2016-01

# The contribution of enterprise resource planning (ERP) systems in enhancing the efficiency of human resources Depatrment

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# THE CONTRIBUTION OF ENTERPRISE RECOURSE PLANNING (ERP) SYSTEMS IN ENHANCING THE EFFICIENCY OF HUMAN RESOURCES DEPARTMENT

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL OF BUSINESS AND ECONOMICS

OF NEAPOLIS UNIVERCITY PAPHOS

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

MASTER IN BUSINESS ADMINISTRATION (MBA)

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JANUARY 2016

# THE CONTRIBUTION OF ENTERPRISE RECOURSE PLANNING (ERP) SYSTEMS IN ENHANCING THE EFFICIENCY OF HUMAN RESOURCES DEPARTMENT

Dissertation

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***Abstract***

*The objective of this study is to examine the contribution of Enterprise Recourse Planning (ERP) systems in enhancing the efficiency of Human Resources department. Of late the number of organization implementing ERP in the hope of increasing the effectiveness of their HRDs is on the rise. This has promoted the need to carry this study with the objective of establishing if indeed ERP improves HRD.*

*The study employed a qualitative methodology that involved undertaking a critical and comprehensive literature review on the past studies on this topic. The literature review provided important theoretical understanding on how ERP is implemented and how it increases In addition, two case study companies, Camelin Décolletage Industries (CDI) and Motorola were examined. These two companies had adopted ERP and provided information on how ERP had impacted HRD operations.*

*The findings of this study have shown that ERP when successfully implemented greatly improves the effectiveness of HRD. ERP enhances all aspects of HR management that include Compensation Management, Performance Management, Time Management, Recruitment Management, Human Resource Planning, and Training Management. There is also improvement in communication and sharing of information. In generally, ERP is able to transform HRD and increase its effectiveness. However, this requires that when ERP is implemented, all critical success factors have to be observed, particularly involvement and participation of employees.*

*The study concluded that ERP contributes in enhancing the efficiency of Human Resources department. However, the study as well recommends that employees should be involved a lot in ERP implementation and the organization has to clearly understand ERP and observe all the critical success factors to achieve expected effectiveness.*

*Keywords: ERP, HR department, Human resources, Critical Success factors.*

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## Chapter 1

### 1.0 Introduction

### 1.1Background information

From the 1990's the Enterprise Resource Planning (ERP) software is one of the most popular software package for businesses in the market and in 1998 it reached the software package was at the height of its popularity. As noted by Olson (2004) the Enterprise Resource Planning software centrally manages and integrates the organizations business functions. Similarly, Scott, & Vessey (2000) points out that the ERP software has been implemented by companies of all types and sizes to help them in managing their organizations, which includes the public sector organizations. Davenport (1998) has argued that the ERP systems are thought to be the most important development when it comes to corporate use of information technology during the 1990's. According to Yi-fen & Chyan (2010) the ERP systems are very important in the operations of modern businesses.

A number of scholars have investigated the relationship that the implementation of ERP has with HRM. Scheer and Habermann (2000) stated that the ability of ERP to link HRM and financial applications in a single database of a rigid and flexible software application is the major advantage it has over predecessors like MRP II. Rao, (2000) stated that the major HRM risks in an ERP system are inadequate training and lack of involvement of the users. Issues related to the level of stress that users of the system incur should also be considered during the implementation of the systems (Umble, Haft, & Umble 2003). Melin (2003) investigated the module function of HRM in an ERP system and argued that a practical HRM system should be developed with the aim of improving incentive mechanism, and employees should be adequately trained on the application of the systems.

The main business drivers behind the implementation of ERP include expected financial gains, technical advantages and strategic and operational benefits. Olson (2004) summarized the benefits of ERP systems to include the following, quicker information response time, increased interaction across the enterprise, improved and efficient order management cycle, reduced

operational and financial costs better interaction with suppliers and customers cash management and timely delivery.

In spite of these clear benefits presented by ERP, many organizations are unable to realize these benefits. As pointed out by Olson (2004), it is an extensive and costly process when it comes to implementing ERP systems. More so, involves a substantial human as well as other resources and it requires the support of different interest groups, direct involvement of management (Ehie & Madsen, 2005). According to Yi-fen & Chyan (2010) the main challenges of ERP implementation hinders the success of ERP systems. This has in turn resulted in a high rate of ERP implementation failure. There has been wide research done concerning the factors which affect the implementation process in order to identify the success factors that are critical which are necessary for the implementation of the ERP system that is successful. The factors normally include: support from top management, project champions, relations with vendors, training users, consultants use, and collaboration between departments as well as communication.

The people factor has been listed by many researchers in their list of success factors that are critical and come to an agreement that that the management of human resources in a manner that is appropriate is key for the ERP implementation projects to be successful ( see Tan & Pan, 2002; Ehie & Madsen, 2005). ERP project launching leads to a change process that is inevitable which bring a lot of behavioral as well as managerial challenges like resistance from users, resistance from management, employees lacking motivation, key personnel high turnover, lack of expertise, human assets that are insufficient, lack of training among others. The people challenges are viewed as difficult to manage when compared to the technical difficulties which are encountered. It is suggested by many academics that the main reason that causes the software implementation projects to fail in large numbers is because too little attention being given by management to human factors. In summary for the implementation of ERP projects to be successful the human concerns and needs should be addressed.

Human resource management today in organizations is being renewed and is becoming one of the functions that are fundamental to the management of projects. There has been change in HRM shifting from a problem solving and interactive role to a strategic role which focuses on the retention as well as retention of human resource (Tan & Pan, 2002). HR practices that traditional

have comprised of activities such as payroll, hiring activities, management of records, termination activities and reporting. HRM takes more of a role of full service this days giving support to employees beyond pension planning and development of careers. With ERP systems arrival, the functions of HR have become integrated fully with the operations of the business side. HRM research in the context of ERP is still new and there are not many studies torching on this subject. The interest and challenges that ERP creates within organizations is what has informed the researcher to seek to investigate this topic.

### 1.2 Problem Statement

Companies face a number of challenges during the ERP implementation despite the significant growth that ERP was witnessed from the late 1990's. According to Dillard & Yuthas (2006) ERP is being used by most multinational firms and more and more midsized and small companies are also stating to use the system. Not all implementations of ERP have outcomes that are successful despite the system promises to benefit companies. Ehie & Madsen (2005), stated that implementation of ERP have commonly delayed an estimated schedule as well as overrunning initial budget. It is indicated by the literature that ERP implementation has failed sometimes in the achievement of the organizations target and outcomes that are desired. Research shows that the failures in the implementation of ERP are not caused by the software but rather by complexity of high degree from the changes caused by ERP in the organization (Scott & Vessey, 2000; Helo et al 2008). These challenges and failures undermine the objectives of ERP in improving the efficiency of HR departments.

The fact that implementation of ERP has forced companies to follow 'best practice's' principle in organizations that are successful and from reference models that are appropriate can be explained by these failures. Zornada & Velkavrh (2005) also agree that the failures in ERP implementation are caused by issues relating to the organization and humans.

### 1.3 Aims and Objectives of the study

The primary research objective of the present study is to examine the contribution of Enterprise Recourse Planning (ERP) systems in enhancing the efficiency of Human Resources department. To achieve this primary objective, the following secondary objectives have been formulated.

I. To determine how Human Resource personnel can actually take advantage of the ERP systems potentials and capabilities.
II. To examine whether an implementation of ERP in HR is actually enhancing rather than worsening the efficiency of the department.
III. To establish the effects ERP is having in HR departments in case of European corporations.

### 1.4 Research questions

The main research question of the study is what are the contribution of Enterprise Recourse Planning (ERP) systems in enhancing the efficiency of Human Resources department. The secondary research questions are underlined below.

I. How can Human Resource personnel actually take advantage of the ERP systems potentials and capabilities? Confirm
II. Does an implementation of ERP in HR is actually enhanced rather than worsen the efficiency of the HR department?
III. What are the effects ERP is having in HR departments in case of European corporations?

### 1.5 Study significance and contribution

ERP software implementation has been witnessing continuous growth both in both public and private organizations. Therefore, it is important that managers are well informed benefits and challenges of EPR so that they can make intelligent decisions. The organization leaders also need to understand the issues they could face during the implementation of the ERP systems. The study aims to explore the effectiveness of implementation of ERP in an organization particularly for within the HR. The study will provide data which can assist the leaders of the organization to make

decisions that are informed during the implementation of the ERP by supplying information that concerns the implementation of the ERP systems. The information obtained from the study can be useful when it comes to determining how the needs and expectations can be well met when the ERP is being implemented.

When there is a full realization of the ERP system in an organization, there is yielding of significant benefits like access to information that is improved and is accurate and timely. Due to the low number of ERP systems implementation and adoption, a lot of organizations don't realize their significance. Taking Australia for example, Yi-fen & Chyan (2010) notes that a recent study conducted found that the ERP systems that were successfully implemented were very few. The implementation of an information system fails; it may be caused by the inability to meet stakeholder's group expectations. It should help if knowledge about the fit between user needs and ERP applications is provided in these institutions to avoid the failures which are caused by mismatches between the user's needs and the system.

## Chapter 2

## 2.0 literature review

### 2.1 What is ERP?

Enterprise Resource Planning (ERP) is a computer-based system intended to place companies' significant activities: planning, production and customer service under an umbrella. It is a product bundle of diverse modules such as fixed assets management, controlling, financial accounting, manufacturing, human resources, planning and development and so forth. Each module is business process specific. Generally companies choose one ready-made package available for their industry but it is also common to choose the modules that best address their needs. There are several ERP merchants in the market; however, this field is mostly overwhelmed by J.D. Edwards, Baan, PeopleSoft, SAP and Oracle (Abbas, 2011).

A packaged software system intended for the customer environment, the coordination between the modules and across entire organizations, access to information in real time, data storing and recovering procedures in an enterprise-wide database, and management and analysis functionalities are the significant attributes of ERP systems. In addition, ERP systems are required to have extra qualities, for example, support for different monetary standards and languages, which is basic for multinational organizations, and backing for particular commercial ventures, like banking, oil, gas, medicinal services and chemicals businesses (Abbas, 2011).

While ERP started from assembling and production planning systems used in the manufacturing industry, ERP extended its scope in the 1990's to other "back-office" capacities such as human resources, finance and production planning (Huang, et al 2004). Besides, as noted by Abbas (2011) lately ERP has consolidated different business augmentations, for example, supply chain management and client relationship management to become more aggressive (See Figure 1).

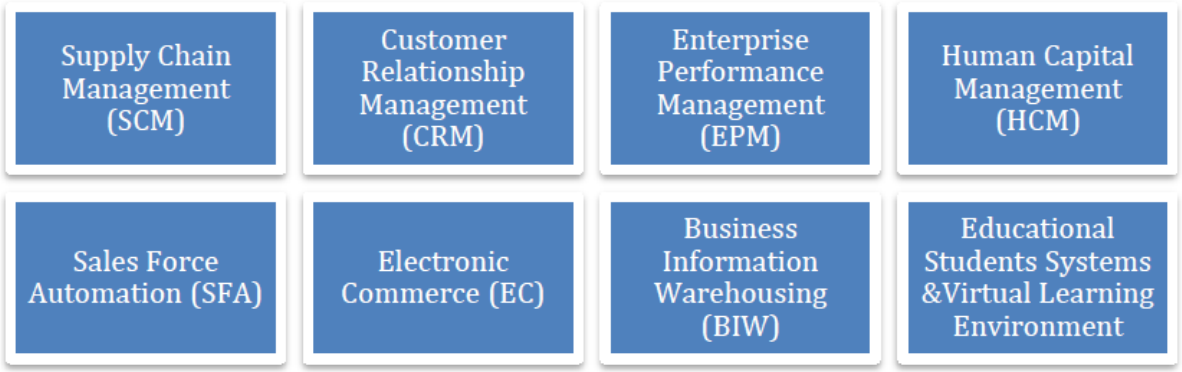


Figure1. ERP Extension (Abbas, 2011)

Enterprise Resource Planning (ERP) started as a payroll solution that was designed to raise accuracy and efficiency in processing of payrolls (Cliffe, 1999). The rise in complexity of HRM practices and alterations in regulatory compliance needs have however led to massive application of ERP in different sub-functional areas in HRM (Cameron & Quinn, 1999). ERP has highly replaced a number of HRM processed and paperwork in HR departments. The continuous rise in needs to comply with regulations, minimize costs incurred in management of human resources and ensure efficiency in managing intellectual capital provided opportunities for vendors like PeopleSoft and SAP, who utilized technology to provide assistance to firms with HR processes that were costly (Al-Mashari, 2002). Firms sought the services of the vendors as they were desperate integrate HR processes with other information systems within the organization.

However, a single and cost effective solution was brought by the release of PeopleSoft9.1 by Oracle. HR functions like planning, on-boarding, hiring, and setting business goals among others were brought to a single solution using PoeplaSoft 9.1 (Oracle, 2010). Similar applications are massively transforming HR functions. Enterprises currently purchase only significant modules of applications from vendors and make payments only for the time they use the applications. This is referred to as utility computing (Ash & Burn, 2003). It is important in minimizing costs and time for implementing new applications. Moreover, it eliminates the need to incur costs in routine maintenance of Information systems, as the providers of the outsourced applications are charged with the maintenance of the systems. The systems are also beneficial to the employees, as they

gain the ability to check their employee information even when that are not within the organization's environment. Employees often get the chance to perform a number of tasks online without necessarily going to HR offices. The modules for employee self-service provide workers with the ability to access personal data from any place. The data may be on payroll information, contact information, handbooks on employee benefit, application for vacation, signing for classes in training and development, and notifying their supervisors on some significant issues (Kalling, 2002). Many organizations are taking precautions regarding the implementation of ERP solutions that cover all the departments within the firm due to consistent changes that take place within the competitive business environment. However, the functions of ERP solutions in HRM seem to exist permanently (Morton & Hu, 2008).

Like other portals for employee self-service, ERP portals provides individuals with the ability of electronic interactions with other employees or corporate systems. A HR Knowledge Portal that is web-based involves the use of Internet technology to give managers access to applications and databases that enable them to undertake off-site tasks on issues like salary planning, skills analysis, workforce budgeting, and performance appraisal (O'Leary, 2000). Though the web-based systems improve the scope of access given to legitimate users, security threats that the systems are exposed to are relatively high. The developers and providers of the systems must always adequately address the security concerns to ensure that risks are controlled.

There are claims that implementation of effective ERP systems improve the rates of employee retentions (Cadili, & Whitley, 2005). The solutions that allow employees to access the systems from any location ensures the functions of HRM are performed continually even during work stoppages that may result from national emergency, or in the case where employees are located in remote areas, with no access to HR departments. Access to these systems often requires the availability of satellite signals as well as electricity. Generally, a secure and small HRM department that has a strong IS partnership has the ability of providing functionality in HRM within any location in the globe.

Current improvements in HR information systems include the provision of HR functions through mobile telephone devices, cell phone networks, or 3G networks (Morton & Hu, 2008). This is referred to as e-HR. The improvements enhance interactions and collaborations between groups.

Corporate social networking ha highly been improved by the allowing the routes of workflow to incorporate mobile devices. Collaboration in online social networking systems like Myspace, Facebook, LinkedIn, and Twitter among others has proved significant in recruitment of employees and attraction of customers (Morton & Hu, 2008). The application of these systems is presently at explosive growth stage, as many organizations and employees take part in the use of social networking systems.

### 2.2 ERP Functions, Purpose of ERP Systems

ERP systems are software which help businesses to integrate all its processes such as planning, manufacturing, distribution and sales, human resource and financial (Kuang et al., 2001). ERP integrates all the information pertaining to the business (Davenport, 1998) ERP is categorized as a rather large information system. ERP can be tailored to meet the needs of the organization (Watson and Schneider, 1999). The adoption of ERP started in the 1990s where they became the main standard replacing legacy systems that were used in major corporations (Parr and Shanks, 2000).ERP systems were implemented in many businesses to aid managers in their decision making as it helped in making activities such as material tracking, project management, subcontracting human resource, service and finance operations (tatari, 2009).

Over the years ERP developed to encompass “back office" duties like logistics, human resource, operations and finance in addition to “non-transaction-based systems” which consists of customer service, marketing and sales (Davenport, 1998).This came to form the key components of ERP systems. This development of ERP resulted in Supply Chain Management emerging as a business undertaking (Chen, 2001), in addition CRM systems and strategies also came to the fore, and this was referred by Turban et al. (2001) as “beyond the corporate walls' integration” (p. 304). Through this integration Turban et al. (2001, p. 305) observed that Supply Chain Management can be said to be the brain with ERP as being the body. The names and version numbers of ERP systems tend to differ due to the supply being handled by a number of software vendors, but there is integration of the various components of the ERP to facilitate free transfer of information and putting such information in a centralized system where all modules are able to access the information.

The promise ERP offers organizations based on increased functionality over legacy systems in addition to the ability to integrate it with other core infrastructure of the organization has prompted many organizations to adopt them in managing their operations (Ross, 1999). Organizations adopt ERP as a result of various business and technical reasons .The technical reasons given include issues to do with Y2K and also working to replace legacy systems that were limited in application. Organizations that have implemented ERP with ease have achieved increased success as there have been intangible and tangible improvements in a number of areas (Davenport, 2000).Other reasons for implementing ERP include: i) integrating customer orders, ii) financial information, iii) standardizing and speeding up the manufacturing process, iv) reduction of the level of inventory and v) standardizing of information pertaining to human resource (Koch, 2002). As shown in Kremzar and Wallace (2001), ERP are implemented to enable a business to operate in an environment that is highly competitive and undergoing change.

A number of studies have been undertaken to study the adoption and implementation of ERP within organizations (Lassila & Brancheau 1999). However implementing ERP has implications that are organization wide which includes committing great resources to the venture, the risks and benefits that are associated with ERP software increases the complexity of implementation (Nelson and Somers, 2001). According to Radding (1999) when an organization invests millions into its core processes and undertakes reengineering of its processes, The ERP is transformed to something greater than an application.

According to research investing in an ERP system is a worthy investment .based on a survey undertaken on multinationals that had invested in ERP, 85% of those companies surveyed pointed out that implementation of the system was a success and 25% stated that they had achieved the business goals they wanted to achieve as shown in (Markus et al. 2000). Many organizations are not sure of how they can maximize ERP to benefit from the system. This study aims to look at what drives beneficial use of ERP systems. Larson and Myers (1997) determined that ERP systems can show early successes and later end up as a failure, it can also start as a failure and later be a success as shown by (Markus et al. 2000). There is limited empirical evidence that shows how organizations implement ERP post the implementation phase (Clark et al. 2006). As such implementing an ERP system is never the desired end point. After implementation of an ERP software for best results there is need to do continuous monitoring and management of the system

(Clark et al. 2006). Due to the complex nature of ERP systems, it does not matter how competent the implementation team is there will always be the need to undertake continuous monitoring of the system (Seddon et al. 2003). To get the most out of an ERP system an organization as shown by a number of studies such as (Markus 1998; Newall et al. 2003; Wills and Wills-Brown 2002) should seek to stabilize the system if they are to gain from it.

### 2. 3. The use of ERP in Human Resource Department

ERP technology system has come to revolutionize how HR is practiced by bringing previously HR practices into the center of all the functions and operations of the business. Human resource is in the center of providing support to other important business functions (Ulrich, 1997). Through integration of tools such as technologies based networking and communication, there has been restructuring of operations that previously were a reserve of the back office such as Finance and Human Resource. Boroughs et al. (2008) argues that this has resulted in opportunity being created for employees to access various company resources from their desks.

Boroughs et al. (2008) points out that today's organizations are faced with contradictions where they are expected to innovate so as to enjoy competitive advantage; this is a costly affair as it requires investing in IT as such they should also invest considering the costs of IT equipment so as to keep the costs at a minimal. Ulrich (1997) observed that a number of organizations have attempted to reduce costs associated with IT through minimizing the use of software. But for business to be a success it needs to have in place a business solution that is effective. In the event a company is undertaking the above beyond its capability to put in perspective whether the pursued solutions results in new obligations or can result in the destruction of the company. However, it has been argued by (Hoy, 2008) adoption of ERP is a key example where many organization implementing costly ERP systems but reaping minimal returns

According to Helo, et al (2008), the two primary objectives of every organization when taking the first step in automating HRM within the organization are reducing expenses and increasing effectiveness. Initially, careful consideration was given to the needs of reducing the overwhelming administrative burden inside of HR on account of the help of automated and

computerized transaction processing framework (Ulrich, et al, 1995). At that point, operational HRM expanded exercises subsequent to the conception of intranets which shape a restricted correspondence channel between an association and its representatives. This method of data conveyance serves to chop down paper costs and enhance the conveyance and updating speed more adequately than other conventional techniques (Rosaker and Olson, 2008).

Boroughs et al (2008) underlines that ERP system has greatly changed the traditional practices of HR within the organization. Huang, et al, (2004) adds that the integration tools as well as web based technologies have impacted on the way back office operations are carried out. Huang, et al, (2004) restates that contemporary HR practices cannot be based on old methods, therefore, implementing ERP technologies assists in the organization effectively utilizing its human capital. Boroughs et al (2008) asserts that ERP is used in the HRM to integrate human resource practices with business function.

Improving of HR work from an exchange to a strategic orientation by taking away the burden of administrative tasks is the most important effect of ERP system on HR roles. This point is shared by Jaquenoud, (2005); (Yusoff, Ramayah & Haslindar, 2011). In other words, HR officials view technology as a means to hold a more strategic role within organizations. This thought is upheld by Evans (1994) who noticed that innovation can "basically and typically speak to the change of HR into a vital business accomplice". The movement from conventional HRM to e-HRM could likewise show that less HR experts are required, because e-HRM kills the "HR middle-man" (Huang, et al, 2004). Since the usage of e-HRM, another significant change has been considered as unavoidable.

On the other hand, there is minimal exact confirmation supporting the same thought. Hypothetically, taking the authoritative work out of HR which means cutting the HR headcounts sounds right yet whether the remaining HR experts can be more vital or not is flawed. Jaquenoud, (2005) addressed whether HR can be more vital by "going to the net" or not. Pollok & Cornford (2004) offered an extensive variety of figures and information from practices to reason his uncertainty. For instance, he referred to a finding from an overview of web self-service organization (Jaquenoud, 2005) which underscored that organizations have tended to utilize the web as a strategic device to deliver HR services, instead of as an approach to reevaluate central

operations and procedure, and accomplish the more elusive advantages that emerge strictly when substantial and supported speculation.

Morton & Hu (2008) has underscored that use of ERP in HRD when well applied has the ability of transforming the HRM processes. They contended that no recounted confirmation for a move to a more key part of HR was found though the presentation of E-HRM did encourage a shift in HR focus as far as time spent on authoritative versus key assignments in the event that organizations (Morton & Hu, 2008).

It is contended that adopting ERP system in HR management procedures does not mean evacuating all transactional work but rather suggests the improvement of exchanges (Ulf, 2003). Numerous transactions, on the global premise, still require pros' counseling, for example, guidance on corporate assessment or job law. What's more, the change's prosperity or disappointment significantly relies on the mentality and capacities of line managers to deal with the change. Thus, it can be contended that no key commitment from HR is liable to be considered of quality until those issues have been settled.

Hong & Kim (2002) notes that ERP systems guarantee to enhance association's key execution pointers, for example, capability, effectiveness, benefit, consumer satisfaction and different measures of value. Then again, ERP frameworks are profoundly intricate data frameworks and the usage of these frameworks is a troublesome and expensive procedure placing a lot of demands on corporate time and assets (Evans, 1994). Business Process Reengineering (BPR) is a noteworthy part in ERP establishments and this obliges organizations to change the way business has been done, which, in understanding, influences the representatives work lives and may create resistance.

It has been argued by Pollok, & Cornford (2004) that private and public sector organizations are not distinctive to the extent ERP are concerned. Public managers, as their peers in the private sector, require an up-to-date financial and cost information in order to make decisions better and quicker, in contrast to earlier legacy systems. ERPs allow a better co-ordination of the different resources used in order to deliver services to citizens (Oliver and Romm, 2000). Different scholars have reached varying conclusion, indicating huge contrasts between private and public

associations in respect to the effect of overseeing and executing ERP (Raymond, Uwizeyemungu and Bergeron, 2005).

ERP are related to technical aspects as well as managerial issues. ERP systems at present used to modernize management frameworks in many organizations (Olson, 2004). The role of ERP and is key to achieve transformational change in public service provision and organization (Chen, 2001). ERP systems are today an urgent component in making public organizations more responsible, productive and successful (Chen, 2001). According to Chang et al. (2000), the most common reasons to implement an ERP system is the need to increase efficiency.

Different studies centered the regard for "change administration" where ERP implementation will include changes to business forms (Rosaker and Olson, 2008); Huang, et al (2004), as they emphatically support change management (Harris, 1999), supply chain management, and organizational performance improvement (Hong, and Kim (2002; Oliver and Romm (2000).

According to Oliver and Romm (2000), organizations resolve to implement ERPs solutions for various reasons: (i) the need to enhance current performance operations, (ii) the need to incorporatedata and systems and (iii) the need to avoid competitive disadvantage or a business hazard from being critical.

Bansal (2010) observes that in the present business world, where globalization has taken center stage , and knowledge, skills and commitment offers the competitive advantage, use of technology has become more important. Bansal (2010) adds that it is the work for HRD to create the competitive advantage. This implies HRD has to move beyond its traditional functions of hiring, firing, training and payment to become a strategic partner. However, HRM as a strategic partner brings major challenges particularly in organizations that have multiple business units with decentralized HRM process.

Ulf (2003) notes that ERP is able to fix a number of issues that can arise in organizations with multiple business units, providing a centralized system with specific processes an processes and procedures for different HRM functions. Indeed, Ulf (2003) adds that all the HR functions are prescribed base on the best industry practices and procedures. According to Bansal (2010)

ERP in HRD covers organizational structures, organization hierarchies, security profiles, performance and talent management, master data management, recruitment among other functions.

In their study, Morton & Hu (2008) established that ERP helped in management of organization in relations to specific time period offering flexibility of analyzing change within the organization. Morton & Hu (2008) further observed that ERP allowed real time changes within the organizational structure by its integration with different HR related elements such as transfer and promotions. ERP allows the HR managers to view the whole organization structure in relation to future planning. Similarly, ERP helps in creating different reports such number of employees within a certain department, list of head of departments and many more. Therefore, ERP helps the HRM to make decisions faster, helps in manpower planning and restructuring on real time basis.

ERP is also useful in compensation management as well as salary management, which is very important element in HRM. Morton & Hu (2008) explains that compensation management in ERP entails a number of functions that are related to compensation and salary management. These functions include, planning compensation, online salary surveys and formulating compensation programs like annual salary reviews.

While ERP systems promises to improve the HRD performance within the organization like improving recruitment, compensation, customer satisfaction and training (Chen, 2001). Still, ERP is an extremely complex information systems, therefore, it implementation is costly and difficult. According to ERP is usually accompanied with business process reengineering (BPR), which requires organizations to change the manner they operate. This affects the employees work lives and in turn may create resistance among these employees when it is not well managed and communicated.

Kumar, Maheshwari & Kumar (2003) observes that owing to the management related challenges that comes with ERP, many of these system are terminated or never achieve them objectives. The point of employee's resistance is also echoed here by Olson (2004) who notes that employees resist change brought by ERP and therefore result in failure of ERP. Similarly, Markus & Tanis (1999) established that other reason for failure of ERP include lack of training, lack of effective communication, the final-user not being prepared, and lack of supporting documents. Kumar et al (2003) restates that the biggest issue in success of ERP is the people. More so, the

challenges brought by people are complex to address than the technical issues that can be easily handled.

Cedar (2009) notes that business leaders in seeking ways to remain competitive have looked up ways of improving how they undertake business. This has resulted in practices that are driven by innovation which results in newer concepts being created which results in increased competitiveness. Mayfield, et al (2003), asserts that other than these other factors that drive competitiveness includes issues such as globalization of businesses, transformation, technology and intellectual capital among others. This has resulted in improved competitiveness of companies.

For a company to be able to venture into a competitive it relies on its employees especially how they are treated and the general management of the organization in addition to how effective the organization is in delivering on its goals and objectives. Competitiveness can be achieved through redefining and elevating HR as a tool to help create a competitive organization (Hendrickson, 2003). Volkoff, et al (2005) underlined that there is need for corporate leaders to know that for their organization to be competitive there is need to harness the potential of the employees. This requires the company to treat the human resource in a style that will ensure they are comfortable.

According to Ulrich (2001) for human resource management to be effective it calls for having in place a strategy that covers the entire organization. As a result when an organization undertakes restructuring of a number of HR activities it is likely to realize improvement in its competitive edge. Making use of sophisticated technologies can result to an organization being faced with challenges (Ulrich (2001). According to Stone, et al (2006) the global economic environment has resulted in an business environment full of uncertainty, as such companies are seeking ways of improving their business process and operations through making use of their assets faster in a way that is not only better but intelligent and this is achieved through ERP (Davenport, 1998). Integrating various business components into a single database helps bring together various sections of a business together resulting in seamless working of the entire system. As observed by researchers such as (Davenport, 1998) integration helps dominate functionality which results in the organization attaining competitive advantage.

As shown in Corner & Ulrich (1996) among the factors that should be pursued in overcoming traditional HR practices include innovating and implementing new ideas, acting with speed and integration of business processes. As observed by other authors the answer of making business competitive rests on implementing ERP. By implementing ERP there is creation of a network of diversified team which upon integration results in the organization meeting its goals and objectives (Davenport, 1998). There is need to have in place adequate preparations before implementing a business practice to ensure that the post implementation phase goes on smoothly (Greengard, 2000). Currently, ERP and HR management systems are multifaceted and in as much as they are more complex on execution they tend to be more user-friendly. As highlighted by Hendrickson (2003),being able to get the correct balance on what constitutes that which is best for a given business unit and what is best for the organization is challenging. Hendrickson (2003) underlines that using technology systems can aide a business to be better.

### 2. 3.1. The use of ERP System in HRM

Hendrickson (2003) has asserted that human resource is a key component in the business practice. As companies grow alongside things such as technology and their competitive edge, Human Resource practices need to be re-engineered to be in line with the change in times. As such by implementing ERP there is efficient and effective usage of human resource by the organization. This as a result leads to increased need for human resource and financial data that can come in handy when undertaking decision making. Through the ERP's, Human resource management helps in providing integration in the HR practices together with other operations relating to the business

Volkoff et al (2005) established that through ensuring cross-functional integration in the HR department, a number of Human resource functions come to link with each other resulting in more operations of the business being carried out. For instance, the module charged with payroll can be linked with attendance and time systems which can then be used as a determinant of the number of hours the employees have worked. This is a key insight when an organization wants to calculate the amount of wages to pay the employee (Boroughs et al., 2008). In addition the information related to the HR can be used with the company's financial data to the financial expenditure reports of the organization.

As explained by Davis & Wilder (1998) HRM functions have evolved from simple calculation of compensation as well as personnel management to fields like recruitment management, human resource planning, time management, performance management, business trip arrangement, and compensation management. Data from all the current HRM functions are collected within a centralized database, and the database uses integration to supply the required data for any function (Umble, Haft, & Umble 2003).

### 2.3.2 Training Management

Changes in the business environment often result to changes in job description in various positions. This calls for consistent training to ensure proper productivity and job security of employees. Implementation of ERP systems can help in training workers to acquire business, technical and interpersonal skills that are necessary for active participation in teams or workers (Rao, 2000). ERP systems can help in creation of training plans as well as delivering training to employees on acceptance of new skills and comprehension of management regulations among others.

### 2.3.3 Human Resource Planning

Managers can apply the module of HRM within an ERP system to undertake activities in human resource planning adequately. This is done after the considerations of the requirements of the enterprise. The accuracy of the simulation of the performance of human resource planning and the comparison of data by ERP system can help HR managers make timely decisions (Holland & Light, 1999). ERP systems also have the ability of undertaking analysis and forecasting of costs of human resource planning through the integration of relevant information (Al-Mashari, 2002). These help in accurate decision-making.

### 2.3.4 Recruitment Management

Since human capital is the most important asset to an enterprise, accuracy in recruitment of employees is very important in ensuring the success of a firm. A reasonable system for recruitment is required to ensure that a talented pool of applicants is always attracted to open positions. ERP systems have the ability of supporting recruitment in three major ways: reduction of load through optimization of the recruitment process, offering scientific management to costs of recruitment,

and provision of significant information required in making decisions regarding recruitment (Al-Mashari, 2002).

### 2.3.5 Time Management

Management of time in planning, organizing, management, and controlling HRM processes is necessary in current organizations due to the needs to ensure competitive advantage in the market. ERP systems help in time management by recording the rate of employee attendance and related information using Telematics Control Unit (TCU) (Cadili, & Whitley, 2005).

### 2.3.6 Performance Management

Significant issues that are always considered in evaluation of performance include the way operational and facilitative activities are allocated to individuals, and the distinctive nature of the facilitative content of a duty from the contents of a similar duty in other organizations. These issues can be used in the development of indices for evaluation in organizations. When the performance management system is integrated with the system for time management, ERP system records data within a centralized database and provide every evaluation index with the right data in a timely manner (Melin, 2003). The data is significant in strategic decision making regarding employee performance.

### 2.3.7 Compensation Management

A good compensation system should have the ability of applying appropriate methods of calculations with regard to departments, locations, and positions among others factors. Implementation of ERP ensures this is achieved by integrating the compensation system other related systems in the organization. This helps in ensuring relevant data is updated and calculations are performed in a timely manner (Mandal & Gunasekaran, 2003). The system can also help in forecasting compensation information and thus making decisions regarding the improvements that are necessary for the future compensation management systems. This helps in reducing management costs and the problems that rise because of intervention of manpower.

## 2.4 Critical success factors in implementing ERP

According to research investing in an ERP system is a worthy investment .based on a survey undertaken on multinationals that had invested in ERP, 85% of those companies surveyed pointed out that implementation of the system was a success and 25% stated that they had achieved the business goals they wanted to achieve as shown in (Markus et al. 2000). Many organizations are not sure of how they can maximize ERP to benefit from the system. This study aims to look at what drives beneficial use of ERP systems.

Larson and Myers (1997) determined that ERP systems can show early successes and later end up as a failure, it can also start as a failure and later be a success as shown by (Markus et al. 2000). There is limited empirical evidence that shows how organizations implement ERP post the implementation phase (Clark et al. 2006). As such implementing ERP systems is never the desired end point. After implementation of an ERP software for best results there is need to do continuous monitoring and management of the system (Clark et al. 2006). Due to the complex nature of ERP systems, it does not matter how competent the implementation team is there will always be the need to undertake continuous monitoring of the system (Seddon et al. 2003). To get the most out of an ERP system an organization as shown by a number of studies such as (Markus 1998; Newall et al. 2003; Wills and Wills-Brown 2002) should seek to stabilize the system if they are to gain any value from it .There are a number of factors which affect the use of ERP for beneficial purpose.

### 2.4.1 User training

A number of studies such as Jasperson et al. (2005); Muscatello & Parente, (2006), hold that training users of ERP is key for its successful implementation. Training of users before implementing the ERP can take advantage of the experience within the organization; this will reduce the time needed solve the issues that crop up during implementation. User training during the post implementation phase helps assimilate and update the knowledge required to run the ERP. Training undertaken during the post-adoption phase helps users to understand the effect of the system on their work and other processes within the organization (Davenport et al. 2004).Training also helps the users to update their knowledge about the ERP especially if there are new functionality that have been introduced in the system . Training can as well take the form of

facilitating periodic meetings of the various users, this allows for exchange of information as it concerns the system (Umble et al. 2003).

### 2.4.2 Communication

From previous literature communication has been determined as a key component for the eventual success of an ERP system implementation (Holland & Light 1999; Ko et al. 2005). During the time the system is being implemented and later , the main users, information system personnel and vendors need to continuously take part in communication both formally and informally. From a number of studies it has been shown that increase in communication makes it easy for individuals to take part in activities alongside each other (Berman and Heilweg, 1989) and this also strengthens the common understanding (Ko et al. 2005). Communication also allows for user feedback to be integrated into the system to improve it further (Nah and Delgado 2006).

### 2.4.3 Documentation

Through documentation ERP knowledge can be acquired and disbursed .Documentation helps in facilitating the sharing of knowledge through description of various processes taking place , guides used in operation ,design manuals among others. Users are able to grasp how the system is operated , correct any errors that crop up ,and solve problems through perusing the documentation (Scott 2005).

### 2.4.4 Change management

After an ERP system has been implemented, there are high expectations of changes taking place as such there is need for the organization to seek ways of adjusting to the changes so as to limit the confusion of the users. Individuals are in most cases ready to adapt to changes if they have the knowledge that there is need to have changes and be responsible for creating benefits that aide the business (IBM 2000b).

According to Orlikowski and Hofman (1997) some of the organizational changes are never anticipated but come about during the time change is taking place, this takes place in response to an event, breakdown or an opportunity that was not expected .Implementing ERP brings about change in things such as processes, the structure of the organization, human resource, information

and communication technology infrastructure among others. Because implementing ERP is viewed as being a continuous process and not a thing with a clear definition having a start and a finish, changes that take place should not be expect to have an end point. As such researchers such as (Clark et al. 2006; Jasperson et al. 2005) are of the suggestion that change management is a key component of ERP is to be implemented with success.

### 2.4.5 Process optimization

For a business to gain improved productivity there is need to undertake process improvement as shown by (Seddon et al. 2003).This calls for gaining knowledge about the evolving software needs within an organization and looking for ways to ensure balance between the varied software needs and change in the needs of the organization (Davenport et al. 2004; Shang 2001). A number of organizations undertake radical changes in the early stages of ERP implementation and later they quit going ahead with the process. The fit of the various organizational processes and the ERP system is never sustained due to changing organizational needs with time. As a result process optimization should be a continuous process Thus, optimizing processes should not stop just because the ERP has been implemented.

### 2.4.6 Integration/ extension

Integration is among the key reasons for organizations implementing ERP systems. But this does not mean that it will always be a success (Gattiker and Goodhue 2005). Thus organizations can use integration as a leverage through implementing a number of strategies such as integrating the legacy systems of the organization with the ERP platform (Davenport et al. 2004). Bringing together various applications to form one system that integrates CRM, SCM and the ERP system that helps the organization to share different applications, hardware and software helps in reducing the various associated costs.

In summary, the continuous changes in the current business environment call for implementation of strategies that lead to optimization of costs and improvement of efficiency in performance. Traditionally, human resource management involved calculations of employee compensations and personnel management. However, needs for efficiency called for introduction of more functions like salary planning, skills analysis, workforce budgeting, and performance appraisal among

others. Technological advancements helped in the expansion of the application of ERP from mere calculation of employees' salaries to the incorporation of all HRM functions.

However, success of the ERP systems is ensured by successful implementation. A system can be designed accurately, though poor implementations may lead to failure in its application. To ensure success, the structure of human resource management must be considered during the designing process. These should include the management style, leadership structure, policies, culture, and the overall structure of the firm. Employees should be trained properly to ensure that they understand how the system functions. This should include the use of experts from other firms as well as visiting other firms where the systems have been successfully implemented. The benefits of ERP systems often result from success in implementation of the systems.

ERP is vital in HRM operations as shown in the literature review. Majority researchers believed in the influence of ERP in changing HR role to a larger amount while the others contended that ERP has not been perceived as a critical tool in changing HR association. Again, in spite of the fact that many HR analysts and professionals agree that the implementation of ERP will improve HR operations and present HR managers with an opportunity to concentrate on different issues, whether their new orientation results overall improvement of HRM may be debatable. It can simply be said that depending on ERP alone to achieve the transformational effect is more effectie.

## Chapter 3:

## 3.0 Research Methodology

### 3.1 Introduction

The following chapter describes the steps taken for accomplishing this research methodologically. We begin by explaining the research paradigm and then explain the research process. Other aspects that will be explained include data collection, data analysis, validity and reliability.

### 3.2 Research Method

As pointed out by Bhattacherjee (2012) there are several ways to categorize different forms of research. However, from all the categories, the most common differentiations are qualitative and quantitative research approaches. Denscombe (2007) asserts that quantitative research approach mainly stress on numbers than anything else, whereas numbers indicates the underlying theoretical concepts. Interpretation of these numbers in quantitative research is seen as a strong scientific proof of how an occurrence happens. On the other side, qualitative research approach allows the researcher to examine the concept of social and cultural occurrence understanding of people, their actions and what motivates, and the wider background in which they live as well work.

Bhattacherjee (2012) as well asserts that quantitative research approach is the best approach when a research seeks to use a big sample size and targets to generalize the study results to a big population. For this study, the researcher's interest is in establishing the patterns or trends that apply in varying situation. Nonetheless, the limitation of this approach is that social and cultural elements of organizations are lost or viewed in superficial way.

| **Components** | **Quantitative** | **Qualitative** |
|---|---|---|
| Paradigm & Philosophy | Positivist perspective; researcher is independent of that which is researched | Interpretivist perspective; researcher interacts with that which is being researched |
| Method/Types of Research | Experimental, Descriptive, comparative, correlational | Phenomenology, case study, ethnography, grounded theory, cultural studies |
| Data | Questionnaires, surveys, tests, etc. in the form of numbers and statistics | In-depth interviews, observations, focus groups |
| Data Analysis | Deductive process, statistical procedures | Inductive process: codes, themes, patterns to theory |

*Table 1 A comparison of Quantitative and Qualitative Research Adapted from Castellan (2010)*

In the present research, since the researcher is investigating a social issue that touches on application of technology, the researcher decided to apply qualitative approach based on case studies of previous cases carried out. The two cases used are Motorola and Camelin Décolletage Industries (CDI) who implemented ERP in their organizations.

### 3.3. Research Paradigm

As explained by Myers (2009) a lot of the research carried out in the information systems field resolve round design science and behavioral science. Myers (2009) notes that in behavioral science, researchers seek to develop and ascertain theories and concepts that explain r or project organizational or human behavior, while in design science, researchers seek to expand boundaries of organization and human abilities by developing new and innovative artifacts. The important thing is that both paradigms are foundations of Information systems field and essential to examine since they are placed at the convergence of organizations, people and technology. The proposed research questions for this study relate with the paradigm of behavioral science because the present study is mainly about offering an explanation of organizational or human behavior and not developing new artifacts for to extend the boundaries of organizational or human capabilities.

Denscombe (2007) as well holds that scientific research studies can be categorized into three forms, exploratory, explanatory and descriptive based on the objective of the study. From this three, exploratory form of study is the best suitable with the present study. As explained by Denscombe (2007) exploratory research usually is carried out in new spheres of inquiry where the objective of the researcher is to find the scope of the magnitude of a certain issue, to develop some primary ideas regarding the issue or to investigate the feasibility of carrying more extensive studies in that issue.

As mentioned before in chapter one, on the basis of appropriate research as well as absence of in-depth studies on adoption of ERP, it appears that this topic is still in its embryonic stage and requires more explorative studies so as to get a better understanding of the issue. Therefore, the present research whose aim is to explore the contribution of ERP systems in enhancing the efficiency of Human Resources department from the viewpoint of ERP users can assist us to develop or generate some new ideas about the issue. In the subsequent sections, we shall delve into stages of research process, and explain how the researcher reached the best decision in carrying the research from other options.

### 3.4 Philosophical underpinning

According to Yin (2003), when applying a case study approach, it follows constructivist paradigm. According to constructivist holds that truth is relative and is based on the perspective of an individual. Constructivist understands the significance of the subjective nature of human as they create meaning. However, constructivist does not directly reject the idea of objectivity. Accordingly, this philosophical approach stresses pluralism and focuses on the circular tension that surrounds subjectivity and objectivity (Miller and Crabtree, 1999). Yin (2003) underscores that constructivist is based on the principle of a social construction of reality. Yin (2003) underlines that one of the biggest advantage of this paradigm is the close cooperation that exist between the researcher and his participants. However, since the researcher based his case studies on previous studies done on Motorola and Camelin Décolletage Industries (CDI), there was no closeness between the researcher and the participants.

### 3.5 Research design

In the present study on contributions of ERP on HR department, as already stated the researcher used case study approached where previous two cases of implementation of ERP in Motorola and Camelin Décolletage Industries (CDI was used. As explained by Yin (2003a case study is a methodological approach that allows the researcher to study a phenomenon in its natural setting. In this case, we intend to study the effectiveness of ERP in an organization in relation to HR operations. Using a case study, it will be easy to understand if implementation of ERP improved the operations of HRM or did not.

Ideally, to examine the contribution of Enterprise Recourse Planning (ERP) systems in enhancing the efficiency of Human Resources department, we would have carried out an interview with several HR managers among selected companies. This would have provided first- hand information. However, carrying out such a study is costly and requires more time. It will as well mean that we formulate questions, them to the participants and for several weeks before revising back the interviews. More so, their consent would be required and some interview questions may not be answered. All these issues points to the limitations of undertaking primary research. Accordingly, the research opted for case study methodology approach. This entailed selecting

previous cases that have been documented where organizations implemented ERP and how it enhanced the efficiency in these organizations.

### 3.6 Type of Design case study

As noted by Yin (2003), case study approach entails selecting one or more examples of the issue under examination and investigating the attributes of the selected examples. Through a close examination of a small number of cases, the research is able learn more about the characteristics of the issue and it differs under different situations. Yin (2003) restates that case study approach is specifically suited to examine processes. This relates well with the present study where it seeks to examine how implementation of ERP enhances efficiency in human resource management.

The case study techniques and styles were applied in this study, accordingly two case companies for selected and examined how they implemented ERP systems and how these systems contributed to HRD operations. The multiple case study applied Yin's (2003)'s plan and styles. The case study design and method is relevant to this research because of its capacity to respond the study questions suitably. The case study is ideal for analyzing current events only when the relevant characters cannot be altered (Yin, 2003, p. 7).

The two extra resources that can be examined in a case study include direct surveillance of the events and questioning the participants of the events. The vigor of the case study method relies on its capacity to analyze a range of proof that includes documents, relic, interview and surveillance (Yin, 2003, p. 8). Besides, case study is:

> *...done when the explanation and description (instead of forecasting founded on the cause and impact) are needed, If it is impossible or realistic to alter the prospective sources of character, and if the variables are difficult to recognize or are too entrenched in the incident to be sampled for the research (Merriam, 1988, p. 7).*

Yin (2003) notes that harmonizing the research technique to the policy applied to get the fact that answers the researcher questions like why, which, and how correctly. Yin's (2003) style

of selecting the correct policy is based on three conditions that include the kind of study question, the authority the researcher has over the events and if or not the emphasis is on the current or past events and to what level(see also Creswell (1998).

The researcher has no authority over the main technique or guidelines of the cases being analyzed. Online education within a year was one of the methods of selecting participants. Therefore, the events are current, and the particular aspects have not been recognized to examine and are inseparable from the incident thus making the case study design reliable for the research.

Therefore, two policies were appropriate for the study questions. The 'which' questions that emphasize on current events where the researcher has insufficient authority over the behavioral issues could be recognized descriptive in nature and the application of a preliminary study will be the best technique to use (Yin, 2003). Merriam (1988) agrees, noting that a case study can also incorporate fact collected by a study mechanism. *The analysis answers would form the portion of the database for the case examination (p. 8*). Besides, the studied policy that is more favorable in answering the 'why' and 'how' questions in the case study that also emphasizes on current issues and does need the researcher to have authority over the behavioral events.

### 3.6.1 Multiple cases

If a research has more than one case, then a multiple-case analysis is applied. It is frequently linked with multiple tests. A researcher may ask himself the distinction between a holistic case and multiple case-analysis. The two are different based on the distinct perspective. A multiple cases studies enable the researcher to examine within every setting and across the settings. While a holistic study only enables the researcher to recognize and understand solitary distinct/ unique or extreme case. In a multiple case study, researchers analyze various cases to recognize the similarities and distinctions between the cases. According to Yin (2003), multiple cases can be applied to predict varying results for a theoretical duplication. The evidence established from multiple studies is considered more reliable though it might be very expensive and time-consuming.

In this study to examine the contribution of Enterprise Recourse Planning (ERP) systems in enhancing the efficiency of HRD, two companies were selected, Motorola and Camelin Décolletage Industries (CDI).

### 3.6.2 Advantages and Disadvantages of case studies

The advantage of a case study is that it can achieve many of the similar objectives as other approaches. For instance, a case study can be used to develop new knowledge (exploratory), solve some problems (constructive) or test a hypothesis using empirical evidence (confirmatory). More so, the case study approach can as well use primary or secondary data. Case studies as well simplifies complex theories and concepts making it easy for audience to understand. According to Creswell (1998) case studies enhances analytical thinking, critical thinking and communication and allows the researcher to use real life situations.

However, apart from the above advantages, there are several limitations of using case studies. For instance Yin (2003) states that data collected through case studies cannot basically be generalized to the broader population. This results in data that is collected using longitudinal case studies may not be useful. More so, some of case studies are not carried out scientifically and therefore their findings not reliable. Creswell (1998) has also noted that case studies are usually on one organization, and therefore tends to one researcher undertaking the study, this in many occasions could result in biasness during data collection. Similarly, it is hard to reach a conclusive cause/effect from a case study.

Still, case studies remain important method of collecting data, particularly in cases where observation is required, or where the researcher has no means of undertaking a primary study.

### 3.6.3 Data collection

Though it would have been better to use as many cases as possible to understand the different ways and situations where ERP has been implemented, the researcher opted to select only two cases. The cases were selected because they represented two examples where ERP was implemented and positively impacted HRD. The first case was implementation of ERP at Motorola and Camelin Décolletage Industries (CDI) and the second case was implementation of ERP at Motorolla.

### 3.7 Data analysis

Creswell (1998) argued that, data analysis entails sorting what a researcher has observed, heard or studied so that he can create some understanding on what has been learned. Incorporating this data, the researcher illustrates, develops explanations, establishes assumptions, creates the hypothesis and associates the story with the others. For the present study, the research collected data from previous cases, and this informed the data analysis. Accordingly, the researcher analyzed data through theme analysis to relate them with the literature review.

# Chapter 4

## 4.0 Case Studies

## 4.1 Camelin Décolletage Industries (CDI)

### 4.1.1 Background and objectives

As mentioned by Mathonnet (2005), Camelin Décolletage Industries (CDI) is a company that turns bar and specializes in metal parts production for the car industry like brakes, doors hinges and drain plugs. It was founded at Besancon, France in 1913 and it produces both medium and large series of automotive parts for the car markers (Peugeot) and for suppliers of Tier One like TRW, Faurecia, Autoliv, Textron, Contitech and Treves. It uses a just-in-time production process when it comes to manufacturing the only thirty parts which have been referenced. It has about 100 employees.

CDI was a subsidiary of Textron until July 2003, a company in U.S that owns Be II (helicopters) and CESSNA (airplanes) (Mathonnet, 2005). It became independent after It was acquired by local investors and some of its employees. CDI generated revenues of 11 million in 2004 with 90% coming from car suppliers. Its abroad sales have developed and it exports over 60% of its production to the Czech Republic, Germany and Spain. CDI realizes 40% of the total sales in the Czech Republic with tier 1 car supplier, TWR. TWR is responsible for equipping 40% of motor vehicles in Europe and it recently transferred production to the Czech Republic. According to the logistics manager and ERP project manager at CDI M (Mathonnet, 2005). Arnaud Rolland as quoted by Mathonnet (2005) said that "*TWR prefers to procure from CDI, rather than from a local subcontractor, because we have a specific know-how and a learning curve in the production of parts of braking systems that allows us to compete with low cost suppliers*".

The company needed to maintain its quality policy of having zero products that defect and no delivery delay at the lowest cost, in order to stay a step ahead of competition. The company saw the importance of improving its information management system hence the decision to implement an Enterprise Resource Planning (ERP) system in 2004. In order to continue local production, it is very important for the company to produce products of high standard and quality as well as development of performing logistic services. The new business system was meant to

improve both the flow and accuracy of information and also decrease the costs of inventory. The daily challenges of the company was manufacturing of large volumes of different parts of cars and have them loaded in the suppliers trucks just one hour so that they are transported to the Czech Republic (Mathonnet, 2005). It is critical for the flexibility of the company to align to the just-in-time production process of the car suppliers. CDI decided to replace IBM's AS/40 data management system with an ERP software solution from a French provider of Enterprise resource planning software and ICT services, Adonix (Mathonnet, 2005).

### 4.1.2 Project description

According to Mathonnet (2005) an integrator Innetis (www.innetis.com) was selected by CDI in accordance with the technical specifications to implement Adonix X3 ERP standard solution. The value of the contract was 150,000 euros. The choice when it comes to the specific solutions was determined by three main reasons:

- The publisher of the ERP software should provide a software solution that is simple and user-friendly that will match the needs of the company and not a software solution that is complex for example Oracle or SAP which is best for big businesses.

- It would have taken long to implement Microsoft's Navision solution.

- The exchange standards of the GALIA Association, that is responsible for elaboration and promotion of and the formation on EDI/Web-EDI standards in France's car industry, must be observed by the ERP solution.

The project had a six month time frame, from February to July 2004. Different functions in the company were involved in the implementation of the ERP including: logistics, production, accounting and finance. The company decided to create a partial interface between the ERP system and the pay-roll application but not have an implementation of the CRM application. In order to enable communication between customers' remote sites and show pictures of car parts that have been newly referenced at a distance, there was installation of a web-conferencing system. After a delay of four months, in November 2004 the ERP software was fully functional. The ERP solution implementation needed more customization than was

initially expected and by January 2005 it was still in the fine-tuning phase (Mathonnet, 2005).
.

Many standards ERP software solutions are pull manufacturing model based, and CDI makes use of the push manufacturing model in order to adapt the production process and logistics to meet the ones of customers in the car industry. The company expects that by mid-2005 it will process and analyze collected data from production and logistics fully from the ERP system. CDI carried out training sessions during the implementation which spanned from one hour for field workers to 15 days when it comes to the administrative personnel. The company initially feared that field workers would be reluctant to record their own data but the training helped overcome this and they were recording it after 15 days (Mathonnet, 2005).

### 4.1.3 Output

The process of information flow has been significantly changed and the production quality improved in the company thanks to the ERP system despite the long phase of customization.

### 4.1.4 Production

Machine breakdown and default products monitoring has been improved thanks to the ERP application. Administrative or commercial staff used to record all production data but each field worker now personally records all data corresponding to their production. Every metal car part produced has a number which is referenced in accordance with the workers name and the machine used to manufacture it. Due to this production and quality process monitoring has been improved. Defect products can be detected in a shortened time.

### 4.1.5 Logistics

Both short term and long term deliveries can be easily anticipated with the ERP application. It is less costly and simpler to access information reducing stock levels and costs. Mr. Arnaud Rolland argues that the clear benefits of ERP cannot be felt immediately but requires to take time possible one year before the benefits are felt (Mathonnet, 2005).

### 4.1.6 Accounting

The ERP being compatible with the eCar solution of Tenor Conseil has enabled the invoicing of car makers like Peugeot or Renault directly through Web-EDI exchange. Compared to the traditional EDI data exchange it saves the processing of data and reduces costs saving time (Mathonnet, 2005).

### 4.1.7 Overall impact on the company

New dynamics have been created by the implementation of ERP within the company strengthening employee motivation. "*Usine Nouvelle"* a French national magazine wrote about ERP implementation and its success at CDI (Mathonnet, 2005). The number of employees did not change after the implementation of ERP but there was evolution of task sharing. Each employee is responsible for recording their data has compared to when it was done by the administrative employees. The new process has reduced errors while enabling monitoring and machine maintenance and enable accounting staff to focus on more value adding tasks.

### 4.1.8 Lessons learned

ERP implementation success largely depends on the human factor according to Mr. Arnaud Rolland. He argued that the integrator failed to sufficiently take into account peculiarities of the activities of CDI at the start in this case (Mathonnet, 2005). The process of bar turning needs successive bar turning steps and batch processing. Used metal weight fro manufacturing many of the car parts failed to correspond to the real weight of consumed metal in the process of production, which was one of the main problems that occurred during implementation. This required further code line development ending up delaying the project. It is important to demand the full implication of the integrator in the implementation of the project and not depend on the integrator before signing a contract.

Mr. Arnaud Rolland stated that on many occasions the integrator explained the way things work in organization, but rather the client needs to do that. As such, the integrator needs to listen more to customer requirements and expectations. This helps in avoiding time-wasting during project implementation. Employees need to express their expectations/needs to the integrator effectively and clearly. According to Mr. Arnaud Rolland Employees need to take an active role

when ERP is being implemented so that they can point out the possible problems or their responsibilities to the integrator. During the implementation of the ERP system all the company's employees need to be fully involved. Mr. Arnaud Rolland states that

> *"It is important that employees take over the process of implementing the ERP system themselves because they will have to use it. This will later facilitate the implementation and adoption of the system within the company" (*Mathonnet, 2005, p.4).

CDI's historical context also facilitated the new e-business application implementation. Being part of Textron CDI had a corporate culture which facilitated implementation and usage of the new e-business application and helped the successful implementation of ERP. Another factor that is important in the implementation of ERP is the project manager's attitude and contact network. Mr. according to Mathonnet (2005), Arnaud Rolland reported that the integrator and the client should develop a good working relationship to help meet the company's expectations. More so, flexibility as well as taking time to make improvement on the ERP system sis required (Mathonnet (2005).

## 4.2 Case 2 ERP implementation at Motorola

### 4.2.1 Background

In the year 1997, Motorola SPS undertook a process re-engineering where replaced the system used in the processing of payrolls and human resource which was paper based. The paper based system was prone to errors and full of inefficiency this in addition to lack of a predefined standards of human resource prompted it to alter its system. The company has operations in more than 50 countries in addition to around 30 factories that are located globally ,some of the sites are located in the Far East and the United States , with such a wide flung operations it was hard for the company to track its operations concerning human resource that were located in different countries.

Motorola SPS contracted Andersen Consulting to help them with development and implementation of a better system that would help reduce the challenges it faced. Andersen Consulting envisaged a system that would meet the following conditions**:**

- Collect and process payroll and human resource information;
- Give managers and employees access to the above information.

Anderson consulting wanted to come up with a system that would allow managers and the employees to use the platform alongside other providers in processing data relating to human resource. For the system, Anderson Consulting called for Motorola SPS to adopt 3 Human Resource System version 3.0 /SAP's R software as the main standard in the processing of payroll and employee data. In the period of the implementation of the project that took 16 months, Andersen consulting also advised during configuration of the human resource system, during this time it helped Motorola SPS to handle the collection of relevant information from vendors and facilitating employee training.

Adopting one method of data processing ensured that Motorola was almost able to standardize its transactions relating to human resources. As a result any data about employees coming from any country could be stored and processed using a single method. In addition the new system helped Motorola to be able to centrally locate its human resource data in the United States in its facility located in Phoenix, Arizona.This mirrored with among the main goals of the project which was ensuring that employees and managers were able to access the company's data, there was need to have in place a custom network that was referred to as The Employee Self Service Network (ENET).

ENET is a system based on the intranet and it was initiated because of two main reasons one was to give employees access to their personal data through a browser and two to allow managers to be able to check and approve transactions concerning employees such as those to do with changes in salary or job of the personnel. The ENET in addition was designed to help with the linkage of other sources of information such as things to do with career development, showcase courses available in the Motorola University in addition to documents containing policies relating to the company.

Because there was greater need to standardize the policy concerned with the human resource, the design of ENET ensured that it automatically checked data to make sure that there was a standardized format, in the process there was limited need to validate the data manually. In adopting a system based on intranet like the case of the ENET helped the company to put in place a human resource policy with global reach , this helped provide a definition of things such as changes to undertake within departments , adjustment of salaries , new employee processing and making changes to already existing employees. As such any new change in the human resource policy could be duplicated in all the countries that Motorola had operations.

Between the years 1997 and 1999, Motorola SPS implemented the new SAP/ENET system in all the areas it operated from the Far East, Europe and the United States. The team of Andersen Consulting that initially was charged with development was reduced to 6 from 16.The system will help Motorola SPS save more than £2 million yearly through reduction in the time taken to undertake basic tasks of administration of the human resource. There are updates being planned for the ENET to make it able to process data that is specific to employee needs such as things to do with languages and personal skills.

According to a human resource manager in Motorola SPS called Mr. John Morgan , ENET has revolutionized how the manager interacts with other managers and the employees of the organization, this has increased the surety of accuracy of the information provided by the manager (Pitt, 2000). According to the manager the benefits of ENET are evident already.

# Chapter 5

## 5.1 Analysis Conclusion and recommendations

The following study was set to answer three research question that included, (i) how can Human Resource personnel actually take advantage of the ERP systems potentials and capabilities? (ii), Does an implementation of ERP in HR is actually enhanced rather than worsen the efficiency of the HR department? And (iii), what are the effects ERP is having in HR departments in case of European corporations? These questions have been answered through the literature review and the two case studies of Camelin Décolletage Industries (CDI) and Motorola.

As noted in the literature review and supported in the case studies, HR personal can take advantage of ERP by implementing the system to create effectiveness in HR process. For instance Boroughs et al. (2008) ERP technology system is able to revolutionize the way HR is practiced by bringing previously HR practices into the center of all the functions and operations of the business. This observation is supported by HRM of Motorola Mr. John Morgan, who noted that ERP upon being implemented revolutionized how the manager interacts with other managers and the employees of the organization, this has increased the surety of accuracy of the information provided by the manager. Similarly, in the case of Camelin Décolletage Industries (CDI) it was reported that t new dynamics have been created by the implementation of ERP within the company strengthening employee motivation (Mathonnet, 2005).

It has been reported in the literature review that by Helo, et al (2008) that two main objectives of each organization when implementing ERP in its HRM operations is to reduce expenses and increasing effectiveness. Indeed, this is what happened at both Motorola and Camelin Décolletage Industries (CDI) where after implementation the two organizations experienced increased effectiveness and reduced costs. Indeed, ERP system is able to integrate different department within the organization and various divisions within the HRD increasing the efficiency within the organization.

As indicated by Ulrich, (1997) companies should implement ERP as way of increasing their competitiveness. It has been argued that organizations are always looking for ways to improve their competiveness and this can be achieved through adopting new technologies particularly when

they can result in improvement in human resource management. Accordingly, the two case study discussed above implemented ERP with the objective of attaining competitiveness in their respective industries.

In the two case studies it was noted that the companies implemented ERP because they wanted to fix certain shortcomings within their organizations. For example, Camelin Décolletage Industries (CDI) wanted to improve its HR department to reduce costs and improve its operations, while at the same time improving its competiveness hence the decision to implement an Enterprise Resource Planning (ERP). On the other hand, Motorola wanted to implement a better system that would help reduce the challenges it faced particularly in regard to collecting and processing payroll and human resource information and giving managers and employees access to information. Indeed, Ulf (2003) affirms that ERP is able to fix a number of issues that arise in organizations, especially those that have multiple business units. Through ERP these organizations are able to a centralized system with specific processes and procedures for different HRM functions.

However, an organization will not be able to experience the benefits brought by ERP in its HR department without considering critical success factors. In the literature review it was mentioned by that the success rate of ERP was 25% (from a survey of companies that had implemented ERP) (Markus et al. 2000). Accordingly, after the implementation, there is need to carryout training, document the process, monitor the system, process optimization and integration. Indeed, this was also reported in the case studies as noted by Mr. Arnaud Rolland of Camelin Décolletage Industries (CDI) who stated that ERP implementation success largely depends on the human factor.

In relation to answering the second research question; Does an implementation of ERP in HR is actually enhanced rather than worsen the efficiency of the HR department? The study has established that in general, implementation of ERP improves the efficiency of the HR departments. This has been established in the literature that companies which implement ERP report improvement in their HR departments. These improvements are brought by integration brought by the system. In the case of Motorola, it is reported in the case through the implementation of ERP, the company was able to standardize its transactions relating to human resources, this enhanced the HR department by allowing fast information sharing between employees and the management. Similarly at Camelin Décolletage Industries (CDI) where ERP was implemented it helped in

streaming the HR department. For instance, it the case it has been noted that the customized its network referred to as The Employee Self Service Network (ENET) that allowed employees to access their personal information and at the same time allowed managers to related to employees. The ENET also linked information between career development and courses being offered at Motorola University. The overall outcome was improved human resource in terms of skills and enhanced communication between employees and the managers. Accordingly, this helped in improving the performance of employees. Indeed, in the literature (see, Rao (2000) it has been noted that ERP can be used in training and development, as being used by Motorola.

Generally, as shown in the literature and in the case studies, ERP systems help in ensuring effectiveness in HRM functions like Compensation Management, Performance Management, Time Management, Recruitment Management, Human Resource Planning, and Training Management. Functions that enable the system to forecast HRM trends, integrate with other system, perform real-time analysis, and provide recommendations ensure that these functions are performed accurately and efficiently. In addition, ERP helps in improving the level of competitive advantage among both small, medium sized, and large enterprises. Organizations are able to control on costs, make real-time analysis, forecast the future demands, and improve the performance of workforce. These ensure that human resources are adequately exploited, and positive returns on investments are ensured. ERP also has the ability of integrating human resource information systems with other information systems within an enterprise to help in driving the enterprise toward efficiency and effectiveness in HRM.

In answering the third research question: What are the effects ERP is having in HR departments in case of European corporations? The two case study companies, Motorola and Camelin Décolletage Industries (CDI) used in the study showed that ERP positively affects the HR departments of these companies. As discussed before in the case studies, both companies reported positive changes and improvements in many of their operations in HRD after they implemented ERP. This was supported by the literature (see, Holland & Light, 1999; Al-Mashari, 2002) that has agreed that companies that implement ERP systems also have the ability improve their HR departments by analyzing and forecasting of costs of human resource planning through the integration of relevant information. These help in accurate decision-making and human resource planning.

Having successfully answered the set research questions, the study achieved its objectives. It can therefore be concluded that Enterprise Recourse Planning (ERP) systems in enhances the efficiency of Human Resources department. However, not all companies that implement ERP achieve this success since in some cases fail has been reported and where ERP implementation failed. But where ERP systems have successfully been implemented, they have had a positive impact. The study therefore gives the below recommendations.

## 5.2 Recommendations

The implementation of ERP systems is significant in optimization of costs and the achievement of HRM strategic objectives in an organization. It enhances the level of competitive advantage of a firm, and the sustainability in a market. Enterprises should thus understand the significance of human capital in order to implement ERP systems successfully (Melin, 2003). An ERP system is an IT's product while human resources are significant part of inventions and improvements in IT. Success is thus ensured when the human resources perfectly understand the systems and help in making improvements whenever necessary changes are required.

Enterprises should also redesign HRM functions in order to ensure successful implementation. Redesigning the functions of HRM beyond personnel management and calculation of compensation will ensure that other departments beneficially interact with human resource department. This helps in uniting all departments towards the achievement of the mission of the organization.

Enterprises should also come up with an effective mechanism for introduction of talent and incentives for employees. An attractive mechanism for compensation that is has the ability of ensuring competitive advantage, as enterprises will have the ability to retain their qualified employees as well as attract top talents from the market. Employees should also be involved in decision making to ensure their commitment to the organization is improved.

Enterprises should place a lot of emphasis on training and education of employees. Proper training ensures successful implementation of ERP systems, as employees gain knowledge on the

functionalities of the systems and thus the ability to point out the issues that require improvements. Training should be strengthened for both the managers and their subordinates.

Finally, enterprises should place emphasis on exterior consultation and supervision for implementation of ERP (Harris, 2006). Inviting experts from other organizations to provide practical guidance enhances the successfulness of implementation of ERP systems. The organization can also arrange for members of its staff to visit other firms where ERP systems have been successfully implemented and draw the experience of using the systems. Moreover, the human resource management should take the supervisory roles during implementation to ensure that the system perfectly matches its structural requirements.

### 5.3 Further research suggestions

There are a number of suggestions that can be suggested for further research. The first is the case study approached used. This was not a comprehensive approach and lacked the advantages that come with primary research tools like interviews and questionnaires. Therefore further study can use interviews where HRM managers can be interviewed on the benefits of using ERP and the challenges they face. Using these tools the study will be able to obtain first-hand information it will be easy to establish the benefits and challenges or limitations of ERP. More so, a different approach can be suggested to measure the effectiveness of ERP in regard to improving HRM operations.

In addition, further research on be undertaken on a particular issue touching on HRM. As noted I n the study there are many HRM aspects that include management, performance management, recruitment, compensation and reward, training and development among other aspects. It will be interesting to understand how ERP impacts one of these aspects. This will give a comprehensive understanding on that particular aspect that can allow HR managers to make specific changes.

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