



---

# **An Assessment of the Impact of Employee Self-Service Systems on Human Capital Management: A Case Study of KCM Smelter Co. Limited, Chingola, Zambia.**

**Ms. Mwangala Mutemwa, Mr. Milu Elisha Kafumukache, Dr. Clement Kasenge, Mr. Patrick Mubiana, Katongo Mabengwa and Dr. Maybin Masando**

*Lecturer, National Institute of Public Administration, Zambia.*

*PhD Student, National Institute of Public Administration, Zambia, Lecturer, National Institute of Public Administration, Zambia,*

*Lecturer National Institute of Public Administration, Zambia.*

*Graduate from Zambia Catholic University and Head of Campus, National Institute of Public Administration, Zambia.*

**DOI:** <https://doi.org/10.55248/gengpi.4.1023.102815>

---

## **ABSTRACT**

*Technological advancement in the 21st century has unlocked possibilities in all spheres of existence. Lately with the advent of the Covid-19 pandemic, the workplace has been transformed and businesses are operating in uncharted waters. The use of Employee Self-service systems is believed to guarantee more efficient and effective way of managing human capital in organizations. However, many organizations are still stuck with the traditional way of managing human capital despite its usefulness. It is on this basis that this study sought to assess the relationship between Employee Self-service systems and management of human capital. The main objective of the study was to assess the impact of Employee self-service systems on Human Capital Management, more specifically, the study aimed at ascertaining the impact of employee self-service systems operation on Human Capital Management, explore how efficient employee self-service systems are in helping achieve highly effective employee performance at KCM Smelter Co. Limited, and establishing the relationship between Employee self-service systems and Human Capital Management at KCM Smelter Co. Limited,*

*The study adopted a descriptive survey research design. The population of the study was composed of 1425 employees at KCM Smelter CO. Limited, out of which a stratified and Simple Random sampling was used to draw out a sample size of 100 respondents. The sample frame consisted of a list of all KCM Smelter Co. Limited. This study relied on primary data, which was collected using physical questionnaires distributed to respondents with help from Human Resource personnel from the different Departments.*

**Keywords:** *Employee Self-Service Systems, Human Resource Management, Management*

---

## **1. Introduction**

Organizations exist as open systems and hence they are in continuous interaction with the environment in which they operate. The environment in which the organizations operate is never static. This means that all organizations lend themselves to this environment, which is highly dynamic, chaotic, and turbulent such that it is not possible to predict what will happen and/or when it will happen. Consequently, the ever-changing environment continually presents opportunities and challenges. To ensure survival and success, firms need to develop capability and capacity to manage threats and exploit emerging opportunities promptly. This requires formulation of strategies that constantly match capabilities to environment requirements. Success therefore calls for proactive approach to business (Robinson, 2008).

Consequently, the primary aim of an organization is to increase the performance which cannot be achieved without optimal productivity of the organizations workforce. Additionally, Technological advancement, globalization and competition are changing the economic and social environment rapidly. As a result of this, organizations that are unable to urgently cope and adapt to these changes are underperforming. The Human Resource Management (HRM) function has changed dramatically over time evolving from the traditional administrative function primarily responsible for payroll processing to a more strategic direction of Human Capital Management that can add value to an organization (Malis, 2002).

### **1.1.1 Employee Self-Service Systems as a Concept**

In today's competitive world both private and public organizations are facing new challenges regarding continued quality service delivery and creating committed workforce (wainaina, 2015). Currently neither public nor private organization can perform at highest levels unless each and every employee

is committed to the organization's goals and objectives" (Bhati, 2012). "Organizations have therefore come to realization that employees are the drivers of efficiency and competitive advantage (Lissy, 2014). Use of employee self-service systems can help an organization drive towards efficiency and competitive advantage.

Furthermore, the resource-based view maintains that human resources can meet the criteria for resources that are valuable, rare, inimitable, and non-substitutable Okemah, (2016). Therefore, organizations to succeed and perform there is need to address the needs of these valuable assets, hence the need to address aspects such as employee self-service systems which could have an effect on employees' motivation and in turn increase productivity. Covid 19 Pandemic has completely revolved how most Organizations implement their strategies especially Human Resource Strategies and implementation of ESS systems is one of the key components that will help organization minimize the problems that Covid 19 bring to an organization regarding Post Covid operations.

### **1.1.2 Human Capital Management as a Concept**

The role of Human Resource Personnel keeps dramatically evolving with introduction of new technologies. These technologies replace human tasks into software generated tasks. Human Capital management seeks to explain how Human Resource personnel integrate from traditional Human Resource to a more advanced Human Capital management task. Human Capital Management is a set of practices an organization uses for recruiting, managing, developing and optimizing employees to increase their value to the company (Human Capital Management, 2021).

In the Zambian context, during the restructuring process according to KCM, (2020) explained how it was important to encompass Human Capital Management to increase company efficiency, optimization and boost productivity and avoid any employees from being laid off but rather introduce better conditions of service. By introduction of employee self-service systems which then be connected to Human Capital management, employees will be motivated to perform their duties more efficiently and in turn increase production and company performance which are main components of HCM. The Zambian mining sector is one of the Zambian economic sectors that contributes at least 70% of the total economic growth as noted by (Central Statistical Office of Zambia, 2018). However, this sector to remain sustainable, there is need for highly skilled, competent, and knowledgeable employees. Thus, the mining companies invest significant amounts in implementation and management of Employee Self Service Systems. However, despite the different Employee self-service systems that the mining employees access, there appears to be a gap, concerning the understanding of the impact of employee self-service systems on human capital management. It is in this light that the study seeks to close this gap by deeply assessing this phenomenon.

### **Theoretical Framework**

A core competency is a concept in management theory according to Prahalad, (1994), as the collective learning in the firm. It is a specific factor that a business sees as central to the way a company or employees conduct their operations or work. Prahalad explains how core competence model has an effect on employee production to an organization. According to Prahalad and Hamels Competency model, organizations cannot move into new markets and grow possibilities without using core competency. The model focuses on a combination of specific collaborative, integrated and applied knowledge, skills and attitude within the organization to help achieve competitive advantage. Hamels states the strategic objective of an organization should be focused on creating a new competitive space in the market rather than fighting it off. This is done by using four competency cores i.e. resources which are sources for the development and acquisition of skills and technologies, capabilities which are various possibilities made available to build core competency, competitive advantage and strategy which are acquiring and developing the largest possible market shares. Hamel further illustrates how filling in blanks within organization and introducing new innovations may help improve employee performance.

This model will be applied to the research by introducing employee self-service systems to an organization, the strategic objective of being competitive will be achieved. This is because core competency will illustrate how innovation and allowing organization to develop and acquire new skills and technology helps organization.

### **Impact of employee self-service systems on cost reduction**

In ensuring that employee self-service systems enhance cost reduction, Daniel and Ward (2005) described several employee self-service feature categories for employee to help a company reduce costs which is a primary aim of human capital management. The following self-service feature categories for employee portals have been identified: Human Resource information, Information technology services, Procurement, Time or expense reporting and Training. These self-service features could have different levels of importance. Maslow's Hierarchy of Needs has been used for the Information Technology Value Hierarchy (Urwiler, 2010).

This framework described that specific IT needs such as infrastructure should be available before upon meeting other needs. Maslow's Hierarchy can also be used to describe the needs for self-service features in an organization. Employees only have the need for some features when basic features are available. Each level of the hierarchy included different self-service features. The selection of these features was based on the Moscow-method. The letters of this prioritization method represents must have, Should have, Could have and won't have this time.

According to Consortium, (2008) shows that the hierarchy of self-service features can be found in the Figure below and the following levels for this hierarchy, which include the self-service feature categories, have been identified:

They must have self-service features included the categories of Human Resource information and Information Technology services because these features are the foundation of any employee self-service portal. These self-service features are relevant for every organization and employees should have the possibility to request Human Resource information and IT services on their own.

Procurement and Time or expense reporting were categorized as should have features, because these features are only relevant for some organizations (e.g. consultancy) and other organizations or departments might not need these features.

## Literature Review

Employee Self-Service (ESS) systems have emerged as a vital tool in contemporary Human Resource Management (HRM). These systems grant employees direct access to a range of HR functions, reducing administrative burdens and enhancing efficiency. This review aims to investigate the impact of ESS systems on Human Capital Management (HCM) within the specific context of KCM Smelter Co. Limited in Chingola, Zambia.

ESS systems are web-based platforms designed to enable employees to independently manage various HR tasks. These tasks encompass accessing pay information, updating personal details, applying for leave, and enrolling in benefits (Marler & Boudreau, 2017).

One of the primary advantages of implementing ESS systems is the notable increase in HR efficiency and productivity. Studies indicate that ESS adoption leads to a reduction in administrative workload, allowing HR professionals to dedicate more time to strategic activities (Sparrow & Hird, 2019). In the context of KCM Smelter Co. Limited, this can potentially result in improved allocation of HR resources for higher-value initiatives.

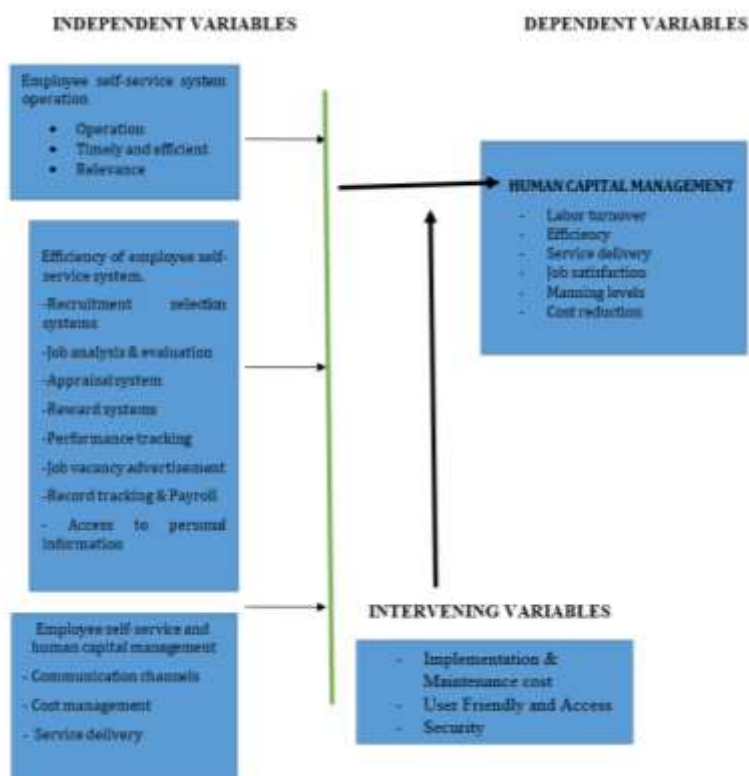
ESS systems empower employees by providing them with greater control over their HR-related tasks. This autonomy can lead to heightened job satisfaction and engagement levels as employees perceive a greater degree of involvement in their HR affairs (Vaiman, Collings, & Scullion, 2019). For KCM Smelter Co. Limited, this could translate into a more motivated and productive workforce.

The implementation of ESS systems can lead to improved data accuracy and compliance. Allowing employees to directly manage their personal information helps mitigate errors and ensures compliance with legal and regulatory requirements (Boudreau & Ramstad, 2018). This aspect is particularly critical for organizations like KCM Smelter Co. Limited, where precision in HR records is paramount.

While ESS systems offer substantial benefits, there are potential challenges. Concerns may arise regarding data security and privacy, necessitating robust safeguards (Marler & Boudreau, 2017). Furthermore, adequate training and support for employees are crucial to ensure effective utilization of the system, a factor KCM Smelter Co. Limited should carefully consider.

## 1.2. Conceptual Framework

A concept is an abstract or general idea inferred or divided from specific instances (Kombo and Tromp, 2009). On the other hand, Teresa and Karana (2014) define conceptual framework as a research tool attended to assist a researcher to develop awareness and understanding of the situation under scrutiny. This framework explains the relationship between the dependent and independent variables.



## 2. Material and method

Research design refers to the general plan of how one will go about answering the research question (Lewis, et al., 2003). The research only used a case study research design which involved using Quantitative approaches. Quantitative approaches involved collection of closed-minded data and giving personal interpretation of findings on the impacts of Employee self-service systems on human capital management. The Quantitative research design was used because the study will be only in need of emotions, opinions and feeling of the targeted respondents on the subject matter. The responses gathered from the respondents was then be transcribed, coded and then processed using themes. Quantitative data will be collected through closed questions and consultations with the miners at KCM Smelter Co Limited. On the other hand, the study will use quantitative approaches. With these approaches, the study will employ numerical data because of the inferential aims of the study. Using numerical methods, the problem and questions of the study will be sought and the findings on the targeted respondents will be concluded to the entire population.

The mine was targeted because the researcher attempted to control the limitation of finance and time, thus KCM Smelter Co Limited is within the reach of the researcher. It was discovered that there are 1435 operational miners at KCM Smelter Co Limited. Miners were targeted in that they are the partakers of the different employee self-service systems provided as required by the mining companies and the supervisory board of the mining sector. The sample was adequate for the study in that it suffices the rule recommended by Mungenda, (2007) that a sample size should be at least 10% to 30% of the total population. The sample was determined not to be large enough to avoid the saturation of information from the targeted miners as the study was only in need of Quantitative data. The researcher made use of the Slovin's formula of sample size to calculate the sample as follows;

$$n = \frac{N}{1+Ne^2} \text{ Where N is the population and e is the desired level of significance the study will target.}$$

$$n = \frac{1425}{1+(1425)0.1^2}$$

$$= 98.45$$

From the formula 100 employees from the 5 different departments that are found at KCM Smelter Co. Limited were interviewed.

The researcher used both primary and secondary sources of data. The primary data obtained from miners at KCM Smelter Co Limited was used for data analysis. This data types were gathered from the miners as raw information on the aspect of Employee self-services and Human capital management will be needed. The information was obtained by using semi-structured questionnaires. On the other hand, the secondary data was obtained from published materials which will include journals, textbooks magazines, internal reports and newspapers. The variables were taken from a time series of 2000 – 2021. This data was then used to build the theoretical background and the literature review.

To select the miners from the targeted mining company, the study used the stratified sampling and random sampling procedure. This procedure was used due to the fact that the miners belong to different departments. Thus, the departments within the mine they were considered as strata's and the Miners in the department were selected using the Simple Random Sampling procedure. This was done so as to give the all the miners in the stratum an equal chance of participating in the study and as well reduce on sampling biasness. Thus, each miner in respective stratum was assigned a computer generated random number. If the  $W^{\text{th}}$  number is generated, the  $W^{\text{th}}$  miner in the strata was targeted.

## 3. Results and Discussion

### Employee Self-services Systems Operation

The study established that KCM Smelter Co. Limited uses Employee Self-services systems around the organization to execute different Human Capital Related tasks. The use of Employee Self-services systems in the company was found to have led to effective execution of Tasks, promoted timely operations and enhances the quality of jobs in the organization. However, use of Employee Self-services systems was found to have some influence on effective job performance because less complaints were submitted and workers felt empowered when operating Employee Self-services system portals. For this reason, Employee Self-services systems were found to have a positive statistical relationship with management of human capital.

### Efficiency of Employee Self-service Systems

The study found that Employee self-service systems were efficient and positively influenced human capital. This is because it enabled employees to check their personal information with ease. Furthermore, it improved online vacancy advertisement and employee selection process, improved job analysis and evaluation, created a timely and efficient appraisal system, ensured employees track their leave days and training vacancies in organization, it also made it easier to track employee performance. Lastly employees were able to track their record and payroll systems without a hustle and in a short period of time. However, it was noticed that the use of Employee self-service systems had an average influence of the interview process and the ease of applicant tracking appointments and was not that effective on reward systems. Nevertheless, use of employee self-service systems in the organization overall had a positive statistical relationship with management of human capital.

### Employee self-service systems and Human Capital Management

The findings indicated that employees at KCM Smelter Co. Limited used Employee self-service systems to access information easily and faster. The findings also established that there was flexibility in the use of Employee Self-service system to communicate with management, employees and customers. The systems also enabled the employees to access their personal information at their convenient time. The respondents were in agreement and

others disagreed that Employee Self-service system led to cost management. The study also revealed that effectiveness of Employee Self-service system has contributed to employee effective service delivery in the organization. Employee Self-service systems were found to have a positive statistical relationship with management of human capital.

---

#### 4. Conclusion and Recommendation

On Employee Self-services Systems Operation, the study found that the company used Employee Self-services systems around the organization to execute different Human Capital Related tasks. The use of Employee Self-services systems in the company was found to have led to effective execution of Tasks, promoted timely operations and enhances the quality of jobs in the organization. On Efficiency of employee self-service systems, the study found that KCM Smelter. CO. limited had implemented employee self-service systems and there was efficient use of the system at the company and this led to improved online vacancy advertisement, improved job analysis and evaluation, created a timely and efficient appraisal system. The study further revealed that efficient implementation and use of employee self-service systems in the organization could enhance training programs in the company.

The system was also responsible to the effective employee selection process. However, the systems were not effective in carrying out interviews to potential employees and it was also difficult to track job applications online using the system. In conclusion it was established that effective use of employee self-service systems in the organization led to enhanced human capital. On Employee self-service systems and Human Capital Management, the study established that use of Employee self-service systems in the company led to improved access to information. The employees also used the systems to efficiently communicate with management, employees and customers. In addition, the systems enabled employees to easily and conveniently access their personal information and also to deliver services effectively to the clients.

---

#### 5. Recommendations

The study recommended that Employee self-service systems should be enhanced to ensure efficiency in job scheduling process. The system should also enhance employee appraisal system as this will enable the management to identify areas of improvement in employee training and development. The study recommended that the company should improve the recruitment information system so as to enhance the interview process. It should also make an improvement on the system to allow efficiency in tracking of job application and appointment process. On performance related Employee self-service systems, the study recommended that the system is improved employee self-assessment. In addition, the system should be able to ensure fair and effective reward system. This will lead to improved employee motivation and performance. Self-service systems in the company should also be improved to ensure efficiency and effectiveness in service delivery. The company should also use the system to manage the cost of operations in the company. Finally, the study recommended that for effective human resource planning system at the Company where management should develop an effective job evaluation system to achieve and ensure optimum supervision.

---

#### 6. Limitations of the study

The study was limited due to insufficient time and resources constraints. Furthermore, some employees were reluctant or simply were skeptical about filling in the questionnaires and some which were retained had some questions left unanswered. This made it difficult to have comprehensive data.

---

#### References

- Arefin, & Hosain, (2019). The role of human resource information system on organizational performance. Evidence from Bangladesh Pharmaceutical Industry . *European Journal Of Applied Business Management*, 37-53.
- Barney, (1997). On Becoming a Strategic Partner: The Role of Human Resources in Gaining Competitive Advantage. *Sociology mind*, 31-46.
- Barney, (2001). Resource Based Theories of Competitive Advanatage: A Ten Year Retrospective On The Resource Based View. *Journal Of Management*, 643-650.
- Bhati, (2012). A Study about Employee Commitment and its impact on Sustainable Productivity in Indian Auto-Component Industry. *European Journal of Business and Social Sciences*, Vol.1.
- Cameli, (2005). How leveraging human resource capital with its competitive distinctiveness enhances the performances of commercial and public organisations. 391- 412.
- Central Statistical Office Of Zambia. (2018). Zambia In Figures. Zambia: CSO.
- Consortium, (2008). Moscows Priortization. . *Arten Handbook*.
- cONSURTIIUM]], D. (n.d.).
- Drazin, and Van De Ven, (1985). Alternative Forms Of Fit In Contingency Theory. *Administrative Science Quarterly*, 514-539. Retrieved from <https://doi.org/10.2307/2392695>

- Gitari, (2019). Effect of recruitment and selection subsystem of human resource information systems on firm performance of companies listed at The Nairobi securities exchange in Kenya. *International Journal of Humanities and Social Sciences*, 96-115.
- Gitari, (2019). Effect of recruitment and selflection subsystem of human resource information systems on firm performance of companies listed at the Nairobi securities exchange in Kenya. *International Journal Of Humanities and Social Sciences*, 96-115.
- Greenhaus, (2007). Sources of Conflict between Work and Family Roles. *Academy of Management Review*, 10. pp. 76-88.
- Hang'andu, (2016). Promotion of self servicee development of the employees in Zambia's Public service. Lusaka: The University Of Zambia.
- Hendricks, (2002). How important is human capital for development? Evidence from immigrant earnings.. . *American Economic Review*, 198–219.
- Human Capital Management. (2021, September). Retrieved from Bamboo HR( An HR glossary for HR terms): <https://www.bamboohr.com/hr-glossary/human-capital-management-hcm/>
- Kakuru, (2016). Human Resource Planning Systems. *The Journal of Information and Knowledge Management systems*, 6-13.
- Kayula, (2020). COVID19 and labour law; a case of Zambia. *Creative Commons International*, 1-4.
- KCM to be reorganised and restructured into two subsidiary companies effective Febuary 1, 2021. (December 29, 2020). *Lusaka Times*.
- Khera, & Gulati, (2012). Humand information systems and its impact on human resource planning: a perceptual analysis of information technology companies. *Journal Of Business And Management*, 6-13.
- Malis, (2002). Corporate intranets include automated time and attendance in your “HR Self Service e” Offering. . Retrieved from Crosswind: <http://www.crosswind.com>
- Margatama, L. (2017). Employee Self Service Based Systems development and implementation. *Journal Informatika Case study: BCP Indonesia*, 52-60.
- Margatama, (2017). Employee Self Service-Based Human Resources Information System Development and Implementation. Case Study: BCP INDONESIA. . *Journal Informatika*, 11(1),, 52-60.
- Mazikana, (2007, March). Impact of Self service on Zambian Public Sector.
- Mugo, (2017). Perceived effectiveness of human resource information system at Kenya Breweries Limited (unpublished doctoral dissertation,. Nairobi, Kenya: University of Nairobi, .
- Mugo, (2017). Percieved effectiveness of human resource information systems at Kenya Breweries Limited. Nairobi, Kenya: University of Nairobi.
- Mungenda, (2007). Research methods, Qualitative and Quantitative Approaches. ACT, Nairobi.
- Nagendra, & Deshpande, (2014). Human resource information systems in HR planning and development in mid to large sized organizations. *Procedia Social and Behaviour Sciences*.
- Njeje, & Ochieng, (2018). E-performance management systems and organisation performance of Sacco's in Kenya. *International Journal Of Business and Management*, 89-98.
- Paul (n.d.). e-HR and Employee Self Service: A Case Study of a Victorian Public Sector Organisation . *Issues in Informing Science and Information Technology*, 1020.
- Prahalad, (1994). Strategy as a field of study: Whysearch for new paradigm? *Strategic management journal*, 5-16.
- Ramaseshan, (2015). Firm self-service technology readiness. . *Journal of service management*, 26(5),, 752-770 .
- Reinking, (2012). *Contingency Theory In Information Systems*. Florida: University Of Central Florida.
- Robinson, and Pearce, (2008). *Strategic Management 8th Edition*. McGraw-Hill,Inc, OH.
- Samkarpad, (2017). Effectiveness of Human Resource Information System on Hr function in reference to manufacturing units of sangaredy district. *Splint International Journal Of Professionals*, 29.
- Schultz, (1961). Investment In HUman Capital. *The American Economic Review*, 1-17.
- Snicker, (2013). Employee self-service technology acceptance: A Case Study at TAP Portugal (unpublished doctoral dissertation,). Porto, Portugal: University of Porto.
- Stiles, (2003). *Human capital and performance: A literature review*. University of Cambridge: Cambridge.
- Teece, and Pisano and Shuen, (1996). The Dynamic Capabilities Of Firms: An Introduction, *Industrial And Corporate Change*. *Journal Of Economic Behaviour And Organization*, 193-224.

---

Urwiler, (2010). The IT Value Hierarchy: Using Maslow's Hierarchy of Needs as a Metaphor for Gauging the Maturity Level of Information Technology Use within Competitive Organizations. , . *Information Systems Management*, 25(1).

Ventakash, & Lissy, (2014). A study relationship between employee engagement factors and organizational commitment in private banking sector. *International Journal Of Business and Administration Research Review*, 209-217.

Wainaina, (2015). Determinants of Organizational commitment among academic staff in Kenya's Public and Private Institutions. Nairobi, Kenya: Jomo Kenyatta University Of Agriculture and Technology.

Marler, J. H., & Boudreau, J. W. (2017). An evidence-based review of HR Analytics. *The International Journal of Human Resource Management*, 28(1), 3-26.

Sparrow, P. R., & Hird, M. (2019). Strategizing HR analytics: Benchmarking people management practices for competitive advantage. *Organizational Dynamics*, 48(4), 236-244.

Vaiman, V., Collings, D., & Scullion, H. (2019). Talent management decision making. *Management Decision*, 57(7), 1697-1712.

Boudreau, J. W., & Ramstad, P. M. (2018). *Beyond HR: The new science of human capital*. Harvard Business Press.