

## The Impact of Human Resources Management in Logistic Service Providers and Supply Chain Capabilities: A Case Study

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### Abstract

Nigeria's position as one of the world's fastest growing economy led to the greater importance and monumental growth of its logistics and supply chain management services. This growth was paralleled by dramatic yet inadequate changes in human resources management practices. The purpose of this study is to investigate the relationship between HRM practices and logistics firm performance with logistic and supply chain management services as the focus. To explore the impact human resource management has on logistics capabilities in Nigeria, this study examines the relationship between, recruitment and selection, performance appraisal, compensation & benefits, health & safety and training and development with the key logistics capabilities of integrated logistics services (ILS), information and communication technology (ICT), flexible supply chain (FSC) solution, and industry specific logistics expertise (ISLE) in selected logistics service providers. Data were collected using questionnaire sent to human resource managers and other staff in logistics service provider firms in Nigeria. Using hierarchical regression analysis, training and development, recruitment and selection, reward management and performance appraisal were effective in building logistic and supply chain capabilities. The implications of these findings in the contextual characteristics of logistics and supply chain service capabilities in Nigeria are discussed, including avenues for further research.

**Keywords:** Supply chain, Employee, Logistics, ICT(Information and Communication Technology), Human Resource( HR), Human Resource Management (HRM) ,Capabilities, Economy, Competitive, Industry.

### 1. INTRODUCTION

Globally, logistics has emerged as a significant growth factor in most nations. Reputed to be one of Africa's fastest growing economy and manufacturing hub, Nigeria is among the nations where the demand for logistics and supply chain service has been growing at a monumental pace. The increasing pressures from the rapid changes that are occurring in the business environment have led to a variety of responses among industrial organizations. Globalization of logistics and supply chain services, the rate of technological innovation and fluctuation in consumer demand are among the factors that have increased the dynamism of the competitive environment to which organizations must respond. More prominent, however, is the distinct shortage of logistics and supply chain expertise, including information system support capabilities, which have become hurdles to logistics and supply chain development (Long, 2003). The inadequate logistics infrastructure coupled with lack of skilled workers and management is blamed for the high level of loss, damage and deterioration of stocks experienced, especially for perishable products (Dolven 2002, Kerr 2005). The challenges, however, also generate opportunities for companies with advanced logistics system and skilled employee to grow their market.

For Nigerian logistics firms to survive in a global economy in this new millennium, they need to exploit all the available resources as a means of achieving competitive advantage. One resource recently recognized as providing a source of competitive advantage is the human resources of the firm and it is widely accepted that people in organization are an important source of competitive advantage for firms (Pfeffer, 1994). Many scholars have reiterated that the increasing interest in human resources is due to the assumptions that employees and the way are managed are critical to the success of a firm (Kamoche, 1996; Lado and Wilson,

1994; Mueller, 1996; Wright, McMahan and McWilliams, 1994). Since firm performance is considered as one of the major organizational goals, much of the recent human resource management (HRM) research has been directed in understanding the relationship between HRM practices and firm performance.

Effective and competitive human resource is the key to the strength of organizations in facing the challenges of business today. The importance of having a competitive human resource is synonymous with the success of today's organizations. An efficient and effective human resource will produce quality, productive individuals that will eventually minimize the problems that are related to human resources such as job dissatisfaction, absenteeism, or turnover of employees.

What is Human Resources Management? Human resource management is a distinctive approach to employment management which seeks to achieve competitive advantage through strategic deployment of a highly committed and capable workforce, using an integrated array of cultural, structural and personnel techniques (Storey, 1995). HRM is a system, a philosophy, policy and practices that can influence employers that work in an organization. HRM practices include training and development, performance appraisal, reward/compensation management, safety and health, recruitment and selection, and industrial relations. According to Huang (2000), HRM practice is one area that influences employees' intention to leave, levels of job satisfaction and organizational commitment. HRM as a practice and an academic discipline has developed substantially since the early 1980s. Given the development of the logistics and supply chain services in Nigeria and the challenges they face, HRM would be expected to play an important role in improving its effectiveness. Logistics service providers (LSPs), however, seem to share the general reluctance among business organizations in Nigeria to emphasize HRM practices in order to improve quality of service, despite the evidence that effective HRM practices are important elements of service quality and customer satisfaction (Yong and Wu, 2008).

Logistics is the process of strategically managing the acquisition, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channel in such a way that profitability is maximized through cost effective fulfillment of orders (Somuyiwa, 2010; Somuyiwa and Sangosanya, 2007; Christopher, 1992; CLM, 1998). Logistics means more than procurement, processing, movement and storage of materials, parts and finished inventory, therefore requires effective HRM practices for smooth operations.

Since the concept of HRM became popular in the early 1980s, there has been increasing academic interest in the concept as well as research in the area. Early models of HRM (Beer, Spector, Lawrence, Miles, and Walton 1984; Fombrun, Tichy and Devanna, 1984; Guest, 1989) were largely conceptual and not based on substantial empirical evidence for their validity. The 1990s saw a substantial amount of empirical research carried out to find evidence on the link between HRM practices and performance. In recent years, much of the research in the 1990s did in fact find statistical evidence for an association between HRM practices and performance (e.g. Arthur, 1994; Huselid, 1995; Ichniowski, Shaw and Premeaux, 1997). Researchers also have shown an increasing interest in the concept of HRM practices and in the link between HRM Practices and organizational performance.

A significant body of previous research has reported positive associations between HR Practices and organizational performance. These studies focus on the impact of several specific HRM practices, such as compensation (Gerhart and Trevor, 1996, Gomez-Mejia, 1992), training (Bartel, 1994) or performance appraisal systems (McDonald and Smith, 1995). Other studies report the positive impact of HRM practices on organizational performance (Arthur, 1994; Bawa, 2000; Becker and Huselid, 1998a, Berg, 1999; Berg, Appelbaum, Bailey and Kalleberg, 1996; Delaney and Huselid, 1996; Delery and Doty, 1996; Paul and Anantharaman, 2003).

In order to effectively investigate whether human resources are capable of contributing to competitive advantage, it is pragmatic to examine HRM practices in as many settings as possible. Most of the studies in

HRM practices and organizational performance have been conducted in the West, on the domestic operations of US firms, with a smaller number of studies carried out in the UK and Europe (e.g. Guest and Hoque, 1994; Hoque, 1999), and Asia (e.g. Huang, 2000; Huang and Cullen, 2001; Khatri 2000; Zohir, 2007; Murayama and Yokota, 2009). There is a dearth of empirical studies in HRM practices conducted in Nigeria. One important attempt to study HRM practices was conducted in transport sector, specifically the logistics and supply chain aspect (Somuyiwa and Adewoye, 2010). In this new millennium, the role of human resource remains vital to organizations. In spite of this evidence, many organizations are slow in adopting those practices that were found to contribute to organizational success. This is also found in the logistics and supply chain firms in Nigeria.

The key aim of this study is to explore the relationship between HRM practices and the key logistics capabilities in LSPs firms in Nigeria and the identification of any possible impact HRM practices may have on the key logistics and supply chain capabilities (LSCs). This study reports the findings of an exploratory research project that examines the relationship between the HRM practices of , recruitment and selection, performance appraisal, compensation/benefit, training and development, health and safety and the key LSC capabilities of providing integrated logistics services (ILS), using information and communication technology (ICT) to solve complex logistics problems, devising flexible supply chain (FSC) solutions and offering industry specific logistics expertise (ISLE).

The rapid growth of logistics and supply chain firms, increase in environmental variability and degree of competition, acute shortage of labour and the corresponding increase in employee turnover and cost of employee replacement have forced firms to aggressively compete for employees. These industry issues and problems demand that firms continually access its internal process and capabilities if it is to remain competitive. It is known that HRM practices can positively affect organizational performance. However, previous studies in Nigeria are quite limited in investigating this phenomenon. The first limitation is that in Nigeria, beside the studies done by Somuyiwa (2010) and Somuyiwa and Sangosanya (2007) on HRM Practices on logistics information system, little research has been done to date. Secondly, despite the abundant of studies in the West, revealing positive effects of HRM practices on a firm's performance (e.g. Ahmad and Schroeder, 2003, Bae and Lawler, 2000, Batt, 2002; Hoque, 1999, Delery and Doty, 1996, Wright, Gardner, and Moyinihan, 2003), so far there is no consistent agreement on how to measure HRM Practice and what to measure with regard to organizational performance (Becker and Gerhart, 1996; Dyer and Reeves, 1995, Wright and Gardner, 2003). Lastly, very few of these studies (Wright and McMahan, 1992; Huselid, 1996, Cotton and Tuttle, 1986; Gerhart and Milkovich, 1992) have considered profitability or corporate financial performance, productivity and employee turnover as moderators. This study examines

- The relationship between HRM practices and firm performance,
- The relationship between HRM practices and logistics and supply chain capabilities of ILS, ICT, FSC and ISLE.

Specifically, this study is intended to achieve the following objectives:

- To identify and examine the extent of HRM practices in Nigeria logistics firms' capabilities.
- To investigate the impact of HRM practices on the firm's performance
- To examine the impact of HRM practices on development of key logistics and supply chain (LSC) capabilities.

This study is conducted to address the gap in the literature. It offered three important questions that probably had not been previously investigated in other studies and in the logistics and supply chain services in Nigeria particularly.

- What is the extent of HRM practices in the logistics and supply chain services in Nigeria?

- Do HRM practices affect firm performance (logistics firms)?
- Do HRM practices contribute to the development of key logistics and supply chain capabilities?

## 2. BACKGROUND OF THE STUDY

The term “human resource management” has been commonly used for the last two decades. Prior to that, the field was generally known as “personnel management”. Dessler (1991) had made no differentiation between personnel management and HRM and saw that the latter as a modern expanded version of traditional personnel management due to technological change in the work environment and a shift in societal values. Torrington and Hall (1998) explained the differences between personnel management and HRM by mentioning that personnel management is considered as **workforce-centered** while HRM as **resources-centered**. Guest (1987) conception of HRM is not as an alternative to personnel management but as a particular form of personnel management which stressed the strategic issues of employee commitment, flexibility, quality and integration.

Since there is no universal agreement on the meaning of HRM, many definitions and coherent approach to the management of organization’s most valued assets – the employees who individually and collectively contributed to the achievement of the objectives of the business”. Beer, et al. (1984) viewed HRM as involving all management decisions that affect the relationship between the organization and employees – its human resources. Storey (1995) considered HRM as a distinctive approach to employment management which seek to obtain competitive advantage through the deployment of highly committed and skilled workforce, using an array of techniques.

### 2.1 HRM AS A SOURCE OF COMPETITIVE ADVANTAGE

In recent years, human resource has been recognized as an important source of sustained competitive advantage. Much of the human resources and theoretical and empirical work has been grounded in the resource-based view (RBV) of the firm (Barney, 1986, 1991, 1995). This theory maintains that in order to develop a sustainable competitive advantage, organization must create resources in a manner that is rare, non-imitable, and non-substitutable. Barney (1986, 1991, 1995), Pfeffer (1994), have argued that because the resources that have historically provided organizations with competitive advantage are easily and rapidly imitated, the human resources of the organization may be an extremely important source of sustained competitive advantage, especially in the logistics sector.

The RBV of the firm is a theoretical paradigm originally in the field of strategic management. The RBV assumes that resources and attributes of the firm are more important to sustained competitive advantages than industry structure and competitors’ actions (Barney, 1997). Resources have been defined as “tangible and intangible assets a firm uses to choose and implement its strategies” (Barney, 2001). This broad definition includes human, organizational financial and physical resources. Barney (1991) and Teece, Pisano and Shuen (1997) have outlined a framework for determining if a resource can be considered a source of sustained competitive advantage. The key elements of this framework require resources to be valuable, rare, inimitable and non-substitutable. Technology, natural resources and economies of scale can create value, RBV argued that these sources of value are increasingly available to almost anyone anywhere and they are easy to copy, whilst human resources which is defined as “the pool of employees under the firm’s control in a direct employment relationship” (Wright and McMahan, 1992) can provide the firm with a source of competitive advantage with respect to its competitors.

The first of these criteria is the value added to the company’s production processes, the contribution made by each employee having its effect on the results obtained by the organization as a whole. Also, since employees are not the same, their characteristics are in limited supply in the market. In addition, these human resources

are difficult to imitate. Since it is not easy to identify the exact source of the competitive advantage and reproduce the basic conditions necessary for it to occur. Finally, this human resource is not easily replaced; through short-term substitutes may be found, it is unlikely that they will result in a sustainable competitive advantage like the one provided by human resources. Barley (1991) argued that organizations may not obtain the maximum utility from their employees because the employees are not contributing to their fullest potential. It was argued that organizations, through the effects of their HRM practices could maximize the knowledge, skills, and abilities (KSA) of employees. The focus of the overall body of research, then, is to examine the contributions of HRM policies and practices to the performance of the organizations.

## **2.2 HRM AND LOGISTICS SERVICE PROVIDERS**

Recent researches in logistic and supply chain management indicate that a lack of logistics professionals has become an issue that can no longer be ignored (Trunick 2003, Hong et al. 2004, Kerr 2005). In addition, in 2002, the Asia Pacific Logistics Institute in Singapore in association with the logistics Institute of the Georgia Institute of Technology in the USA indicated that both international and domestic LSPs identified lack of talent as one of the key challenges of operating supply chain services (Bolton and Wei, 2003). Hong, et al (2004) also found that shortage of logistics management expertise, coupled with inefficient information support systems, are impediments to supply chain development. In contrast, LSPs in Nigeria do not consider lack of qualified personnel to be a major issue that could affect the future of the logistics industry in Nigeria. Richard Armstrong, president of Armstrong and Associates (a supply chain market research and consulting firm), comments that whether a company is able to undertake any logistics project anywhere still depends on the strength of its contacts within the country's bureaucracy (Kerr. 2005).

## **2.3 IMPACT OF HRM IN THE LOGISTICS FIRM PERFORMANCE**

Several studies (Li and Vellenga 1993, Bookbinder and Tan 2003, Lin 2007, Lieb 2008) have provided data to show a work force with the appropriate talent and skills would be a positive contributing factor in service capabilities of logistics service providers. Modern logistics companies need talented people who can learn quickly about a tool and apply it towards productivity gains, as well as workers who emphasize customer service and are motivated to ensure fewer work shortage.

Four key LSC capabilities were focused because they are among some of the most important logistics and supply chain attributes in promoting service quality and effectiveness in the logistics industry:

- **INTEGRATED LOGISTICS SERVICE (ILS) CAPABILITY**

Broadly, LSPs can be segmented into two groups: operational specialist (or functional service providers) and integrated logistics service providers (Bowersox, Closs and Cooper 2002, Warke, Arkader and Hijjar 2007). The former provides specialized services, such as transportation or warehousing while the latter provides a larger range of logistics services that included all work necessary to service customers, from order entry to product delivery (Bowersox, et al. 2002). The ability of offer integrated logistics services, indirectly, implies a capability to deal with a wider range of logistics issues, endemic to different parts of the supply chain, such as procurement, production, warehousing and distribution.

The ILS capability, therefore, binds all logistics activities together in a system that simultaneously works to minimize total distribution costs and maintain desired customer service level (Kenderdine and Larson 1998). This suggests that effective integrated logistics services enhance quality management practices, which increase firm performance.

- **INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) CAPABILITY**

ICT is increasingly regarded as a vital resource that supports many business processes (Alshawi 2001). In the logistics industry, ICT such as internet, extranet, internet, Electronic Data interchange (EDI), facilitates the integration of supply chain activities (Angeles 2000). The importance of ICT in LSC operation lies in ICT's contribution to the provision of timely and accurate information, enabling information sharing both within the firm and between supply chain partners and enhancing organizational decision making (Aldin and Stahre 2003). Bowersox, et al. (2002) outlines four reasons for the increasing importance of ICT as a valuable logistics resource. First, customers appreciate timely information about order status, product availability, delivery schedules and invoice settlement, which are increasingly enhanced by rapid advances in ICT. Second, timely information is essential for inventory planning and human resource scheduling; third timely information increases LSC flexibility with regard to how, when, and where resources may be utilized to gain strategic advantage. Fourth, enhanced information transfer and capability exchange utilizing the internet is changing relationships between buyers and sellers and redefining channel relationships. Therefore the ability to utilize ICT skills and knowledge to enhance LSC operations is fast becoming an indispensable resource for LSPs.

- **FLEXIBLE SUPPLY CHAIN (FSC) CAPABILITIES**

Flexibility in operation and delivery is one of the most sought after capability of LSPs (Stank, Daugherty and Ellinger 1998). In a dynamic market environment, operational flexibility is not just a customer attractor, but a strong predictor of performance (Anand and Ward 2004). LSPs typically regard service flexibility as an important ingredient for meeting customers' fast changing needs in real time. It will be noted that, LSPs capable of providing customers with FSC solutions in a constantly evolving market place would have a competitive edge over those with lesser relevant infrastructure (Qureshi, et al 2008).

- **INDUSTRY SPECIFIC LOGISTICS EXPERTISE (ISLE) CAPABILITY**

Increasingly, firms are seeking logistics companies to provide them with a turn key logistic solution, accentuating the importance of industry specific expertise for new market development (Richardson, 1997; Huang and Kadar 2002, Bolton and Wei 2003; Hannon 2003). It requires a constant stream of just in time products delivery to keep production line on the move. Alliances and joint ventures are major trends in the distributions and logistics sector, with many top LSPs building competitive national distribution chains targeting specific industries.

### **3. METHODOLOGY OF THE STUDY**

Some sample of logistics service providers (LSPs) for this study was taken from the list of logistics companies within the South-Eastern region of Nigeria. A total of 4 logistics companies were visited at the course of the study, thus constituting the participant size for the survey. In this survey, questionnaire survey method was been used to collect data. The full scale survey was conducted with a total of 150 questionnaires given out among the four selected logistics firms in the region.

#### **3.1 DATA COLLECTION PROCEDURE**

To collect the data, a full scale questionnaire survey was conducted during the months of August through October 8, 2011, within the 4 logistics companies selected. The survey engaged 94 respondent staff from the total of 150 in the four sample logistic companies and with the response rate of 62.7%. The researcher distributed and collected the questionnaire in person, which allowed the researcher to ask relevant questions to the sample respondents to complete the questionnaire while they were present. The response rate was satisfactory and statistically acceptable (Babbie, 2004). Data and information were collected from the staff using the questionnaire. Each respondent spent about 25 minutes to complete the questionnaire. For the survey questionnaire distributed within the companies, a prior permission letter had been issued for the entire

operational 4 logistics companies, and the Human Resources Manager gave a telephonic approval from each company authority where the survey was conducted every day during office hours. After checking, 26 of the 110 returned questionnaires were found to be invalid and were excluded from the data file, reducing the usable sample to 94. Of the 94 valid questionnaires returned, 3 were completed by the company's general manager, 44 by sales or marketing manager, and 47 by either operational executives (such as senior logistics supervisor, heads of units, warehouse manager or inventory controller).

### **3.2 DATA ANALYSIS TECHNIQUES**

Basically, there exist numerous methods of analyzing data, but in order to test the hypothesis formulated, the data will be analyzed by finding and grouping the proportion of each respondents that chose whatever response in the tables. The consensus of option of respondents is then measured by the application of Factor Analysis Techniques. Also, the Regression Analysis model, Correlation Matrix, Categorical Regression (CATREG) were used as data analysis techniques. In this case regression was used to describe how logistics firm performance and productivity depend on HRM practices (Recruitment and Selection, training and development, performance appraisal, Health and Safety and compensation and Benefits. The resulting regression could be used to predict LSP's performance and productivity for any combination of the independent variables.

## **4. ANALYSIS OF STUDY DATA**

Regression analysis was used to explore the impact of HRM practices have on each of the LSC capabilities and performance of LSPs. Descriptive statistics was used to project the respondents profile as well as the general patterns of variations in the HRM variables and organizational performance. Then the KMO-Bartlett Test, Factor Analysis, Correlation matrix, Pareto Chart and Scree plot were all conducted to investigate the impact and relationship between HRM practices and LSPs performance in the study. The KMO- Bartlett test was performed with data set to evaluate the pattern of correlation in the data that indicate that 'Factor Analysis' is suitable for the study. The KMO ranges from 0-1 where greater values indicate high level of suitability and value greater than 0.5 is statistically acceptable. For this study the KMO value is 0.698, and Bartlett test is significant (Chi-Square with 190 degree of freedom). Therefore Factor Analysis is considered as an appropriate technique for analyzing factor loading. Moreover, the approximate chi-square statistics is 2,032.288 with 190 degree of freedom which is significant at the 0.05 level. A Factor Analysis of the HRM variables produced a factor that explains 98.7 percent of the variance with high reliability (Cronbach  $\alpha$  = 0.734). The need to specifically examine the individual impact of the various HRM variables on LSPs capabilities and performance informed the choice to use all these statistical techniques

### **4.1 RESULTS**

The profile of the sample respondents of this study is shown in the table 4 below. There are more males (76.3%) than females (23.7%). The majority of the sample i.e. (51.3%) is above 40 years old and about (28.7%) and (14.6%) are the age groups between 36-40 years old and 31-35 years old respectively; while 5.5% is for the age group of 20-30 years old. It was found that the majority i.e. (68.7%) hold executive MBA's, 20.4% are Master's degree holder and about 10.9% are Bachelor's degree holders. However, the companies are now selecting and recruiting MBA holders to help improve their business performance, a point that motivates many employees to pursue executive MBA. This tends to reduce cost of training of employees by companies. It is found that 63.1% of respondents have received formal job training while about 36.9% of the respondents have not received any formal job training. Based on the survey results, 64.4% are respondents in a 100% private owned company while 35.6% are respondents in a Government owned company.

TABLE 1  
DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS IN LSPs (N = 94).

RESPONDENT CHARACTERISTICS	CATEGORY	PERCENTAGE
Gender	Male	76.3
	Female	23.7
Age	20-30	5.4
	31-35	14.6
	36-40	28.7
	Above 40	51.3
	Bachelor	10.9
Education	MBA	68.7
	Master's	20.4
Training	Yes	63.1
	No	36.9
Organization type (N=4)	100% private	64.4
	Government	35.6
	Joint venture	-
Types of logistics offered *	Transportation	66.2
	Distribution	23.8
	Courier service	20.0

Note \* percentage exceed 100% as firms can offer more than one category of logistics services.

Table 2 presents the Factor Analysis Result. Principal Component Analysis (PCA) reduced the 25 variables into ten (10) main factors which explain about 58.1% of the total variable. Each factor was dominated by at least 1 variable. Factor component 1 (PC<sub>1</sub>) has high significant loading which is related to performance appraisal. This includes 'employee satisfaction with performance appraisal result' (.923), 'performance provides regularly by management' (.917); 'performance appraisal in my company is result oriented' (.898), 'employee environment towards job performance' (.892); 'performance appraisal clear to all' (.845). Factor component 2 was related to training and development (PC<sub>2</sub>). This factor includes items such as 'training programmes are of high quality' (.897); 'updated programmes according to requirement' (.841) 'continuous training programmes by organization' (.840); 'train employees to retain them' (.803); 'new employee familiar with organizations norms and value' (.792). Factor 3 (PC<sub>3</sub>) was related to health and safety and include items such as 'provision of safety and protective devices' (.866), 'effective health Insurance scheme (.821); 'Safety and protective devices for injury prove areas' (.796); high ethics on health and safety issues' (.798); 'training employees on health and safety' (.730). Factor component 4 (PC<sub>4</sub>) was related to recruitment and selection 'hiring people with specialized skills (.871), organization prefers promotion from within' (.836) 'hire people with creative thinking' (.830), 'recruitment and selection without interference' (.760). Factor component 5 (PC<sub>5</sub>) was related to compensation and benefit which includes 'compensation rewards irrigative ideas (.852), 'performance is noticed and rewarded' (.857). Factor component (PC<sub>6</sub>) related to compensation and benefit which include 'compensation in the form of monetary and non-monetary incentives' (.962); Factor component 7 (PC<sub>7</sub>) related to compensation and benefit which include 'compensation related with level of knowledge and skill' (.831), Factor component 8 (PC<sub>8</sub>) still on compensation "good performance rewarded with more training' (.742). Factor component 9 (PC<sub>9</sub>) related to recruitment and selection; 'recruitment and selection process fits with candidates and job' (.510). Factor component 10 (PC<sub>10</sub>) related to

health and safety ‘training employee on health and safety’ (.467).See Principal Component Analysis (Rotated Component Matrix) table 2 below with the analysed values in the table appearing in bold.

	PRINCIPAL COMPONENT ANALYSIS									
	1	2	3	4	5	6	7	8	9	10
RS1	-.210	.084	.020	<b>.871</b>	.293	-.130	-.040	.064	-.004	.010
RS2	-.193	.133	.132	<b>.830</b>	.139	.069	.051	.108	.156	-.296
RS3	-.105	.242	.060	<b>.836</b>	-.111	.011	.205	-.124	.165	.193
RS4	.037	.345	.301	.446	-.077	.059	.181	.225	<b>.510</b>	-.167
RS5	-.258	.172	.029	<b>.760</b>	-.054	.016	.060	.339	-.253	.072
HS1	.023	-.122	<b>.789</b>	.046	-.132	-.280	-.194	.150	.040	.015
HS2	.009	-.037	<b>.821</b>	.130	-.058	-.045	-.105	-.110	.382	.081
HS3	-.102	-.085	<b>.866</b>	.123	-.071	-.017	.136	-.039	.095	-.182
HS4	.117	.161	<b>.796</b>	-.086	-.134	.104	.122	-.100	-.387	-.074
HS5	.192	.175	<b>.730</b>	.017	-.077	.090	.027	.009	-.143	<b>.567</b>
PA1	<b>.845</b>	-.064	.061	-.134	-.058	-.031	-.099	-.134	.227	.016
PA2	<b>.898</b>	-.067	.000	-.152	-.027	-.021	-.024	-.063	.245	.110
PA3	<b>.917</b>	-.120	.063	-.186	-.094	-.035	.007	.002	-.094	-.034
PA4	<b>.923</b>	-.148	.017	-.134	-.073	-.025	.031	-.010	-.217	-.058
PA5	<b>.892</b>	-.066	-.005	-.046	-.110	-.026	-.098	-.002	-.128	.062
CB1	-.166	.106	-.251	.071	<b>.852</b>	-.022	.143	-.099	.135	.128
CB2	-.144	.130	-.114	.099	<b>.857</b>	.000	.153	.160	-.144	-.149
CB3	-.129	.056	.007	.195	.367	-.007	<b>.831</b>	.230	.016	.003
CB4	-.097	.060	-.094	-.025	-.022	<b>.962</b>	.000	.081	.002	.012
CB5	-.189	.211	-.098	.325	.119	.158	.362	<b>.742</b>	.082	-.001
TR1	-.209	<b>.792</b>	-.005	.242	-.085	-.073	.194	.201	.046	-.031
TR2	-.233	<b>.840</b>	.035	.158	.052	.085	.001	.222	.094	-.076
TR3	-.200	<b>.841</b>	.043	.102	.014	-.030	.000	-.186	-.077	-.328
TR4	-.020	<b>.897</b>	-.010	.034	.081	-.002	.042	-.097	-.015	.260
TR5	.104	<b>.803</b>	-.083	.140	.311	.163	-.097	.119	.015	.136

TABLE 2: PRINCIPAL COMPONENT ANALYSIS

To test the proposed hypothesis, regression analysis were conducted; it was found that HRM practices have significant impact on the overall performance and LSC capabilities of LSPs. The HRM practices are found to explain about 88.1% of the total variance in the firm performance, which suggests that they are important factors which impact on firm performance (productivity) and LSC capabilities of LSPs.

Table 3 reports all the HRM variables being statistically significant. Thus, all formulated hypotheses are accepted at the 0.05 level of significance. The recruitment and selection, training and development, performance appraisal, compensation and benefits, health and safety incentives are all positively and significantly related to firm performance (productivity) and equally has a great impact on the LSC capabilities especially on ICT, FSC and ILS.

**Table 3**  
**REGRESSION ANALYSIS OF HRM PRACTICES AND FIRM PRODUCTIVITY**

INDEPENDENT VARIABLE	Unstandardized coefficient		Standardized Coefficients	t	Sig.
	B	S.E.	Beta		
Constant	.719	1.335		.539	.592
<b>Recruitment &amp; selection</b>	.311	.045	.285*	6.898	.000
<b>Performance appraisal</b>	.416	.043	.359*	9.757	.000
<b>Training &amp; development</b>	.356	.031	.437*	11.612	.000
<b>Health &amp; safety</b>	.515	.051	.425*	10.028	.000
<b>Compensation &amp; benefits</b>	.347	.041	.359*	8.443	.000
<b>F test</b>		154.685*			
<b>R<sup>2</sup> Adjusted</b>		.986	.003		
<b>N = 94</b>					

Notes: a. Dependent variable is Productivity and LSC capabilities, sig. = significance level.

b. \* $p < 0.05$

Table 4 showing Categorical Regression was used to describe how productivity and LSC capabilities depend on recruitment & selection, performance appraisal, training & development, health and safety, and compensation & benefits. The resulting regression could be used to predict firm performance (productivity) for any combination of the independent variables. The following results were obtained in this instance.

Regression for CATEGORICAL DATA (CATREG)  
Coefficients

FACTORS	Standardized coefficient			DF	F	Sig
	Beta	Bootstrap Estimate of Error	(1000) of Std.			
Recruitment & selection	.416	.069		13	36.762	.000
Training & development	.446	.059		15	56.160	.000
Performance Appraisal	.390	.083		20	22.064	.000
Compensation & Benefit	.408	.085		12	22.989	.000
Health & Safety incentives	.358	.064		15	30.814	.000

*a. Dependent variable: Productivity & LSC Capabilities*

*Thus, firm performance (productivity) & LSC capabilities = .416 \* recruitment + .446\* training & development + .390\* performance Appraisal + .408\* compensation & benefits +.358\* & health & safety incentives; R<sup>2</sup> = 99.7%*

All the variables of this predictive model are statistically significant and hence could be used in improving firm performance and LSC capabilities. It should be noted that all the variables through their standardized coefficients considered in the model will contribute substantially to productivity in LSPs.

**5.0 DISCUSSION ON FINDINGS**

The objective of this study was to investigate on the impact of HRM practices and firm performance among the LSPs in Owerri, Nigeria. The demographic data of this study indicates that male employees are dominating at the higher positions in the LSPs surveyed. The field study result reveals that employees receive formal job training. Moreover, the majority of the respondents are MBA degree holders. Most of the HRM variables have the high value of Means, approaching the highest possible score of five, suggesting that all variable are perceived by sample respondent employees and managers to have strong influence on organizational performance. The KMO and Bartlett's Kaiser – Meyer – Olkin test results also supported these findings and all the variables are found to have consistent high level of significance.

All factors were found to have significant loadings. For example Factor 1 (PA<sub>1</sub>) Performance Appraisal had significant loadings on the five items. This observation suggests that firms in the LSPs should improve their performance appraisal system to enhance employee performance. Factor 2 (TR<sub>1</sub>) Training & development had a high significant loading to suggest that firms are likely to benefit by providing orientation for new employees, providing continuous training programmes and high quality training programmes. Factor 3 (HS<sub>1</sub>) – Health & safety had reasonably significant loading on health and safety of employees, effective insurance scheme, training on health & safety matters. Thus, management of LSPs is obliged to pay more attention to health and safety of employees at work to improve their performance. Factor 4 (RS) –Recruitment & selection, had significant loading on 'hire people with specialized skills', hire people with creative thinking skills', 'organization prefers promotion from within'. In this study, it was found that recruitment and selection processes have significant loadings on firm performance similar to the performance appraisal,

training and development and compensation and benefit activities. That the impact of compensation and benefits activities is not so high as other practices could be due to the fact that the existing compensation and benefit activities are not very effective. This study's empirical results obviously suggest that the HRM practices are to be further improved, and it is particularly noted that the priority should be given to the improvement of performance appraisal and compensation practices, which received highest significant loading. The regression analysis results demonstrate that HRM practices have a strong impact to overall improvement of LSPs' performance. The hypotheses focus on 'recruitment and selection', 'training and development', 'performance appraisal', 'compensation and benefits' and 'health and safety'. They all have positive impact on firm performance as was hypothesized. It was found in this study that recruitment and selection practices in LSPs had a positive impact on LSPs' firm performance with a standardized coefficient of .285\* ( $P < 0.050$ ). The LSPs' surveyed recruit and select people with skills and ability. This result is in line with those of previous studies (i.e. Huselid 1995, Cho, et al. 2006) which also found positive link between hiring and staffing management for organizational growth.

The second hypothesis ( $H_2$ ) posited that effective performance appraisal is positively related with firm performance. The study results substantiate the hypothesis showing that performance appraisal is positively associated with LSPs' firm performance with a coefficient of .359\* ( $P < 0.05$ ). This result is also in line with the findings of the previous studies undertaken by Huselid (1995), and Marshal (1998). Thus LSPs are putting more emphasis on skills and qualified employees, and evaluation of performance.

The third hypothesis ( $H_3$ ) stated that training of performance related to firm performance. In this study it was found that effective training and development practices in LSPs had a positive impact in firm performance with a coefficient of .437\* ( $P < 0.05$ ). This result supports previous studies results (Vlachos 2008) which have found that training and development have relationship with firm performance.

The fourth hypothesis ( $H_4$ ) stated that compensation & benefit, that are limited to employee skills, knowledge and performance, are likely to positively impact on firm performance. It was found that compensation & benefits practices had a positive impact on firm performance with a coefficient of .359\* ( $P < 0.05$ ). This supports the previous studies by Huselid (1995).

The fifth hypothesis ( $H_5$ ) stated that health and safety incentives /awareness would relate to firm performance. In this study it was found that adequate health package and safety awareness in LSPs had a positive impact on performance, with a coefficient of .425\* ( $P < 0.05$ ).

All these formulated hypotheses are accepted at the significance level of 0.05. More importantly, all the HRM system components are highly and significantly related to firm performance and LSC capabilities. Thus, the results of this study have several implications for firms in the LSP category.

## 5.1 RESEARCH FINDINGS AND RECOMMENDATION

The findings of this research indicate a number of implications for LSPs and the management of Human Resources. Most of the LSPs surveyed are privately owned. In order to better understand and develop more effective strategic HRM practices. There is need for HRM to be incorporated as a system within the companies. HRM practices are the concern for investors, buyers, entrepreneurs and managers. The study findings provide some guidance for future direction to all stakeholders in LSPs for their business sustainability in the competitive business environment. LSC capabilities have to relatively distinct, though related, sets attribute. One centers on individual talents and skills, while the other is characterized by team effort and collaboration. Reward management presently practiced by LSPs in Nigeria appears to be concentrated directly towards individuals rather than teams thus, having little impact on team base capabilities. However, offering opportunities for individual career development and professional advancement has also been found to be an effective means to retain employees and reduce turnover (Armstrong 2007). Attention to reward management, performance appraisal, training and development

programmes is likely to strengthen LSC capabilities and reduce staff turnover. Lastly, the research study has been limited to 4 LSPs only due to logistics problem on the part of the researcher. Further research should examine similar research objectives for as many LSPs as possible as sampling and sample size. Also, more HRM practices similar to those studied to an extent have to be studied to compare the result.

## **6. CONCLUSION**

This study investigated the impact/relationship between HRM practices and firm performance & LSC capabilities. Based on the empirical findings, most of the core practices of HRM, namely recruitment and selection, performance appraisal, training and development, health and safety of employee, compensation and benefits were all found to have a significant and positive impact on firm performance. This observation implies that firms should be encouraged to invest more in HRM system improvement to enhance their performance and competitiveness.

The data collected and statistical results suggest that the sample LSPs would benefit by establishing some orientation programmes for new employees. These introduced programmes would provide continuous training for updating employee skills and knowledge. Employees may be rewarded by revising and updating training programmes to cope with the changing environment, initiatives to improve the quality of training. If these sample LSPs increase their human capital investment both by off the job and on the job training, they should be able to improve performance. Since attention in the global economy is on firm performance improvement, it is important that firms manage their Human Resources well to enhance their overall performance for their competitiveness in the global market.

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