CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Business viability requires that service-oriented organizations be able to achieve two important outcomes of operational efficiency and service delivery. Operational efficiency enables the organization to increase its competitive advantage by forming a positive input-output nexus, while service delivery is the ability to achieve customer satisfaction within the objectives of the organization. Jaja (2019) avers that for public organizations, this obligation becomes weightier in light of their social burden of delivering public welfare and promoting socioeconomic development. One of the instruments government utilizes in this respect is the administration of seaports. Salisu and Raji (2017) posit that the seaport is a catalyst for the economic affluence of any nation as it serves as gateway for intra and international trade and opens the economy up for a preponderance of global investments.

Yet, several seaports in Africa have not been able to achieve this due to a catalogue of service delivery challenges (Mashwama and Aigbavboa, 2018). Seaport operators and managers are encumbered by incoherent planning practices (Salisu et al., 2017), equipment procurement and maintenance, human capital planning (Eleagu and Akonye, 2018), untimely delivery of services and ineffective communication strategies (Mashwama et al., 2018). Jaja (2019) argues that seaports in Nigeria are not immune from these challenges as they are also encumbered by maladministration, bureaucratic bottlenecks and fragmented budgeting. These challenges are reminiscent of ineffective management of the facility, finance, facilities and personnel. There is indeed a persistent need for radical productivity change in Nigerian seaports if they are going to live up to the expectations of driving economic development through global trade and investment (Nwanosike, Tipi and Warnock-Smith, 2016).

Pursuant to this call and the preceding synopsis of these seaport service delivery challenges as a management issue, the study examines the place of facility management as a deterrent to the status quo. This consideration is emboldened by the Shohet's (2006) assertion that facility management is the integration of different specialist areas of maintenance, performance, risk management, energy and operations management, space management, staff development and information technology (Shohet, 2006) towards the attainment of the business goal. By so doing, facility management combines real estate, their surroundings and services for the realization of core business of the enterprise. The facility management discourse evokes critical considerations such as what can be done to attain the business goal, what can be done to improve employee contribution to the organization, what measures could be utilized in retaining and enlarging clientele, where and how could resources be expended to achieve a greater, if not optimum return.

Over the last three decades, academic interests in this subject had remained high with a preponderance of empirical evidence of the prospects of facility management towards improved organizational performance. Thus, establishing the academic and practical significance of research in this subject. Facility Management (FM) effectively have built up the principles and techniques that bring with it, competitive advantage for those organizations employing its services whether directly or indirectly (Alexander, 1996; Oladejo, 2014; Osagie, 2002; Shohet, 2006; Spedding, 1994; and Wiggins, 2011). Today, FM is not just a business opportunity but a rapidly expanding function that is gaining status as an important profession that warrants a high status in the strategic make-up of every organization (Clark, 2012).

Despite the proliferation of facility management research, an issue of Facility Management (FM) is a rather new discourse in the seaport literature in Sub-Saharan Africa, especially from a Nigerian perspective. The seaport becomes a crucial specimen for an evaluation of the

role of facility management in enhancing its service delivery given its significant position as the gateway to global trade and logistics. Almost 80% of the total global trade volume is facilitated by ocean transportation (Shan, 2014). Various services are performed such as shipment (offering cargo handling), storage in warehouses and stacking areas, offloading and other services done in the quay areas etc., provision of safe and navigable channel, maintaining port facilities and equipment, ensuring safety, develop and own properties. Paixao and Marlow (2003) in Cetin and Cerit (2010) advocate the argument that ports are currently surrounded by an environment characterized by a high degree of complexity, where activities are often carried out in a disorganized way, with high costs, inadequate customer services, lost opportunities, and sub-optimization of resources; and as such a new attitude must be adopted.

The old and present attitude is a situation where seaports are becoming increasingly dependent on external coordination and control of the whole supply chain rather than its internal strengths such as inventory management and hinterland communications. Seaport operators in most developed countries such as United States and Canada, having foreseen these events, are already repositioning their container terminals through joint ventures, port terminals concessions, or to meet an increase in vessel size to compete globally rather than regionally (Paixao et al, 2003). The goal is aligned towards improved competitiveness, quality of the traditional port services, implementing differentiation strategy by providing more specialized, value-added services and delivering door-to-door transport solutions. This has transformed the seaports in these countries from loading and discharging operators to intermodal terminals in the supply chain systems that add value to the port users and final customers.

This has led to an integration of the supply chain actors and the introduction of seamless transport systems using state-of-the-art technology which has heightened the flexibility of the

seaports to respond to the ever changing stimuli and risks of port business. In the new competitive landscape, the port authorities have roles such as concentrating on value-added logistics, development of information and communication systems to enhance the integration of the supply chain actors, and port networking by strategic cooperation with other ports to be more effective and retain their competitive position (Notteboom and Winkelmans, 2001 in Cerit and Cetin, 2010). These changes emphasize the importance of ‘‘customer satisfaction’’ in the port industry.

The Nigerian situation presents a different scenario mainly from the perspective of a lack of serious competition among the ports. This may be alluded to the fact that Nigerian seaports are mainly public owned with no existing private seaports in the country at present. Nigeria is a contiguous Atlantic Ocean country and strategically located in the heart of Africa. This geopolitical position makes Nigeria a strategic port for dissemination of goods to other parts of Africa. Yet, this strategic position of the country is yet to be fully utilized going by the volume of foreign trade in recent years through Nigerian seaports to and from other African countries. The seaports in Nigeria have come of age but still cannot boast of providing effective service delivery. They have the potentials of increasing in value, service delivery and eventually making a huge impact on the internally generated revenue of Nigeria.

For so many years now, the country has been dependent on a lot of imported goods and this has contributed to the growing importance of sea ports facility management. The dependence on ocean transportation has accorded the maritime industry which includes seaports the crucial responsibility of determining and enhancing the survival of nations as no nation can survive without imports and exports, the majority of which is made possible through transportation by sea. Therefore, seaport inefficiencies have direct negative impacts on the overall efficiency and flexibility of the movement of goods and result with higher costs for all parts of international trade (Steven and Corsi, 2012). This huge responsibility towards

economic development implies that seaports resort to the adoption of growth and sustainability strategies. In other words, for a port organization to assess effectiveness, both the processes such as port operations, human resources, marketing, information technology and the relationship between the port and its environment should be analyzed in detail (Cetin and Cerit, 2010).

In Nigeria, the activities of NPA were commercialized and offered greater autonomy in accordance with the recommendation of the Technical Committee on privatization and commercialization. Still, it could not bring the expected importance because of public service bureaucracy. It was later revised to the initial status. In an effort to reposition and enhance the national economy, the federal government embarked on various reform initiatives in the public sector which includes the maritime sector. This initiative was to foster an economy that is responsive, robust, private sector oriented and in line with the international best practices.

After the pre-bid conferences, physical due diligence, technical bid submissions etc, the successful bidders negotiated their concession agreements with a public sector team made up of NPA and Bureau of Public Enterprises (BPP). Successfully negotiated agreements were signed and transaction programmes initiated preparations to handing over. Under this new arrangement, the Authority ceded some of her functions and responsibilities enumerated as follows:

1. Ownership and administration of land and water within port limits
2. Planning and development of Port operational infrastructure
3. Leasing and concession of Port Infrastructure and setting bench mark for tariff structure
4. Responsible for nautical/harbour operations and hydrographic survey.
5. Marine incidents and pollution

6. Maintenance of safety and security at the common user areas,
7. Enacting Port regulations and bye laws as well as monitor and enforce them
8. Day to day monitoring of operations and enforcement of relevant sections of respective agreements.

Private sector functions in the earlier mentioned arrangement include as follows:

1. Cargo handling, stevedoring, warehousing and delivering
2. Acquisition of cargo handling and operations related equipment
3. Development and maintenance of Port's superstructure
4. Maintenance of safety and security within the terminal
5. Towage, mooring. Bunkering, ship chandelling and ship repairs.

The Federal Ministry of Transportation were assigned the following functions:

1. Policy formulation and planning at national level of basic marine infrastructure
2. Legislation. International relations.

Still, the seaports contend with issues of performance, inefficient services, low service delivery. One ponders the role of facility management in alleviating these issues amid sound management of sophisticated or specialized structures, equipment, plants and machinery. In seaports such as Koko, Sapele and Burutu, these issues highlighted are even worse and this gives rise to high level of inefficiency, losses for NPA and our economy in general.

Given that this industry from a global viewpoint has not been averse to the adoption of new initiatives, Schaefers (1999) argues on the need for further studies on the interrelationship of growth and sustainability strategies and seaport service delivery towards efficiency of seaports. As a result of the present economy and the very urgent need to boost it, the seaport is a very important sector to be looked into. If well managed and adequate facility management and service delivery is established, it will give a big boost to the economy.

Therefore, the reason for this research came up. Consequently, the study serves as impetus to urgently go beyond speculation and empirically correlate facility management variable as a growth strategy with service delivery of seaports in South South Nigeria.

1.2 Statement of the Problem

The role of facility management in facilitating organizational performance, thereby providing competitive advantage, is widely acknowledged (Hardy, 2012) as researchers have considered space management (Oladejo, Umeh and Egolum, 2015) and level of support services management (Nwachukwu, Agu, Orji and Okolie, 2016), as a cornerstone of facility management in business organizations. It is noteworthy that FM is in existence in Nigerian Sea Ports given the concession to companies for the lease, procurement and management of NPA facilities on a Build, Operate and Transfer (BOT) model. However, the extent to which these variables that constitute professional facility management functions could impact on service delivery in Nigerian seaports are quite unclear and is yet to be established in indigenous literature.

Preliminary investigation shows that reported comparable poor service quality and lack of competitiveness of seaports in Nigeria and the customer dissatisfaction therewith cannot be separated from failure of the ports to attain their core values of efficiency, customer satisfaction, safety and security, and improved receptiveness. This is evident in the facility rot and collapse of Quay Apron at Warri Old Port Terminal B/Terminal 2, and the transfer of Associated Maritime Services (AMS) to Terminal A/Terminal 1 in Warri New Port as a result of defect in space management. Likewise, ports such as Associated Maritime Services do not make enough income to keep to their part of the concession agreement [Service level agreement (SLA)], while Koko and Burutu ports suffer from poor implementation of business development policy and abandonment of warehouses, structures and offices.

Maintenance and management of space are done in line with service level management agreement. However, the space management is not being handled the way it is supposed to. In as much as more warehouses, improved facilities and more funds are being generated, are the concessionaires actually doing enough? The answer is No. In seaports such as Koko and Burutu, space management and maintenance are worse. Many facilities are rotting away. The spaces are not utilized. The built up areas are not being managed well. So many abandoned structures, warehouses, offices etc. are seen. One cannot expect facility management and service delivery of these sea ports to be commendable. The loss of revenue in these Ports calls for an urgent attention. Sapele Port is also underutilized and faces the same problem.

Employment based on the above mentioned agreement was for Nigerians to be employed and trained for skilled manpower. Some concessionaires' employment schedule showed that they employed Nigerians as Artisans (unskilled labour) not professionals. Also, they are not training them meanwhile they have 'evidence' that they are training them but in the real sense, they are not. These issues mentioned are reasons for business development management and employee engagement.

Above all, under the concessional agreement, the concessionaires were to manage the space allocated to them by maintaining them, building offices (well-constructed), adding warehouses, improving stacking areas, car park areas, etc. However, some of the offices were built with wood, container, fabricated etc. which form temporary structures. These spaces are underutilized and are not exactly used as expected. These are in contrast with the specification of the agreement. As such, workplace programming is actually lacking and poses a challenge in these ports.

Therefore, an empirical assessment of the relationship between business development management and employee engagement in Nigerian seaports has become a matter of particular interest especially towards enhanced customer satisfaction in the industry. The essence of this research lies in the fact that Nigerian seaports have failed to live up to their vision and mission of being the leading Port in Africa and delivering efficient Port service in a safe, secure and customer friendly environment respectively (Aguome, Ogbuefi and Egolum, 2019). Thus, the study presents an empirical investigation into the relationship between professional facility management and service delivery of Nigerian seaports.

1.3 Aim and Objectives of the Study

The aim of the study is to examine the influence of facility management services on service delivery in seaports with a view to providing information that will enhance seaport service delivery towards the attainment of their core values. The specific objectives of the study are:

1. To determine the influence of space management on service delivery of seaports in South South Nigeria;
2. To examine the influence of workplace programming and receptiveness of the seaports in the study area ;
3. To ascertain the influence of business development management on employee engagement in the study area
4. To determine the influence of support services management on customer experience in seaports in South South Nigeria.
5. To propose a theoretical model for effective facility management service delivery in the study area

1.4 Research Questions

1. What is the influence of space management on service delivery of seaports in South South Nigeria?
2. What is the influence of workplace programming on receptiveness of South South Nigeria seaports?
3. What is the influence of business development management on employee engagement in South South Nigeria seaports?
4. What is the influence of support services management and customer experience in seaports in South South Nigeria?
5. What is the model proposed by the study for effective facility management service delivery of the study area?

1.5 Statement of Hypotheses

Ho1: There is no significant influence of space management on service delivery in South South Nigeria seaports.

Ho2: Workplace programming does not have a significant influence on receptiveness of the study area

Ho3: Business development management does not influence employee engagement in the Study area

Ho4: Support services management does not have a significant positive influence on customer experience in the study area.

1.6 Significance of the Study

The need for the study emanates from the scanty empirical evidence of the appraisal of the impact of facility management on service delivery in South South Nigeria seaports. Several extant literature on facility management in Nigeria are mainly preliminary and pedagogic; addressing issues such as definitions and scope, and few applications to education, banking,

healthcare and hospitality sectors. This study will toe a different path in going further to determine the effect of facilities management on service delivery of seaports in Nigeria using the Delta zone (Warri ports zone) South South Nigeria region as study area.

This study is significant to the government as it elucidates them on what they stand to gain if more attention is given to Nigerian ports as a source of IGR especially in the Nigerian economy The Nigerian Ports Authority on the other hand will be educated on the expectations of the ports' users and owner (government), which will be beneficial to them in the long run.

It will enlighten them on the best world standards of FM in the sea ports and how to upgrade and maintain their facility for improvement. It will present the major challenges faced in FM services of Nigerian sea ports which many researchers have not looked into. The study will also provide the necessary avenue and data for further research. The result and recommendation also will help those in the marine sector to improve in their service delivery.

1.7 Scope of the Study

The Nigerian Ports Authority has different ports located in some parts of the country. These include Tin Can Port in Lagos, Calabar Port, Delta Port, Port Harcourt and Onne Ports in Rivers State. However, the Ports are zoned into four: Lagos ports, Warri (Delta) Ports, Rivers Ports and Calabar Ports.

The study is limited to an appraisal of the impact of facility management on service delivery of seaports in Warri Zone which comprises Warri old and new Ports, Koko Port, Burutu Port, and Sapele Port .The Warri Ports zone was chosen as the study areas because some of the Ports such as Burutu and Escravos are across the sea on island.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

Facility management, which is the independent variable, service delivery which is the dependent variable form the basis of the study's conceptual review.

2.1.1 Facility Management

Many however have perceived Facilities Management in terms of conventional property management functions. What has been acknowledged by those concerned is the potentially comprehensive view of facilities management. Some definitions give much more prominence to the management of buildings and their functioning rather than the management of buildings for business and people. University of Arts London (2013) defines FM as the provision of support services needed to deliver safe, secure and operational environment required for the effective production of an organization's core product (in this case adequate security). Lending credence, United States Library of Congress (1992) sees the concept as a coordination of the organizational environment with the staff of the organization, and the business operations of the organization.

The two definitions see FM as a facilitator of safe and efficient business processes which are consistent with the goals of establishing the business. However, it is conspicuous that technological processes such as Information and Communication Technology remain missing in these definitions. Rondeau (1995) argues that the International Facility Management Association (IFMA) offers a more detailed view of the concept as long-range facility planning, tactical planning, reconstruction and/or renovation work, facility financial forecasting and management. Others are real estate transfer, space management, architectural and engineering planning and design, ICT services, and maintenance and operations of the physical plant. This more detailed aspect of FM was summarized into 3 categories of support

services management, property management, and ICT management (Royal Institute of Chartered Surveyors, RICS, 1993).

It can be said that the function of FM is to integrate these processes into a situation that guarantees the actualization of organizational goals. Lending credence, facilities management is an integrated approach to the operation, maintenance, improvement and adaptation of organizational buildings and facilities so as to create an environment that strongly supports its primary objectives (Barret and Baldry, 2003). One might argue that the adaptation here may allow for the integration of ICT, and if so, then the latter definitions have addressed the ICT puzzle. Yet, there are reasons why this study may not adopt them as a working definition of facility management. They seem to revolve around the functions of operations (services), property and Information and Communication Technology management. By so doing, it negates the importance of the human capital in the organization without which no FM will be successful.

These varied, and sometimes incomplete, approaches to viewing the concept are not without precedence. Offering a supporting cast to this assertion is the view that Facility Management is "all things to all people" (Udechukwu, 2012). This can only proffer evidence on the cohesiveness of FM. Hence, it is widely accepted that FM covers a wide range of facility services and the management of which can contribute to the relative success or the partial failure of an organisation's business (Chotipanich 2004). Still, it is important that a holistic and comprehensive definition is offered in this respect as the study takes an exploratory angle in determining the contribution of professional FM in improved service delivery of seaports in Nigeria.

The implication from the conceptual review of facility management is that FM has been incompletely viewed as an integration of: operations and employee (Chotipanich, 2004); operations, maintenance, property management (Atkin and Brooks, 2000; Okoroh, Jones and

IIozor, 2003); operations, property and ICT management (RICS, 1993); staff and workplace (USLC, 1992) etc. towards the actualization of business goals. The study in this regard offers a comprehensive definition of facilities management as the integration of real estate, workplace facilities, business and technological processes, and the human capital for the realization of the core business of the enterprise. This is adopted as the conceptual framework of FM for the study.

In our analysis of the effect of FM on service delivery of seaports in Nigeria, the study utilized relevant proxies for the two variables. Prior to a discussion on service delivery of seaports, it is pertinent to discuss the FM proxies that the study utilized. These are space management, workplace programming, support services management and business development management.

2.1.1.1 Workplace Programming (WP) (Computer Aided Facility Management CAFM)

Gattiker and Goodhue (2004) define workplace programming as information system package that configures and integrates information and information-based processes within and across functional areas in organizations. Kelly, Coffey and Parks (2000) are of the view that this system automates and structures an organization's business processes by furnishing reference models and process templates across the enterprise. In their contribution, Nah, Lav and Kuang (2003) argue that the workplace programming system is a packaged software system that enables an organization to manage the efficient and effective use of resources (materials, human resources and finances) by providing a total, integrated solution to its information processing needs. In doing this, workplace programming uses a centralized common database management system.

Hossain (2002) opines that these database management systems have integrated modules that enable seamless data flow to users through standard interfaces. In agreement, Stevenson

(2007) concurs that WP is the generic term used for facility management software that include modules such as production, finance, marketing and human resources and that allow companies to plan their goods and services. Hossein (2004) expanded the discussion of WP within the facilities management discourse with the assertion that WP implies systems that integrate internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc. One may add that this is made possible with an integrated software application. Lending credence, Loundon (2009) stresses that WP is a packaged business software system that lets an organisation automate and integrate the majority of its business processes, share common data and practices across the enterprise and produce and access information in a real-time environment.

The various functions typically supported by the system include manufacturing, management, inventory, shipping, logistics, distribution, invoicing, and accounting. Some solutions now embed customer relationship management functionality (Njihia and Mwirigi, 2014). A wide variety of business activities that include sales, marketing, billing, production, inventory management, human resource management, and quality control also depend on these systems. Put simply, WP system is a business management system that comprises integrated sets of comprehensive software which can be used, when successfully implemented to manage and integrate all the business functions and facilities within an organization (Sharp, Shehab and Supramaniam, 2007). This implies that Workplace Programming (WP) is a framework for organizing, defining, and standardizing the business processes necessary to effectively plan and control an organization so the organization can use its internal knowledge to seek external advantage. The study adopts this definition as the conceptual framework of WP due to its simple and yet comprehensive approach, and relevance to the facilities management discourse.

Patrick, Hossain and Rasheed (2002) observe that WP systems affect organizations and are implemented mostly to enhance organizational effectiveness. The main purpose for deploying WP systems is to improve control over organizational processes (Hanseth, 2001). WP systems are information systems packages that are configurable and integrate information and information-based processes within and across functional areas in organization (Gattiker and Goodhue, 2004). WP systems automate and structure an organization's business process by furnishing reference models and process templates across the enterprise (Allen, 2002). They are implementations of standard software modules for core business processes and are usually combined with specially tailored customization to provide competitive differentiation with the goal of providing integration and functionality across multi-functional and frequently multi-national organizations.

Implementing WP system involves a change management initiative, which includes a review of processes across the organization, and entails more than just installing stand-alone pre-written software (Skok and Legge, 2001). This assertion is another justification of its inclusion in the study as a facilities management proxy as modern facilities management is essentially change management driven.

Therefore, WP system as implied in this study, is a set of software applications that organize, define and standardize the business processes necessary to effectively plan and control an organization. This infers that WP applications are a computer model of a business, embodying the products and processes, information flow, procedures, and relationships between functions and activities. By so doing, it reinforces the ICT aspect of modern facilities management in business organizations. The ICT aspect requires a set of planning applications which provides recommendations for what must be accomplished in order to meet the forecasted demand and keep the business functioning smoothly. The implication is that planning is at the core of WP and is embodied in a top-down hierarchy of functions—

master planning, detailed material and resource planning, and execution (production control and purchasing).

Skok and Legge (2001) opine that master planning is the executive level function that sets the operational business plan (supports the sales and operations planning (S&OP) process). Detailed material planning (Material Requirements Planning or MRP) or Enterprise Resource Planning uses bill of material and inventory information to develop a complete manufacturing and purchasing plan for all products, assemblies, components and materials. At this same level, Capacity Requirements Planning (CRP) ties the production plan to resource availability—work centre capacity and loading. Clustered around the planning core functions, additional software modules provide support for executing the plan (production control, purchasing), gathering information for tracking status and feedback to planning (closed loop) and for accounting and control. Additional modules help manage customer orders and fulfilment, forecasting, costing (often integrated within the execution functions), master data (bills of material and routings), finance (accounts payable and receivable, payroll, general ledger, financial reporting and analysis), quality, shop-floor data collection, and more. This is basically a facilities management function (Ozili, 2014).

From the discourse, one can discern that a definition or discussion on WP systems is pointless without some mention of the technology infrastructure. Lending credence, Sharp (2004) argue that WP must be built on a single comprehensive database management system. Data analysis and reporting tools are also an essential part of the system, allowing full exploitation of the broad range of information that the system will manage. Another essential technology characteristic is internet connectivity and e-business links for e-commerce and customer service, supplier relationship management, and collaboration (Shokan, 2005). This is a concern in this part of the world with incessant power and internet connection outages. This may be a constraint to the employment of WP within the facility management function

given Siringinidi's (2005) argument that modern systems employ thin-client, highly graphical, tailorable role-based user interface with simple connections to and from Microsoft Office applications (Excel, Word) and e-mail.

Research by Burns (2009) suggests that where it is successfully applied, it enables companies to break down traditional organization's silos, replacing them with a tightly integrated horizontal structure in which strategy, organizational structure, process and technology are closely aligned. These new solutions provided functionality that encompassed other applications in addition to the core business of the organization. However, the aim remains to attain the set goals of the organization. An overview of Workplace Programming system including some of the most popular functions within each module is shown in figure 2.1.

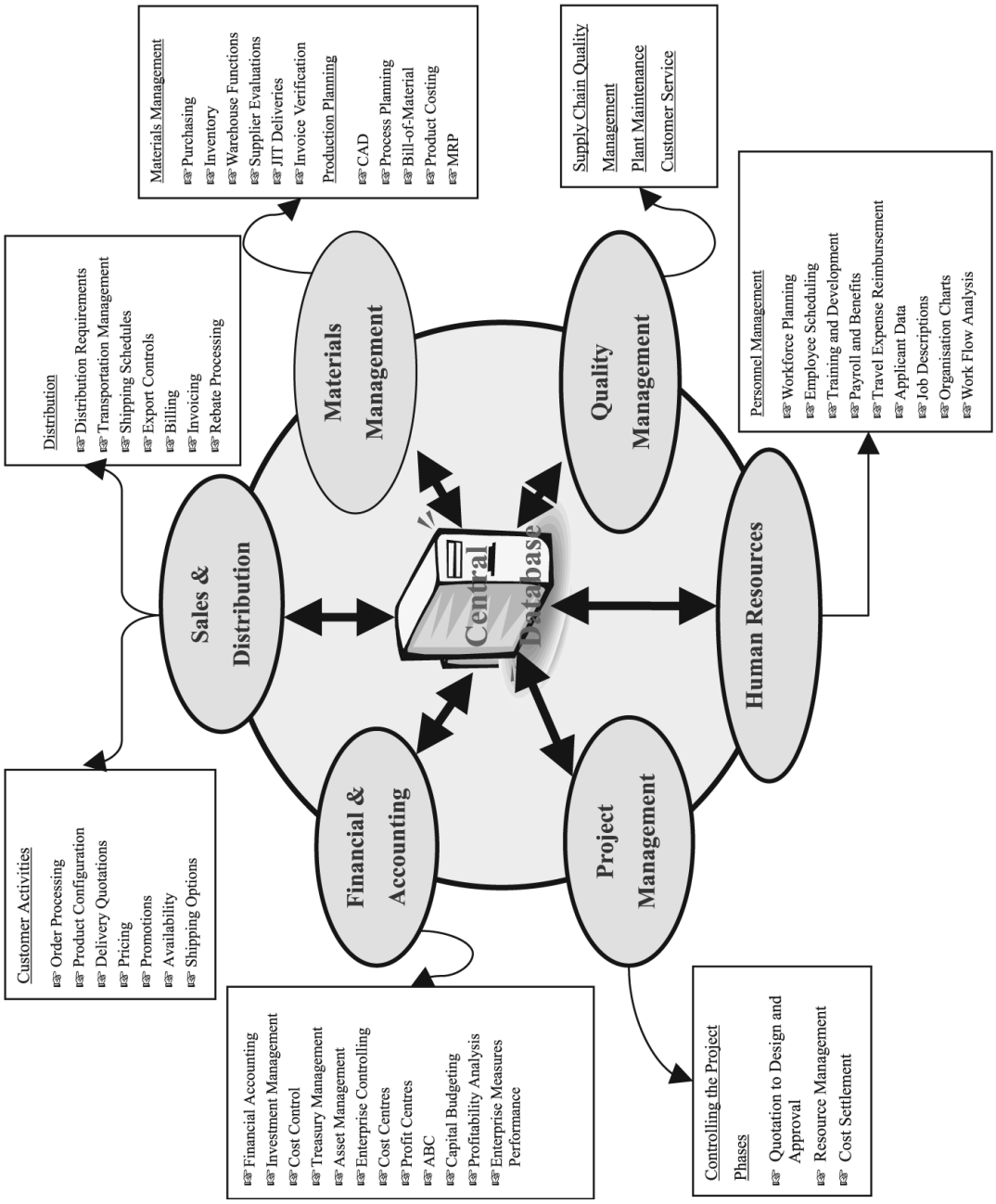

Figure 2.1: WP Systems Module

Source: Shehab, E.M. (2004). Workplace Programming: An Integrative Review. *Business Process Management, 10(4),359-386.*

Figure 2.1 shows that workplace programming integrates the ingredients that make up an organization along the core objectives of the organization. Lending credence, a typical system integrates all these functions by allowing its modules to share and transfer information by freely centralizing information in a single database accessible by all modules

(Chen, 2001). The various modules of WP include engineering data control (bill of materials, process plan and work centre data); sales, purchase and inventory; material requirement planning (MRP); resource flow management (production scheduling, finance and human resource management). Also, the model of WP includes areas such as finance (financial accounting, treasury management; enterprise control and asset management), logistics (production planning, quality management and materials management), human resources (personnel management, training and development) and workflow (integrates the entire enterprise with flexible assignment of tasks and responsibilities to locations, positions, jobs, groups or individuals) (Siriginidi, 2000).

Although a WP system is a pure software package, it embodies established ways of doing business. Studies have likened it to Computer Aided Facility Management (CAFM) and illustrated it as not just a pure software package to be tailored to an organization but an organizational infrastructure that affects how people work. It "imposes its own logic on company's strategy, organization, and culture" (Lee and Lee, 2000). For example, SAP R/3, as one of the major WP vendors, currently stores over 1,000 predefined processes that represent financial, logistics and human resources best practices in a repository called "business engineer" (Scott and Kaindl, 2000).

The normal symptoms that would suggest the need for WP would be lack of coordinated activity, excessive need for reconciliation, flouting of controls, poor customer response levels and operations falling short of industry benchmarks in terms of cost controls and general efficiency. This is a dominant feature in Nigerian seaports (Cetin et al., 2010). The benefits of WP adoption thus include: better customer satisfaction, increased flexibility, reduced quality costs, improved information accuracy and improved decision making capability (Siriginidi, 2000). This deployment has two issues: selection and implementation. The system selection process is difficult. While most WP packages have similarities, they also

have fundamental design differences. The selection involves listening to the views of various people whose involvement would be essential and the criteria go beyond technical issues such as proven experience of the supplier in the desired industry, along with support infrastructure. Selecting a system that is simple offers smart tools for system administration, a consistent interface (supports, graphical and character) that could reduce the implementation time. The various selection criteria of WP systems are well documented.

From the clients' viewpoint, the selection factors to be considered as addressed by Siriginidi (2000), include the stability and history of the WP supplier, track record of WP sales, implementation support from suppliers and improvement in WP packages. In another study, Bernroider and Koch (2001) discuss the results from an empirical study concerning differences in the characteristics of the WP system selection process between small or medium and large sized organizations. A total of twenty-nine (29) different WP selection criteria have been identified; the adaptability and flexibility of the software is more highly valued by smaller organizations, as these advantages may be unique business processes that need to be preserved.

A short implementation time and therefore, lower costs are also given more importance, as resources are a bigger issue. The high importance attributed to fit with current business procedures, flexibility, costs, user-friendliness of the system and short implementation has also been found in another empirical study of midsize companies conducted by Everdingen, et al (2000). With regard to evaluating WP suppliers, Everdingen et al. (2000) also report that mid-sized organizations tend to focus on product characteristics such as functionality and quality of the products and services rather than on characteristics of the supplier of the product. At the same time, the speed of implementation, the possibilities of the product for interfacing with other applications and the price of products and services are also important supplier selection criteria.

Sprott (2000) identifies four incremental selection criteria that organizations should use to choose the supplier of an WP application. These are applicability, integration, adaptability and upgradability. Rao (2000) also identifies the criteria for the selection of WP systems. These criteria are affordability, domain knowledge of suppliers' local support, technical upgradability, and incorporation of latest technologies. Chen (2001) observes several critical planning issues prior to the WP adoption decision, including needs assessment and choosing a right WP system matching business process with WP system, understanding organizational requirements and economic and strategic justification. He reported that competitive strategy, targeted market segments, customer requirements, operating environments and available resources all enter into the decision of WP adoption.

Verville and Halington (2002) investigate the decision process for selecting WP system through a case study. They identify three distinct types of an WP system evaluation to be vendor, functional and technical. Criteria such as vendor's reputation, financial stability, long-term viability and vendor's corporate vision and direction were factors that were considered during the evaluation. The criteria reviewed above show that most of the studies have focused on the European business. The homogeneity of the business market among different countries due to globalization and integration also render the selection criteria relevant and valid in Nigeria business environment.

So, since WP systems and packages are attracting increasing attention from both academic and industrial communities, a review of the recent development of WP is needed to make decisions concerning WP selection and implementation and to aid in guiding more research. All organizations, regardless of whether they are large or small, profit seeking or non-profit, use some combination of resources to achieve their goals. These resources, or inputs, are generally obtained from the organization's environment. Some of these resources are human,

financial, physical, information etc. Managers are responsible for combining and coordinating these resources to achieve the organization's goals.

2.1.1.2 Support Services Management

Amaratunga, Kulatunga and Baldry (2005) defines facilities management as "a process by which an organisaiton plans, delivers and sustains excellent support services in a quality environment to meet strategic business objectives at best cost". These support services were identified as mail services, catering services, car fleet, reception, office administration, refuse disposal, travel arrangement, vending, security, furniture, car park management etc. Cain (2004) argues that effectively planned facilities and quality support services can generate significant business or organisational returns. Lending credence, Abba (2014) avers that ensuring that these support services are available and adequately rendered in the right form, right quality and at the right cost, to yield the desired results of the organisation is the task of facility management.

While each organization varies in terms of relevant support services, their role in attaining the set goals of the organization is crucially important. Spedding and Homes (1999) equally stress that the major goal of facilities management is to ensure that the support services of an organization are packaged and managed in such a way that the core activity of the organization is achieved excellently. Their position is reinforced by the contribution of Durodola (2009) on application of facilities management in the hotel industry, that support services, business development, information and telecommunication technology, and space management are the core components of facilities management.

2.1.1.3 Business Development Management

The constantly changing business environment requires firms to strive for superior competitive advantages via dynamic business plans which incorporate creativity and innovativeness. This is essentially important for their long term sustainability. The Bible

book of Ecclesiastics has also contributed to the discourse with the assertion that "there is nothing so much worth as a mind instructed". Still, until recently there has been a general resistance to investment in staff development in organizations because of the presumption that employees hired under a merit system are qualified and trained for their jobs. This assumption has been jettisoned as the need for business development management became obvious both in the private and the public sectors (Okotoni and Erero, 2005) especially in a dynamic and competitive business environment. Many organizations have come to recognize that developing the business competences of the human capital offers a way of "developing skills, enhancing engagement and quality of work, and building worker loyalty to the firm".

Undoubtedly, human capital which simply means workers that are available for a particular kind of work plays a significant role in enhancing firms' competitiveness and thus should be developed (Maryarnu, 2007). At a glance, substantial studies were carried out on human capital and their implications on employee performance were widely covered and obviously, human capital enhancement will result in greater competitiveness and performance (Agarwala, 2003; Guthrie, Petty and Johnson, 2002). Meantime, there is a significant relationship between innovativeness and organization performance under the human capital philosophy (Lumpkin and Dess, 2005).

In the view of Azika (2004), human capital constitutes the most important asset of an organization. No organization ever functions without human resources or people employed to work in it. Besides, no organization functions effectively and efficiently without competent personnel working in it. Dada (2005) observes that the importance of human capital to an organization cannot be over emphasized. They drive other resources of the organization towards organizational goals. This implies that other resources cannot function in the organization without being manipulated by human resources or capital. Onodugo (2000) argues that human resources are central and critical to any organizational success and as

such, they should be carefully hired, systematically developed, consulted and adequately compensated within the work place. It is believed that in so doing they will willingly put in their best.

A crucial point raised by Onodugo (2000) is that of systematically developing the human capital in organizations. This is echoed by the argument of Cherrinton (2008) that one particular area of personnel work, which enhances the effective use of human resources, is human capital development (Cherrington, 2008). Human capital development has become such an important area of contemporary management because of the functional capabilities it represents in both the public and private sectors of the economy. It comprises interrelated terms often used interchangeably in literature and diverse discourse. These subjects are very important aspects of the human resources management in an organization comprising human capital investment, training and development, manpower development etc.

Nwachukwu (2007) opines that business development is a management tool that effectively develops potentials of an essential organizational resource. For the purpose of this study, the organizational resource here is the seaport employee. This implies that business development management is essential for the continued improvement of customer satisfaction by an organization. This view correlates to the submission of McNamara (2006) who recounts that the function of BDM is to bring about behavioral changes required to meet management goals. Nwachukwu (2007) opines that in corporate existence, new line employees need BDM before they can take up their responsibilities while older employees require the programme both to keep them alert to the demand of their present jobs and to fit them to transfer and promotions.

Ukah (1996) sees development then, as the improvement of labour qualities in which people's ability to think and act are broadened in contributing to an increase in their productivity and employment. He highlighted these qualities as knowledge, skills, ideas,

health and other capabilities resulting from investment in formal academics or vocational education and medical care. Olu (2008) argues that business development management is also known as human resources development and it is not a separate activity to be handed over to a specialist and then forgotten or ignored. He asserts that the successes of development programmes depend on the degree to which all levels of management are committed to it. The feeling is that development should be regarded as a range of related activities, rather than an all-embracing programme.

In favour of similarities between both, several scholars argue that the purpose for human capital development is to supply specific knowledge, skills and attitudes needed to meet organizational goals (usually the performance standards of productivity) while the objective of business development management is to supply individuals with the required knowledge to meet organizational goals in specific portion (Ojo, 2008). Lending credence, Peretomode (2009) asserts that business development management is the training and re-training of an individual so as to gain efficiency on the job. His argument points to the view that employees may become rustic and obsolete if they do not update themselves with new work methods, skills and knowledge about their work, the organization and the environment. The entire organization may also become rustic if it lacks a systematic means of continually developing and renewing organizational capabilities.

Oladunni (2000), in his contribution stressed that, "the objective of business development management is the promotion of human learning to make employees adaptable and suitable to organizational requirements". This implies that BDM is like an umbrella where the other nomenclatures of skill improvement come under. Nwachukwu (2007) opines that it is a management tool that trains and effectively develops potentials of human resources in an organizational setting. The study adopts this framework for BDM due to its relevance to the discourse.

The study in its analysis of the effect of business development management on employee engagement in seaports used employee training, education, knowledge and skill as indices of BDM in line with the works of Olu (2008), Cherrington (2008), Nwachukwu (2007), and Peretomode (2009). The indices are reviewed as follows:

i. Training

One particular area of facilities management, which enhances the effective use of human resources, is employee training (Cherrington, 2008). Training has become such an important area of contemporary facilities management because of the functional capabilities it represents in both the public and private sectors of the economy. Employee training is a very important aspect of the human resources management in an organization. This view correlates to the submission of McNamara (2006) who recounts that the function of training is to bring about behavioral changes required to meet management goals. Nwachukwu (2007) opines that in corporate existence, new line employees need some training before they can take up their responsibilities while older employees require training both to keep them alert to the demand of their present jobs and to fit them to transfer and promotions. From these views, one can say that training is geared towards improved employee engagement through skills and knowledge acquisition, enhanced experience and attitudinal change.

ii. **Education**

Education is "a process by which an individual is encouraged and enabled to develop fully his innate potentials; it may also serve the purpose of equipping the individual with what is necessary to be a productive member of society (Adepoju, 2004). Through teaching and learning the individual acquires and develops knowledge, beliefs and skills. The definition brings out the three requisites of a holistic education: intellectual, practical education, and moral education. It is a process through which the employee realizes his potentials and uses same for self-fulfillment in the service of himself and others (Ocho, 2000; Ngwoke, 2006;

Ejiofor, 2003; Enyi, 2004). Ukeje (2004) avers that it is the sum total of all the processes by which an employee develops the abilities, attitudes and other forms of behaviour which are of positive value to the organization in which he works.

Essentially the fact that we can glean from all these definitions is that functional education embodies all the processes by which individuals are helped to internalize acceptable norms and values; acquire relevant skills, knowledge, attitudes, and capabilities designed to promote individual's usefulness to themselves, workplace and the society. Put succinctly, Chidomere (2007) sees education as the building block for social and economic construction. Yet, citing the relevance of business development management, Odimegwu (2005) proffers that knowledge acquired through education, however, needs to be nurtured through training and development programmes to awaken the diverse individual's talents to ensure that such potentials are optimally developed, harnessed and utilized.

iii. Skill

Employee job related skill represents a group of essential abilities that involve the development of a knowledge base, expertise level and mindset that is increasingly necessary for success in the modern workplace. Hansen and Hansen (2016) while seeing employee job related skills as critical tools essential to survival and success in the workplace outlined typical illustrations of such skills. These are as follows:

1. **Exceptional listener.** Communicator who effectively conveys information verbally and in writing.

2. **Analytical/Research Skills.** Deals with your ability to assess a situation, seek multiple perspectives, gather more information if necessary, and identify key issues that need to be addressed. Sample bullet point describing this skill: Highly analytical thinking with demonstrated talent for identifying, scrutinizing, improving, and streamlining complex work processes.

3. **Computer/Technical Literacy.** Almost all jobs now require some basic understanding of computer hardware and software, especially word processing, spreadsheets, and email. Sample bullet point describing this skill: Computer-literate performer with extensive software proficiency covering wide variety of applications.

4. **Flexibility/Adaptability/Managing Multiple Priorities.** Deals with your ability to manage multiple assignments and tasks, set priorities, and adapt to changing conditions and work assignments. Sample bullet point describing this skill: Flexible team player who thrives in environments requiring ability to effectively prioritize and juggle multiple concurrent projects.

5. **Interpersonal Abilities.** The ability to relate to your co-workers, inspire others to participate, and mitigate conflict with co-workers is essential given the amount of time spent at work each day. Sample bullet point describing this skill: Proven relationship-builder with unsurpassed interpersonal skills.

6. **Communications Skills (listening, verbal, written).** By far, the one skill mentioned most often by employers is the ability to listen, write, and speak effectively. Successful communication is critical in business.

7. **Leadership/Management Skills**. While there is some debate about whether leadership is something people are born with, these skills deal with your ability to take charge and manage your co-workers. Sample bullet point describing this skill: Goal-driven leader who maintains a productive climate and confidently motivates, mobilizes, and coaches employees to meet high performance standards.

8. **Multicultural Sensitivity/Awareness.** There is possibly no bigger issue in the workplace than diversity, and job-seekers must demonstrate a sensitivity and awareness to other people and cultures. Sample bullet point describing this skill: Personable professional whose

strengths include cultural sensitivity and an ability to build rapport with a diverse workforce in multicultural settings.

9. **Planning/Organizing.** Deals with your ability to design, plan, organize, and implement projects and tasks within an allotted timeframe. Also involves goal-setting. Sample bullet point describing this skill: Results-driven achiever with exemplary planning and organizational skills, along with a high degree of detail orientation.

10. **Problem-Solving/Reasoning/Creativity.** Involves the ability to find solutions to problems using your creativity, reasoning, and past experiences along with the available information and resources. Sample bullet point describing this skill: Innovative problem-solver who can generate workable solutions and resolve complaints.

11. **Teamwork.** Because so many jobs involve working in one or more work-groups, you must have the ability to work with others in a professional manner while attempting to achieve a common goal. Sample bullet point describing this skill: Resourceful team player who excels at building trusting relationships with customers and colleagues.

12. **Honesty/Integrity/Morality.** Employers probably respect personal integrity more than any other value, especially in light of the many recent corporate scandals. Sample bullet point describing this skill: Seasoned professional whose honesty and integrity provide for effective leadership and optimal business relationships.

13. **Dedication/Hard-Working/Work Ethic/Tenacity.** Employers seek job-seekers who love what they do and will keep at it until they solve the problem and get the job done. Sample bullet point describing this skill: Productive worker with solid work ethic who exerts optimal effort in successfully completing tasks.

14. **Dependability/Reliability/Responsibility.** There's no question that all employers desire employees who will arrive to work every day — on time — and ready to work, and who will

take responsibility for their actions. Sample bullet point describing this skill: Dependable, responsible contributor committed to excellence and success.

15. **Loyalty.** Employers want employees who will have a strong devotion to the company — even at times when the company is not necessarily loyal to its employees. Sample bullet point describing this skill: Loyal and dedicated manager with an excellent work record.

16. **Positive Attitude/Motivation/Energy/Passion.** The job-seekers who get hired and the employees who get promoted are the ones with drive and passion — and who demonstrate this enthusiasm through their words and actions. Sample bullet point describing this skill: Energetic performer consistently cited for unbridled passion for work, sunny disposition, and upbeat, positive attitude.

17. **Professionalism.** Deals with acting in a responsible and fair manner in all your personal and work activities, which is seen as a sign of maturity and self-confidence; avoid being petty. Sample bullet point describing this skill: Conscientious go-getter who is highly organized, dedicated, and committed to professionalism.

18. **Self-Confidence.** Look at it this way: if you don't believe in yourself, in your unique mix of skills, education, and abilities, why should a prospective employer? Be confident in yourself and what you can offer employers. Sample bullet point describing this skill: Confident, hard-working employee who is committed to achieving excellence.

19. **Self-Motivated/Ability to Work with little or no Supervision.** While teamwork is always mentioned as an important skill, so is the ability to work independently, with minimal supervision. Sample bullet point describing this skill: Highly motivated self-starter who takes initiative with minimal supervision.

20. **Willingness to Learn.** No matter what your age, no matter how much experience you have, you should always be willing to learn a new skill or technique. Jobs are constantly changing and evolving, and you must show an openness to grow and learn with that change.

Sample bullet point describing this skill: Enthusiastic, knowledge-hungry learner, eager to meet challenges and quickly assimilate new concepts.

It is believed that the aim of business development management is to develop these capabilities towards the actualization of the organizational goal (Peretomode, 2009). Using these as indices, the study explored the effect of facilities management themed employee development programme on employee engagement in Nigerian seaports.

2.1.1.4 Space Management

The growth of large national and international organisations, together with improved communications, mobility of people, and information technology, means that attention has now begun to focus more on the connections between buildings and people. Handy (2012) argues that two of the most common services provided under the FM umbrella are master facility documentation and space management which he believes is essentially needed by every facility. He further asserts that much of this takes the form of floor plans with information organized by system or engineering trade. There are some additional facility drawings that show riser diagrams, control diagrams and equipment schedules.

The process begins with the establishment of architectural base plans, which also include reflected ceiling plans. MEP (mechanical, electrical, and plumbing) drawing information is then overlaid to the architectural base plans – system by system. Mechanical drawings include ductwork and hydronic (HVAC) water. Electrical includes power, lighting and systems (mainly fire alarm). Plumbing includes domestic water, sanitary (waste and vent), and med gas. With the ARCHIBUS Web Central application, system zones can be highlighted along with the shutoff points that control the systems. This puts vital information that operations, maintenance and facility directors need in one central location.

In addition to documenting the facility's systems, Hardy (2012) added that FM services also provide information on space management. Space management begins with an

inventory – physically viewing all the spaces to be included in the planning. The layouts are documented to scale in CAD or BIM (typically in 2D, but 3D is becoming more prevalent). The process starts by adding area polygons that connect to a database where additional space and maintenance attributes can be stored and maintained. The data structure for rooms needs to be organized by campus, building, floor and room. This helps simplify the information, so it can be used to plan for maintenance and repairs in a budget. From there, an organization can identify information like space use per floor and bed tracking designations. His major conclusion is that facilities management is a critical service that maintains value and improves the operations of a building. Handy's (2012) study is relevant to the first objective of this study and therefore may be presented under the empirical discourse section. In view of this, the study within its first objective will attempt to infuse information and communication technology issues in analyzing the relationship space management employee efficiency.

2.1.2 Service Delivery

The dependent variable of the study is service delivery and the choice of service delivery as a goal of facilities management is supported by the works of Lucas (2016), Ooncharoen and Ussahawanitchakit (2008) and Gebauer, Edvardsson and Bjurko (2010). Observably, the highly competitive business environment ensures that organizations go to great lengths to differentiate themselves from one another. Lucas (2016) argues that this is usually approached from the perspective of service delivery analysis. In the same vein, Ooncharoen et al. (2008) and Gebauer et al. see service delivery as a prerequisite for organizational excellence and business performance.

Seeing the concept as both intrinsic as well as extrinsic, Grönroos (2007) opines that it refers to the act of giving good service to internal as well as ultimate, external customers. This implies that service delivery not only refers to organizational practices but also relates to the

approach and attitude of both organization and employees. This is supported by the view that an organization with a sound service culture develops positive employee attitudes towards giving service to their customers (ibid.). This is consistent with the service-profit chain theory (Heskett and Schlesinger, 1994; Homburg, Wieseke and Hoyer, 2009) which suggests that organizational performance is derived from customer satisfaction and loyalty created by employee performance of service delivery, which in turn is influenced by employee satisfaction and commitment (Heskett and Schlesinger, 1994).

Zeithaml, Bitner and Gremler (2009) argue that this very rich definition has three main implications for service providers. First, service delivery exists when there is an appreciation for good service. Second, good service is given to both internal and external customers. This is an implication that service delivery starts from management and tickles down to the employees, from whence it now expands to the customers. The argument is that only service delivery is best achieved where the employee rendering same is adequately motivated. Thirdly, good service is a way of life and provided naturally as it is a crucial norm of the organization. The third implication of service providers by Zeithaml et al. (2009) concurs with earlier assertion on the role of motivation.

The service delivery construct has been conceptualized with service climate, service quality, service culture, service reliability, service training and service orientation (Ostrom, 2010; Bowen, Schneider and Kim, 2000). Ostrom (2010) likens service climate to a tangible surface layer of service delivery. On the other hand, service orientation refers to the background of organizational climate with which service is rendered in an organization (Urban, 2009). Lending credence, service orientation is seen as personal characteristics, traits, and behaviour determinants of employee service providers necessary to deliver good services (Chait, Carraher and Buckley, 2000; Vella, Gountas and Walker, 2009). Some researchers have even used the dimensions of service orientation to measure service climate

(Solnet and Paulsen, 2006), and this highlights their similarities within the service delivery discourse.

Pitilakis (2011) compiled the suggestions of several scholars on port service delivery constructs as shown in Table 2. 1.

Table 2.1: Port Service Delivery Indicators

Indicator	***Type***	***Description***		***Reference***
1	Service time of ship (average total time; service time)	Port quality indicator; operational indicator; productivity indicator (element measure – berth); ship processing measure.	- Average time needed to transfer different types of cargo from ship mooring to the departure of hinterland transport of the port production chain. Can be estimated for each one of the following categories: dry bulk, liquid bulk, break bulk, and container. - Vessel service time (hours); - Average service time per vessel at each berth.	UNCTAD (1976); Le-Griffin and Murphy (2006); Lawrence (1973); Pachakis and Kiremidjian (2004); Shabayekand Yeung (2002).
2	Fraction of time berthed ships worked	Operational indicators		UNCTAD (1976)

3	Berth time (average vessel time at berth)	Operational indicators	- = {(lifts per ship) + (number of crane assigned) + (Q/C productivity)} + (berthing and un-berthing time); - Total hours alongside berths divided by the total number of vessels berthed.	Nam, Kwak and Yu (2002); Chung (1993); Tahar and Hussain (2000).
4	Ship working rate	Efficiency parameter		Tongzon (2001)
5	Arriving late	Operational indicators		UNCTAD (1976)
6	Time spent in the queue			Tahar and Hussain (2000)
7	Overall average service times of the operators	Operational indicators	- Overall average service times of the operators within the study period; - Number of vessels going to each operator in	Shabayek and Yeung (2002)

			each month; - Average service time of each operator (hour).	
8	Pre-berthing detention	Efficiency parameter; —Port discharge process performance indicators.	- The time during which a ship waits before getting entry into a berth. Can be estimated for each one of the following categories: dry bulk, liquid bulk, break bulk, container. - Ship‘s waiting time to be berthed; - Waiting time before berthing.	Peter and Paixão Casaca (2003); Tahar and Hussain (2000).
9	Overall transit time	—Port discharge process‖ performance indicator		Peter and Paixão Casaca (2003); McLean and Biles (2008)
10	Tow waiting time	Operational indicators		Bush et al. (2003)

11	Average waiting rate	Total hours of vessels waiting to berth divided by total hours alongside berths		
12		On time deliveries		
13		Time ships spend empty and/or unloaded		
14		Time ships spend loaded and waiting		
15	Average waiting (idle) time (waiting time of ship (day) or idle time at berth (percentage))	Operational indicator; efficiency parameter; cargo transfer product indicator; ship processing measure; ―port discharge process‖ performance indicators.	- The time when a vessel remains idle at berth expressed as a percentage of the total time of the vessel at berth. Lower idle time would mean early completion of cargo handling and readiness for more vessels. Can be estimated for each one of the following categories: dry bulk, liquid bulk, break bulk, container. - Ship‘s waiting time to start	UNCTAD (1976); De Langen, Nijdam and Horst (2007); Lawrence (1973); Peter and Paixão Casaca (2003); Nam et al. (2002); Pachakis and Kiremidjian (2004).

			discharging operations; - Boat waiting time (idle time).	
16	Average waiting (idle) time for berth	Operational indicators	Total hours of vessels waiting for berth divided by total number of vessels berthed	Chung (1993)
17	Average waiting (idle) time due to rain	Total hours of work stoppage due to rain divided by the total number of vessels worked		
18	Average waiting (idle) time other causes	Total hours of stoppage attributed to the cause divided by the total number of vessels worked		
19	Dwell time	Total number of cargo tons multiplied by days in port divided by total tonnage of cargo handled		
20	Average vessel time outside	Total hours in port - total hours berth alongside divided by total number of vessel calls		
21	Time waiting for cargo to be transferred from one mode to another	―Port discharge process‖ performance indicators	Time in storage and time from quay to storage	Peter and Paixão Casaca (2003) Peter and Paixão Casaca (2003)
22	Time for goods to be cleared			

23	Ship‘s time spent in route deviations	
24	Time spent carrying out ship repairs due to engine breakdowns	
25	Total time delays	
26	Time spent in transferring cargo from storage to net mode of transport	- Time spent in transferring cargo from storage to net mode of transport (including loading time); - Storage time at ports.
27	Awaiting departure of next mode of transport	Time spent by cargo awaiting departure of next mode of transport (road or rail)
28	Time spent in carrying out logistics activities required by customers that add value	

Source: Pitilakis (2011).

Another service delivery construct is of service training, which refers to the knowledge and skill development employees are subjected to enhance their ability and willingness to deliver quality services to customers (Lytle and Timmerman, 2006). The study identified this as a contributor to service delivery with the inclusion of business development as a facility management proxy for improved employee engagement in Nigerian seaports. This move is supported by Dietz, Pugh and Wiley who assert that service training is an essential component of quality improvement in service-centred organizations through the creation of service delivery standards. Service quality which was utilized in the objectives of the study as initiated by the research problem was fully discussed in a separate section.

2.1.2.1 Service Quality

In the last two decades, service quality has attracted significant attention from researchers, practitioners due to its close relationship with service delivery (Gonzalez, Comesana and

Brea, 2007; Hallowell, 1996; Ladhari, 2009; Lassar, Manolis and Winsor, 2000; Yee, et al., 2009). Several perspectives can be used to explain why service quality may lead to better service delivery. First, based on the resource-based view theory of the firm (Barney, 2001; Barney, Wright and Ketchen, 2001; Yang, 2008), service quality is regarded as a crucial firm resource that is valuable and inimitable by competitors, thus is likely to lead to positive outcomes. Social exchange theory (Blau, 1968; Sierra and McQuitty, 2005) provides further insights into how service quality may influence customer based service delivery evaluation. Thus, persistent service quality engraves in service employees the will to go extra mile to serve the customers' needs which in turn affect customers' perception of service delivery (Sierra and McQuitty, 2005).

2.1.2.1.1 Measuring Service Quality in Seaports

The vast majority of research into port performance has focused on service delivery (Whittle, 2012). As services are intangible, heterogeneous, inseparable and perishable, the measurement of service quality is more difficult and different compared to that of product quality (Sureshchandar, Rajendran and Kamalanabhan, 2001). The conceptualization, measurement and modelling of service quality, therefore have received considerable attention in the services marketing literature. Studies have looked at measures for service delivery like rate of tons or containers per hour loaded onto ships, or the terminal's performance on other criteria, such as trucking services, gate congestion, availability of stevedore services, and so on, that are deemed to influence effectiveness of port services in determining the long-term success of the port. This means a shift toward understanding and better meeting customer needs that go beyond basic efficiency and effectiveness by assessing the effectiveness of port organizations using a set of effectiveness measures applicable to seaports. First, they have to be determined.

The essence of service quality in the service delivery literature is evident in our background articulation and statement of the problem which regrettably exposed the poor service delivery in Nigerian seaports. In addition to the theories examined earlier, it is necessary to review service quality model which is one of the most common measurements of service quality. This is referred to in literature as SERVQUAL Model. The SERVQUAL model is one of the initial and most commonly used tools to measure service quality and consists of five dimensions: Reliability, Assurance, Tangibles, Empathy, and Responsiveness (Parasurman, 1988). Due to these dimensions, it has also been referred to as the RATER Model. However, the model has been criticized for lacking specifics especially with regards to seaports.

Various authors also found that the dimensions of service quality indicated in SERVQUAL are either too many or too few for the specific context of their research. This stresses the view that despite numerous studies on service quality measurement in various industries, little research has been conducted in the maritime industry in general and ports in particular. Rather than focusing on detailed service quality measurements, most maritime-related literature researched the issue of carrier and port selection. Among a few relevant studies in this respect, Ugboma (2004) found that all five SERVQUAL dimensions were valid. Meanwhile, efficiency, timeliness, and security were found by Lopez and Poole (1998) to contribute to the quality of port services. Brady and Cronin (2001) identified the aspects of service quality including "rational quality", "result quality", and "physical environmental quality".

Brady et al. (2001) further developed sub-factors of the port service quality, for example, the "relational quality" includes port sales, customer relations and distribution network, while the "exogenous quality" indicates the volume of cargo flows, hinterland, and the size of free trade zones (FTZ) (Cho, 2010). Ha (2003) identified a group of port service quality factors, including "ready information availability of port-related activities," "port location," "port

turnaround time," "facilities available," "port management," "port costs," and "customer convenience." On another note, separate measurement tools of port service quality comprising "endogenous quality," "exogenous quality," and "relational quality" were also developed (Cho, 2010). They explored the effects of port service quality on customer satisfaction, loyalty and referral intentions.

A few subsequent studies focusing on the efficiency and service quality of Asian ports (Lee, 2000; Song and Yeo, 2004) have utilized these frameworks and evaluated customers' reaction to various factors of service quality (Cho, 2010). However, these studies neglected the critical dimension of social responsibility, which can enhance or damage the image or reputation of organizations and, hence, the perceived quality of their services. This fact is particularly important in the context that many ports around the world are now attempting to implement green port initiatives. It is pertinent to note that there is no evidence that Nigerian ports are following in this wake.

Due to the perceived poor implementation of the SERVQUAL model in seaports, Thai (2008) developed and validated a measurement model (ROPMIS) to explore the concept of service quality in maritime transport. This model consists of the following six dimensions: Resources, Outcomes, Process, Management, and Image and Social responsibility. This model incorporated newly developed elements, such as management-, image-, and social responsibility-related quality dimensions, on the basis of a comprehensive review of various service quality dimensions and factors in previous studies. Compared with the SERVQUAL model, the ROPMIS model is more applicable to the maritime industry because it incorporates the image and social responsibility aspects that are critically important in port service delivery (Thai, 2008). The study adopts this model as a measurement tool for service quality in Nigerian seaports due to its management integration which bears relevance to the facilities management discourse.

2.1.2.2 Customer Experience

The study identifies the role of the customer in service delivery with the inclusion of customer outcomes as a proxy for service delivery in seaports. The literature in marketing, retailing and service management historically has not considered customer experience as a separate construct. Instead researchers have focused on measuring customer satisfaction and service quality (Parasuraman, Zeithaml, and Berry, 1988; Verhoef, Langerak, and Donkers, 2007). However, it is not that customer experience has never been considered. Most notably, Holbrook and Hirschmann (1982) theorized that consumption has experiential aspects (Babin, 1994). Schmitt (1999) has explored how companies create experiential marketing by having customers sense, feel, think, act and relate to a company and its brands. And, Berry, Carbone, and Haeckel (2002) suggest that in order for organizations to compete by providing customers with satisfactory experience they must orchestrate all the "clues" that people detect in the buying process.

Generally, customer experience is known as an outcome of service delivery, which means that it is related to the services provided to the customer in a positive manner. The level of customer experience is also believed to be enhanced, along with an increased level of perceived quality of the product or service delivered. In particular, customer experience is considered to be an intrinsic variable that explains returning customers and their post-behaviors of purchasing products and services (Oliver, 1980; Lee, 2000; Szymanski, and Henard, 2001). Numerous studies in many service sectors confirmed the positive relationship between service delivery and customer experience (Brady and Robertson, 2001) with some conflicting evidence (Rosen and Suprenant, 1998). The few studies in the transportation sector, including aviation (Anderson, 2009) and high-speed railways (Cao and Chen, 2011), revealed a positive relationship between service delivery and customer experience.

Building from these insights, recent definitions of customer experience include that "The customer experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial, physical, and spiritual)" (Gentile, Spiller, and Noci, 2007). A second and related definition is that "Customer Experience is the internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company's products, service or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, reviews and so forth." (Meyer and Schwager, 2007).

Adding to the foregoing, we submit that the customer experience construct is holistic in nature and involves the customer's cognitive, affective, emotional, social and physical responses to the retailer. It includes elements of customer intelligence, account management and continuous improvements (Susi and Jawaharrani, 2010). Successful service delivery works on the basis that the customer is a part of the creation and delivery of the service and then designs processes built on that philosophy – this is called co-creation. This experience is created not only by those elements which the retailer can control (such as service interface, retail atmosphere, assortment, price), but also by elements that are outside of the retailer's control (like influence of others, purpose of shopping). Additionally, we submit that the customer experience encompasses the total experience, including the search, purchase, consumption, and after-sale phases of the experience, and may involve multiple retail channels. This implies that customer experience is influenced by customer satisfaction with services rendered.

Primarily in marketing, customer satisfaction is defined as the global evaluation of relationship fulfillment by a firm (Dwyer and Oh, 1987) or the positively affected state resulting from the assessment of a firm's working relationship (Farrelly and Quester, 2005; Gaski and Nevin, 1985). It is also one of the most important elements to explain any type of relationship among participants (Sanzo, 2003) and a consumer's fulfillment response (Oliver, 1997). Essentially, customer experience is the sense that customers get when they obtain service that fulfills or surpasses their expectation. Nevertheless, research in the maritime sector on the relationship between this and facilities management, particularly in the context of ports, is scant and the subject deserves further investigation.

2.1.2.3 Responsiveness to Customer Demand

Literary works on responsiveness to customer demand has raised issues such as flexibility and agility of a port. Agility is interpreted as using market knowledge and a virtual corporation to exploit profitable opportunities in a volatile market place (Gunasekarana, Laib and Cheng, 2007). Likewise, a number of researchers have examined the roles that flexibility plays in improving supply chain efficiency of seaports (Gunasekaran and Ngai, 2005; Reichhart and Holweg, 2007). This is characterized by the practice of build-to-order production and rapid-fire order fulfillment which has aided supply chain responsiveness of ports to volatile demand (Holweg, 2005; Sharif, Irani and Lloyd, 2007).

With respect to the agility and flexibility issues, a responsive port service could then be defined as, "a network capable of creating wealth to its stakeholders in a competitive environment by reacting quickly and cost effectively to changing market requirements." (Gunasekaran et al., 2007). Perhaps, the responsiveness to demand discourse emanates from similar views as expressed by Hill (2000) who argues that strategic service delivery is not just aimed at improving operational efficiency but on meeting market volatility issues. Thus,

the ultimate aim of management is to match "the performance of an operation's resources with the requirements of its markets" (Slack and Lewis, 2002).

Responsiveness to customer demand is aimed at enhancing customer satisfaction through streamlined and focused service delivery (Holweg, Disney, Holmstrom and Smaros, 2005). This has led to cost reduction and increased Just-In-Time (JIT) delivery to customers. Holweg and Pil (2001) stress that this can only be aided by information sharing across the chain. Lending credence, Gunasekaran et al. (2007) argue that responsiveness is enabled by a collaborative network of partners (which they refer to as value chain), IT systems, and knowledge management. In order to expand its business, it is important for a firm to augment its knowledge capability by accumulating, transmitting and incorporating information quicker than the competing firms to new markets and new products as a part of its growth strategy (Von and Cusumano, 2001).

Offering their take on the foregoing, Kohli and Jaworski (1990) correspond organizational responsiveness to information utilization within the organization (Mei, 2012). This correspondence was composed of two sets of activities – response design (i.e., using market intelligence to develop plans) and response implementation (i.e., using market intelligence to execute such plans) (Jaworski and Kohli, 1993, 1996; Kohli et al., 1990 in Mei, 2012). These authors also identified several concrete forms of organizational responsiveness including ―selecting target markets, designing and offering products/services that cater to customers' current and anticipated needs, and producing, distributing, and promoting the products in a way that elicits favorable end-customer response‖ (Kohli et al., 1990 in Mei, 2012).

Organizations have used supply chain responsiveness to improve global market share. Companies with more supply chain responsiveness will be more adaptive to demand fluctuation and can overcome the environment uncertainty at a lower cost due to the shorter lead time (Randall, Morgan and Morton, 2003 in Sukati, Abdul Hamid, Baharun, Alifiah, and

Anuar, 2012). Citing Apple as case study, Roh, Hong and Min (2013) claim that the company improved its market share with the introduction of customer-centric innovative products like iPod, iTunes, iPhone and iPad. Such moves have led to a culture of order-winning above price attractiveness in the race to win the hearts of customers.

Salam and Balomyong (2003) aver that RSC of manufacturing organizations are characterized by variables such as:

a. Real-time access to inventory levels, shipping, lead times and prices, available through synchronized demand analysis
b. Visibility to actual customer order information and other point-of-sale data
c. Capability to manage demand for multiple, complex SKU hierarchies
d. Visibility into future projections and historical demand patterns
e. Collaboration capabilities with trading partners and other chain members

Sukati et al. (2012) argue that successful supply chain responsiveness is characterized by operation system responsiveness, logistic process responsiveness and supply network responsiveness. This is shown in figure 2.2:

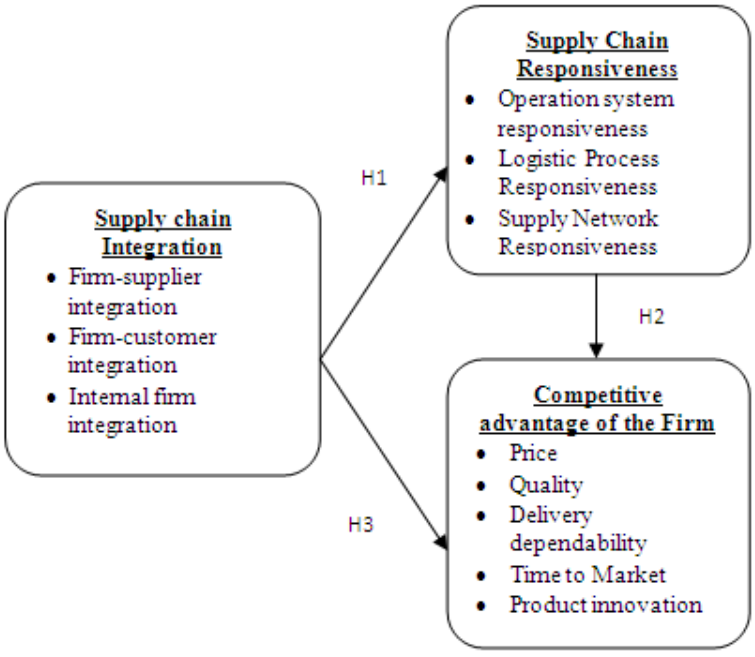

Figure 2.2: Supply Chain Responsiveness

Source: Sukati, I. Abdul Hamid, A., Baharun, R., Alifiah, M.N. and Anuar, A. (2012). Competitive Advantage through Supply Chain Responsiveness and Supply Chain Integration. *International Journal of Business and Commerce Vol. 1, No. 7.*

Figure 2.2 shows that Sukati's et al. (2012) work identified Responsive Supply Chain as a product of supply chain integration which this study has earlier identified as stakeholder integration. Therefore, the study goes further to utilize the elements of organizational responsiveness as shown in figure 2.2 as proxies for determining the relationship between workplace programming and responsiveness of Nigerian seaports.

2.1.2.4 Employee Engagement

This simply refers to the proactive, industrious, caring and customer focused behavior of an employee (Durudola, 2009). Gregory (2015) argues that employee engagement is the manner in which a case or matter is determined or settled by a worker. The implication of this assertion is that employee engagement while not the same with employee efficiency, may be seen as a determinant of employee efficiency given its result-oriented attitude. Research by Susi et al. (2010) explains how work-life balance and employee engagement becomes a visible benchmark among high performing organizations. It sees employee engagement as an amalgamation of employee attitude activities, purpose driven leadership and human resource processes. Even the best designed processes and systems will only be effective if carried out by people with higher engagement and this makes engagement the moderator between the design and the execution of the service excellence model (ibid.).

2.2 Theoretical Review

The practical integration of facilities management in improving service delivery of seaports demands the development of common theoretical models that concretize the seaport management phenomenon. However, Croom, Romano and Giannakis (2000) argue that there is a lack of enough conceptual frameworks for the development of theories in the field. It is

further argued that seaport management theoretical development is still at the early stage and lacks full empirical evidence of its applicability. These theories listed below may bear some sort of reference to facilities management.

2.2.1 Agency Theory

Agency theory presents a relationship between a principal and an agent where the principal delegates authority to the agent (Morgan and Monczka, 1995). The agent carries out the outsourced functions while the principal plays the oversight roles, offering incentives to motivate the agent. The relevance of the theory to facilities management integration in seaports lies in the management responsibility of the facilities manager towards the achievement of the set goal of the principal.

Criticism

A major criticism of the Agency theory is its delegation of authority to agents. The problem here lies in the probity and dedication of the agent. The principal-agent relationship may not give due consideration to the agent's ingenuity and selfishness. Where this occurs, self-interest may override organizational goals as agents may start abusing their power for self-gratification purposes. Iroegbu (2016) suggests the inclusion of a robust reward system to deter to such personal profit motives.

The Resource Dependence Theory tends to see the actors as equals who depend on each other. However, its weakness lies in the fact that the seaport management can override or reduce the involvement of facilities management operations. While the Game Theory shows some relevance to the discourse with its belief in strategizing out of competitive situations (a feature of facilities management); the noncompetitive environment of seaports in Nigeria shows that the effect of Game Theory in this aspect may not be as pronounced. The Agency Theory provides a balance in seeing the relationship as a principal-agent contract with the

seaport organization calling the shot as the principal while the facilities manager act as proxy for the actualization of the goal of improved service delivery.

2.2.2 Scientific Management Theory (Classical Approach)

The theorists who contributed towards management thinking included practical managers as well as social scientists. The contribution of practical managers has been to theorize on their own experiences. In practice, these theorists have applied their principles to the structure of organisation rather than to people in organisations. These theorists are known as "Classical" or "Scientific" managers and their approach has been described as prescriptive. Classical theories were primarily concerned with the structure and activities of formal official organisations and emphasized issues such as, division of work, establishment of a hierarchy of authority and span of control. Classical writers were concerned with improving the organisation structure as a means of increasing efficiency. They emphasized the importance of principles for the design of a logical structure of an organisation. These writings were in a normative style and they saw these principles as a set of rules offering general solutions to common problems of organisation and management.

Many of the classical writers during the last decades of the nineteenth century and the first decades of the twentieth were concerned with the improvement of management as a means of increasing productivity as managers started to search for ways to coordinate and control production activities as never before. At this time, the emphasis was on the problem of obtaining increased productivity from individual workers through the technical structuring of the work organisation and the provision of monetary incentives as the motivator for higher levels of output (Mullins, 1996). Early scientific management movement was given impetus under the driving force of Taylor (cited in Koontz, O'Donnell and Weihrich, 1984).

From his engineering viewpoint, he emphasized that in the same way that there is a best machine for each job, so there is a best working method by which people should undertake

their jobs. He considered that all work processes could be analyzed into discrete tasks and that by scientific method it was possible to find the one best way to perform each task (Mullins, 1996). Each job was broken down into component parts, each part timed, and the parts rearranged into the most efficient method of working. In order to drive these ideas through to the workforce, workers were to receive pay rises corresponding to the increment in productivity and thus this philosophy saw increase in productivity as the answer to both higher wages and higher profits (McFarland, 1979; Weihrisch & Koontz, 1993; Wren, 1994). Taylor believed that if management acted on his ideas, work would become more satisfying and profitable for all concerned.

2.2.3 Systems Theory

The dominance of first the classical school and second the human relations schools has been overtaken by a more comprehensive approach to the study of management in organisations. The new theories viewed organisations as complex systems of people, tasks and technology as modem theorists have taken a more comprehensive view of people in organisations. They have looked at interaction between people and their environment. This is labeled the "systems and contingency approach" (Mintzberg, 1983). A system has been defined as: "a set or assemblage of things connected or interdependent so as to form a complex unit" (Mintzberg, 1983). Put simply, a system is a collection of interrelated parts, which form some whole (Cole, 1996). The systems approach encourages managers to view the organisation both as a whole and as part of a larger environment. The idea is that any part of an organisation's activities affects all other parts.

Optner (1975) describes a system as a set of objectives with a given set of relationships between the objects and their attributes. Systems theory provides a broad analytical framework for understanding organisations. It is used as a tool for unraveling complexity and is appropriate for both behavioral aspects and quantitative, rational approaches of

organisations (Dawson, 1986). It is possible to analyze say psychological systems alongside management information systems and integrate the findings into a wider theoretical framework. Systems are defined and described by a number of elements or characteristics. Among those are boundaries, interacting and mutually interdependent parts, feedback and equilibrium. The boundary of a system is an interesting characteristic and tells what is inside or outside the system, and can be arbitrarily assigned when the system is defined (Mullins, 1996). The idea of systems also implies the interrelationship of its component parts. The concept of interdependence holds that a change in one element of the system leads to changes in other parts of the system.

A system has a tendency to achieve a balance among the various forces operating within and upon it (McFarland, 1979). Feedback is a concept in the theory of systems. Feedback is a process by which systems gather information about how they are doing, feeding the information back into the system to guide, direct, and control their operations. The business organisation is not a closed system where there is no interaction between the system and the environment. It is an open system, where there is a continual interaction with the broader external environment of which it is part, and which take inputs from the environment and through a series of activities transform or convert these inputs into outputs to achieve the various objectives. Within the organisational system, as a whole, each of the different conversion activities may themselves be viewed as separate sub systems with their own input-conversion output process interrelated to, and interacting with, the other sub-systems (Mullins, 1996).

Katz and Kahn (1978) identified five sub-systems which describe organisational functioning:

a. Production or technical;
b. Supportive;
c. Maintenance;

d. Adaptive; and

e. Managerial.

However, when these sub-systems are identified, it is the task of management to coordinate the sub-systems and to ensure that the activities of the organisation as a whole are directed towards the accomplishment of its goals and objectives.

The systems approach focuses attention on the organisation as a whole, as a socio-technical system, and considers the inter-relationships between the different subsystems and the importance of environmental influences. Changes in one part, technical or social will affect other parts and thus the whole system. The systems approach has been criticized (Cole, 1996) for failure to examine the orientation of individual members to the organisation, the different expectations people have of their work or ways in which the environment influences expectations of work. The relevance to facilities management lies in the belief that managers who understand systems theory recognize how different systems affect a worker and how a worker affects the systems around them. A system is made up of a variety of parts that work together to achieve a goal. Systems theory is a broad perspective that allows managers to examine patterns and events in the workplace. This helps managers to coordinate programs to work as a collective whole for the overall goal or mission of the organization rather than for isolated departments. In this regard, a facility manager's role in an organization is interactive as his functions affect the bottom line (profit making) and organizational effectiveness.

2.2.4 Contingency Approach

The label "contingency approach" was suggested by Lawrence and Lorsch in 1967. There is no clear distinction between the systems approach and the contingency approach to the management of organisations (Cole, 1996). The latter was developed out of the findings of the former. A systems approach highlights the complexity of the interdependent components of organisations within equally complex environments (Mintzberg, 1983). A contingency

approach builds on the diagnostic qualities of the systems approach in order to determine the most appropriate organisational design and management style for a given set of circumstances (Lorch & William, 1974). Essentially, the contingency approach suggests that issues of design and style depend on choosing what is the best combination, in the light of prevailing (or forecast) conditions, of the following variables: the external environment; technological factors; and human skills and motivation (Cole, 1996).

The contingency approach takes the view that there is no one best universal form of organisation. There are a large number of variables, or situational factors, that influence, organisational performance. Contingency models highlight differences between organisations. Managers can utilize these models to compare the structure and functioning of their organisation. Both the classical and human relations approaches to organisation and management believed in one best form of structure and tended to concentrate on limited aspects of organisation. The contingency approach takes the view that there is no one best universal structure and that there are a large number of variables, or situational factors, which influence organisational design and performance. This theory asserts that managers make decisions based on the situation at hand rather than a "one size fits all" method. This is relevant to facilities management given that organizations and situations in organizations differ, therefore the manager takes appropriate action based on aspects most important to the current situation.

2.2.5 Bureaucratic Management Theory

Max Weber embellished the scientific management theory with his bureaucratic theory. Weber focused on dividing organizations into hierarchies, establishing strong lines of authority and control. He suggested organizations develop comprehensive and detailed standard operating procedures for all routinized tasks. The establishment of a facilities management department (if in-house) or outsourcing facilities management services to

professional estate management firms serves as a pointer to the relevance of the Bureaucratic Management Theory to the discourse.

2.2.6 Chaos Theory

As chaotic and random as world events seem today, they seem as chaotic in organizations, too. Yet for decades, managers have acted on the basis that organizational events can always be controlled. A new theory (or some say "science"), chaos theory, recognizes that events indeed are rarely controlled. Many chaos theorists (as do systems theorists) refer to biological systems when explaining their theory. They suggest that systems naturally go to more complexity, and as they do so, these systems become more volatile (or susceptible to cataclysmic events) and must expend more energy to maintain that complexity. As they expend more energy, they seek more structure to maintain stability. This trend continues until the system splits, combines with another complex system or falls apart entirely. Sound familiar? This trend is what many see as the trend in life, in organizations and the world in general.

Change is constant. Although certain events and circumstances in an organization can be controlled, others can't. This assertion provides the need for a consideration of the Chaos Theory in facilities management discourse. The Chaos theory recognizes that change is inevitable and is rarely controlled. While organizations grow, complexity and the possibility for susceptible events increase. Organizations increase energy to maintain the new level of complexity, and as organizations spend more energy, more structure is needed for stability. The system continues to evolve and change.

2.3 Theoretical Framework

Chen (2017) in his research on the principles of facility management and case studies, conducted a research through the use of an extensive literature review underpinned by TRIZ

(Gadd, 2011) in order to identify the principles of FM through an inventive process towards a reliable and innovative summary to inform further practice and research. TRIZ according to him, is the Russian acronym for "Teoriya Resheniya Izobretatelskikh Zadatch", which means the 'Theory of Inventive Problem Solving' and was developed in 1946 by Soviet inventor Genrich Altshuller and his colleagues(Gadd, 2011), and it has been widely received and applied in the creative sector and some other sectors.

In the field of FM, it has been not only of academic interest in but also professional need for a set of principles to support best practice research and development after a fast profession growth in this new sector in the past three decades. In order to derive a reliable set of principles of FM through an extensive review on literature and practice, as well as to verify the suitability of those principles with regard to their applicability in specific practice and further research, the TRIZ was chosen to effectively facilitate an expected inventive process. For such a dedicated research, the author of this paper adopted the nine-square approach, which is one practical TRIZ tool, to qualitatively identify and justify the framework of Facility management body of knowledge (FMBOK) and the set of FM principles.

As explained by Chen (2017), from the FM profession point of view, people are clients and FM professionals and their organisations, products are various FM services, and processes are various management actions to provide FM services. A further review focused on people, products and processes was therefore conducted into the evolution of management theory to set up a generic framework of management principles for FM.

Jones and George (2012) summarized five major management theories using the three essential elements of FM: people, product and processes.

Scientific Theory

- Worker task relation
- Work process redesign
- Higher efficiency

This theory is relevant in objective 2 which deals with the variables workplace programming and receptiveness and 1 which proposes a model which needs to be a continuous process.

Administrative Management Theory

- Organizational structure
- High efficiency
- High effectiveness

This theory supports objective 3 which deals with business management development.

Behavioural Management Theory

- Motivate employees
- Employees' performance
- Employees 'commitment

Behavioural Management theory is relevant to objectives 2 as well as 3 which has two variables business development and employee engagement.

Management Science Theory

- Use of resources
- Operations management
- TQM (Total quality management)
- MIS (Management information systems)

This theory is in line with objectives 3 as well as 4 which in relation to support services management and customer experience.

Organisational Environment Theory:

- Open System theory
- Contingency theory

This theory supports objective 4 which is on support services and customer experience.

2.4 Empirical Review

Extant studies on the nexus between facilities management and service delivery in seaports generally appear relatively scanty. This section covers a review of relevant empirical works on the discourse.

Objective 1: To determine the influence of space management on service delivery of seaports in South South Nigeria.

Ogbo, Onekanma and Ukpere (2014) advanced the research regarding the relationship between effective space management and organization performance in the seven-up bottling company, Ninth Mile Enugu. Their major objective was to bring to fore the importance of effective inventory control system on organizational performance as it relates to the bottling company. A total of eighty-three respondents constituted the sample for the study. Four research questions and Four hypotheses were generated and tested at 10% (that is 0.10) significant level using descriptive statistics and non-parametric test (chi-square). The result of the analysis showed that flexibility in space management is an important approach to achieving organizational performance.

Briggs, Sutherland and Drummond (2007) examined service quality and space across all hotels in Scotland to establish managements' and customers' current perceptions of service quality performance. Using survey research and descriptive analysis, the empirical findings indicate that service was being lost by the focus of the Scottish quality assurance scheme on tangibles and that there were major inconsistencies in service quality performance across the sector. Tay and Ooi (2001) on space management analyzed the contributing factors to a high

level of efficiency in the workplace using a 4 category Likert scale since his data did not follow a normal distribution. With a dichotomous dependent variable, logistic regression became the analytic technique of choice. Space management was found to positively correlate with high levels of organizational efficiency.

Price (2010) studied from outputs to inputs from the perspectives of facilities management among Ohio academic library support staff. The 434 respondents indicated a relationship between space management and their overall efficiency. The result of this study correlates with the findings of Amit and Shoemaker (1993) who studied strategic assets and organizational rent. Having sampled a total of 6584 nursing home employees from 76 nursing homes in mid-western United States with questionnaire, they found that space management can help one analyze historical space usage and create accurate chargeback reports.

Amaratunga (2001) investigated the application of some core performance measurement and management principles using a sample of 128 employees from the service industry selected randomly while employing the questionnaire. Pearson's product moment correlation coefficient was used to analyze the data. The Results of the study show that space analysis using spreadsheets equals misery because particularly, historical data is extremely hard to capture in spreadsheets, let alone the analysis of it. He suggests that space management helps in analyzing the actual space usage, compare it with the planned space usage and make informed decisions that will impact the bottom line.

Parasuraman's (2004) two-decade-long research on assessing and improving service performance contended that service quality fails when there is a gap between customers' service expectations and perceptions. The reason for this gap is due to the shortfalls of the service providers' organisation (Parasuraman, 2004). From this theory, a conceptual framework known as the "GAPS model" was developed (figure 2.3), clearly illustrating the

organisational dysfunction with regards to customer satisfaction. Hence, in order to improve the service quality delivered to customers (GAP 5), the internal deficiencies of the organisation (GAPS 1-4) must be effectively cured as shown in figure 2.3.

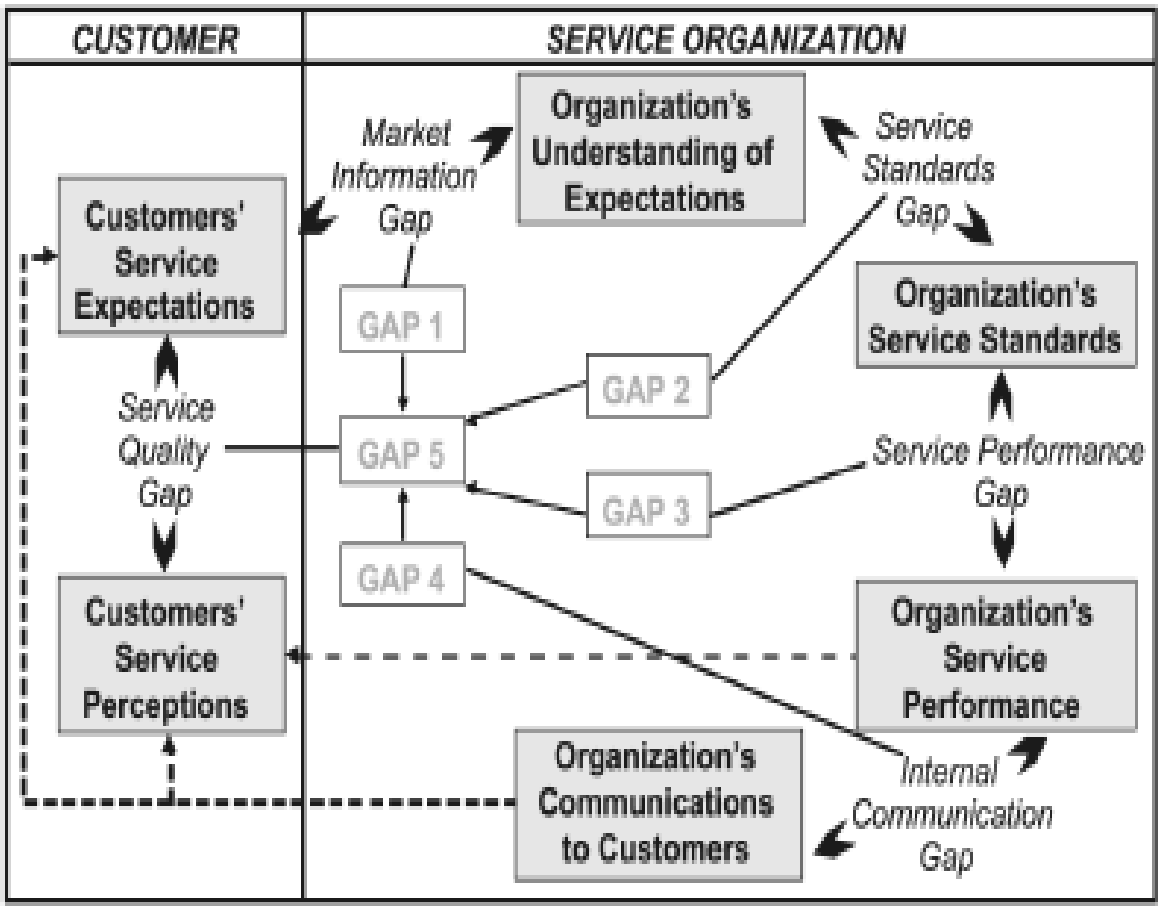

Figure 2.3 GAPS model

Source: Parasuraman (2004)

Figure 2.3 shows that Parasuraman (2004) believes that customers have an 'ideal' level of service that they expect. However rather than having a single level, they have a range of levels, which is known as the 'zone of tolerance' (figure 2.4). If a delivered service falls within the zone, customers will be satisfied. The area above the zone is what customers believe can and should be delivered, and conversely falling below the zone is the minimum standard customers are willing to accept.

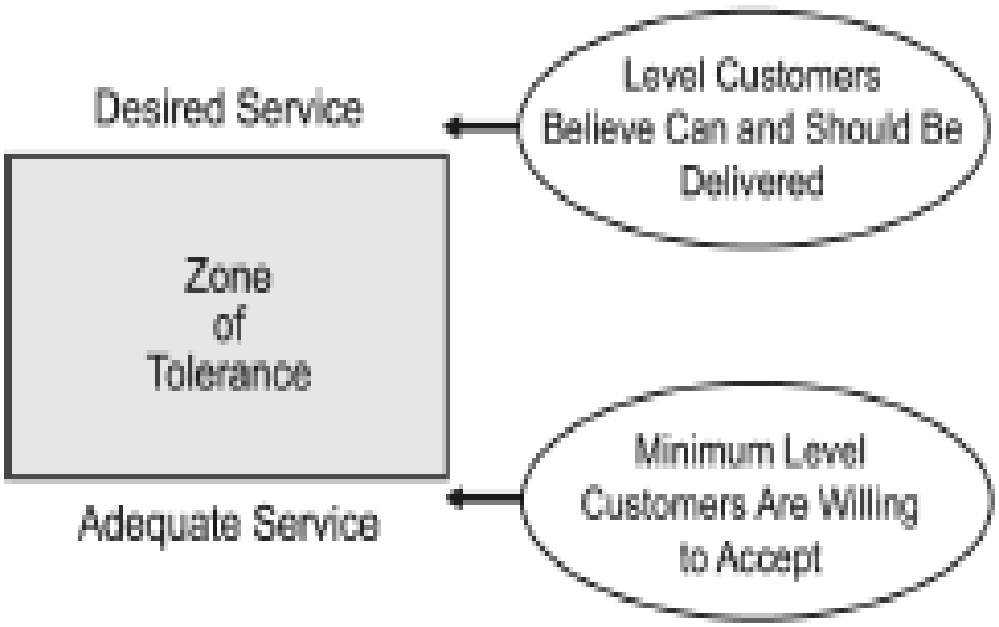

Figure 2.4: Nature and determinants of service expectations

Source: Parasuraman (2004)

Varcoe (1998) investigated the relationship between facilities management and the changing business climate using a sample of 339 employees from the service industry selected randomly. Employees were given a Workplace Descriptive Index (WDI) questionnaire and the Space Management Questionnaire (SMQ). Multiple regression analyses were used to analyze the data. Results of the study showed that although one has carefully planned the future space requirements, real life can always throw surprises at you. He suggested the use of dashboards and business intelligence reports to monitor the actual space utilization, and make changes in usage accordingly. He argues that closely monitoring actual space usage helps you to intervene when necessary.

Amaratunga and Baldry (1999) worked on building performance evaluation in higher education properties with a view to developing a process model. In particular, attention was focused on post-occupancy evaluation (POE) which was defined as the process of undertaking a comprehensive evaluation of a building and implies a systematic, research

based approach to considering the 'fit' between the building, the users and the organization [Preiser and White, 1988 (Cited in Amaratunga and Baldry 1999)]. The research methodology was based on a pilot case study in Britain with data collection instrument anchored on interview, gathering the views of users and distribution of questionnaires. Analysis was based on a mixture of mean score analysis, standard deviation and Spearman's correlation analysis. Building performance anchored on the views of users alone is not good enough without taking into consideration the time lag between life expectancy and actual life cycle of various components of the building. Besides, examining the workability of facilities management from just an aspect of its elements will really not show its efficacy as a proactive management tool. The research methodology based on pilot study and the use of mean score in data analysis is useful to the present study especially in strengthening the validity of the work.

Edum-Fotwe, Egbu and Gibb (2003) examined the necessity of designing facilities management needs into infrastructure projects using a major hospital project as a case study. They argue that successful deployment of the facilities management function for any major development will depend upon the ability to identify, communicate, and manage .,opportunities to help support an organization's business objectives at the earliest possible time. This implies a more holistic view for the facility management functions as reflected by strategic facilities management, and also the ability to address its requirements at an early stage of the development process. This implies an early analysis of site assessment, work-space conditions evaluation, extrapolation of space requirements and holding on to strategic facilities management practice. This work is descriptive and lays emphasis on integration of facilities management principle with design and construction. Attempts are being made to make facilities management a professional calling that caters for pre-contact and post contract activities including post completion period. This work is not all that relevant to the

present work although it is acknowledged that such a strategy emphasizes the importance of facilities management in contract procurement.

Service Quality/SERVQUAL has been acknowledged and widely used in assessing banking service quality. Customer service quality was related to product variety and the diverse features of the service products. According to Gan (2006), customer service quality was related to the differences between customers' expectations of services provider's performance and their evaluation of the service they received. Khan (2010) identified five dimensions of service quality: convenience, efficient operation, security and privacy, reliability, and responsiveness. Gan (2006) identified three service quality dimensions: reliability, assurance and responsiveness. Prior researches show that service dimensions are all significant in shaping customers attitude in the use of high technology banking products (Khan, 2010; Gan, 2006; 2005).

This study adopts their own dimensions of service quality with all the items: reliability, assurance and responsiveness. The service quality dimensions, as identified in this research, are represented, according to Gan (2006) as a customer's overall impression of an organization's service experience. Sathye (1999) found that the reliability dimension was an important determinant for port customers. Furthermore, Sathye (1999), Liao and Cheung (2002) found that reliability was positively related to the use of seaports. In addition, Hussain and Leo (2009) found that assurance, reliability and ease of operations influence customer perception of seaport services in Qatar.

Amaratunga (2000) examined building performance evaluation in higher education properties in Britain from facilities management perspective by looking at the role of facilities management in promoting organizational performance and thereby providing competitive advantage by using the balance scorecard approach. The main objectives were to

provide an operational definition of performance measurement in FM; to analyze the level of application of performance measurement practices in an FM setting and its impact focusing on the general FM taxonomy within the higher education properties setting; to identify and analyze the contextual importance of key performance evaluation factors that interface with the optimum utilization of FM practices and to look for ways of enhancing their applicability through improving their usage and to develop a methodology/framework to measure performance relative to FM, thereby ensuring their validity as performance measures within the higher education sector.

The methodology centres on case studies in particular three Universities were chosen which was hinged on the exploratory nature of the research. The work focused on performance measurement and is therefore not so relevant to the present work but the use of case studies may be adopted where necessary especially where benchmarking is involved.

Brackertz and Kenley (2002) examined facilities management from the perspective of facilities performance in local government using a service delivery approach in Australia. The performance measurement was anchored to the community, services, building and financial perspectives resulting in facility performance profile with special emphasis on balanced score card. The service balanced scorecard (SBS) is aimed at assisting Local Government Authorities to remove the environment of distrust and to provide information to stakeholders that will empower management to make strategic decisions about the future of facilities. The benefit of this approach is that future facility-related decision-making has a greater chance of receiving support from those it is intended to serve – the community. The application of service-balanced scorecard to the private sector of the economy has not been proven.

Objective 2: To examine the relationship between workplace programming and receptiveness of the study area.

With respect to workplace programming and receptiveness, Sukati et al. (2012) investigated the impact of work environment on competitive advantage. The study also assesses the impact of organizational responsiveness on firm competitive advantage. The data collection instrument used was a questionnaire which was administrated to a total sample of 400 managers in Malaysia manufacturing industry. The response rate was 62% while 50% was usable questionnaires. Sample selection was based on convenience sampling. Data were analyzed using mean, standard deviation and correlation between independent and dependent variables. The analyses involved statistical methods such as reliability and validity tests and multiple regressions. The research findings supported the hypotheses that work environment positively impact organizational responsiveness and competitive advantage. The study concludes that organizational responsiveness was positively associated with competitive advantage of a firm.

Sukati, Hamid, Baharun and Tat (2010) conducted a study on the relationship between the internal environment and organizational responsiveness. The study hypothesized that if positive, the relationship could enhance competitive advantage. The data collection instrument used was questionnaire administered to 200 managers. The response rate was 70%. The result indicated that the internal environment relates to organizational responsiveness and further enhances competitive advantage of the organizations under study.

Otchere, Anaan and Quansah (2013) worked on an assessment of the challenges of organizational responsiveness in the Cocoa industry using Cocoa farmers in Ashanti Region of Ghana. The study sought to examine the major constraints which inhibited effective response to customer demand in the industry. The study adopted adductive (inductive and deductive) approach with the administration of interview and questionnaire to collect

quantitative data from farmers. The target population for the research covered five districts out of the twenty-seven districts in the Ashanti region. The regions which comprise Atwima Mponua, Atwina Nwabiagya (Nkawie), New Educbiase, Offiuiso, and Ahafo Awo South districts were selected randomly.

A sample size of 230 was pooled from the Ashanti region out of a total population of 8,000,000 cocoa farmers in Ghana. This also represented the number of copies of the questionnaire sent out which however, fetched a return of 81%. The study found that the challenges of organizational responsiveness were poor technological innovations, lack of information sharing and poor integrated database. The relative importance index run on the mean factors indicated that all the factors of internal, customers and supply integration were important for all the groups. The study further revealed that the best way of enhancing organizational responsiveness is to start from functional integration which is internal to external integrations.

Somuyiwa, Meilt and Adebayo carried out a study on firm competitiveness through organizational responsiveness in Nigeria. The study focused on firm responsiveness to rapid changes that occur in the modern business environment and enjoy competitive advantage. The study adopted survey method with a sample of 115 manufacturing medium-large organizations. Data collected was analyzed with multiple regression analysis. The result revealed that there is a positive association between organizational responsiveness and competitive advantage through improvement in sales patronage. Waly and Helal (2010) used data collected in a national survey of over 1,500 Egyptian workers to examine the relationship between facility management and office building performance. They found a positive correlation between the availability of such professional services and improved customer value. They argue that organisations that adopt professional facilities management services are perceived by customers as showing greater care and concern.

Thatte (2007) in his study on competitive advantage of a frim through supply chain responsiveness and supply chain management practices in the United States focused on the highly turbulent nature of modern business environment which is characterized with shorter product life cycles, rapid new product introduction, increasingly knowledgeable, well informed and sophisticated customers which force supply chains to be more responsive to demand in order to remain competitive. The study captured 294 responses from industry professionals in the manufacturing and supply chain area through questionnaire sent by emails. The data collected was put through a rigorous statistical analysis to test for content, construct and criterion-related validity as well as reliability analysis. The study further developed a structural equation model to test the relationship between SCM practices; modularity based manufacturing practices, supply chain responsiveness and competitive advantage. In the analysis of the effects of various relationships at the sub-construct and item level, regression analysis and ANOVA were employed. The findings supported the hypotheses that SCM practices positively impact SCR, modularity based manufacturing practices are positively associated with SCR which positively impacts on competitive advantage. Furthermore, effective relationship between customers and suppliers were found to positively influence a firm's ability to be operationally responsive. In addition, effective relationship with suppliers and information sharing with trading partners in the supply chain directly and positively impacted supplier network responsiveness. The higher level of operations' system responsiveness created higher level competitive advantage for a firm which manifested in low price, high delivery dependability, high product innovation, short time to market.

The push for improved performance in organizations is not a new phenomenon. One of the primary tasks of managers is to motivate people in the organization to perform at high levels (Steers and Porter, 2000; Caldwell, 2001; Christesen, 2002). It is generally agreed that the

more accurately managers can answer the question of what motivates their employees, the more effective they will be at maximizing productivity, enhancing performance and advancing the notion of organizational accountability (Chernis and Kane, 2004). Brenner (2004) itemized what employees want and perceive to help improve their performance in the work environment as better lighting, more elbow room, creative methods for assessing space, personalization, more impromptu meeting for work well done and involvement in the decision that impact their day to day lives at work. An organization that want to ensure employee performance improvements will exploit those tools used for managing the work environment in which such employees work.

An effective work environment management entails making work environment attractive, creative, comfortable, satisfactory and motivating to employees so as to give employees a sense of pride and purpose in what they do. Cecunc, (2004), Opperman (2002), Elywood (1999) suggest the following tools used to manage work environment to improve performance - enhancing friendly and encouraging human environment, job fit, rewards, feedback, work environment modeling, creating qualitative work life concepts and making physical working conditions favourable.

Edgar and Teicholz (2003) gave an insight on how to accomplish total asset management in facilities management environment. A facility asset is any facility-related physical resource that is significantly important to the organization and requires management. Facility assets typically include property, buildings, infrastructure, building equipment, office equipment, vehicles, grounds and plant materials and people. The scope of individual or aggregate assets maintained within these categories must be identified and tracked individually to comply with legal, fiduciary, policy or operational requirements. The paper's main focus is to identify the features an asset must possess before it can be regarded as facility asset. The

work is innovative and its relevance is in its use to indicate commitment to facilities management practice and indicator of effective facilities management practice.

Brenner (2004) argues that, for modeling of work environment to improve employee performance; it calls for management responsibilities of holding everything together, improving motivation and creating commitment in the work environment. Providing a work environment that simultaneously achieves company goals and employees' goal involves motivating such work environment with quality of work life. This involves giving employees opportunity for their personal growth, achievement, responsibility, recognition and reward so as to get high quality organizational responsiveness (Cecunc, 2004). According to Yesufu (1984), the nature of the physical condition under which employee's work is important to output.

Personal motivation and the structure of the work environment are the principles of management that dictate how to maximize organizational responsiveness (Dawn, 2006). Where maximum organizational responsiveness is obtained, there will likely be maximum profits for any type of organization. Arguably, many scholars in the management field today see the most obvious incentive for increasing responsiveness in the work place as salary and promotions. Surprisingly, this is not always the case (Arthur, Woehr and Graziano, 2001). They argue that optimal human resource management has less to do with salary and more to do with other factors. For responsiveness to improve, employees must be motivated. The question is what motivates employees? Is it the amount that the employee gets paid? Is it possibly recognition on doing a good job? Is it the power of praise? Is it the environment that an employee works in? Is it the ability to set goals for the employee? How about disciplinary guidelines in the workplace?

Strauss (1993) opines that a key motivation for employees in a work environment is that each employee is treated fairly no matter what level of input a particular worker has in relation to

the business processes as a whole. In his view, it is essential for a manager to give each employee a sense of playing an integral role in something that is much larger. There needs to be a structure in place which encourages trust in each and every employee to let them expand their talents by letting them perform bigger roles in an ongoing project. This view is supported by Barta and Kiene (2005) in their assertion that loyalty is the key element of motivating workers and increasing their overall organizational responsiveness. Barta and Kiene (2005) in addition, postulate that there is another factor that motivates employees in the work place. They refer to it as the power of praise. While often ignored or forgotten by managers in the work place, giving an individual worker a sense of worth in relation to the actual work that they have done for the company, praise and recognition have been shown to dramatically increase organizational responsiveness.

Motivating an employee in the work place does not always have to be positive. Behling (1998) stresses that setting disciplinary guidelines for employees to follow will lead to improved organizational responsiveness in the work place as well. Organizational responsiveness has been known to decrease if workers are not faced with consequences for poor performance (Billings and Moos, 1982). They argue that setting guidelines in the workplace leads to a more structured environment for everyone. Therefore, employees will understand the limits and standards that they are required to follow, which in turn will promulgate respect for the manager as well as a more functional, productive department. Managers need to be very creative when it comes to finding other ways to penalize workers who bring down organizational responsiveness. By establishing consequences and the value of behaviors, the manager can focus his or her employees on positive reinforcement.

Bing and Lounsbury (2000) submit that setting goals is another motivating tool to increase responsiveness in the work place. Setting realistic objectives of the actual work to be completed to insure the timeliness and work quality of the particular project will allow the

worker to feel ready to take on the next project with more confidence once the current one has been completed. This will allow workers to perform a thorough job as well as increase organizational responsiveness.

Bing and Lounsbury (2000) further assert that the office environment is also another tool for motivating a worker. They gave an instance. Imagine going to work every day, being in an environment where there is no or limited communication between team members and managers; where there is negative attitude in the work place; where there are no company functions, no team building exercises; and where the work space is unaccommodating for the work that needs to get done. These conditions would not allow any worker to be motivated. If no motivation exists, organizational responsiveness will decrease, and so will profits. This view is corroborated by Brill, Margulies, Konar and BOSTI (1984) who assert that communication is a must in a work place. Good communication skills are imperative for outstanding performance and career management.

Lee and Brand (2005) found a positive correlation between perceived personal control over the physical environment and self-reported job satisfaction. They also found that perceived personal control was positively related to workplace satisfaction. However, Veitch and Gifford (1996) found that although choice led to perceptions of increased control, it also led to a performance decrement among the participants in their trial. They suggest self-presentation and fear of failure were heightened in those participants who were given a choice and that these findings have implications for the relationship between facilities managers and building occupants.

El-Haram and Agapiou (2002) dwelt extensively on the role of the facility manager in new procurement routes by reassessing the role of the facility manager as the party responsible for the co-ordination of planning, design and management of facilities within the private finance initiative regime. The development of strategic long-term partnerships between client

organizations and the facilities management service providers requires the fundamental reassessment of appropriate risk management strategies informed by an integrated information management system as shown in Figure 2.5, which ensures the timely capture and exchange of life cycle data throughout the key stages of the private finance initiative contract.

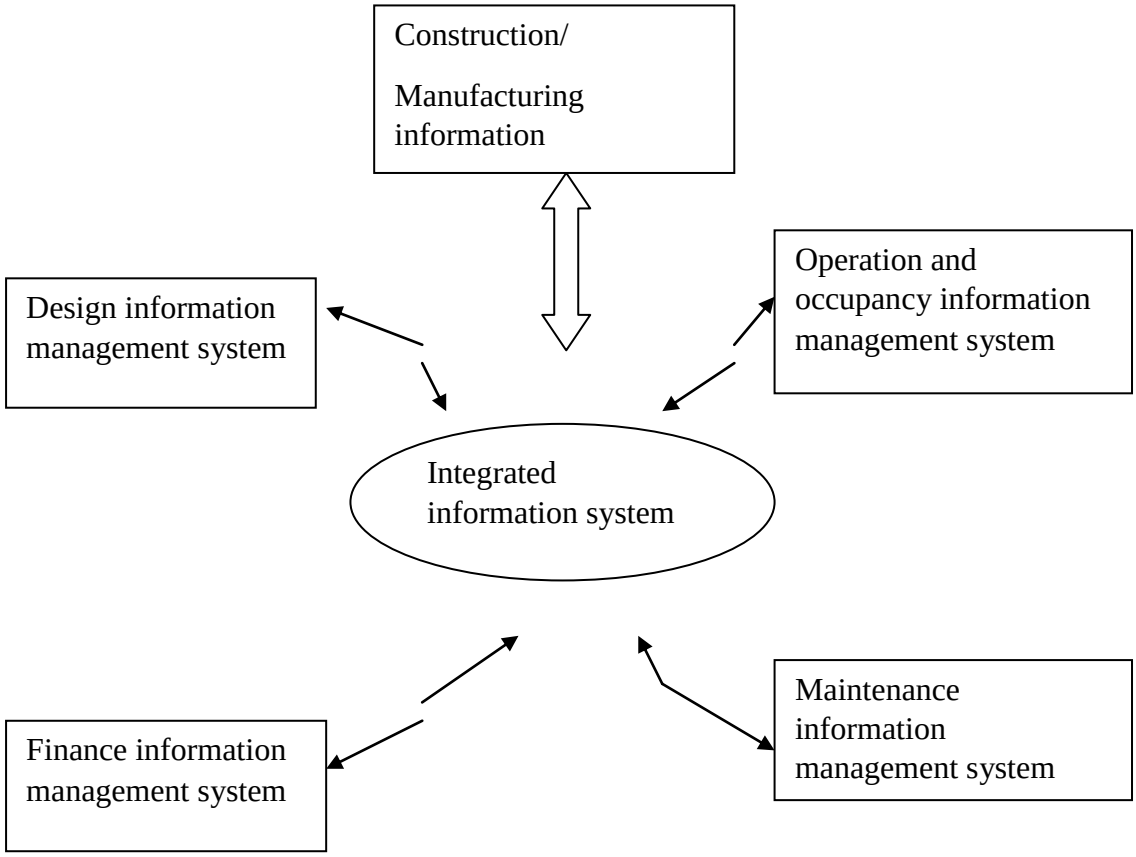

Figure 2.5: An Integrated Information Management System

Source: El-Haram and Agapiou (2002)

Figure 2.5 shows that the availability of information and information tools can assist the facilities management team provider in developing the appropriate risk management strategies within the private finance initiative (PFI) regime. This study shows clearly the relevance of collaboration and interaction among line departments in making a success of facilities management activities. The development of data based facilities management system is anchored to this principle and its presence or practice by organizations clearly

shows their commitment to facilities management principles. Thus, database management system can be regarded as an indicator of effective workplace programming initiative within facilities management practice.

The perception of management support will positively impact upon trust. Research has found (Stokols, 2002) that greater perceived support for creativity at work is associated with lower stress and greater job satisfaction. Providing an appropriate workplace to support creativity is key to the perception of support for creativity. They also found that higher levels of distraction are associated with lower job satisfaction (Stokols, 2002). The behavioural reasoning behind user perceptions and the direct impact of the physical environment was explored by Sommer and Augustin (2007) in their research on spatial orientation of office cubicles.

They found that users' facing in to the cubicle tended to assume that they wanted to limit their interaction with other workers. Users facing out were more open to communication. Interestingly however, Sommer and Augustin found that this physical layout did not decrease work-related interactions, but did reduce non-work-related interactions, contending that social exchanges can influence morale and cohesiveness. This also linked to the 'statuses of workers, where higher level positions tended to face out. In some cases, workers facing inward considered this demeaning.

Cowan (2001) asserted that reliable and relevant information about a building is a necessary tool if management is to take an active role in understanding and controlling expenditure. The work used descriptive statistics to buttress his argument and rely on data from Building Cost Information Service of the RICS to justify his stand. This work is exploratory and educative but its use in the real world needs to be tested. However, in the present work, its use in an organization is an indication of commitment to FM practice.

Brochener (2003) examined the integrated development of facilities design and services with the aim of investigating the paths by which integrated development of facilities design and services can be attained, assuming that the determining force is economic efficiency as measured ultimately from the viewpoint of facility owners. He opines that there are three major requirements that should be met by any system with credible claims to integrate the design of physical facilities and the concurrent designs of services associated with these facilities. First, the system should be able to accommodate both the claims of efficiency under ordinary running conditions for a facility, jointly handling the support for productivity of the core business of building users and low running costs, and at the same time preventing health and safety hazards.

Second, it must be able to bridge proprietary systems from several suppliers of building components and suppliers, within the same building. Third, it should be able to allow the combination of old and new buildings with old and new system and technologies across a managed portfolio, regardless of the spatial extent and fragmentation of the portfolio. The beauty of his contribution is the realization that facilities managers have become essential instruments for services implementation as well as linkages between parties as to warrant their engagements by various participants in the construction process as reflected in Figure 2.6.

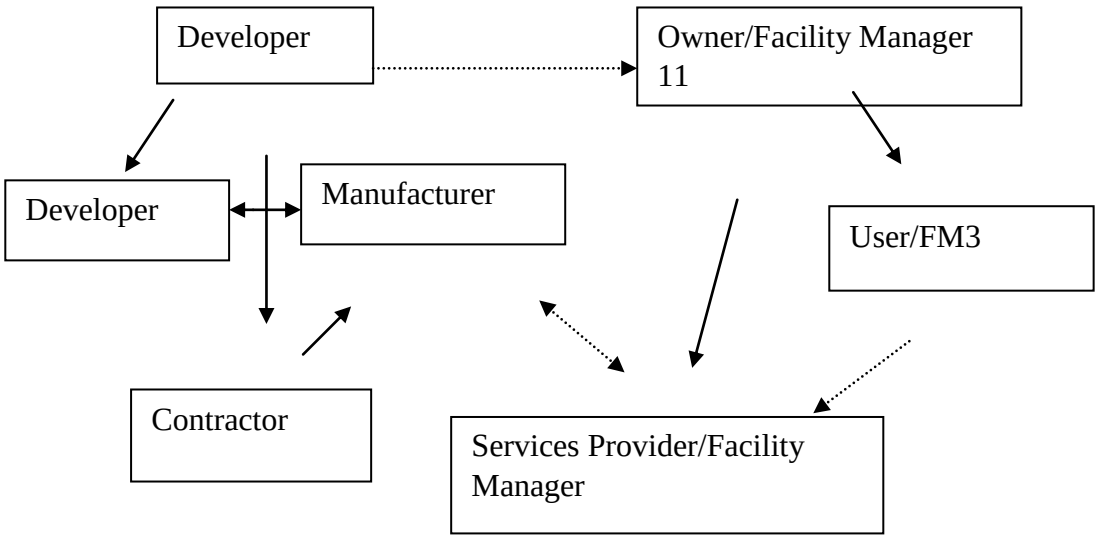

Figure 2.6: Three Organizational contexts for Facility Managers

Source: Brochner (2003)

Hassanain, Froese and Vanier (2003) developed a framework model for Asset Maintenance Management. The work was aimed at developing IT solutions for the Asset maintenance industry of which facilities management is a part. The work describes a collection of knowledge areas within the domain of asset maintenance management. Although the knowledge areas described have previously existed in practice and are documented in the literature, they have not yet been introduced to the asset management (AM) domain in a formalized and standardized view as presented through the development of the process model.

This model is a strategic tool that can be used in maintenance activities under facilities management as shown in Figure 2.7. This work is just a logical step toward the achievement of specific tasks in maintenance activity and very innovative. How it will work in practice remains to be established through empirical analysis. Its presence and use within an organization could be viewed as innovation and indicator of applied facilities management and hence indicator of effective facilities management.

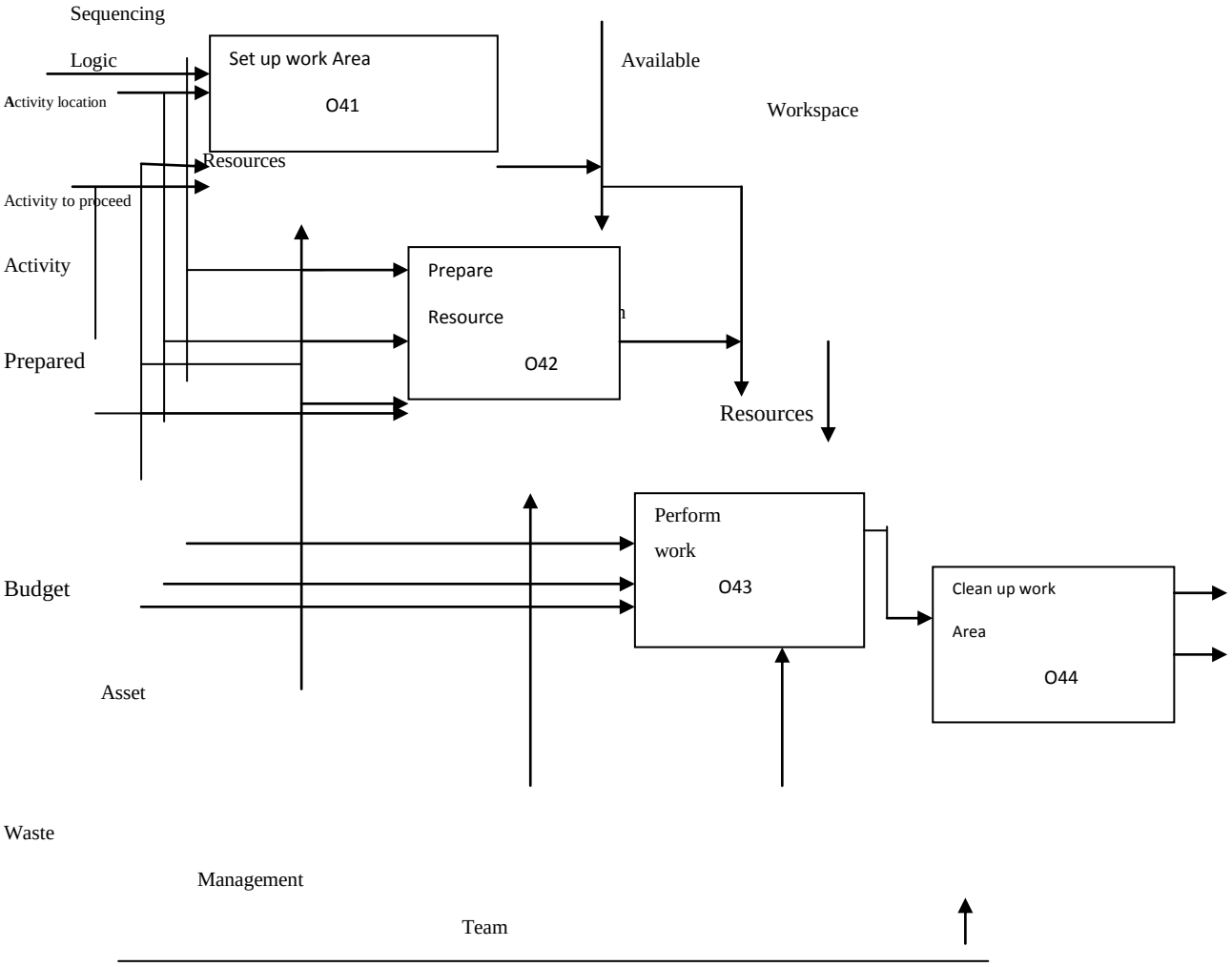

Figure 2.7: Node for Accomplished Maintenance Workload

Source: Hassanain, Froese and Vanier (2003)

Yang and Lee (1997) presented an analytical hierarchy process (AHP) decision model for facility location selection from the view of organizations which contemplate locations of a new facility or a relocation of existing facilities. An AHP model provides a framework to assist managers in analyzing various location factors, evaluating location site alternatives, and making final location selection. Although this present investigation is not about location but Yang and Lee's (1997) work may be relevant where there is the presence of application of AHP model, which indicates the adoption or responsiveness to FM. This becomes important when considering churn management. The same is true of Gilleard and Yat-lung (2004) who worked on benchmarking facility management; applying analytical hierarchy

process. Benchmarking as a tool for facilities efficiency may be useful to this present research especially if quality of service and standard of facilities are to be comparatively analyzed.

Kotze and Nkado (2003) investigated the use of facilities management in institutions of higher learning in South Africa with the objective of establishing the extent to which FM is being operated. The methodology relies on two-stage descriptive survey method with analysis based on descriptive statistics. The findings revealed a high level of FM awareness and there is a recommendation to adopt scenario planning as a tool in FM practice. This work is sectionalized first to tertiary institutions and second to the educational sector at the expense of the other sectors of the economy. It may be difficult to generalize the findings.

Gilleard and Yat-lung (2004) from Hong Kong, illustrates the theoretical framework of applying the analytic hierarchy process (AHP) when benchmarking facility management service provider performance using a case study. The case study illustrated how AHP is particularly effective for handling performance measures that involves multi-attribute multivariate qualitative and quantitative data. The work identified three critical features: ranking, establishing consensual data input and applying sensitivity testing. The work is exploratory but established the statistical and heuristic model that could be employed when benchmarking services in productive organizations.

As is evident in seaport literature, when seeking competitive advantage through cost leadership, managers consider efficiencies and reducing costs to deliver a given service. As container ports initially sought to use the capacity they had built, they focused on streamlining business processes and delivering a service to the shipping line with the capacity available. By the early 1990s, under pressure to do more with less and to grow business, port processes and port efficiency attracted interest as a research stream within the

port management literature. This was inspired by the Data Envelopment Analysis efforts to examine port efficiency (González and Trujillo, 2009; and Cullinane, 2010).

Then (2000) illustrates the use of the strategic facilities brief (SFB) and the service levels brief (SLB) as the vehicles for promoting and maintaining the crucial interface between strategic management decisions and operational management decisions. He is of the view that facilities management is an effective instrument in real estate asset management especially where strategic management is being practiced as reflected in Figure 2.8:

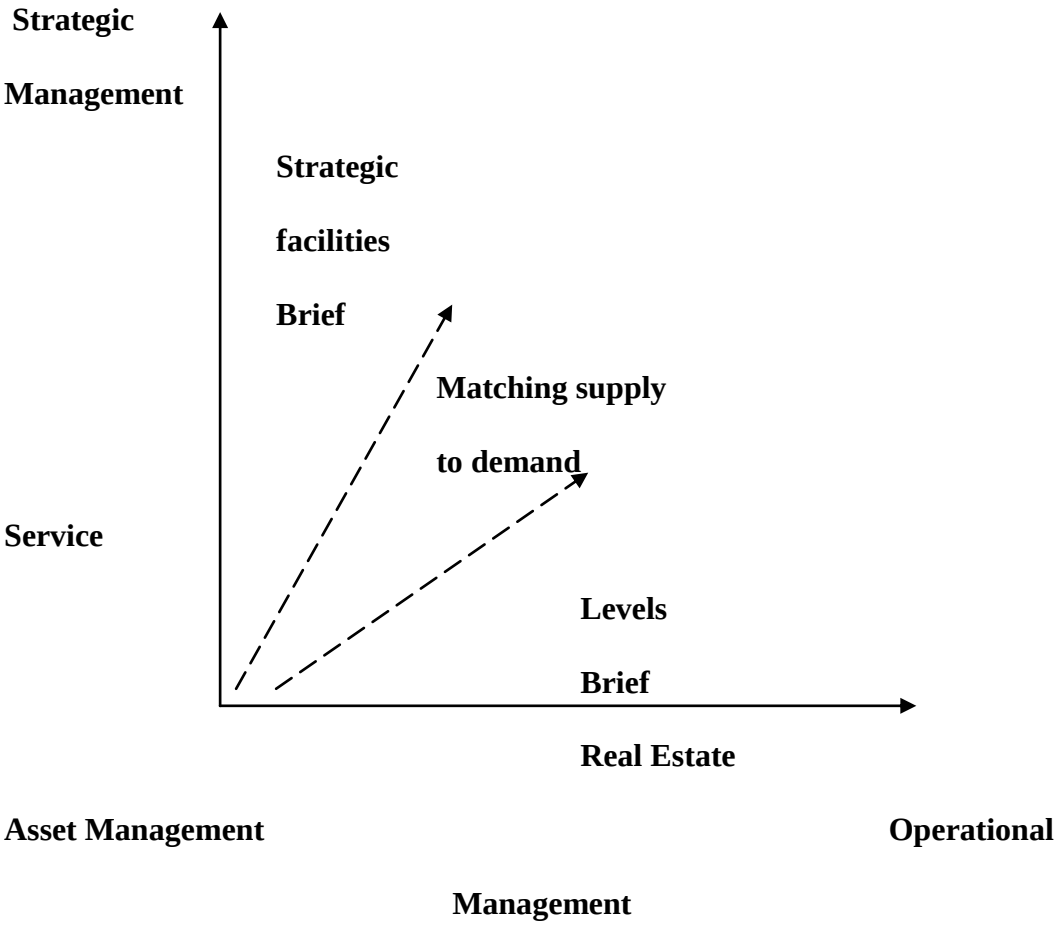

Figure 2.8: The Role of Strategic Facilities and Service Levels Briefs.

Source: Then (2000)

Figure 2.8 shows that the use of facilities brief and service brief is definitely an indication of commitment to FM principles. The irony of it is that this proposition has not been empirically confirmed in the real business world.

A model linking employee satisfaction with the work environment was proposed by Fischer (2004) (figure 2.9). They affirm that the formation of the professional selfschema is a result of repeated positive or negative feedback people receive in their work situations that reinforce either a positive (successful) or a negative (unsuccessful) sense of self over time. They suppose that workspace has a role in this process, either through judgements employees make of the environmental characteristics of the spaces they occupy, or through information communicated to employees about themselves by the spaces they have been allocated (Fischer, 2004).

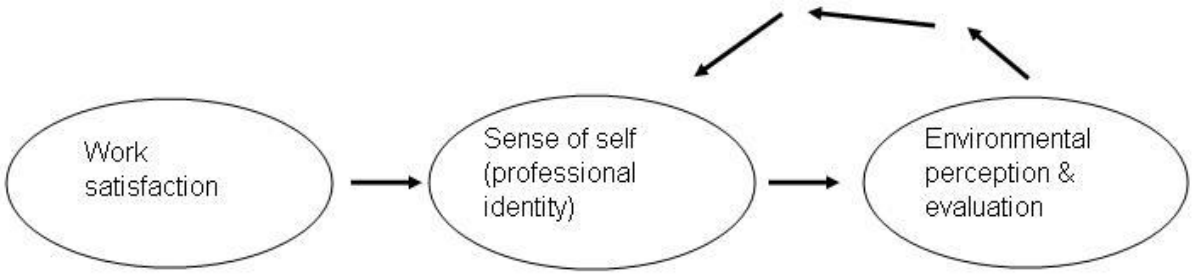

Figure 2.9: Model linking employee satisfaction with the work environment

Source: Fischer (2004).

In summary, literature shows that workplace programming or design can have considerable impact on user perceptions, responsiveness and a consequent knock-on effect to the overall strategic goals of the organization's core business. Becker (1990) emphasised the importance of user perceptions in an organisational sense by explaining the importance of staff involvement and participation in workplace design. The work contended that involving 'end users' directly within the design and briefing stages will enhance their overall perceptions of the workplace as it will influence and determine:

i. The amount and quality of information collected
ii. The nature and quality of solutions proposed and accepted

iii. Help determine employees' satisfaction with the process

iv. Colour their view of the final outcome (Becker, 1990)

However, the problem is that most of extant literature on facilities management has not touched on its implications in seaports in Nigeria. This reinforces the need for this study.

On the correlation between business development management and employee engagement, perhaps some of the most influential work in this area has focused on the investment in skills and training and the association between skills and organizational responsiveness. This relationship was at the heart of a number of well-known studies by the National Institute for Economic and Social Research (NIESR). Through a series of 'matched plant' studies the impact of workforce skills and development on organizational responsiveness was considered alongside a range of other factors such as investment in capital equipment and maintenance practices. A clear connection between higher skills and higher organizational responsiveness has been identified particularly at the intermediate skills level.

Objective 3: To ascertain the influence of business development management on employee engagement in the study area.

Onodugo (2000) investigated human resources management in Awka based firms. Using survey research design with z-test statistic, she found that staff training and development plays a positive role in the organization through enhanced increase in employee performance. In the final analysis, she states that employee performance increases through skill acquisition and the ultimate end of human resource development is to equip the requisite skills to become more productive and thereby increase the chance of increasing the performance base. She recommends that considering the rate of technological advancement, where new skills and techniques for academic work is on the increase, organizations need to undertake continuous training and development to remain competitive.

Fleming (2004) examined facilities performance measurement from the behavioral perspective. The mechanistic, quantitative nature of building performance paradigms fail to take into account the effect of occupiers' perceptions of their environment. Facilities managers see buildings as containers of products and not containers of people. Products are measured against technical performance specifications rather than the idiosyncratic thoughts and perceptions of the buildings' inhabitants. The work seeks to question whether these technical performance indicators may be challenged by perception data and thus force a paradigm shift in building assessment. This work is innovative but did not go beyond the provision of a conceptual framework. The exploitation of behavioral analysis in promoting welfare of workers may be regarded as a good indicator of an efficient facilities management. Ekpor (1989) examined manpower development in Nigerian organizations using survey research design and z-test analytical tool and shows that when training staff, it is ideal to first conduct a comprehensive training need analysis in the organization. His study also shows that organizations may seek the basic data for this process at three different levels as follows;

- Organizational level: Data about the organization as a whole, e.g., its structure, i.e. types and quality of the building markets, products, or services, manpower requirements etc.
- Job level: Data concerning jobs and activities e.g. job descriptions, personnel specifications, on one hand, leadership and communication activities on the other.
- Individual level: Data about individuals e.g. appraisal records, personnel training records, test result of attitude surveys.

The data obtained in this way enables the staff in training to draw a comprehensive picture of the area of current potential shortfall, in requirements. After these data are collected, they are subjected to analysis via utilizing existing records. He further concludes that if the training

needs of an organization are not properly identified, there is always low organizational responsiveness, inefficient and ineffective delivery.

Albaladejo and Romijn (2001) analyzed the determinants of innovation capability in small UK firms while employing ex post facto research design. They found that continuous employee education serves as a tool for employees' motivation and increased commitment to duty. Their study made use of regression method and Analysis of Variance and using a sample size of 580 also found that promotion after successful completion of training programmes has made the employee understand that training is a promotional tool in the organizations. They conclude that whenever the organization comes up with the programmes the employees see the need to participate.

Ubeku (1991) linked training and development with personnel management in his Benin based discussion on personnel management. Using correlation and regression analysis and a sample of 239 respondents, he hypothesized that the effect of training and development programme is significantly positive. His hypotheses centered on the belief that training and development improves the standard of performance of workers, thereby increasing organizational responsiveness, better quality and work done on time in the organization. His finding which also shows that training reduces the degree of supervision were in agreement with his earlier stated hypotheses. His conclusion shows that the more competent an officer is the more confidence he derives in the organization.

In a survey by Grant, Fried, and Juillerat (2010) at a large bank in Europe, managers found that the engagement levels of bank tellers were very low, stating that they were "just glorified clerks". They also said that their jobs were boring and that they felt micromanaged because they were unable to make decisions, even small ones, without the approval of their managers. Salami (2008) analyzed the contributing factors to a high level of employee engagement using job training as the independent variable which he measured on a 4

category Likert scale since his data did not follow a normal distribution. With a dichotomous dependent variable, logistic regression became his analytic technique of choice. The independent variables were all found to positively correlate with high levels of employee engagement.

Brief, Butcher, and Roberson (2005) conducted a field experiment with 57 hospital workers in order to examine employee engagement levels. The researchers tested three hypotheses; the first one was that negative affectivity (NA) is associated negatively with employee engagement. The second one was that positive mood inducing events increase employee engagement levels; and the last one was that the effects of positive events on employee engagement are weaker among high NA individuals than they are among low NA individuals as a result of interaction of NA and positive mood inducing events (Brief et al., 2005). The subjects of this study were randomly assigned to two groups. The experimental group received a positive mood inducing incentives; they received cookies, soft drinks and attractively wrapped toys. The control group did not receive any incentives. Both groups filled out the Taylor Manifest Anxiety Scale (TMAS) that measured NA and questionnaires that measured employee engagement levels (a modified version of Kunin's Faces scale). The results demonstrated that a disposition to NA is negatively associated with employee engagement. The next findings indicated that positive mood-induced events increased employee engagement levels. The last results showed that the individuals with high NA are resistant to positive mood induced events. All these results were consistent with the hypotheses.

Robles-García, Dierssen-Sotos, Martínez-Ochoa, Herrera-Carral, Díaz-Mendi and Llorca-Díaz (2005) examined variables related to employee engagement applying cross-sectional study using the European Foundation for Quality Management [EFQM] model. The main objective was to identify the influence of the dimensions of people items and socio-

demographic characteristics included in the EFQM model on employee engagement of healthcare workers in a district hospital. The questionnaire used was the personal satisfaction survey of the Basque Country (Spain). The outcome measure was a high degree of satisfaction (75th percentile or higher). Independent variables were socio-demographic and organizational characteristics. The association among variables was assessed using odds ratios (OR) and their 95% confidence interval (CI). Adjustment for confounders was performed by unconditional logistic regression.

They found that on a scale from 0 to 10, the mean general satisfaction score was 5.95 (standard deviation, 2). Twenty-five percent of workers gave their general satisfaction with the organizational climate a score of 8 or more points. The most positively considered features were the environmental policy, hierarchical relations, promotion, and professional development. The most negatively viewed items were salary, knowledge and identification of objectives, and training. The variables most closely related to outcome were a favorable perception of training (adjusted OR = 5.04; 95% CI, 2.16-11.77) and recognition of the work performed (adjusted OR = 4.68; 95% CI, 2.20-10.08). Socio-demographic factors had less influence on satisfaction. They further conclude that almost half of the staff surveyed in the hospital were satisfied or highly satisfied with the organizational climate. Satisfaction was strongly associated with positive evaluation of organizational characteristics such as employee engagement.

Tracy (1968) in a study on managing training and development in manufacturing organizations developed an empirical framework of continuous education which suggests that once an establishment makes an investment in an employee through training and development programmes, it gives him a feeling of belonging and the general impression that the organization values him. He made use of correlation and regression analysis and found that each training course an employee gets reinforces his belief in the organization and

himself as he moves, familiarizing with his tools to mastering the working of the machinery, to obtaining the technical knowledge required for doing minor repairs. He also found that training increases the level of individual and organizational competence and helps to reconcile the gap between what should happen, desired targets and standard of work performance.

In a study by Schmidt, Outerbridge, Hunter and Goff (2016), data from four different jobs (TV = 1,474) were used to evaluate three hypotheses of the joint relation of job experience and general mental ability to job performance as measured by (a) work sample measures, (b) job knowledge measures, and (c) supervisory ratings of job performance. The divergence hypothesis predicts an increasing difference and the convergence hypothesis predicts a decreasing difference in the job performance of high- and low-mental-ability employees as employees gain increasing experience on the job.

The non-interactive hypothesis, by contrast, predicts that the performance difference will be constant over time. For all three measures of job performance, results supported the non-interactive hypothesis. Also, consistent with the non-interactive hypothesis, correlational analyses showed essentially constant validities for general mental ability (measured earlier) out to 5 years of experience on the job. In addition to their theoretical implications, these findings have an important practical implication: They indicate that the concerns that employment test validities may decrease over time, complicating estimates of selection utility, are probably unwarranted.

Alexander (2007) in her study focused on the relationship of one cognitive ability test on long-term job performance as measured by personnel data. Archival data from over 3,000 employees at an international technology company were used to assess how aptitude test scores relate to both objective and subjective job performance measures. Supervisory performance ratings, level of promotion, and salary increase significantly contributed to

variance in test scores; however, these results were inconsistent. Number of training courses did not have a significant relationship with test scores. Additionally, type of turnover did not moderate the relationship between aptitude test scores and job performance. These results indicate that although aptitude test score is related to long term job performance factors, other factors account for the majority of the variance. The implication is that aptitude should not be the sole consideration when predicting long term job success.

Tijani, Okunola and Orga (2000) evaluated the customer satisfaction in selected Hotels in Ikeja Area of Lagos. Table of random sampling technique was used to select 10 hotels from 27 hotels registered and recognized by Nigeria Tourism Development Corporation (NTDC) in the areas. A well-structured questionnaire was used to collect necessary data. Findings revealed that the Hotels in the studies area were not giving their customers' satisfaction because what hotelier perceived as customer's quality service differs from the guests' expectation. The study concluded that managers and proprietors of hotels should accord necessary recognition to professionalism and staff training to achieve customer satisfaction. The study is significant to manager of hotels, restaurants, hotel proprietors and human resources managers in meeting customer satisfaction especially in Lagos and in Nigeria in general.

Jones (2006) analyzed three studies pulling together 74 separate investigations of job satisfaction and employee engagement in 12,000 workers. She wrote: 'The conclusions drawn by these researchers, and many others, indicate the presence of a positive, but very weak, relationship between job satisfaction and employee commitment.' Jones argues we have been measuring the wrong kind of satisfaction. Instead of job satisfaction, we should be looking at the link between overall satisfaction with life and output at work" (Bright, 2008). In this study, Jones implies that the more satisfied someone is with their life in general, the more productive we will be in our jobs.

On the other hand, research conducted by Organ (1988) concluded that a stronger connection between performance and satisfaction with business development management was not found because of the narrow definition of organizational commitment. Organ (1988) believes that when the definition of organizational commitment includes behaviors such as organizational citizenship (the extent to which one's voluntary support contributes to the success of an organization), the relationship between satisfaction and commitment will improve. Judge, Thoreson, Bono and Patton (2001) found that after correcting the sampling and measurement errors of 301 studies, the correlation between training and commitment increased to 0.30. It is important to note that the connection between training and organizational commitment is higher for difficult jobs than for less difficult jobs (Saari and Judge, 2004).

One of the more widely researched topics in Industrial Psychology is the relationship between training and employee absenteeism (Cheloha and Farr, 1980). It seems natural to assume that if individuals dislike their jobs then they will often call in sick, or simply look for a new opportunity. Yet again, the link between these factors and training is weak as the correlation between training and absenteeism is 0.25 (Johns, 1997). It is likely that a satisfactorily trained worker may miss work due to illness or personal matters, while an unsatisfied worker may not miss work because he or she does not have any sick time and cannot afford the loss of income. When people are satisfied with their job capabilities through training programmes, they may be more likely to attend work even if they have a cold; however, if they are not satisfied with their job, they will be more likely to call in sick even when they are well enough to work.

Ayeni and Phopoola (2007) have found a strong relationship between business development management and organizational commitment. According to them business development management is mostly to determine how well the organization meets customers' expectations. Whatever the business development management variables associated with

organizational commitment or employee engagement, Bhatti and Nawab's (2012) study on business development management and employee engagement concludes on the basis that business development management had a significant impact on high employees' commitment and productivity.

In a study conducted by Tella, Ayeni and Popoola (2007) on a sample of five research ad four academic libraries using survey research design, it was found, after data analysis with Pearson Multiple Correlation; that a positive correlation exists between motivation, business development management and organizational commitment. Becker, Billings, Evelleth and Gilbert (2004) investigated the relationship between business development management, job commitment and job performance. Using survey research design, they found that employee commitment and job satisfaction are largely unrelated. This was echoed by the findings by Mueller, Wallace and Price (2012) who looked at employee commitment and hypothesized that training is empirically distinct from two forms of employee commitment – work commitment and career commitment. Analyzing data with confirmatory factor analysis, they found that training has a weak correlation with employee commitment but when aided with other contributory factors, the result may differ.

A recent study by Bateman and Strasser (2014) domiciled in Texas and Ohio on longitudinal analysis of the antecedents of organizational commitment using longitudinal data from 129 nursing department employees. Organizational commitment was found to be antecedent to business development management rather than an outcome of it. Shah (2011) examined employee career commitment factors in a public sector organization of a developing country. His study was based on a theoretical approach to identify the proposed relationships of business development management, organizational commitment and job promotion variables with employee career commitment. Using a cross-sectional survey, the study found that independent variables such as business development management, organizational

commitment and job promotion have positive and significant relationships to dependent variable – employee career commitment.

Abuga (2010) correlated business development management and organizational commitment among fast food companies in Wisconsin United States of America. Her study was a quantitative study that involved a collection of data from 21 employees. The collected data were analyzed with Analysis of Variance (ANOVA), Duncan's Multiple Range Test and Pearson correlates. The results showed that business development management affected organizational commitment. She concluded that this result will help fast food companies understand and address the employee job satisfaction and engagement of their employees. Lumley, Coetzee, Tladinyane and Ferreira (2011) were saddled with the objective of exploring the relationship between employees' job satisfaction with business development management (as measured by the Job Satisfaction Survey) and organisational commitment (as measured on the Organisational Commitment Scale). They conducted a cross-sectional survey on a convenience sample of 86 employees at four information technology companies in South Africa. Correlational and stepwise regression analyses revealed a number of significant relationships between the two variables.

Ismail (2012) examined the relationship between components of organizational commitment and business development management among employees at Higher Learning Education Institutions in Kelantan. The study generated a 96.3 percent response rate from 300 respondents. The result showed that affective, continuance and normative commitment was not found to have significant positive relationship with business development management. Azeem (2010) investigated the nature of relationships of demographic factors (age and job tenure) and business development management facets with organizational commitment using a sample of 128 employees from the service industry selected randomly. Employees were given a Job Descriptive Index (JDI) questionnaire and the Organizational Commitment

questionnaire (OCQ). Pearson's product moment correlation coefficient and multiple regression analyses were used to analyze the data. The Results of the study show that the mean values of satisfaction with staff development and organizational commitment are at moderate side.

Celik (2010) analyzed the relationship between components of employee engagement and business development management of tax office employees in Turkey. Factor analysis was conducted on the data obtained through organizational commitment scale developed by Meyer and Allen (1990). Cronbach's alpha coefficient and also test item total correlation were calculated for reliability of the factors. For two groups comparisons Mann Whitney U test and more than two groups comparisons Kruskall Wallis test were used. The study found a significantly positive correlation between business development management and employee engagement.

Objective 4: To determine the influence between support services management and improved customer experience in the study area.

On the influence of Support Services Management (SSM) on customer experience within the context of FM, behavioural studies of user perception are relatively sparse. It is probable however that, users apply differing perceptions of FM services based on their experiences and work patterns within a building, and one would contend this has a direct impact on strategic FM thinking. Fleming (2004) talks about behavioural research as being made up of a heuristic environment, where perceptions of a particular product, environment, service are 'subject to heuristic bias' as they are derived from human memory, problem solving, and thus creating a 'mental note'. The most fascinating element to this discussion of behavioural research is the extension to the concept of an 'availability heuristic', which is based on 'the idea that people assess probabilities from an understanding of a particular occurrence' (Fleming, 2004) and is created based on their associated experiences.

An excellent example of this behaviour comes from Fleming's acknowledgment of the work of Folkes (1988) in her study on students' perceptions with regards to the failure of an escalator in a university facility. The sample of students studied was split into those who habitually used a combination of stairs and the escalator and those who only used the escalator to attend classes on upper floors. The students were asked to estimate what percentage of time the escalator was broken. Those who used only the escalator perceived it was broken 54 percent of the time, while those who used the stairs and the escalator perceived it was broken 31 percent of the time (Folkes, 1988). The distinctive experience of using a non-functioning escalator is thought to have increased the importance of the failure to the habitual users (Fleming, 2004).

It is also probable that those using only the escalator recalled failure incidents more easily because walking was distinctive and also comments made by themselves or classmates about having to use the stairs were distinctive (Folkes, 1988). Fleming (2004) suggests that a move to a more holistic approach to FM performance assessment is required, using occupiers' perceptions as a key performance indicator (KPI). It is important to note the understanding of the availability heuristic in determining the "who should" and "what should" be used to provide a fair and justified basis for effective customer satisfaction measurement. More specifically Fleming states that there is a strong argument that a clear understanding of the availability heuristic applied to consumers which is formed from "good" and "bad" experiences within a building may explain the nature of the users' perceptions of the building as a whole' (Fleming, 2004).

It is eligible therefore to contend that based on Fleming's (2004) findings, it is healthy to apply the inclusion of user perceptions within the strategic FM makeup in order to determine customer satisfaction levels of delivery, as although it will inevitably create bias to particular environments, based primarily on their perceptions and experiences, the bias will already

exist from organisational representatives responsible for the existing application of performance measures, and the justifications behind their inclusion as an effective source of measuring current performance. Hence, the application of perception data as a form of performance measurement is a complementary source, to assist effectively in the strategic growth and improvement of the overall business objectives.

Another interesting linkage to strategic FM delivery and user perceptions is the connection between employee (FM Team) and user (customer) perceptions. Hinks and McNay (1999) found that the perception of an 'FM team' towards the performance and importance of FM services was different to that of the 'customers'. In their study, discussions of KPI's indicated that the definitions being used tended to be particularised to their own business context, an issue which had rarely been associated with other attempts to identify generic performance indicators, thus reinforcing the need for a bespoke set of performance indicators (Hinks and McNay, 1999). These differences may be explained by the users' perception of what FM is, differing to that of FM professionals.

There is still a lack of understanding of the function of FM, particularly in strategic terms among its customer groups. FM is often perceived as purely the maintenance team, where repair activities occur on a reactive basis. This points to a lack of awareness of how FM can strategically add value. Hinks and McNay (1999) found that customers tended to interpret the FM department's role in the organisation from an operational viewpoint and that attempts by the FM department to raise more strategic issues associated with their function remained unrecognised. Shaw and Haynes (2004) argue that facilities managers need to develop performance models that are more sensitive to customer needs in order to change the perception of FM as an expensive overhead towards a customer-focussed and essential business component, capable of adding real value. Thus, the customer is integral to the performance measurement systems in place within the strategic FM organisational setup.

This is reiterated by Camp (1989) in the context of benchmarking, emphasising the importance and ability to satisfy the customer and react to their changing needs and aspirations.

Organisations require effective management of customers, assets and service levels. Managing user expectations and meeting their requirements implies a total quality approach to operating buildings and delivering support services to contribute to achieving business objectives (Alexander, 1996). In addition, Robben's (2004) study of quality measurement in a facilities environment places huge emphasis on the importance of the customer when dealing with quality performance measurement in which the 'increased competition and greater demands by the end users of products and services, has resulted in a rethinking of how quality is measured and delivered to the customer'. Robben suggests that a key factor in the importance of performance measures is to base them on 'customer input'. Robben reiterates that the most important requirement of the development of quality measures is through factors that are critical to the customers of facilities.

In order to effectively deliver customer expectations however, Robben highlights that the most important issue is that expectations must be aligned with the 'delivery mechanisms' of the organisation, and states that 'by meeting customer expectations, you are 90 per cent of the way to providing quality service'. For this to be effective, there is a need to change the perception of FM as reactive maintenance to the strategic support service it can be, adding real value to organisations. Mechanisms therefore need to be put in place to enable user involvement in FM issues at an appropriate level so that users can gain an understanding of the function of FM and the feeling of being able to contribute to and influence decision-making whilst maintaining appropriate management by FM professionals with specific knowledge and not detracting from core business tasks undertaken by the user.

Likewise, May and Pinder (2014) examined the impact of SSM on patient outcomes. They hypothesized on the extent to which practicing NHS Support Services Managers thought that the contribution of SSM could be measured in terms of health outcomes. Using a questionnaire which was distributed to NHS facilities from the majority of NHS trusts in England and Wales, they found that in general, there is little or no evidence from pre-existing research to prove the contribution of SSM in terms of health outcomes. However, in spite of this 59% of SS Managers in the NHS believed that the contribution of SSM could be measured; yet only a relatively small number of Trusts (16%) have attempted to measure the contribution of SSM. The analysis of their secondary data does not show any conclusive evidence of a correlation between SSM and health outcomes.

Research results of Spedding and Homes (1999) have found a strong link between SSM and customer service specifications. Consequentially, they conclude that the major goal of SSM is to ensure that the support services of an organization are packaged and managed in such a way that the core activity of the organization is achieved excellently. Bootle and Kalyan (2002) analyzed properties in business pulling together 74 separate investigations of SSM and realization of organizational goal in 1,200 organizations. They wrote: 'The conclusions drawn by these researchers, and many others, indicate the presence of a positive, but very weak, relationship between SSM and attaining the goals of the organization.'

Wong and Kwan (2001) analyzed the competitive strategies of hotels and travel agents in Hong Kong and Singapore specifically to identify the competitive business strategies used by the hotels and the travel agents and examine the similarities and differences in these strategies across the two city-states. The findings indicate that cost competitiveness, mobilizing people and partners, and building a robust service delivery system are the top three competitive strategies which senior managers employ. Likewise, a few published studies are starting to emerge which link support services management in the office

environment to organizational responsiveness (Laframboise et al., 2003 and Bootle and Kaylan, 2002), however May and Pinder (2014) state that there are relatively few other examples.

Lawson and Phiri (2000) have also attempted to link SSM in the ward environment with patient outcomes. Their study compared two wards on the same hospital site - one newly refurbished and the other a conventional 1960s design. Their findings showed that, unsurprisingly, the patients in the newer buildings expressed more satisfaction with the appearance, layout and overall design.

Handy (2012) posited what are the problems SSM could solve in an organization using 480 real estate professionals with more than 6 years of employment representing 12 states in southern United States of America. He found that most people have no idea what SSM actually means and how it can benefit their healthcare, higher education or research facility. Among his findings was that SSM helps an organization solve four main problems:

- Simplify maintenance response issues to fix things faster and cheaper
- Improve operations planning to prioritize and allocate funds for budgeting
- Create dynamic reporting and tracking of a facility's assets and space
- Provide regulatory compliance that assures systems and buildings are safe

Wong and Kwan (2001) analyzed the competitive strategies of hotels and travel agents in Hong Kong and Singapore specifically to identify the competitive business strategies used by the hotels and the travel agents and examine the similarities and differences in these strategies across the two city-states. The findings indicate that cost competitiveness, SSM, and building a robust service delivery system are the top three competitive strategies which senior managers employ. Hamer (1988) conducted a study on 340 employees of both public and private sector banks to examine their perception of facilities management in their organizations. He found that facilities' managers in the course of their duties are concerned

with inventory management, requirements programming, master planning, location and layout planning, drafting, cost accounting, real estate strategy, move coordination, project administration and implementation, purchasing coordination, maintenance planning, site management and overall system coordination.

Clark and Rees (2000) analyzed professional support services management in public sector organisations in England and Wales. They compare the levels of SSM awareness within these public bodies, the ability of SSM managers to influence the decision-making process, the relationship between these factors and the delivery of effective support services management and the relative importance given to it in recent Government guidelines on best value in these two public services. Based on the findings of five research projects the authors have conducted in both sectors it illustrates how SSM is not just a business opportunity but a rapidly expanding function that is gaining status as an important profession that warrants a high status in the strategic make-up of both NHS Trusts and local government authorities.

Zeckhauser and Silverman (1981) in their study on "Corporate Real Estate Management in the United States" were the first to raise the corporate awareness of serious under management of the support services assets. Another study by Gale and Case (1989) covering thirty selected large firms in fifteen industries also revealed that many corporate managers continue the neglect found in the earlier study. Barrett (1995) has identified that in several of the organisations, SSM is considered to be a purely operational function and hence, facilities departments exist to provide day-to-day service, not to consider how business support services could benefit the core business in the long run.

Hinks and Hanson (1998) further state that, "ignorance of the strategic worth of SSM is a clear risk.., it is not a simple issue to do with the direct costs of the built asset or other support resources.... The greater business issue is how well the scope for business agility is provided by SSM.... If SSM is to contribute more strategically to the business decision-

making process, it will be necessary for a clear process to be defined which supports the integration of business processes. This takes SSM into business dimensions beyond the conventional core competencies and into the management dynamics of business decision-making - the definition and analysis of problems, the strategic analysis of options and the implementation and monitoring of the business SSM process. To complement this, managers must explore the world of business strategy so that they have a better understanding of corporate values and their relationship with SSM.. ..".

Numerous other writers reported a similar trend of low perception and low priority given to the support services function by senior management of many organisations, for example, McDermott (1994), Apgar (1995) and Hamer (1996). What is significant is that the findings from above cited studies highlight a consistent lack of awareness and understanding by most senior managers of the role of SSM in organisation's success. In an attempt to throw light on the application of SSM in business organizations the following works suffice - Thompson, 1990a, 1990b; Alexander, 1993a, 1993b, 1993c, 1993d, 1993e, 1993f, 1994a, 1994b; Kincaid, 1994a; Grimshaw, 1999; Nutt, 1999b, 2000; Varcoe, 2000; Barrett, 2000). The findings from these studies addressed issues such as typical SSM activities, the SSM marketing interface, access to external influential factors, and SSM and its relationship to organisational performance etc.

Okoroh, Jones and Ilozor (2003) in their research work on facilities management and hotel organizations dwelt on adding value to constructed facilities with the aim of examining the impact of service contact on the perceived quality and nature of the services using survey questionnaire for data gathering and the personal construct theory for the analysis of the generated data. In their own opinion, a very large proportion of the product relates to the management of the core activities that center on built facilities. There is a need for life cycle planning of these facilities, their capacity, use and proactive maintenance policy, as well as

the resources needed to cope with changing demands. Factors such as life cycle costing, productivity, performance values, and legislative change drive facilities management.

In conclusion they argue that given the nature, characteristics, variety of components, and related economic aspects of hotels, it seems that there are benefits to be derived from the application of FM values. For instance, owners/owner managers in the sector and the location studied, who was more proactive in the management of their constructed facilities, achieved higher occupancy rates, profitability and repeat business. Proactive management becomes essential when it is realized that service products essentially propel hotel products. Thus, hotel accommodation package to be effective and satisfy customer needs must be accompanied by intangible services such as security, feeling of well-being etc. as shown in Figure 2.10.

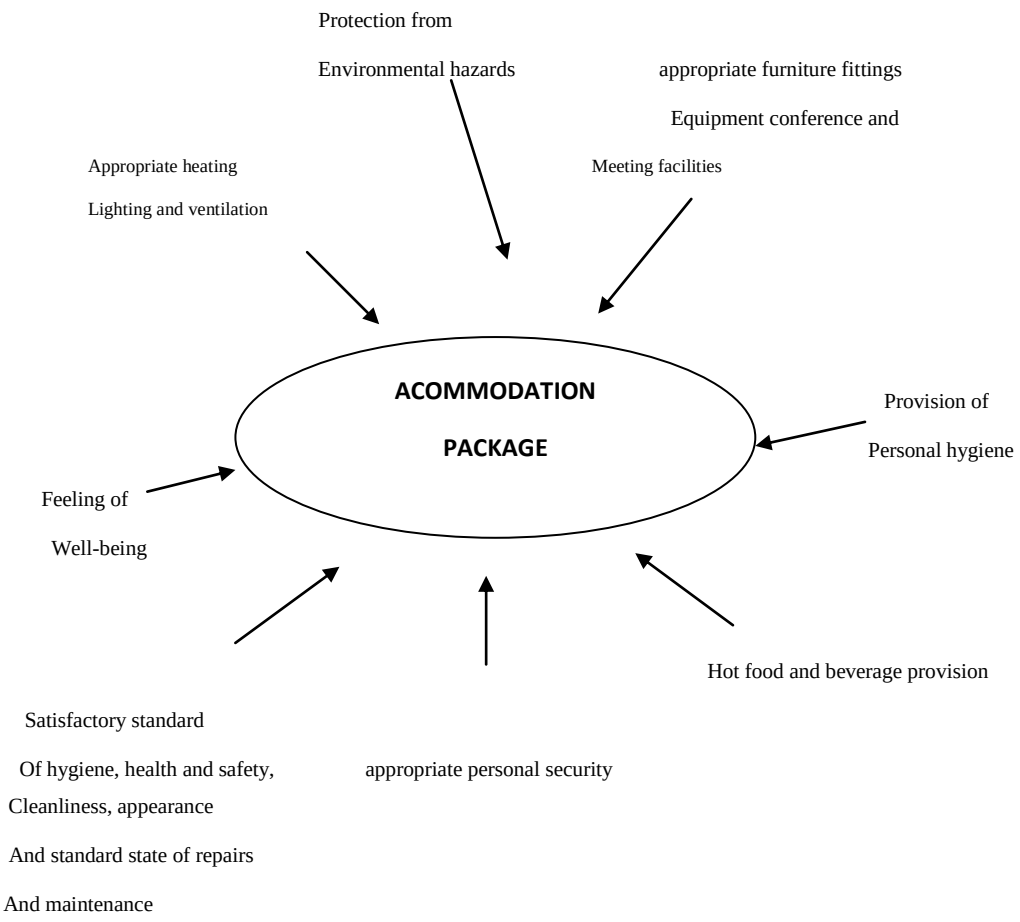

Figure 2.10: Accommodation Package.
Source: Okoroh, Jones and Ilozor (2003)

The work, even though empirical, is limited to Great Britain and so its universality is in doubt. The work was exploratory and really non-specific as far as services of the facilities management are concerned. This research will want to take off from where they stopped with specific focus on support services packaging and customer experience in seaports.

Yeo, Thai and Roh (2015) investigated the concept of PSQ and its influence on customer satisfaction in the case of Korean container ports. Following a literature review, a conceptual model of PSQ and its influence on customer satisfaction was proposed. The model was validated through a survey of 313 members of the Korean Port Logistics Association (KPLA). Partial least squares structural equation modeling (PLS-SEM) was conducted to confirm the PSQ dimensions and to examine their relationship with customer satisfaction using Smart PLS 3.2.1 software. PSQ is found to be a five-factor construct, and its management, and image and social responsibility factors have significant positive effects on customer satisfaction.

Smith (2008) explored the importance of user perceptions within an organisational context, and more specifically, how user perceptions are evidenced and positively applied within Facility Management (FM). A conceptual approach was adopted suggesting that user perceptions should be viewed as a holistic process within FM planning and processes. Through comprehensive literature reviews the paper determines the importance of user perceptions. Firstly, in the context of the user achieving productivity in the workplace as their input, and secondly, in the context of the user later achieving customer satisfaction through strategic FM delivery. The work found that user perceptions in FM can be analysed through a twofold approach, (1) user perception through their input and functionalities in the workplace, and their consequent application of workplace productivity; and (2) user perception through strategic FM delivery and the achievement of customer satisfaction. It

identifies an intrinsic linkage between the two and how they are integral to the overall strategic FM process.

Kaplan and Norton (1996) propose a 'value chain model' in order for businesses to successfully implement internal processes to achieve customer satisfaction (figure 2.11). The model illustrates that businesses should not merely look at existing operational measures to determine customer satisfaction, but should firstly look at the 'innovation process', where they can identify the current and future needs of the customer, which consequently develops new processes in order to deliver the changing customer needs. Businesses are then in a more strategic position to look at the 'operations process', and deliver the products and/or services to the customer.

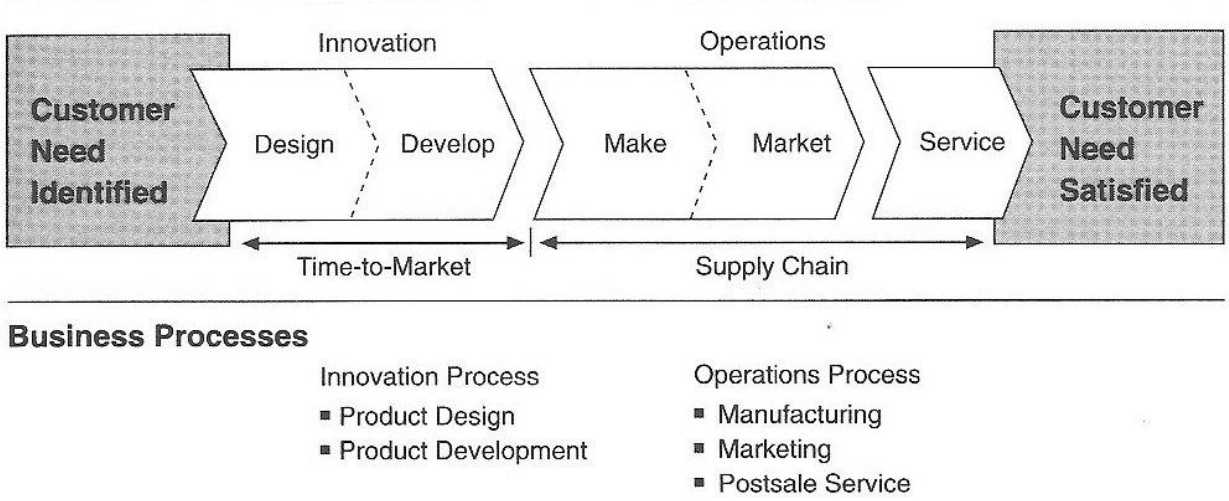

Figure 2.11: Internal business process value chain perspective

Source: Kaplan & Norton (1996).

Table 2: Hypotheses and Structural Equations

Description			**Equations**	**References**
H 1	Service Training has a significant impact on service orientation.	Service Training is considered an integral part of human resource management	$Y5 = \beta 5, 1\ Y1 + \varepsilon 1$	Chen (2005, p.22) Mouawad and Kleiner (1996)

		contributing towards service orientation and the realisation of the organisations strategic objective.		
H 2	Service Rewards has a significant impact on service orientation.	Rewarding positive service behaviour is an integral part of service orientation.	Y5 = β 5, 2 Y2 + **ε**2	Ostrom et al. (2010)
H 3	Service Rewards has a significant impact on service climate.	Service Rewards denote an avenue through which an organization‟s management provides incentives and rewards to their employees for their quality service delivery thereby contributing to a positive service climate.	Y6 = β 6, 2 Y2 + **ε**3	Schneider et al .(1998, p.151) Ostrom et al. (2010), Lytle and Timmerman (2006, p.138)
H 4	Service Co-creation has a positive impact on service climate.	Service Co-creation, is the need to manage service encounters effectively for the benefit of customers and employees to achieve overall organizational goals.	Y6 = β 6, 3 Y3 + **ε**4	Lewis and Entwistle (1990, p. 43)
H 5	Service Transformation has a significant impact on positive service climate.	Service Transformation is about „sustaining high-quality service delivery for service	Y6 = β 6, 4 Y4 + **ε**5	Liao and Chuang (2007, p. 1009)

		employees in a way that nurtures a positive service climate.		
H 6	Service Orientation has a significant impact on service encounters.	Service culture emerges as the standardized service orientation of an organization, which is practiced by all service employees as the default way of handling any service encounter.	Y7 = β 7, 5 Y5 + **ε**6	Ostrom et al. (2010)
H 7	Service Climate directly impacts service encounters.	Service encounters are the practical realizations that display the service orientation and service climate.	Y7 = β 7, 6 Y6 + **ε**7	Ostrom et al. (2010)
H 8	Service Encounters have a significant impact on Service Value.	The norm practices that accrue from the orientation, climate and encounters ultimately contribute towards creating service value. Service culture determines what customers expect from organisations, influencing the customers perception of value and expectations	Y8 = β 8, 7 Y7 + **ε**7	Hotamisli and Baytok (2008).

Source: Durudola (2010).

Numerous studies in many service sectors confirmed the positive relationship between support services management and customer satisfaction (Brady and Robertson, 2001; Cronin and Taylor, 1994; Parasuraman et al., 1994) with some conflicting evidence (Rosen and Suprenant, 1998). The few studies in the transportation sector, including aviation (Anderson et al., 2009) and high-speed railways (Cao and Chen, 2011), revealed a positive relationship between service quality and customer satisfaction. Nevertheless, research in the maritime sector on this relationship, particularly in the context of ports, is scant and the subject deserves further investigation.

2.5 Model Adaptation

Objective 5: To propose a theoretical model for effective facility management service in the study area.

The review of literature on facilities management and seaport service delivery exposes the need for further studies in the respect. From the review it was learnt that facilities management enhances service delivery but the extent to which this is so in Nigerian seaports is not known. However, from the foregoing, one would contend that there is a "logical service delivery ladder" that seaports in the country should aspire to climb if they are to attain the global best standard in the industry. This notion is inspired by the Logical Customer Performance Ladder (LCPC) developed by Smith (2008). This is shown in figure 2.12:

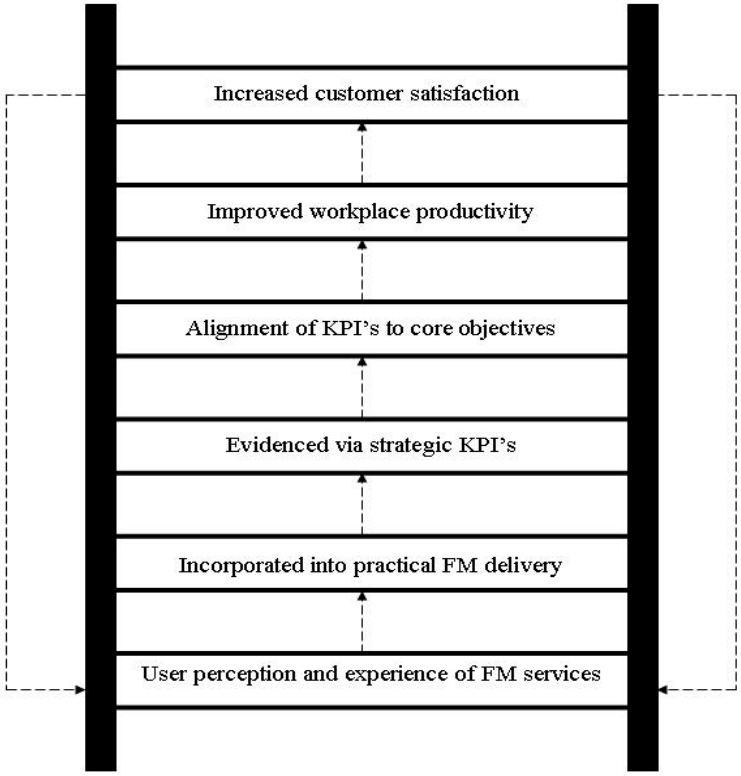

Figure 2.12: Logical Customer Performance Ladder

Source: Smith (2008).

Smith (2008) infers that the model illustrates the logical process mapping to achieve effective customer satisfaction performance within an organisation, where user perceptions and experience lead to thinking about how to effectively deliver the organisations' FM services. The service delivery then needs to be evidenced by strategic KPI's that are fully aligned to the overall business objectives of the organisation. In turn, this focused process will arguably improve the productivity of the workplace. The LCPL is a vital tool in logically structuring a systematic process for obtaining the dual purpose of positive customer satisfaction and improved service delivery (ibid).

The primary notion set out is that measures must be 'dynamic', where by this dynamism is the key stimulant to achieving continuous improvement 'by a constant adjustment of measures to focus on that which is vital to the organisation – both now and in the foreseeable

future'. The key phrase here being 'constant adjustment', in which the LCPL provides organisations with an opportune customer satisfaction model that can be strategically adjusted. User perceptions are not fixed in time, aspirations and expectations inevitably become higher, consequently meaning that performance measurement must change in its accordance. We believe, from a customer strand, the LCPL allows organisations to do this (Smith, 2008). To re-iterate this point, Varcoe (1996) states that 'only those measures that are of importance should be analysed', hence an accountable performance matrix must by focused directly at helping to improve the strategic goals set by the organisation overall.

From figure 2.12, it can be seen that the ladder acknowledges the importance of the initial user input to determine innovative ways of delivering what is important; to the internal business processes that will enable successful service delivery. It shows that marketing research is conducted so as to determine market requirements which the business must ingrain into its structure in consistence with the organizational mission and vision to attain service delivery. The beauty of this model is that the process is continuous and ongoing, implying that complacency should never be allowed in the system. As a result, the study will adapt the Logical Customer Performance Ladder (Smith, 2008) where facilities management is found to successfully enhance seaport service delivery in the proposed theoretical model which is logical service delivery ladder.

2.6 Summary of the Review of Related Literature

Few works had been written about the management of seaports generally in Nigeria especially with reference to facilities management. The review suggests that most current literature on facilities management in Nigeria are mainly preliminary and pedagogic; addressing issues such as definitions and scope, and few applications to education, healthcare and hospitality sectors. The application of the practice to seaports enjoyed minimal attention in the literature. This study will toe a different path in going further to determine the effect of

facilities management on service delivery of seaports in Nigeria using the Niger Delta region as study area.

2.7 Gap in Literature

Little has been done concerning facility management service delivery especially in seaports in Nigeria. The application of the practice to seaports enjoyed minimal attention in the literature. This study will toe a different path in going further to appraise the impact of facilities management on service delivery of seaports in Nigeria using South South region as the study area.

CHAPTER THREE

METHODOLOGY

3.1 Study Area

The study is domiciled in the Warri zone (Delta Ports), South-South geographical zone of Nigeria and the location of the seaports in the area as shown in Figure 3.1:

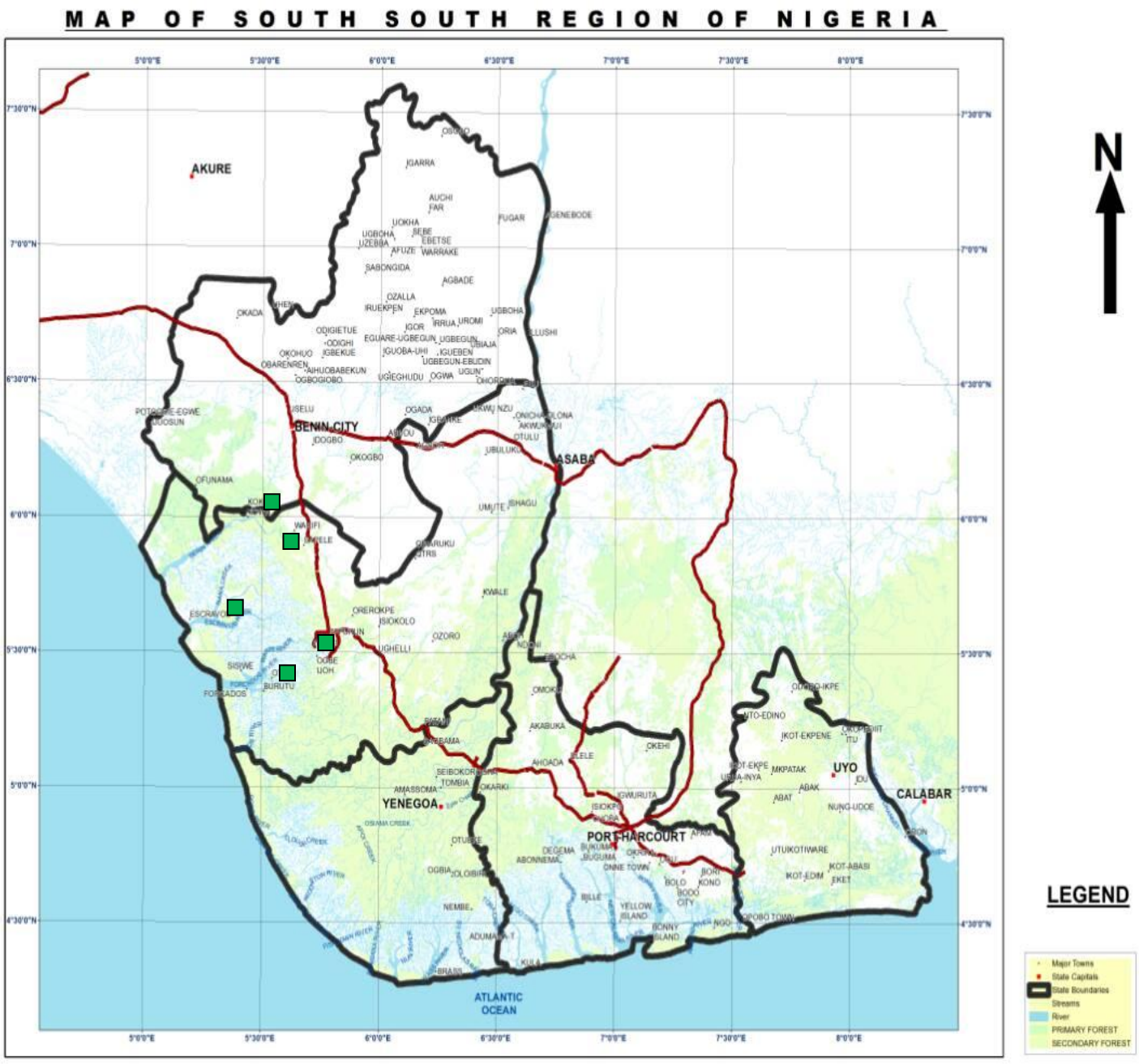

Figure 3.1: Study Area
Source: Office of the Surveyor-General of the Federation (2018)

Figure 3.1 shows the locations of the seaports under study. The areas are marked with green colour for easy identification.

3.1.1 Profile of Ports under Study

1. Koko Port

Koko Port is presently dormant. It was given on concession to Green Leigh Company but the Company could not meet up with or run the services effectively so the license was revoked. NPA leases the warehouses to companies on short leases. NPA leased to Intels and Intels subleased to Prodeco and now it is unoccupied.

2. Sapele Port

Vessels navigate through the water way. INTEL does the monitoring, collects levy and remits to NPA. However, the major part of the Port was taken over by the Navy while part of the Port is occupied and used by Bendel Feed and Flour Mill. Only Navy Vessels come into the Port. The community where the Port is located wants the Navy to leave because they believe that the Navy does not contribute to the economic development and welfare of the host community. A Coordinator handles Koko, Sapele and Oghara (Tank farm). Oghara handles liquid cargo, an extension of a Port but privately owned. It is constructed close to a water front where petroleum products are brought and stored. Tankers go there, load and supply to other places. It has the features of a Port.

3. Burutu Port

Burutu Port was leased to Kendowa Nigeria Limited (offices, stacking areas, Old Club House, quay areas etc), including all the service areas on a five-year lease which was renewed after expiration. The essence was for reconstruction of the Slip Way for the Container Ship. The target market/customers were Onitsha based on the huge Commercial activities and the volume of containers that go into the market. The idea was for the Flat Barge to pass through the salt water, connect to the water ways to finally get to its final

destination which is Onitsha. These vessels will bring containers then the company Kendowa Nigeria Ltd. will convey it to Onitsha to get to the customers.

The proposal made to this effect in collaboration with NPA explained the functions and expectations of NPA from the Lessee. However, due to the fact that it was capital intensive and License to practice involved getting foreign partners as well as other logistic issues, the company has not been able to meet up with these expectations. The Corporate Business Plan proposed by NPA for the lessee included dredging of the river, construction and reconstruction of stacking areas, warehouses, etc.

4. Warri Old and New Ports

The Ports are located in Warri Town where NPA office is. It is the most vibrant of all the Ports in Delta Ports with the highest level of maintenance compared to the other Ports in Delta Region especially in recent times. Warri Old and New Ports are operated by companies using the Terminals to do their business on leases given to them by NPA. Terminal 1 of the Warri Old Port is operated by Intel, Terminal 2 is vacant because of a major defect in the Quay Apron while Terminal 3 is operated by Julius Berger. For Warri New Port, Terminals 1 and 2 are operated by Associated Maritime Services (AMS) and Intel respectively. Also, Ocean and Cargo Terminal Services is on lease in Warri Old Port.

3.2 Research Design

The research design used in this study was the descriptive research design. The survey method of this research design was adopted for the study in line with Osuala (2001) who explained that survey research studies large and small populations by selecting and studying samples chosen from the populations to discover the relative incidence, distribution and interrelations of sociological and psychological variables as evident in this work.

3.3 Sources of Data

The study analyzed data from primary sources. The primary data for this study was collected through the use of questionnaire. This research made use of Likert scale structured questionnaires which was administered to the respondents by the researcher personally. The researcher opted for the questionnaire because, in terms of spread and coverage, it was the most effective way of reaching out to a very large number of people at the same time from whom similar types of information can be obtained. Also, respondents had greater confidence in their anonymity and thus feel freer to express their views.

3.4 Population and sample frame of the Study

The population of the study comprised Warri (Old and New) Ports, Koko, Burutu and Sapele Ports in South-South Nigeria. The population of 97 staff was used. Specifically, the study surveyed all 97 employees (senior staff) across the ports under study as obtained from NPA Human Resources Department (2017). The study retrieved 88 questionnaires which were analysed. The essence was that the officers were best placed to ascertain the relationship between facility management and employee and organizational service delivery of the ports. However, the customers were in the best position to ascertain the effect of support services management on customer experience. Accordingly, 384 seaport customers were sampled from an unknown population using Freund and Williams Formula. These seaport customers include the importers, exporters, clearing and Forwarding agents, companies under lease /concession, Police, Customs and Immigration, etc.

3.5 Sample Size Determination

Since it was normally impossible for the researcher to reach the entire population of seaport customers, the Freund and Williams's formula was used to determine their sample size. The Freund and Williams formula is given as:

$$n = \frac{Z^2pq}{e^2}$$

Where:

n = sample size

p = percentage of positive response

q = percentage of negative response

e = margin of error

Z = level of confidence

From the result of the pilot study, the p (0.5) and the q (0.5) were generated. At $\propto$=0.05 (margin of error), Z = 1.96. Thus, we have:

$$n = \frac{(1.96)^2(0.5)(.5)}{(.05)^2} = \frac{3.8416(0.25)}{.0025} = \frac{.9604}{.0025}$$

384.16

Thus, the study sampled 384 seaport customers in consistence with objective number 4. The seaport customers sampled were 384 in number. However, after the distribution of questionnaires, 352 were retrieved, which is approximately 91.7 %

3.6 Research Instrument

The instrument for data collection for the study is the structured questionnaire. The questionnaire was designed to focus on issues of facility management and service delivery of selected seaports in South South Nigeria (Warri Zone)

3.7 Validity of the Instrument

For the instrument for data collection in the study to measure what it intended to measure, it was subjected to content validity. The researcher designed the instrument in a very simple language to avoid ambiguity, misinterpretation or misunderstanding of the questions or statements. The questions in the questionnaire were well structured in line with the objectives

of the study. The instrument was subjected to peer review and expert analysis. Through item analysis, some items were removed.

3.8 Reliability of the Instrument

In testing the reliability of the instrument statistically, Cronbach's Alpha was used. Firstly, a pilot study was conducted, where 20 senior staff were selected at convenience from the ports under study. Copies of the questionnaire (see Appendix II) were administered to them. They displayed good knowledge of the subject matter and gladly filled the questionnaire. Upon testing the reliability of responses to the items in the test instrument, an Alpha of 0.98 and an inter-item (standardized) coefficient of 0.92 were obtained. These being greater than 0.7 indicated that the reliability of the test instrument was very strong (see Appendix III for detailed result).

3.9 Method of Data Presentation and Analysis

Data was presented in tables and all hypotheses will be tested with Pearson Product Moment Correlation Coefficient (for hypothesis 1-3) to measure the relationship between the variables and Spearman Correlation Coefficient (for hypothesis 4) to establish the relationship between the variables.

3.10 Model Formulation

From the findings of the study, an adaptation of the "Logical Customer Performance Ladder" (LCPL) Model by Smith (2008) as shown in figure 2. 12 was made. Smith (2008) infers that the model illustrates the logical process mapping to achieve effective customer satisfaction performance within an organisation, where user perceptions and experience lead to thinking about how to effectively deliver the organisations' FM services. The ladder acknowledged the importance of the initial user input to determine innovative ways of delivering what is important; to the internal business processes that will enable successful service delivery. The

beauty of this model is that the process is continuous and ongoing, implying that complacency should never be allowed in the system.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This chapter dealt with the presentation and analysis of the data obtained from the respondents in the (Old and New) Ports, Koko, Burutu and Sapele Ports in South-South Nigeria under the study. The essence is that the employees are best placed to ascertain the relationship between variables in the study. The study was conducted to determine the effect of facility management on service delivery of selected seaports in Nigeria. The presentation and interpretation of data were based on questionnaire administered to the employees in these ports. This was done with the use of a Likert scale structured questionnaire. A total of ninety-seven (97) copies of the questionnaire were distributed in accordance with the strata of each port; out of which, eighty-eight (88) were fully completed and returned which is 90.7%. Also, a total of 384 questionnaires were distributed to seaport customers out of which 352 were fully completed and retrieved which is 91.7%.

4.1. Data Presentation

Data presented and subsequently analyzed and discussed bear direct relevance to the problem and objectives of the study, and which apparently are relevant to the testing of the hypotheses formulated by this study. The Tables show the positions held by the respondents in the ports under study.

Table 4.1: Objective 1: Influence of space management on service delivery of seaports in South South Nigeria

S/N	What is the influence of space management on service delivery of seaports in South South Nigeria?	SA	A	UD	D	SD	Weighted Mean	
1	Availability of cargo space has enhanced reliability in freight forwarding for shipping line	38	20	9	11	10	3.74	
2.	Improved resource availability and requirements gathering have enhanced pickup and delivery convenience	32	44	6	6	0	4.16	
3	Premises planning and design has created an improvement in safe port operations.	30	32	15	8	3	3.89	
4	Adaptation of buildings and infrastructure has fashioned smooth communication channels	26	20	18	16	8	3.45	

5	Activity integration has led to improved competency in emergency handling	33	21	17	9	8	3.7
6	e-warehousing has improved accuracy of documentation	45	30	8	4	1	4.3
7	Management Information System has reduced data redundancy levels in the port	34	22	2	19	11	3.56
8	Integrated information services (single window for information) has led to better integration of business operations	35	38	10	4	1	4.16
9	Space management has contributed to good sanitary conditions of wharfs and yards	25	32	8	10	13	3.52

The result from Table 4.1 reveals that availability of cargo space has enhanced reliability in freight forwarding for shipping line, as shown by a weighted mean of 3.74; improved resource availability and requirements gathering have enhanced pickup and delivery convenience (4.16); premises planning and design has created an improvement in safe port operations (3.89); adaptation of buildings and infrastructure has fashioned smooth

communication channels (3.45). The respondents also opined that activity integration has led to improved competency in emergency handling (3.7); e-warehousing has improved accuracy of documentation (4.3); management information system has reduced data redundancy levels in the port (3.56); integrated information services (single window for information) has led to better integration of business operations (4.16); and space management has contributed to good sanitary conditions of wharfs and yards (3.52).

Table 4.2: Objective 2: Influence of workplace programming on receptiveness of South South Nigeria sea ports

S/N	Influence of workplace programming on receptiveness of South South Nigeria sea ports	SA	A	UD	D	SD	Weighted Mean
1	Computer aided data entry has enhanced speedy fulfilment of work order	30	30	18	5	5	3.85
2.	Advanced planning and scheduling system has engendered solicitude and promptitude in problem solving situations	25	18	20	13	12	3.35
3	Computer Aided Facility Management using a Customer Relations Management System has led to timely execution of work order	36	21	15	10	6	3.81

4	Continuous control, monitoring and evaluation systems have abetted management in keeping track of activities in the port	40	35	5	7	1	4.20
5	Machinery for documentation and response to customer complaints has reduced waiting and loading times	26	19	15	15	13	3.34
6	Cargo tracing service has fostered security and orderly handling of goods	35	45	5	3	0	4.27
7	Workspace support systems (help desk) have led to increased speed of issuing bill of lading	37	38	10	3	0	4.24
8	Work-life balance policy of the port has created better employee accessibility and approachability	40	37	6	4	1	4.26

The presentation of data in Table 4.2 shows that computer aided entry has enhanced speedy fulfilment of work order (3.85); advanced planning and scheduling system has engendered solicitude and promptitude in problem solving situations (3.35); computer aided facility management using a computer relations management system has led to timely execution of work order (3.81); continuous control, monitoring and evaluation systems have abetted management in keeping track of activities in the port (4.20).

Likewise, the respondents averred that machinery for documentation and response to customer complaints has reduced waiting and loading times (3.34); cargo tracing service has fostered security and orderly handling of goods (4.27); workspace support systems (help desk) have led to increased speed of issuing bill of lading (4.24); work-life balance policy of port has created better employee accessibility and approachability (4.26).

Table 4.3: Objective 3: The Influence of business development management on employee engagement in South South Nigeria sea ports

S/N							
Influence of business development management on employee engagement in South South Nigeria sea ports	**SA**	**A**	**UD**	**D**	**SD**	**Weighted Mean**	
1	Human resources information system has helped manage employee skill gaps	19	21	19	17	12	3.2
2.	Training of port staff has significantly increased staff knowledge levels	38	35	5	7	3	4.11
3	Contents of	23	19	25	12	8	3.39

	staff development program are abreast with contemporary methods in port operations						
4	Continuity and risk assessment strategy has created better employee empathy	38	30	10	9	1	4.08
5	Human capital development policy of the port has improved employee disposition	26	28	16	14	4	3.66

Table 4.3 highlights that human resources information system has helped manage skill gaps (3.2); training of port staff has significantly increased staff knowledge levels (4.11); contents of staff program are abreast with contemporary methods in port operations (3.39); continuity and risk assessment strategy has created better employee empathy (4.08); and human capital development policy of the port has improved employee disposition (3.66).

4.1.1: Objective 4: Influence of support services management on customer experience in South South Nigeria seaports

For this research question, 384 copies of the questionnaire were randomly administered to customers of the selected seaports, while 352 were valid and successfully returned.

Table 4.4: Influence of support services management on customer experience in South South Nigeria seaports

S/N	Influence of support services management on customer experience in South South Nigeria seaports	SA	A	UD	D	SD	Weighted Mean
1	State of supporting equipment has enhanced customer satisfaction in the ports	76	60	72	80	64	3.01
2.	Planning and scheduling of management inspection has enhanced functionality and performance of support facilities	140	128	56	20	8	4.06
3	Customers are satisfied with the state of record keeping in the port	85	65	65	85	52	3.13
4	State of security apparatus in the ports has inspired customer confidence and loyalty in the ports	44	36	80	112	80	2.58

The result from Table 4.4 reveals that state of supporting equipment has enhanced customer satisfaction in the ports, evidenced by a weighted mean of 3.01; planning and scheduling of

management inspection has enhanced functionality and performance of support facilities (4.06); customers are satisfied with the state of record keeping in the port (3.13); and state of security apparatus in the ports has inspired customer confidence and loyalty in ports (2.58).

4.2 Test of Hypotheses

The four hypotheses postulated in Chapter One were tested with various statistical tools aided by computer through the application of Statistical Package for Social Sciences software. The hypotheses were tested using Spearman Rank Order Correlation Coefficient.

4.2.1 Hypothesis One

Ho: There is no significant influence of space management on service delivery in South South Nigeria seaports.

Ho1: There is a significant influence of space management on service delivery in South South Nigeria seaports.

Computation Table for the Analysis

Space Management	Service Delivery
32	23
25	29
9	13
12	10
10	13

Table 4.5: Descriptive statistics

	Mean	**Std. Deviation**	N
Space Management	1.8845	1.04327	88
Service Delivery	2.2450	1.08782	88

Table 4.5 displays the descriptive statistics of space management and service delivery. Space management had a mean score of 1.8845, standard deviation of 1.04327 and number of cases 88, service delivery had score of 2.2450, standard deviation of 1.08782 and number of cases as 88.

Table 4.6: Correlations

Correlations

			SPACE MANAGEMENT	SERVICE DELIVERY
Spearman's rho	SPACE MANAGEMENT	Correlation Coefficient	1.000	.667
		Sig. (2-tailed)	.	.0219
		N	5	5
	SERVICE DELIVERY	Correlation Coefficient	.667	1.000
		Sig. (2-tailed)	.0219	.
		N	5	5

**. Correlation is significant at the 0.05 level (2-tailed).

From the analysis above, it shows that the probability value (0.0219) is less than the alpha value (0.05), the research therefore accepts the alternative hypothesis and concludes that there is a significant effect of space management on service delivery in South South Nigeria seaports with a correlation value of 0.667. This value indicates that correlation is significant at 0.05 level (2tailed).

4.2.2 Hypothesis Two

Ho: Workplace programming does not have a significant influence on receptivity of South South Nigeria seaports.

H1: Workplace programming has a significant influence on receptivity of South South Nigeria seaports.

Computation Table for the Analysis

Workplace programming	Responsiveness
30	29
27	23
11	12
10	11
10	13

Table 4.7: Descriptive Statistics

	Mean	Std. Deviation	N
Workplace programming	4.5020	.73615	88
Responsiveness	4.5219	.72489	88

Correlations

			Workplace programming	Responsiveness
Spearman's rho	Workplace programming	Correlation Coefficient	1.000	.821
		Sig. (2-tailed)	.	.089
		N	88	88
	Responsiveness	Correlation Coefficient	.821	1.000
		Sig. (2-tailed)	.089	.
		N	88	88

The result in the correlation Table 4.8 shows that the influence of workplace programming on receptivity is significant (r = .821). This value indicates that correlation is significant at 0.05 level (2tailed).

4.2.3 Hypothesis Three

Ho: Business development management does not have significant influence employee engagement in South Nigeria seaports.

H1: Business development management has significant influence on employee engagement in South Nigeria seaports

Computation Table for the Analysis

Business development management	Employee engagement
30	29
27	23
11	12
10	11
10	13

Table 4.8: Descriptive Statistics

	Mean	Std. Deviation	N
Business development management	1.8491	1.17861	88
Employee engagement	1.6772	1.11378	88

Source: SPSSWIN 19.00 Version output

Table 4.9 Correlations Matrix on the Relationship between Business Development Management and Employee Engagement

Correlations

			Business development management	Employee engagement
Spearman's rho	Business development management	Correlation Coefficient	1.000	.821
		Sig. (2-tailed)	.	.009
		N	88	88
	Employee engagement	Correlation Coefficient	.821	1.000
		Sig. (2-tailed)	.009	.
		N	88	88

Source: SPSSWIN 19.00 Version output

From the analysis above, it shows that the probability value (0.009) is less than the alpha value (0.05), the researcher therefore accept the alternative hypothesis and conclude that Business development management correlate with employee engagement in South Nigeria seaports with a correlation value of 0.821. This value indicates that correlation is significant at 0.05 level (2tailed).

4.2.4 Hypothesis Four

Ho4: Support services management does not have a significant positive influence on improved customer experience in South South Nigeria seaports.

The goal is to determine correlation between support services management and customer experience in South South Nigeria seaports. Spearman Rank Order Correlation was used in testing the hypothesis.

Table 4.11: Spearman Correlation

Correlations

			SSM	CE
Spearman's rho	SSM	Correlation Coefficient	1.000	.705**
		Sig. (2-tailed)	.	.000
		N	88	88
	CE	Correlation Coefficient	.705**	1.000
		Sig. (2-tailed)	.000	.
		N	88	88

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.11 shows the result of the Spearman's rank correlation analysis. The estimated Spearman's rank correlation coefficient (r) 0.705 is high and shows that a strong relationship exists between support services management and customer experience.

The positive sign of this correlation coefficient shows that the extent to which support services management is positively related to customer experience is large.

4.3 Relative Importance Index

The study measured seaport facility management with the following proxies – space management, workplace programming, business development management, and support services management in consistence with the facility management service level agreement in the seaports under study from the analysis and testing of the hypotheses, the following results were obtained:

Space management was found to have a significant positive influence on service quality with correlation result $r = .88$; $p < 0.05$.

Workplace programming had a significant positive influence on receptiveness given the correlation result $r = .98$; $p < 0.05$.

Likewise, business development management had a significant positive influence on employee engagement from the correlation result $r = .80$; $p < .05$).

To a large extent, support services management affected customer experience in the seaports under study.

From these results of .88, 0.98, 0.80, and 0.70 respectively, the relative importance index of the variables used for the study in a 4-point Likert Scale ranking shows the following:

Workplace programming	=	4
Space management	=	3
Business development management	=	2
Support services management	=	1

This implies that from the result of the study, workplace programming should be given a priority in Nigerian seaports facility management, space management, business development management and support services management should follow in this scale of preference. This

is consistent with the Logical Customer Performance Ladder propounded by Smith (2008) which this study intends to adopt.

4.4 Discussion of Results

In this section, the discussion revolved around the objectives of the study as presented in chapter one. The findings made in this work were compared with findings made in other related studies to determine the level of consistence or disparity with the results of the study.

RESEARCH OBJECTIVE 1

To determine the influence of space management on service delivery of seaports in South South Nigeria

The result in the correlation Table 4.1 shows that there is significant positive effect of space management on service delivery in the organizations under study (r = .88). The correlation coefficient shows 0.889. This value indicates that correlation is significant at 0.05 level (2tailed).

The findings synchronized with Ogbo, Onekanma and Ukpere (2014) who advanced the research regarding the relationship between effective space management and organization performance in the seven-up bottling company, Ninth Mile Enugu. Their major objective was to bring to fore the importance of effective inventory control system on organizational performance as it relates to the bottling company. A total of eighty-three respondents constituted the sample for the study. Four research questions and Four hypotheses were generated and tested at 10% (that is 0.10) significant level using descriptive statistics and non-parametric test (chi-square). The result of the analysis showed that flexibility in space management is an important approach to achieving organizational performance.

The result agrees with Tay and Ooi's (2001) work on space management which analyzed the contributing factors to a high level of efficiency in the workplace using a 4 category Likert scale since his data did not follow a normal distribution. With a dichotomous dependent

variable, logistic regression became the analytic technique of choice. Space management was found to positively correlate with high levels of organizational efficiency.

The result of this study correlates with the findings of Amit and Shoemaker (1993) who studied strategic assets and organizational rent. Having sampled a total of 6584 nursing home employees from 76 nursing homes in mid-western United States with questionnaire, they found that space management can help one analyze historical space usage and create accurate chargeback reports.

RESEARCH OBJECTIVE 2

To examine the influence of workplace programming and receptiveness of the seaports in the study area

The result in the correlation Table 4.2 shows that the relationship between workplace programming and responsiveness is significant (r = .98). This value indicates that correlation is significant at 0.05 level (2tailed).

The finding correlates with a study conducted by Sukati et al. (2012) who investigated the impact of work environment on competitive advantage. The study also assesses the impact of organizational responsiveness on firm competitive advantage. The data collection instrument used was a questionnaire which was administrated to a total sample of 400 managers in Malaysia manufacturing industry. The response rate was 62% while 50% was usable questionnaires. Sample selection was based on convenience sampling. Data were analyzed using mean, standard deviation and correlation between independent and dependent variables. The analyses involved statistical methods such as reliability and validity tests and multiple regressions. The research findings supported the hypotheses that work environment positively impact organizational responsiveness and competitive advantage.

The result is also consistent with the work of Sukati, Hamid, Baharun and Tat (2010) on the relationship between the internal environment and organizational responsiveness. The study hypothesized that if positive, the relationship could enhance competitive advantage. The data collection instrument used was questionnaire administered to 200 managers. The response rate was 70%. The result indicated that the internal environment relates to organizational responsiveness and further enhances competitive advantage of the organizations under study.

The study disagrees with the work of Otchere, Anaan and Quansah (2013) on an assessment of the challenges of organizational responsiveness in the Cocoa industry using Cocoa farmers in Ashanti Region of Ghana. The study sought to examine the major constraints which inhibited effective response to customer demand in the industry. The study adopted adductive (inductive and deductive) approach with the administration of interview and questionnaire to collect quantitative data from farmers. The target population for the research covered five districts out of the twenty-seven districts in the Ashanti region. The regions which comprise Atwima Mponua, Atwina Nwabiagya (Nkawie), New Educbiase, Offiuiso, and Ahafo Awo South districts were selected randomly.

A sample size of 230 was pooled from the Ashanti region out of a total population of 8,000,000 cocoa farmers in Ghana. This also represented the number of copies of the questionnaire sent out which however, fetched a return of 81%. The study found that the challenges of organizational responsiveness were poor technological innovations, lack of information sharing and poor integrated database. The relative importance index run on the mean factors indicated that all the factors of internal, customers and supply integration were important for all the groups. The study further revealed that the best way of enhancing organizational responsiveness is to start from functional integration which is internal to external integrations.

RESEARCH OBJECTIVE 3

To ascertain the influence of business development management on employee engagement in the study area.

The values in Table 4.3 indicate that correlation is significant at 0.05 level (2tailed) and implies that the correlation between business development management and employee engagement is significantly positive (r = .80). The computed correlations coefficient is greater than the table value of r = .195 with 283 degrees of freedom (df. = n-2) at alpha level for a two-tailed test (r = .80, p< .05).

The findings are compatible with the empirical study of Onodugo (2000) who investigated human resources management in Awka based firms. Using survey research design with z-test statistic, she found that staff training and development plays a positive role in the organization through enhanced increase in employee performance. In the final analysis, she states that employee performance increases through skill acquisition and the ultimate end of human resource development is to equip the requisite skills to become more productive and thereby increase the chance of increasing the performance base.

However, the study disagrees with the findings of Alexander (2007) who in her study focused on the relationship of one cognitive ability test on long-term job performance as measured by personnel data. Archival data from over 3,000 employees at an international technology company were used to assess how aptitude test scores relate to both objective and subjective job performance measures. Supervisory performance ratings, level of promotion, and salary increase significantly contributed to variance in test scores; however, these results were inconsistent. Number of training courses did not have a significant relationship with test scores. Additionally, type of turnover did not moderate the relationship between aptitude test scores and job performance. These results indicate that although aptitude test score is related to long term job performance factors, other factors account for the majority of the variance.

The implication is that aptitude should not be the sole consideration when predicting long term job success.

Yet, the findings of the study is in alignment with the work of Tijani, Okunola and Orga (2000) evaluated the customer satisfaction in selected Hotels in Ikeja Area of Lagos. Table of random sampling technique was used to select 10 hotels from 27 hotels registered and recognized by Nigeria Tourism Development Corporation (NTDC) in the areas. A well-structured questionnaire was used to collect necessary data. Findings revealed that the Hotels in the studies area were not giving their customers' satisfaction because what hotelier perceived as customer's quality service differs from the guests' expectation. The study concluded that managers and proprietors of hotels should accord necessary recognition to professionalism and staff training to achieve customer satisfaction.

The study also agrees with the works of Ayeni and Phopoola (2007), Bhatti and Nawab (2012), and Tella, Ayeni and Popoola (2007).

On the other hand, the findings of the study is consistent with Shah (2011) who examined employee career commitment factors in a public sector organization of a developing country. His study was based on a theoretical approach to identify the proposed relationships of business development management, organizational commitment and job promotion variables with employee career commitment. Using a cross-sectional survey, the study found that independent variables such as business development management, organizational commitment and job promotion have positive and significant relationships to dependent variable – employee career commitment.

It also agrees with Abuga (2010) who correlated business development management and organizational commitment among fast food companies in Wisconsin United States of America. Her study was a quantitative study that involved a collection of data from 21

employees. The collected data were analyzed with Analysis of Variance (ANOVA), Duncan's Multiple Range Test and Pearson correlates. The results showed that business development management affected organizational commitment.

Similarly, the study aligns with the findings of Lumley, Coetzee, Tladinyane and Ferreira (2011) who were saddled with the objective of exploring the relationship between employees' job satisfaction with business development management (as measured by the Job Satisfaction Survey) and organisational commitment (as measured on the Organisational Commitment Scale). They conducted a cross-sectional survey on a convenience sample of 86 employees at four information technology companies in South Africa. Correlational and stepwise regression analyses revealed a number of significant relationships between the two variables.

The findings do not agree with the result of research by Ismail (2012) who examined the relationship between components of organizational commitment and business development management among employees at Higher Learning Education Institutions in Kelantan. The study generated a 96.3 percent response rate from 300 respondents. The result showed that affective, continuance and normative commitment was not found to have significant positive relationship with business development management.

The result for this objective is consistent with the empirical work of Celik (2010) which analyzed the relationship between components of employee engagement and business development management of tax office employees in Turkey. Factor analysis was conducted on the data obtained through organizational commitment scale developed by Meyer and Allen (1990). Cronbach's alpha coefficient and also test item total correlation were calculated for reliability of the factors. For two groups comparisons Mann Whitney U test and more than two groups comparisons Kruskall Wallis test were used. The study found a significantly positive correlation between business development management and employee engagement.

RESEARCH OBJECTIVE 4

To determine the influence of support services management on customer experience in seaports in South South Nigeria

Table 4.4 shows the result of the Spearman's rank correlation analysis. The estimated Spearman's rank correlation coefficient (r) 0.705 is high and shows that a strong relationship exists between support services management and customer experience. Therefore, to a large extent, support services management affects customer experience in Nigerian seaports.

The finding does not tally with a study conducted by May and Pinder (2014) who examined the impact of SSM on patient outcomes. They hypothesized on the extent to which practicing NHS Support Services Managers thought that the contribution of SSM could be measured in terms of health outcomes. Using a questionnaire which was distributed to NHS facilities from the majority of NHS trusts in England and Wales, they found that in general, there is little or no evidence from pre-existing research to prove the contribution of SSM in terms of health outcomes. However, in spite of this 59% of SS Managers in the NHS believed that the contribution of SSM could be measured; yet only a relatively small number of Trusts (16%) have attempted to measure the contribution of SSM. The analysis of their secondary data does not show any conclusive evidence of a correlation between SSM and health outcomes.

However, it agrees with research results of Spedding and Homes (1999) which have found a strong link between SSM and customer service specifications, but disagrees with Bootle and Kalyan (2002) who analyzed properties in business pulling together 74 separate investigations of SSM and realization of organizational goal in 1,200 organizations and found a positive, but very weak, relationship between SSM and attaining the goals of the organization.

The study tallies with the work of Lawson and Phiri (2000) who have also attempted to link SSM in the ward environment with patient outcomes. Their study compared two wards on

the same hospital site - one newly refurbished and the other a conventional 1960s design. Their findings showed that, unsurprisingly, the patients in the newer buildings expressed more satisfaction with the appearance, layout and overall design.

It is also consistent with the study by Wong and Kwan (2001) which analyzed the competitive strategies of hotels and travel agents in Hong Kong and Singapore specifically to identify the competitive business strategies used by the hotels and the travel agents and examine the similarities and differences in these strategies across the two city-states. The findings indicate that cost competitiveness, SSM, and building a robust service delivery system are the top three competitive strategies which senior managers employ.

In consistence with the findings of the study, numerous studies in many service sectors have confirmed the positive relationship between support services management and customer satisfaction (Brady and Robertson, 2001; Cronin and Taylor, 1994; Parasuraman et al., 1994). The conflicting evidence was found in the work of Rosen and Suprenant (1998). The few studies in the transportation sector, including aviation (Anderson et al., 2009) and high-speed railways (Cao and Chen, 2011), revealed a positive relationship between service quality and customer satisfaction. Nevertheless, research in the maritime sector on this relationship, particularly in the context of ports, is scant and validates the conduct of this study.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter provides an overview of the summary of findings, conclusion and recommendations of the study.

5.1 Summary of Findings

In consistence with the objectives of the study,

1. **Objective 1 was to determine the influence of space management on service delivery of seaports in South South Nigeria.** It was found that there was significant positive effect of space management on service delivery in the organizations under study ($r = .88$; $p < 0.05$).
2. **Objective 2 was to examine the influence of workplace programming and receptiveness of the seaports in the study area**. The study found that the relationship between workplace programming and responsiveness was significantly positive ($r = .98$; $p < 0.05$).

3 **Objective 3 was to ascertain the influence of business development management on employee engagement in the study area**. It was also found that the correlation between business development management and employee engagement was significantly positive ($r = .80$; $p < 0.05$).

4 **Objective 4 was to determine the influence of support services management on customer experience in seaports in South South Nigeria**. The study also found that support services management had a significantly positive correlation with customer experience in Nigerian seaports ($r = 0.705$; $p < 0.05$).

5 **Objective 5 was to propose a theoretical model for effective facility management service delivery in the study area**

5.2 Conclusion

On the basis of research findings, the study concluded that the impact of facility management on service delivery of South South Nigeria seaports were significantly positive.

5.3 Recommendations

1. The study recommends the adoption of space management through contemporary Information and Communications Technology systems as it has been found to improve service quality and delivery.
2. It is therefore recommended that seaport operators and stakeholders have a serious rethink and give adequate priority to the workplace in a bid to boost receptiveness to Customer orders.
3. Given that our world is constantly evolving, seaport employees must be continuously enlightened to meet the daily challenges of today's world. Proprietors of seaports in Nigeria should undertake and encourage continuous training and development programmes to build the capacity of employees to meet current global best standards.
4. The study recommends a system of innovation in seaport practices to constantly ensure that maintenance and procurement programmes comply with the service level agreement.
5. On the issue of service level agreement (SLA) there should be continuous improvement of service level agreement at lease every two years so that user perceptions, experience, stakeholders 'contribution, experience as well as other current trend will help to streamline and improve on the existing Service Level Agreement.

5.4 Contribution to Knowledge

In wake of few indigenous studies in seaport facility management, the study contributes to knowledge with the conclusion that impact of facility management on service delivery of seaports in Nigeria is significantly positive. The study also contributes to literature with the adaptation of Smith's (2008) "Logical Customer Performance Ladder" to propose a theoretical Model of seaport facility management which is "Logical Service Delivery Ladder". From the findings of the study, it is obvious that for seaports in the country to attain the global best standard in the industry, compliance to the facility management service level agreement should be prioritized. The model is shown in Figure 5.1:

Figure 5.1: Logical Service Delivery Ladder (LSDL) for Seaport Facility Management Aguome (2019).

The model illustrates the logical process mapping to achieve effective customer satisfaction performance in seaports. The model argues that in the drafting of seaport facility management service level agreement, information acquired about user perceptions and experience should lead to thinking about how to effectively deliver the organisations' FM services. The service delivery then needs to be evidenced by strategic Key Performance Indicators that are fully aligned to the overall business objectives of the organisation. These KPIs for seaport facility management are space management, workplace programming, business development management, and support services management.

In turn, this focused process will arguably improve the productivity of the workplace through improved service quality, organizational responsiveness, employee engagement, and customer experience in Nigerian seaports. The LSDL acknowledges the importance of the initial user input to determine innovative ways of delivering what is important; to the internal business processes that will enable successful service delivery. It shows that marketing research is conducted so as to determine market requirements which the business must ingrain into its structure in consistence with the organizational mission and vision to attain service delivery. These are incorporated into the facility management service level agreement which then determines the KPIs.

The alignment of the KPIs to the corporate objectives of the seaport ensures that the workplace is programmed effectively for performance enhancement which invariably improves customer experience in the seaports. The beauty of this model is that the process is continuous and ongoing, implying that complacency should never be allowed in the system.

5.5 Area for further Research.

The issue identified from the study for further research:

(1) The model known as Logical Service Delivery Ladder, proposed in this study has to be tested and calls for further study.

(2) It is suggested that this study be replicated in other sectors of the Nigerian economy to either confirm or refute the findings of this study.

(3) It is also suggested that service level agreement as a tool to impact stakeholders' vision be researched.

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APPENDIX I

LETTER OF INTRODUCTION

Department of Estate Management
Faculty of Environmental Sciences
Nnamdi Azikiwe University, Awka
Anambra State
July, 2018.

Dear Sir/Madam,

QUESTIONNAIRE FOR A STUDY ON APPRAISAL OF THE IMPACT OF FACILITY MANAGEMENT ON SERVICE DELIVERY OF SELECTED SEAPORTS IN SOUTH SOUTH, NIGERIA.

I am Aguome, Njideka Maryclara, a Postgraduate student of Estate Management in Nnamdi Azikiwe University, Awka, Anambra State of Nigeria. I humbly request that you kindly fill this questionnaire on the above stated research topic. The questions form a part of data collection for the research work, which is done in partial fulfillment of the requirements for the award of a Doctor of Philosophy (Ph.D) Degree.

To this end, I would like you to please respond to the attached questionnaire with all amount of fairness. Your sincere response to the questions in this questionnaire will help in the successful completion of this study. I assure you that all information disclosed will be treated in strict confidence and used solely for academic purposes.

Thanks for your anticipated cooperation.

Yours faithfully,

Aguome, Njideka Maryclara.

APPENDIX II

APPRAISAL OF THE IMPACT OF FACILITY MANAGEMENT ON SERVICE DELIVERY OF SEAPORTS IN SOUTH SOUTH NIGERIA (WARRI PORTS ZONE)

QUESTIONNAIRE

This is to certify that I have read through all the information given to me by the researcher. I am therefore willing to participate fully in this study.

Instruction: Please tick (√) against your choice of response to the questions indicating any of the following choices:

SA = Strongly Agree; A = Agree; U = Undecided; D = Disagree; SD= Strongly Disagree.

I	**What is the influence of space management on service delivery of seaports in South South Nigeria?**	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
1	Availability of cargo space has enhanced reliability in freight forwarding for shipping line					
2	Improved resource availability and requirements gathering have enhanced pickup and delivery convenience					
3	Premises planning and design has created an improvement in safe port operations					
4	Adaptation of buildings and infrastructure has fashioned smooth					

	communication channels					
5	Activity integration has led to improved competency in emergency handling					
6	e-warehousing has improved accuracy of documentation					
7	Management Information System has reduced data redundancy levels in the port					
8	Integrated information services (single window for information) has led to better integration of business operations					
9	Space management has contributed to good sanitary conditions of wharfs and yards					
II	**What is the influence of workplace programming on receptiveness of South South Nigeria seaports?**					
10	Computer aided data entry has enhanced speedy fulfilment of work order					
11	Advanced planning and scheduling					

	system has engendered solicitude and promptitude in problem solving situations					
12	Computer Aided Facility Management using a Customer Relations Management System has led to timely execution of work order					
13	Continuous control, monitoring and evaluation systems have abetted management in keeping track of activities in the port					
14	Machinery for documentation and response to customer complaints has reduced waiting and loading times					
15	Cargo tracing service has fostered security and orderly handling of goods					
16	Workspace support systems (help desk) have led to increased speed of issuing bill of lading					
17	Work-life balance policy of the port has created better employee					

	accessibility and approachability					
III	**What is the influence of business development management on employee engagement in South South Nigeria seaports?**					
18	Human resources information system has helped manage employee skill gaps					
19	Training of port staff has significantly increased staff knowledge levels					
20	Contents of staff development programmes are abreast with contemporary methods in port operations					
21	Continuity and risk assessment strategy has created better employee empathy					
22	Human capital development policy of the port has improved employee disposition					
IV	**What is the influence of support services management on customer**					

	experience in South South Nigeria seaports?					
23	State of supporting equipment has enhanced customer satisfaction in the ports					
24	Planning and scheduling of management inspection has enhanced functionality and performance of support facilities					
25	Customers are satisfied with the state of record keeping in the port					
26	State of security apparatus in the ports has inspired customer confidence and loyalty in the ports					

APPENDIX III

RELIABILITY STATISTICS

Output Created		2017-07-31M12:37:32.750
Comments		
Input	Data	C:\Users\Njideka Aguome\Documents\Aninwike.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Impact41 Impact42 Impact43 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA.
Resources	Processor Time	0:00:00.015
	Elapsed Time	0:00:00.016

[DataSet1] C:\Users\Aguome\Documents\Aguome.sav

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	20	100
	Excluded[a]	0	0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.984	20

APPENDIX IV

Custom warehouse (771.07m^2)

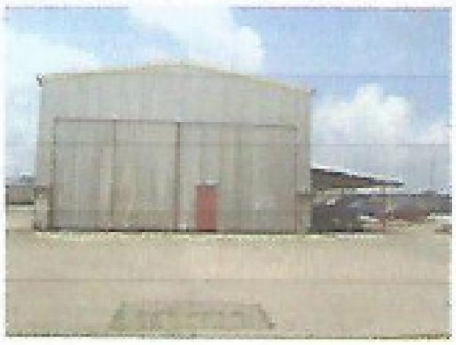
Big Warehouse (3,192m^2)

Quay Apron (2,469.60m^2)

Stacking Area (4,216.80m^2)

Plate I: Pictures of Koko Port

APPENDIX V



Warehouse (648.87m^2)

Shade 3,425 warehouse (7,362m^2)

respectively

Intels Stacking Area (96,938.60m^2)

Quay Apron of AMS Terminal (17,100m^2)

Plate II: Pictures of Warri Old and New Ports

Plate III: Warri Old and New Ports

APPENDIX VI

Warehouse (579.80m^2)

Quay Apron (4,140.10m^2)

Plate IV: Pictures of Sapele Port

APPENDIX VII

Warehouse (3,079.7m^2)

Warehouse (6,442.37m^2)

Slip way (14,000m^2)

Plate V: Pictures of Burutu Port