company for a proper budget allocation
4. The preservation of the history of the employee's activity and of the material benefits he was given [3].

4.4 Talent management analytics and measurement

Talent management has considered a critical factor for the competitive advantage in a contemporary organization. Business intelligence could contribute to this critical area by:

1. Analyzing employee skills and qualifications.
2. Evaluating the efficiency of the recruitment processes.
3. Measuring the effectiveness of learning programs.
4. Monitoring the progress of aligning employee goals with corporate goals [2].

5. CONCLUSION AND IMPLICATIONS

This study has shown the importance of the application of business intelligence in contemporary organizations. The application of such concept will support the organizations' effort in promoting the competitive advantage. This effort could be represented in the opportunities provided by business intelligence to improve particular activities and areas related to human resource management. This department can take advantage of the application of business intelligence in the analysis and improvement of related systems such as HRM strategy realization, workforce planning, compensation and benefits, and talent management analytics and measurement. HRM in contemporary organizations should prepare a suitable work environment associated to the business intelligence system to take advantage of this application in order to serve the competitive advantage.

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