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## THE HEADIC ISSUE OF DIGITAL REVOLUTION: AN EMERGENT CHALLENGE FOR THE FUTURE OF JOBS

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### ABSTRACT

The article goes through the different stages of human at work and its current practices then focuses on the digital revolution coming on. It explores the effects on jobs in the transport and banking sectors. What are the countries that are well prepared for that revolution? Are Africa and Burkina ready for the digital transformation? The lack of infrastructure is severe in some countries. The main keys are to strengthen the education systems, to build a solid lifelong system and to use the tools of change management. The findings show that countries have an important role to play but also international organizations like ILO, UNESCO, OCED, EU, and AU.

**Keywords:** Digital revolution, Challenge, Jobs, Future.

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### INTRODUCTION

Human Resource Management (HRM) has emerged as a discipline and practice in management of people in organization for a century. It has evolved and developed in different areas of expertise borrowing from several disciplines and theories. At the company, national, regional and international levels, HRM is shaped by legal framework supported by some organizations. The International Labor Organization (ILO) is that component of the United Nations founded hundred years ago, in charge of labor issues. Functioning in the tripartite system with the

member states, the employers' organizations and the workers trade unions, ILO is pushing to make the legal framework available for the achievement of human being welfare at work. According to UNESCO, OECD and reports, the digital revolution is profoundly reshaping the way people live, work and learn. This article will focus on the effects of digit revolution on two sectors finance and transport. In the western countries the banks are closing their branches and moving into digit banking. For transport sector, the announced advent of independent vehicle will have an effect on businesses. In Africa we can observe a geographic expansion of banking and the development of mobile banking to address all the segments of the customers.

The first hypothesis is that the digital revolution will have an effect on jobs at the company level, country level and international level.

The second hypothesis is that the digital revolution will have an effect on human resource management at the company level, country level and international level.

To test the hypotheses, we analyse the cases of transport and finance sectors in France and in Africa.

**Problem Statement**

Digital phenomenon is comparable in scale to the industrial revolution. How that 4<sup>th</sup> revolution will influence jobs and human resource management at the companies, the countries, Africa and the world levels?

**Aims and Objectives**

- Have a good comprehension of the challenges of human resource management in the context digital revolution at the international and local level
- Suggest guidelines for reflection to help managers to face the challenges at the international and local level

**Rationale of Research**

- the challenges of digital revolution in human resources management are understood
- the digital revolution challenges in human resource management at international level and in Africa through our cultural context is also pointed out.

**LITERATURE REVIEW**

**Evolution and development of HRM**

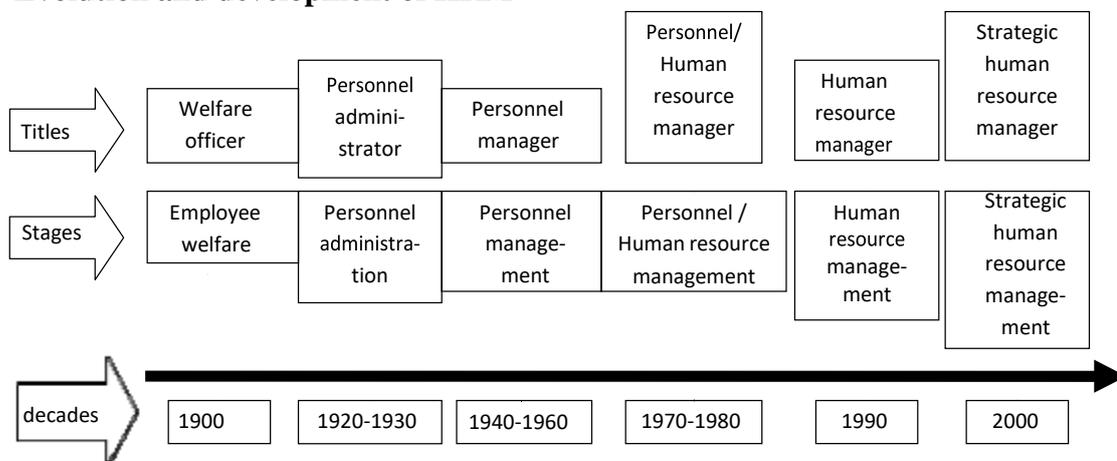


Figure-1: Stages in the evolution and development of human resource management

Source: Adapted from Josephat Stephen Itika (2011)

The 1900s was the time of advancement in scientific knowledge, technological and economic through innovation and creativity in the Western countries mainly in Britain, France, Germany, Spain and Italy. Thus, Germany was already in advance by preparing the 1<sup>st</sup> World War. Welfare services like a canteen and others needs were grouped in the service. This Personal administration stage covered the period between 1920s and the mid of 1930s. The growing size of the organization and pressure to productivity called the need to recruit, select, train, keep record, appraise and control the employees. Personal administrator was therefore in charge of personal administration.

Let notice that International Labor Organization, that component of the United Nations was founded in 1919. This organization is in charge of the protection of people at work.

After the 2<sup>nd</sup> World War, **Personal administration** involved to personal management with new challenges. Thinkers like Maslow (1970) with its human need's hierarchy lead to people relation theory.

This stage has involved to the maturity until the late 1970s sustained by the fast growth of the economy in the western countries and in some developing countries in line with the high rate of the prices of the raw material and the oil.

- Macro policy framework

During the period going from 1970s to the late 1980s, the President Regan in USA, the prime Minister Thatcher in Great Britain, the experts of the World Bank and the International Monetary Fund pushed to the birth of neoliberalism in the Western countries, the reduction of the role of the states. In the developing countries and in Africa, the fall of the price of the raw materials led to economic and social crises. The IMF and WB pushed the states to the privatization of public companies and a lot of workers lost they jobs.

- Business competition

The 1980s and early 90s witnessed an uncertain, chaotic and often turbulent business environment. Increased competition from Japan, and other international companies with cheaper but high quality goods was a challenge to American and European organizations. Nassè and Sawadogo (2019), and Nassè (2015) have pointed out that nowadays business competition in the African context and in the international context is becoming more and more aggressive and challenging.

- Change in customer needs and expectations

A change in customer taste, fashion and quality of goods to reflect their purchase price put more pressure on the organizations to get the best out of their production systems, processes, and employees. Nassè (2018) shows that customer needs and expectations are different according to the context.

- Technological change

Competition was also intensified by the organizations that could adopt and adapt flexible specialization technologies to meet customer needs and expectations

- Change of philosophy of employee relations

The power of employees was through legislated trade unions where thousands of employees under the industrial production system held power

- Developments in the academia

Building on the knowledge accumulated in previous decades and research that was being conducted particularly in the 1980s and early 1990s, it appeared that

organizational strategy, and strategic approach to managing employees was the best option for responding to challenges facing organizations.

### **HRM Definitions**

- **The American school alias ‘Harvard School’**

The works by Boxall (1992), and Beer et al. (1985) are considered to be some of the main foundations of different concepts and disciplines which shape the scope of human resource management in America, and which were later adopted, adapted, or dropped by other scholars worldwide.

- **The UK school alias European school**

Storey (1989) has described the role of Guest and Colleagues in shaping human resource management discourses in Europe. These authors consider the following key critical areas of focus in human resource management to marry business and human resource strategies. Strong organizational culture for employee commitment for the desired organizational performance.

Quality, creativity and innovation are critical factors, which distinguishes one organization from another. Employees have to be able to come up with new ideas and put them into practice in order to exploit business opportunities.

Current human resource management debates seem to consider these two ways as complementary. So human resource philosophies and objectives are anchored on these schools of thought (Storey, 1995; Guest, 2001).

Perhaps the most popular definitions of human resource management are those suggested by Storey. Storey looks at human resource management as: “a distinctive approach to employment management which seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce using an integrated array of cultural, structural and personnel techniques (Storey, 1995).

### **HRM scope**

Depending on the size of the company, the scope of HRM covers the establishment of the organizational structure, the human resourcing, the managing performance appraisal, the Personnel training and development the Compensation and Rewards management, the Personnel relations. The other functions include but not limited to, health, transport, security and safety, pensions, deaths, and personnel information system.

### **Human Resource Management Emerging Challenges**

Demographic transition is emerging challenges both for Western countries and developing countries. The first countries are facing the aging of the population while the developing countries are facing the youth of its people. In Burkina Faso, the public service entrance exams registered more than 1,200,000 candidates for about 5,000 positions in 2019 which witnesses the lack of jobs. Globalization of businesses lead the HRM to take into account the multicultural context. Innovation and ICT are other challenges of HRM. For this reason some authors like Livian and Shamba (2014), Nassè (2019) have demonstrated that the hybridation of management theories could improve management and HRM, particularly in the African context.

### **ICT Conceptual Development**

**Database** can be defined as an assortment of data that is organized to be easily accessed, managed and updated.

**Cloud computing** is the practice of using a network of remote servers hosted on the Internet to store, manage and process data rather than using a local server or a personal computer.

**Smart phone** is a mobile phone that performs many of the functions of a computer, typically having a touchscreen interface, Internet access and an operating system able of running downloaded applications.

**Internet** is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

**Artificial intelligence** is a theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

### **Case Study 1 and Critical Analysis**

UBS is private company of security guards located in Burkina Faso, founded in 2017. UBS is working for mining companies, education businesses and government offices. 50 guards are working for UBS. Apart, the guards, UBS have a managing director, a responsible of administration and marketing, a responsible of operation and an accountant. The HRM functions is shared by the 4 Staff members. The managing director in line of the business strategy of UBS is in charge of Job design, job description and rewarding functions. The responsible of operation, proposes the number of guards to hire then organize the new guards training and ensure the supervision. The responsible of administration and marketing is in charge of staffing, and other personal management routines. While HRM is key factor of success for UBS, the survey done for my bachelor dissertation pointed out that some functions are weak. The remuneration is low, the rewarding, and on job training system are insufficient. Yet, the remuneration depends on the invoice of the customers, the rewarding and on job training system should be enhanced.

The ICT as CCTV will have an effect on UBS business. The HRM at UBS will also involve to target this new issues.

### **METHODOLOGY**

For this work we used qualitative method based on conceptual and empirical literature review. To have a good understanding of human resource management, we use the material offered by few authors on the subject, some publications from ILO, and our own experience as a practitioner in charge of employment, training and education at the bureau of the National council. About the digital transformation, we use UNESCO, OECD and France Government reports. We shared also the experience of Rwanda and Burkina Faso in the digit field then analyze the effect of ICT on jobs and HRM.

### **FINDINGS AND DISCUSSION**

#### **Findings**

#### **The Digital Transformation is Ongoing**

OECD report state that economies and societies are undergoing a digital transformation.

ICT, artificial intelligence (AI) and robotics are profoundly changing the way people work, interact with one another, communicate and live. Digital technologies have also enabled the rise of the “platform economy”, which has introduced new ways to work, create value and socialize. Digital transformation can also lead to divergence, between workers who are high-skilled and those with low levels of skills and between firms, with a small share of them accounting for a large share of profits.

The regions, with some attracting high-tech firms, high-paid jobs, and a high- skilled population while others lag behind or stagnate, experiencing lay-offs and a shrinking population. Divergence between children spending their time on line and older people feeling more isolated.

As broadband Internet access expands, the lack of adequate skills has become an increasingly important reason why some people do not have Internet at home. As Internet use expands, the digital gap – which initially concerned gaps in Internet access, is increasingly defined by the different ways in which people are able to use Internet and the benefits they derive from their online activities.

Digitalization is transforming the way many jobs are carried out; as an evidence Nassè (2013) has emphasized how new technologies have brought a revolution in the practical teaching of English as a second language in the context of West Africa. The pace at which new technologies are being developed is accelerating, raising anxieties about whether they will soon make some workers redundant. At the same time, the digital transformation is creating new opportunities and jobs. Reaping the full benefits of digitalization will ultimately depend on the ability of each country to develop a set of policies that help workers adapt to these changes and develop relevant skills to thrive in the digital world.

As labor markets evolve in response to digitalization, governments need to find the right balance between policies that foster flexibility and labor mobility, and policies that ensure job stability. As technology alters the importance of certain jobs in the labor market, governments will need to invest in education and training that helps workers to change job or even occupation so that they can benefit from new job opportunities and reduce the risk of losing their jobs.

### **Countries are unequally prepared to size the benefits of digital transformation**

According to OECD report, Belgium, Denmark, Finland, the Netherlands, New Zealand, Norway and Sweden, are ahead of other countries in their exposure to digitalization. Their populations are also well equipped with adequate skills and supported by effective lifelong learning systems that enable them to benefit from digitalization.

Other countries, such as Japan and Korea, have great potential to make the most of digital transformation but need to adopt a range of policies to ensure older workers and adults are not left behind.

In Chile, Greece, Italy, Lithuania, the Slovak Republic and Turkey, individuals and workers often lack the foundation skills necessary to flourish in a digital world. In these countries, lifelong learning systems, both formal and non-formal, need to be strengthened substantially to enable upskilling or reskilling throughout life.

According to the same report, in Africa the digital infrastructure is poor and the populations are low skilled for digital transformation. The education system needs to be prepared to face such challenges. Some countries as South Africa, Rwanda and Kenya seems to size the importance of the revolution in progress.

### **Cases of Banking and Transport Sectors**

According the report of the France Government a lot of sectors will suffer from digit revolution. The competition between taxi companies in one side and the others companies lead by Uber seems to say where the future. In Paris some underground lines are functioning without driver. The real revolution is expected when the vehicle fully automated (level 5) will be on the market.

Open-road traffic experiments were announced in early November 2017 by two of the leading independent vehicle manufacturers, Waymo, the Google subsidiary, and French Navya. The Businesses in the transport sector will easily adopt this vehicle to reduce the costs, and avoid accidents and strikes. Cities and countries who adopt that system will be considered as modern.

But at the same time millions of conductors will lose their jobs.

New jobs will be created in line of the supervision of the independent vehicles, the system maintenance.

According the same report, banking and insurance sector will be profoundly modified by the digit revolution. Banks are already using predictive algorithm but the visible effect will be in the retail banking. Customers are able to do more and more transactions with mobile phones. Banks are therefore closing their subsidiaries and branches. According to the report 100,000 jobs could be lost only in France.

In Africa and in Burkina Faso Banks and Insurance companies continue to develop their branches because a large part of the continent is not covered yet and the rate of access to banking service is still low. In the same time digit banking is growing fast. So in Africa the result of the digit transformation is not clearly against or for employment.

In conclusion, we can say that at the companies' level, at the cities level, at the countries level and even at the international level, reflection should be made to find adequate solutions to the issues.

### **Case study 2: Burkina Faso, a new country for ICT in Africa**

Burkina Faso is a low-income sub-Saharan African country with limited natural resources. Its population is estimated at 19 million with an annual growth rate of 3% per year according to the INSD. GDP has grown by more than 5.5% for more than 10 years. According to the World Economic Forum NRI, Burkina is ranked at 132 compared to 83, 86, 87, 101, 106 respectively for Rwanda, Cape Verde, Kenya, Ghana and Senegal.

"About ICT, the government's ambition is to guarantee the access of citizens, businesses and the administration and full advantage of the digital potential," said the Minister of Development of the Digital Economy and Posts, Hadja Fatimata Sanon cited by the New Africa Magazine of 29.06.2019.

Burkina has adopted a national policy for the development of the digital economy. With the help of partners, several programs address the issue of digital infrastructure and the entire digital ecosystem. Some tangible results such as the digitization of tax and customs departments, public service entrance exams, the orientation of bachelors in public and private universities are achievements. According the Director cited by the same Magazine More than 60% of tax revenue is now reported and paid online. These digital transformations meet the resistance of the trade unions of tax workers, customs, and civil service. Citizens save time and the government fights corruption.

### **Discussion**

- The relevance of leadership in digital revolution

The human resource managers, the entrepreneurs, the countries' and international leaders should explain to people what is happening and help them to go through the digital revolution So as Machiavelli, Human Resource Managers like leaders must be guided by rules that leads to success of their organizations and countries.

ILO, UNESCO, UE, AU... are called to fix the rules to save the interest of workers and human being in general during that digital revolution.

- The relevance of Managing Change in digital revolution

Like the figure below managing the change is crucial while individually and collectively people are going through different phases. The role of managing change is to accompany the movement and shorten the critical period.

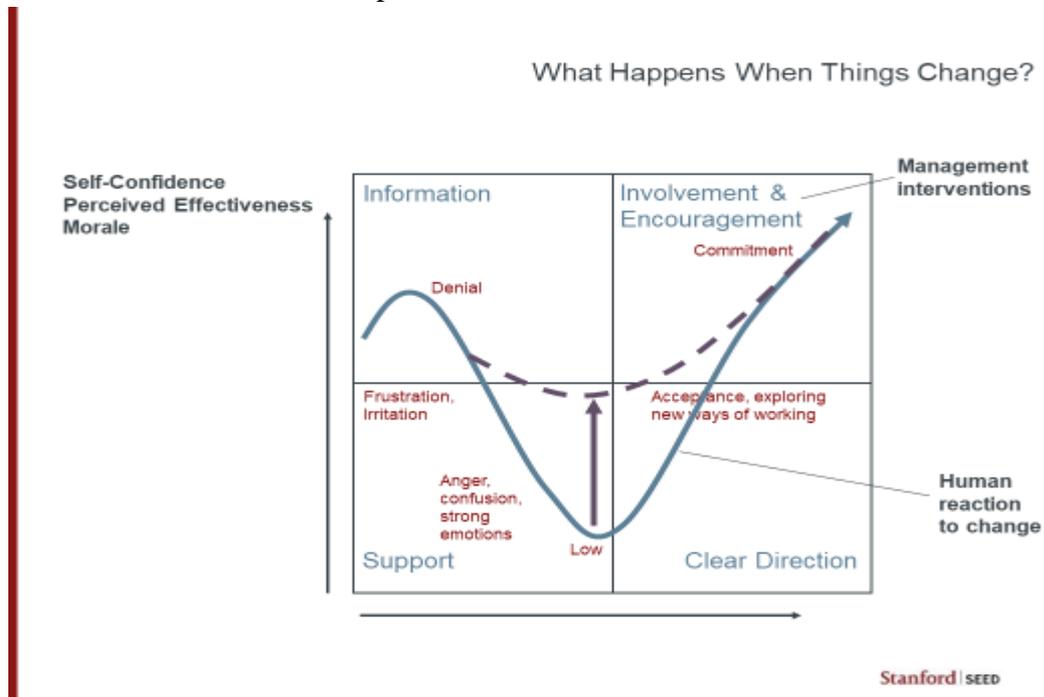


Figure-2: Different steps in change situation  
Source: Stanford University

- The relevance of Training and Development

Training and Development is a key function of HRM (Itik, 2011) Education and lifelong training system is important and some countries are ready (OECD report). Others are still struggling with domestic issues.

- The relevance of Managing Diversity in digital revolution

The literature review revealed that according to the age, to the region, to the qualification... people are not prepared in the same way to face digit transformation.

### CONCLUSION

The assessment is an opportunity to learn more about human resource management that has evaluated and has accompanied for ages the main revolution and changes in human history. For Ouédraogo and Nassè (2020), there is a tremendous change and economic revolution in term of how business is handled in Africa, what shows that African businesses have adopted the digital technologies. We have also discovered an important subject that is digital revolution that is in progress now. Inevitably it is an emergent challenge for companies, for cities, for countries and for the world as a whole.

Human Resource management can help to limit the disaster that is announced. Human resource managers and leaders must be aware and well prepared for this coming issue. We hope that this work will humbly contribute to the debate.

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### **Appendices**

AU: Africa Union,

Eu: European Union

ICT: Information, Communication Technologies

LSMS: London School of Modern Studies

ILO: International Labor Organization

OECD: Organization for Economic Cooperation and Development

UNESCO: United Nation Education and Culture Organization

HRM: Human Resource Management

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