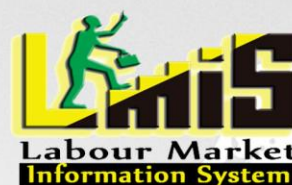




Ministry of Labour
& Social Security



Easier access to employment
opportunities

Potential Areas of Employment Opportunities due to Logistics Hub Development in Jamaica



Prepared by:
Planning, Research and Monitoring Unit
Ministry of Labour and Social Security
March 2016

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EXECUTIVE SUMMARY

This study explores potential areas of employment opportunities that may arise through the proposed logistics hub development in Jamaica. Twenty one (21) establishments from the Transportation, Shipping and Communication sectors, Government entities, as well as education and training institutions participated.

The research was qualitative and utilized purposive sampling technique. It sought to investigate the views of Managers and Senior Officers regarding the concept of a logistics hub. It also explored potential areas of employment opportunities, including those for low skilled and unskilled persons as well as entrepreneurial opportunities. Training needs was examined in this report, given the need to ensure that the labour force has the requisite certification for potential job opportunities. This has implication for the level of demand for skills from overseas to solve possible skills gap.

Understanding the concept of a logistics hub

Information gathered from respondents suggests that a logistics hub is a mode of operation that involves efficient processing, storage and movement of goods and raw materials via various means. These goods and raw materials can either be transported locally or internationally. A logistics hub is therefore designed to facilitate an integration of world trade, as well as interconnectivity of businesses and infrastructure for movement of goods and services locally.

Evidence garnered from existing literature indicates that it is a specific area selected to manage activities related to transportation, organization, separation, coordination and distribution of goods for national and international transportation on a commercial basis, through various operators.

Potential occupations and skills required for the proposed logistics hub

The study sought to ascertain occupations and skills which currently exist and new skills which may be needed as a result of the logistics hub development. The development of the Spanish Town Free Zone in 2016 will facilitate the creation of 2,500 high-level jobs in the areas of Chemical and Mechanical Engineering, Manufacturing, Petro-Chemicals, Logistics and Research.

Other occupations identified by respondents include Custom Brokers, Maritime Lawyers, Multi-skill Technicians, Port Managers, Logistics Clerks, Mechatronics Engineers, Ship Repairers as well as Computerized Crane Operators. Some of the skills considered necessary include:

- knowledge of procedures which facilitate clearance of goods;
- the ability to oversee the operation of one or several ports;
- being able to plan and coordinate stowage for efficient, cost effective loading and dispatching shipping containers; and
- the ability to deploy and supply stocks for warehousing, manufacturing and other businesses that deal with large quantities of stock.

This report also highlighted employment opportunities through entrepreneurship ventures. Support services such as the Supply of Goods, Food and Entertainment, Container and Ship Cleaning, as well as Truck Repairs were documented as avenues that could facilitate entrepreneurship. Farming was also identified as a potential area since the demand for local products could increase due to the expected influx of persons from all over the world.

Employment opportunities for low skilled and unskilled persons

The majority of respondents felt that it would be difficult for low and unskilled persons to gain employment in the industry, since it usually requires skilled labour in order to ensure high levels of productivity and efficiency. Therefore, it would be in the interest of low and unskilled persons to seek training, particularly because this will help to improve the quality of the local labour force.

A few respondents indicated that there would be employment opportunities in occupational areas that do not require much skill, e.g. Sorting, Packing and Assembling of goods, Garbage Collection and Janitorial Service.

Potential opportunities in the logistics hub for existing industries

The logistics hub could create forward linkages in industries such as:

- Transportation
- Custom Brokering
- Transshipment
- Shipping
- Information Communication Technology

Energy providers were also mentioned as major beneficiaries of the logistics hub development because operations will require the use of electricity and fuel. The spin-off effect from the logistics hub initiative could facilitate backward linkages for example, in Construction, Education and the Financial Services industries.

Key training needs

Human resource development was identified as a key element for the success of a logistics hub initiative. Reports from countries with logistics hubs indicate that they invest in improving the quality of their labour force so that persons are equipped with the relevant skills. The study indicates that there will be training needs in Jamaica for several skill areas, including:

- Custom Broking
- Logistics Management
- Supply Chain Management
- Security
- Legal
- Engineering
- Foreign Languages such as Spanish and Mandarin

In addition, there was a general consensus among employers that the Jamaican labour force needed workplace behaviour training. The idea is that if persons are not equipped with the relevant 'soft' skills, then this would limit their opportunities to gain employment or retain a job.

Measures being undertaken by training institutions to provide required skills

The report sought to ascertain whether education and training institutions had programmes or have begun to introduce programmes that are geared towards preparing the labour force for the logistics hub initiative. Results indicate that several education and training institutions have incorporated programmes within their curriculum which range from certificate courses to post graduate diplomas. These programmes include:

- a) Certificate course in Logistics Manpower Training
- b) Professional Diploma in Warehouse Management Logistics
- c) Associate of Applied Science Degree (AASc.) in Industrial Systems Operations and Maintenance
- d) Bachelor of Science in Cruise Shipping and Marine Tourism
- e) Masters in Logistics and Supply Chain Management
- f) Post Graduate Diploma in Logistics Management

Possible skills to be sourced internationally

Most respondents did not feel that there would be a need to recruit skilled workers from overseas. Others felt that a foreign country which is investing in the development of a logistics hub, would initially utilize its own persons to manage all operations. A few respondents felt that Jamaica would have to source skilled persons such as Information Technology workers, as well as Technical workers in Network Architecture, Quality Control and System Operations.

1.0 Introduction

1.1 Background

The Government of Jamaica (GOJ) has embarked on an economic programme aimed at improving the country's Gross Domestic Product (GDP) per capita. The programme focuses on attracting new investments in areas such as Tourism, Logistics, Shipping, Agriculture and Business Process Outsourcing.¹

During the preparation of the *Transport Sector Plan* for Vision 2030 Jamaica - National Development Plan in 2007, the opportunity for the country to be a major transshipment hub was articulated.² It was felt that Jamaica had certain characteristics that would give it a distinct advantage. These include its strategic geographical location, English speaking workforce, relatively low wages as well as a developed maritime infrastructure.³ With the projected increase in trade flows from the Panama Canal, Jamaica would be strategically positioned to reap the benefits if proper organizational and infrastructural mechanisms are established. The expansion of the Panama Canal is expected to be completed in 2016. Caribbean Islands such as the Dominican Republic, Jamaica and Cuba are therefore in the process of expanding and remodeling wharves and port facilities.

It is against this background that the GOJ's *Medium Term Socio-Economic Framework 2012–2015* focused on expediting the phased and integrated development of key components of the Global Logistics Hub.⁴ These include:⁵

- a) Privatization and expansion of the Kingston Container Terminal (KCT), which were completed;
- b) Privatization and upgrading of the Norman Manley International Airport (completed);

¹ Ibid

² The Jamaica logistics hub symposium for Jamaican companies and investors, prepared by PIOJ

³ Ibid

⁴ Ibid

⁵ Government of Jamaica (2015) Growth Agenda Policy Paper

- c) Establishment of a Transshipment Port and an industrial and commercial economic zone in the Portland Bight Protected Area;
- d) Development of a Port Community System which is to be pursued by private sector and ultimately merged with the ASYCUDA⁶ World to provide complete trade and logistics solution;
- e) Development of Special Economic Zones; and
- f) Completion of highway construction projects to improve the internal logistics infrastructure (ongoing).

With the proposed development of these key components, it is important to examine the demand for skilled workers. This is because, in preparation for the logistic hub expansion, a country will need to have a skilled workforce in order to compete regionally and globally. As such, this study was conducted by the Ministry of Labour and Social Security's Planning, Research and Monitoring Unit to identify future areas of employment opportunities.

1.2 Objectives

The study sought to provide Policy Makers, Planners, Students and Job Seekers with information that, in addition to identifying the potential areas of employment, will indicate the types of skills needed. The main objectives of the study are to:

- Provide an understanding of the concept of a logistics hub;
- Identify potential occupations and skills required for the proposed logistics hub;
- Identify employment opportunities for low skilled and unskilled persons;
- Identify potential opportunities in the logistics hub for existing industries;
- Determine key training needs;
- Examine measures being taken by training institutions to provide required skills; and
- Identify possible skills to be sourced internationally.

⁶ Automated System for Customs Data

1.3 Methodology

This section describes the rationale and assumptions on which the study was based, as well as the research design and method employed.

1.4 Assumptions

The underlying assumption of the research is that the development of the logistics hub will provide improved employment opportunities, as well as an increased need for skilled workers in Jamaica. This assumption was based on the review of best practices and outcomes of other logistics hub initiatives.

1.5 Research Method

In order to gain an insight into the potential areas of employment opportunities, major players in the industry were targeted. This influenced the sample technique, which was purposive in nature. Representatives of organizations were targeted on the premise that they possess the requisite information on how Jamaica could benefit from a logistics hub initiative, as well as the training needs for its development. The sample frame consisted of establishments involved in Shipping, Transportation, Logistics Management, Telecommunication and Government entities that are critical to the process. Education and training institutions that have a role to play in skills development for the hub were also targeted. The interviewees included Managers and Senior Officers.

The study employed the use of a qualitative research method. Data collection was within a two month period and was executed through semi-structured interviews (See Appendix). Each interview was conducted using an interview guide. The instrument was modified to capture additional information based on the type of industry to which the interviewee belonged.

1.6 Limitations

The research was constrained by lack of participation from some entities that would have added valuable information to enhance the report. Some respondents although operating within the logistics hub industry, were unable to make predictions on occupations which will be in demand. This made it difficult to obtain a complete list of occupations that would be needed.

Given the gender disparity in the ratio of males to females employed in related areas of logistics hubs such as the Shipping industry, the scope of this study did not address this issue.

2.0 Literature Review

2.1 What is Logistics?

The Council of Logistics Management (1991) defines logistics as that *“part of the supply chain process that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers’ requirements.”* Pinnock (2014) states that logistics is *“one of the most important aspects of global and local trade”* which allows for communication anywhere in the world as well as the movement of goods or information.⁷

Tilanus (1997) offers an alternative definition, *“as the process of anticipating customer needs and wants; acquiring the capital, materials, people, technologies, and information necessary to meet those needs and wants; optimising the goods or service-producing network to fulfil customer requests; and utilizing the network to fulfil customer requests in a timely way.”*

Johnson and Wood’s definition (cited in Tilanus, 1997) uses four terms to explain logistics. These are inbound logistics, materials management, physical distribution and supply chain management. Johnson and Wood explain that logistics demonstrates the complete process of materials and products moving into, through, and out of firms. For them, inbound logistics focuses on the movement of material received from the dealer. Materials management explains the movement of materials and components within a firm. Physical distribution refers to the movement of goods outward from the end of the assembly line to the customer. Supply chain management involves the monitoring of materials, information and finances as they move from supplier to manufacturer to wholesaler to retailer and finally, the consumer.

⁷ Dr. Fritz Pinnock (2014) – The Jamaican Logistics Hub: preparing a 21st Century Workforce for New Logistics Jobs

2.2 What is a Logistics Hub?

A logistics hub can be defined as a *“regional cross-docking point, where products from multiple supply sources arrive and are sorted in accordance to the needs of the destination points. Products are then delivered to these points without being stored at the hub.”*⁸

Another definition provided by the Euro-Platform group suggests that a logistics hub *“is a centre or specific area designated to deal with activities related to transportation, organization, separation, coordination and distribution of goods for national and international transit on a commercial basis, by various operators.”*⁹ Operators may own, lease or rent the buildings or facilities of the hub such as warehouses, storage houses, distribution centres, offices, trucking and shipping services.¹⁰

The World Bank in its Logistics Performance Indicator (LPI) identified six dimensions to determine the logistics affability of a country.¹¹ These six factors include:¹²

- a) Efficiency of the clearance process (i.e. speed, simplicity and predictability of formalities) by border control agencies, including customs;
- b) Quality of trade and transport related infrastructure (e.g. ports, railroads, roads, information technology);
- c) Ease of arranging competitively priced shipments;
- d) Competence and quality of logistics services (e.g., Transport Operators, Customs Brokers);
- e) Ability to track and trace consignments; and
- f) Timeliness of shipments in reaching destinations within the scheduled or expected delivery time.

⁸ Analysing the development of a Logistics Hub - <http://southwestcorridornorthwestpassage.org/analyzing-development-of-logistics-hub/>

⁹ Exploring logistics hub - <http://jamaica-gleaner.com/gleaner/20130515/news/news1.html>

¹⁰ Ibid

¹¹ World Bank. (2009). Doing Business. Washington D.C.

¹² Ibid

2.3 Logistics hub country cases

Countries such as the Netherlands, Singapore and Dubai have well established logistics hubs. The characteristics of each hub and the impact on their country are described below.

2.3.1 The Singaporean Case

According to Mufnoz (2005), Singapore is the most important logistics hub in the world, with 20 of the top 25 global logistics players conducting operations there. Tongzon (2004) in his study on Singapore identified some factors that are vital for a hub to be successful. It should be strategically located for example, along the main shipping and air routes. It needs to have an air terminal that provides extensive linkages and connectivity to the world. Its seaport should be the central point of shipping lines and include good linkage to other ports internationally. It should have good capabilities in warehousing and related services. In addition, there must be adequate and highly efficient infrastructure.¹³ Ketels, Lall and Siong (2009) also highlighted the importance of having a highly skilled workforce as a critical element for a successful logistics hub.

Singapore's success has been driven by investment in human capital. In the earlier years (1960's/70's), Singapore did not have the highly educated workforce needed to attract world-class companies to the country. To attract high level workers, incentives such as high salaries and good quality of life were provided. An aggressive Educational Policy was developed to enhance quality. Investment was directed to increase the coverage and quality of education that focused on Science and Mathematics, and match the skills needed in chosen sectors (Ketels, Lall, & Siong, 2009). BERI's Global Labour Force Study (2005) rated Singapore as having the best workforce, although the average school years for workers still lagged behind other Asian countries (Porter, Neo, & Ketels, Remaking Singapore, 2010). Since the 21st century, the

¹³ Tongzon, J. „Strategies for Developing Logistics Hubs: The Case of Singapore“, *The 3rd Gwangyang Port Forum*, 21-23 April 2004, Gwangyang City, S. Korea, 2004. Available: <http://www.amc.edu.au/mlm/staff/jtongzon.html> [Accessed July 2006]

Logistics and Transportation sector contributes up to 8 per cent of GDP, creating over 200,000 jobs.¹⁴

Porter (2008) indicates that the Singaporean Logistics Hub is extensive. The supporting industries include Container, Ship and Aircraft Maintenance. Firms also supply marine, lighting and electrical equipment. Offshore Engineering is an important service that is provided within the cluster. In most of these supporting industries, Singapore is a world-leading player, with local firms capturing a large share of the global market.¹⁵

The list of related industries that profit from the logistics hub is extensive and not exhaustive.¹⁶ The Singaporean economy is well diversified and hosts regional headquarters for automotive companies and manufacturing operations that produce high value components.¹⁷ It is noted that as more of these companies expand, they outsource activities that were formerly done in-house, leading to a rapid growth in related business services. These include Legal Counselling, Accounting, Management Consultancy and Advertising.¹⁸ Singapore also promotes high value-added, knowledge-based and international services. Service clusters such as Communications and Media, Information Technology and Healthcare have all shown strong growth potential.¹⁹

2.3.2 The Rotterdam Case

The establishment of the Netherlands as a logistics centre for international firms was as a result of its historical strengths, specialization in trade, and the existence of adequate infrastructure.²⁰ Since the middle ages, the Netherlands have been strongly dependent on trade and transport related activities in order to address the lack of natural resources needed to support local industries.²¹

¹⁴ Germany Trade and Invest (2014) retrieved from <http://www.gtai.de/GTAI/Navigation/EN/Invest/Industries/logistics.html>

¹⁵ Porter, M. (2008). Clusters and competition. In M. Porter, On Competition.

¹⁶ Ibid

¹⁷ Ibid

¹⁸ Ibid

¹⁹ Ibid

²⁰ Cases of the leading ports in developing logistics centres - http://www.unescap.org/sites/default/files/pub_2194_ch4.pdf

²¹ Ibid

From the inception of containerization²² in the early 1960s, the Port of Rotterdam seized the opportunities offered by the new form of transportation system. This was accomplished through heavy investment in handling facilities and equipment for efficient transshipment of containers to inland modes of transport.²³ Another strategic advantage for the Port of Rotterdam is its ability to house the largest bulk ships, which enables large container vessels to rely on their ports without difficulties.²⁴ This high quality maritime infrastructure enables not only the establishment of transshipment points and storage facilities, but also the emergence of a chemical cluster around the Port of Rotterdam.²⁵

According to Professor Yossi Sheffi, during 2013 the Port of Rotterdam, employed 55,000 people directly and 90,000 indirectly. The employment opportunities varied and included blue collar jobs associated with activities such as Warehousing, White Collar positions in Management, Customer Service and Information Technology and a variety of skilled jobs created by value-added services such as Product Tagging, Light Manufacturing and Repair Work.²⁶

2.3.3 The Dubai Case

Dubai's logistics hub is the most dominant in the Middle East. Due to its location in the south of the Persian Gulf on the Arabian Peninsula, it allows for a competitive advantage not only for regional trade, but also for trade between Asia and Europe. The logistics cluster in Dubai has been a key driving force of economic growth and development.²⁷

Dubai's logistics development has been supported by other complementary industries. The development of other clusters in Dubai's economy has led to significant demand for transport and logistics, particularly in the areas of Tourism, Real Estate, Manufacturing and Construction. Banking, Finance, Insurance and Consulting Services are important supporting and related

²² Containerization is a system of intermodal freight transport using intermodal containers made of weathering steel.

²³ Ibid

²⁴ Ibid

²⁵ Ibid

²⁶ Prof. Yossi Sheffi - Logistics Clusters: Much More than Hubs for Freight

²⁷ Commit FZE, 2008

industries to Transport and Logistics.²⁸ Dubai's financial services sector is well developed within the city and as a result businesses are conducted efficiently. For example, Shippers are able to insure their goods with ease.²⁹ Ashai, Dahshan, et al. (2007) stated that other related industries include Ship Repair, Ship Building and other port services.

In terms of dry docking, more than 12,000 persons are employed by the Dubai's dry docks in its Ship Repair, Vessel Conversion, Engineering and building new units and dockyard.³⁰ Jobs in the dry dock range from highly specialized disciplines such as Crane Operators, High-voltage Technicians and Boilermakers, to Welders, Carpenters, Painters and Cleaners.³¹

2.3.4 The Jamaican Case

The establishment of Jamaica as a Global Logistics Hub has serious implication for the country's international competitiveness. This is largely based on the type of infrastructure required for the hub to function efficiently and compete at a world-class level.³² Jamaica has the advantage of having the 7th largest harbour in the world. The GOJ plans to build on this natural advantage by placing significant attention on projects related to infrastructural requirements.³³

Other infrastructural developments include the Spanish Town Free Zone, of which phase I is expected to be completed in 2016.³⁴ This development is expected to provide 2,500 high level jobs in the areas of Chemical and Mechanical Engineering, Manufacturing, Petro-Chemicals, Logistics and Research.³⁵ Employment opportunities in the Service industry will also be generated by Business Processing Outsourcing clients within the zone.³⁶ The ultimate purpose of Spanish Town Free Zone facility will be for the refining and regeneration of petroleum products, manufacturing of composite and insulation material, vehicle assembly, auto parts

²⁸ Ibid

²⁹ Ibid

³⁰ Jamaica Gleaner - Logistics And Supply-Chain Management: At The Hub Of Job Creation

³¹ Ibid

³² Caribbean Policy Research Unit – UWI. Creating National Wealth Through The Jamaica Logistics Hub: Looking Beyond Ports And Parks To People And Processes

³³ Ibid

³⁴ The Jamaica Observer - Logistics hub dream step closer to reality

³⁵ Ibid

³⁶ Ibid

remanufacturing and distribution, manufacturing of pharmaceutical and nutraceutical products, research, development and manufacturing of tobacco products.³⁷

The Kingston Dry Dock, which houses vessels up to 150 tonnes, has significant scope for growth due to the variation and increased trafficking of vessels that will result from the logistics hub.³⁸ The arrival of 3,664 vessels averaging over 30,000 tonnes in 2012 indicates that opportunities exist in several areas for entrepreneurs and skilled workers in the provision of dry docking facilities and other marine services.³⁹

The development of skills is therefore urgent. This means that adequate research must be conducted in order to ascertain the level of skills needed to ensure that Jamaica has the quality labour force that is equipped to operate within a global logistics environment. This view was stressed by Pinnock (2014) who articulated that *“training and retraining are critical for getting the workforce ready for the emerging jobs.”*⁴⁰

Logistics hubs that have facilitated the creation of national wealth usually occur in countries with a high level of human capital; where there is generally basic formal education and a large proportion of the population attaining quality higher education.⁴¹

The Global Competitiveness Report (2015) ranked Jamaica 70th from a total of 140 countries in relation to the quality of the education system. Education and training institutions will therefore have the challenge of ensuring that the workforce receives the level of certification that is on par with international standards.

Table 1 provides the types of educational requirements, which according to Professor Gordon Shirley, will be deemed important for a logistics hub development in Jamaica.

³⁷ Ibid

³⁸ Ibid

³⁹ Ibid

⁴⁰ Dr. Fritz Pinnock – The Jamaican Logistics Hub: Preparing a 21st Century Workforce for New Logistics Jobs

⁴¹ Caribbean Policy Research Unit – UWI. Creating National Wealth Through The Jamaica Logistics Hub: Looking Beyond Ports And Parks To People And Processes

Table 1
Types of educational requirements for logistics hub development in Jamaica

| Types of Programmes | Areas |
|--------------------------------|---|
| Post-graduate Education | <ul style="list-style-type: none"> • Maritime Law • Digital Logistics Chain Management • Operations Management • Information Technology and Logistics |
| Undergraduate Education | <ul style="list-style-type: none"> • Logistics & Supply Chain Management • Operations Research • IT & Logistics |
| Vocational Education | <ul style="list-style-type: none"> • Certified Logistics Associates • Certified Logistics Technicians • Broader Supply Chain education needs • Special Product Handling needs • Drivers & Equipment Operators • Repair Technicians • Information Technology Skills |

Source: Professor Gordon Shirley Presentation (2014) – Infrastructure, Logistics Hub and Economic Growth

3.0 Findings

Initial contact was made with relevant interviewees via telephone, email and facsimile, informing them of the nature of the study, its importance and the value of their contribution. Representatives from 35 organizations were contacted and attempts made to secure interviews with the targeted amount. As shown in Table 2, data was collected from twenty one (21) entities, resulting in a response rate of 60 per cent.

Table 2
Number of interviews and
response rate by types of sector

| Sector | Interviews Sought | Interviews Conducted | Response rate % |
|---|-------------------|----------------------|-----------------|
| Public Administration and Defence; Compulsory Social Security | 8 | 4 | 50.0 |
| Education | 6 | 4 | 66.6 |
| Transport, Storage and Communication | 20 | 12 | 60.0 |
| Real Estate, Renting and Business Activities | 1 | 1 | 100 |
| Total | 35 | 21 | 60.0 |

3.1 Perceived definition of the concept of a logistics hub

Most respondents perceived the logistics hub as an operation in a centralized geographic location, which involves the processing, storage and movement of goods and raw materials through various means in an efficient manner. A respondent referred to it as a *“cluster of services that enables goods or raw materials to be delivered in Jamaica and re-distributed to the Western Hemispheric population.”* Another person explained that the hub is *“the different ports in Jamaica, as well as what would become economic zones across Jamaica. It is therefore economic operations going on across most of Jamaica.”*

Other suggestions were that a logistics hub *“involves the integration of world trade.”* The interviewee classified it as a division of resources and alluded to it as a bicycle wheel in which

the hub is the centre and the spokes are various resources, with the outer rim being the people who benefit.

3.2 Potential for new businesses

Some respondents did not feel that new businesses will be created, but an expansion of existing services. An interviewee suggested that some professions and businesses would be enhanced, for example Accounting, Engineering as well as persons already in the field of logistics. This view was supported by another respondent who articulated that he expects to see “*a proliferation of existing businesses.*”

Respondents who were optimistic felt that new businesses will be created and indicated that these would be found in areas with direct linkages such as Transportation, Logistics and Distribution Services as well as Information Technology and Communication Systems (See Figure 1). New areas with direct linkages included Dry Docking, Ship Chandelling and Bunkering. An interviewee pointed out that:

“We have not been doing a lot of Marine Law practices, which would be an important area. We could use this opportunity to invest in more Technicians for repairing damaged, second hand, used or misfitted goods to re-ship them as finalized products to a market.”

The findings also revealed that the spin-off from the logistics hub development will result in indirect linkages in areas such as “Agriculture, Food Security and Natural Resources”, “Arts, Entertainment and Recreation Hospitality Communication” and “Built Environment, Building and Construction”.

Anticipated areas of new and expanded businesses

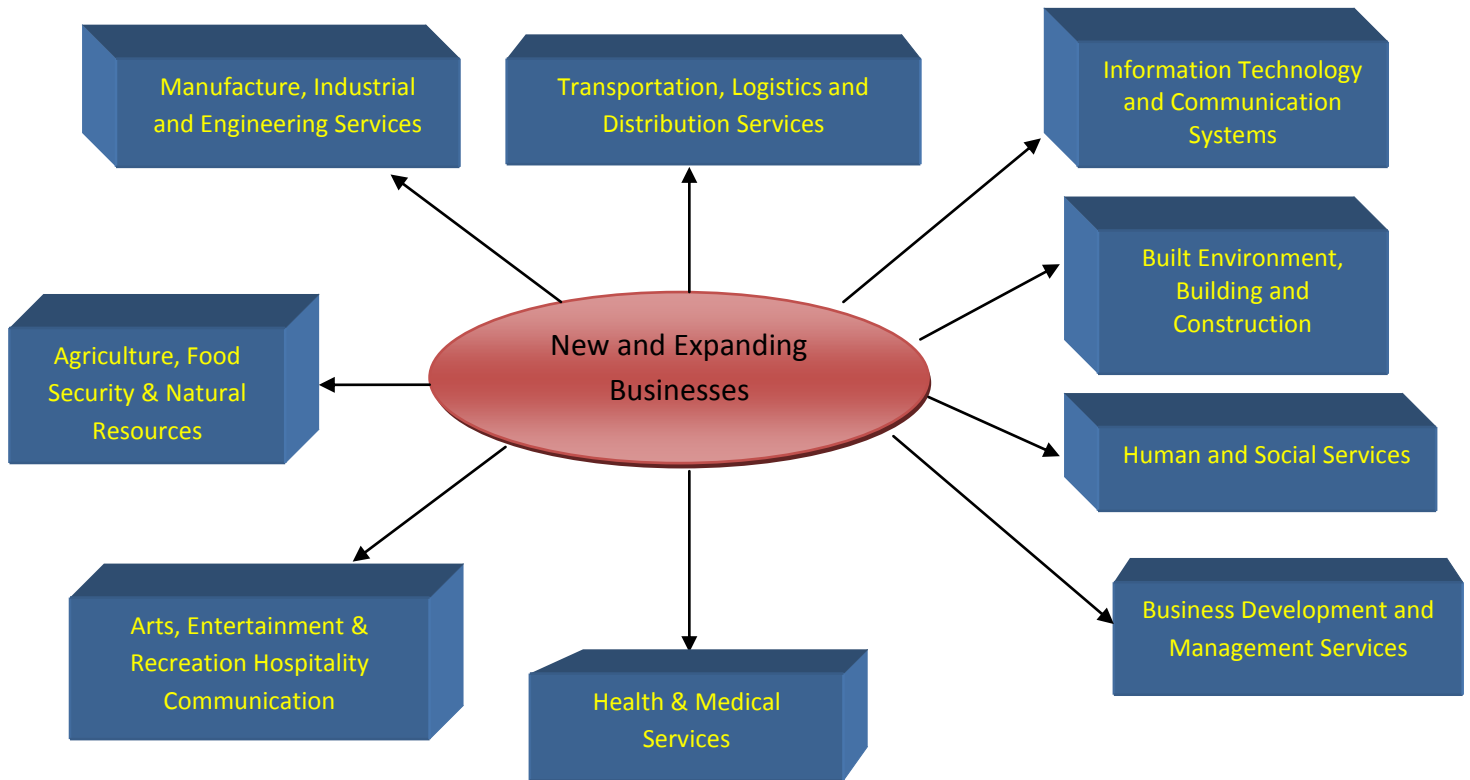


Figure 1

3.3 Industries to benefit from the logistics hub development

Respondents identified several industries that can readily benefit from a logistics hub development. These included Logistics, Shipping, Business Process Outsourcing, Agriculture, Aviation and Tourism (See Figure 2).

Types of Industries



Figure 2

The logistics hub will create forward linkages in industries such as Transportation and Information Communication Technology. Energy providers were also mentioned as a major beneficiary because, as indicated by one individual, *“whether or not the logistics hub initiative is lucrative, electricity will be needed for operations.”* In addition, fuel and electricity consumption will increase due to greater levels of business activities in areas such as Construction, Education, Courier Services, Financial Services, Manufacturing as well as Agriculture and Tourism.

3.3.1 Transportation

The Transportation industry was deemed integral to the operations of the logistics hub. This is because the hub will require the movement of goods and raw material across Jamaica and to other territories. One interviewee stated that *“in order to develop Jamaica into an integrated logistics hub, it is essential to develop robust maritime, aviation and land transport capabilities.”*

3.3.2 Information Communication Technology (ICT)

ICT was identified as critical to the successful operations of a logistics hub. It can facilitate GPS⁴² tracking of trailers moving from one location to the next. It also allows effective surveillance of goods and equipment. For example, it enables a customer to track the status of a particular piece of equipment and monitor it in real time, using ICT connectivity. Real time monitoring will also be facilitated through improved technology such as mobile handset, which has been changing rapidly.

3.3.3 Construction

In terms of the Construction industry, the belief was that there will be the need for *“new buildings and expansion of others; so definitely persons will be required to construct and expand these buildings for the hub.”* There will be the need for large warehouses to store goods for distribution in Jamaica and to move to other territories. Road works will also take place to allow the efficient haulage of goods and raw materials. Improvement in airport structures is seen as significant for a successful logistics hub development. Interviewees suggest that higher valued goods are usually transported by air. The ports will also need to expand in order to facilitate increased economic activities related to trade as well as docking of larger ships.

3.3.4 Education and Training

Having a trained workforce ensures that persons are equipped with requisite skills to take advantage of employment opportunities in various sectors. Education and training will therefore play an essential role through the introduction of new programmes and upgrading

⁴² Global Positioning System

existing ones. This is geared towards meeting the quality of skills in the labour force to supply the demand of the logistics hub. Hence, there will be a greater need for Teachers and Instructors in this area.

3.3.5 Agriculture and Tourism

Interviewees indicated that the Agriculture and Tourism sectors will benefit greatly from the logistics hub. The Tourism sector is linked to business operations associated with hotels, restaurants, entertainment, craft vending, tour companies as well as farming. One benefit of the logistics hub development is the influx of foreign workers in transit to Jamaica, which will create a demand for certain services. For example, ships travelling through Jamaican waters will need food supply and restaurants will benefit as they will need to cater to different cultures.

Overtime, this influx can lead to increased tourist arrival, to which other sectors can greatly benefit. The Agriculture sector stands to gain due to greater need to supply food products for hotels and restaurants. From an employment standpoint it was highlighted that there will be an increased demand for Butchers who specialise in meat cuts.

3.3.6 Courier Services

The Courier Service was reported as having the potential to *“benefit tremendously.”* This is due to increased economic activities that are likely to take place and the need to transport documents and other small packages. The Courier Services will be responsible for delivering these documents and other small packages all across Jamaica.

3.3.7 Financial Services

The Financial Services industry will be active within a logistics hub environment, due to the need for persons to access financial resources for business operations, for example, through wire transfers. Respondents indicated that Jamaica’s financial sector *“is developed and well regulated.”* It was reported that because of Jamaica’s modern banking regulations, hub operators would feel *“comfortable doing business through commercial and merchant banks.”*

3.3.8 Manufacturing

A recommendation was that some manufacturing businesses could benefit if they operate Business Process Outsourcing franchises for example, producing goods on behalf of parent companies abroad. This would enhance growth and development, resulting in increased employment opportunities. Manufacturing was considered integral to the logistics hub developments as it allows for linkages with other industries, thus leading to increased value added. The type of value added services include Labelling, Cargo Tracking, Distribution Planning, Inventory Control and Warehousing.

3.3.9 Security

The issue of safety is critical to the success of the hub development because it is necessary to maintain a secured environment in order to attract greater levels of investment in the country. With the expected increase in transportation of goods and raw materials, the issue of safeguarding against theft as well as the trafficking of narcotics becomes paramount. The movement of goods has to be monitored and measures put in place to prevent the occurrence of illegal activities. In addition, with increased use of ICT, cyber crime can prove to be a challenge and as a result, a number of employment opportunities will be created to manage this issue (See Table 3).

3.4 Entrepreneurship Opportunities

Some persons felt that there will be entrepreneurship opportunities through the creation of partnerships with overseas companies. It was suggested that *“local establishments could work with a company from overseas that has a value chain where the products already have a market.”*

Support service was identified as an area that could facilitate entrepreneurship and ensure the viability of the logistics hub. One interviewee explained that this is because *“support services are going to be very critical in areas such as Information Technology, Bus, Car and Airplane Maintenance and Repairs, Transportation and Custom Brokerage. Opportunities arising from*

this can create linkages in areas such as Manufacturing and Tourism; which means more people and goods moving throughout the logistics hub."

Other opportunities were anticipated through backward integration of businesses. An interviewee explained that *"this is where persons provide services outside the hub to support the activities of the hub."* These types of services include Container Washing, Ship Repairs, Security Intelligence, Supply of goods and Food and Entertainment.

Farming was also identified as a potential area for entrepreneurship as the demand for local products increase because of the influx of persons from all over the world. Farm products will be needed to supply hotels as well as restaurants that cater to persons from varying cultural backgrounds.

Some persons were unable to say whether or not there will be entrepreneurship opportunities due to the logistics hub development. Others felt that access to funding, which is a challenge in Jamaica, would have to be increased so that persons could invest and establish businesses.

3.5 Potential areas of employment opportunities

Respondents were asked to indicate occupations and skills which will be needed for the logistics hub. Several potential areas were identified such as Trade Logistics Service Providers, Freight Forwarders, Port Managers, Marine Surveyors, Logistics Clerks and Cyber Logistics Management Specialists (See Table 3).

Table 3
Potential occupations for logistics hub development

| Type of Occupations | Main Functions |
|---------------------|---|
| Accountants | <ul style="list-style-type: none">• Plan, develop, organize, administer, invest, manage and conduct quantitative analyses.• Keep, audit and inspect financial records of individuals or businesses.• Prepare financial and tax reports. |
| Administrators | <ul style="list-style-type: none">• Manage office equipment.• Manage Clerical or other Administrative staff.• Handle external/internal communication or |

| Type of Occupations | Main Functions |
|--|---|
| | management systems. |
| Automated Machine Technicians | <ul style="list-style-type: none"> • Diagnose, repair and install ATM machines. • Visit clients to diagnose and fix problems on site or remove machines and take it back to shops to be worked on by ATM Bench Technicians. |
| Butchers | <ul style="list-style-type: none"> • Slaughter animals, dress their flesh, sell their meat or do any combination of these three tasks. |
| Clerks | <ul style="list-style-type: none"> • Performs a variety of administrative tasks, including answering telephones, typing or word processing and maintaining records. |
| Computerized Crane Operators | <ul style="list-style-type: none"> • Work at construction sites and move cargo at seaports and in other industries requiring the lifting and moving of large or heavy objects. |
| Configuration Managers | <ul style="list-style-type: none"> • Record and update information that describes an enterprise's hardware and software. |
| Cosmetologists | <ul style="list-style-type: none"> • Provide beauty services that include caring for the condition of hair, skin and nails. |
| Custom Brokers | <ul style="list-style-type: none"> • Clear goods through customs barriers for importers and exporters. |
| Custom Officers | <ul style="list-style-type: none"> • Enforce customs laws on behalf of a Government. • Help to prevent importation of illegal and/or dangerous goods. |
| Cyber Logistics Management Specialists | <ul style="list-style-type: none"> • Plan and manage procurement, storage and movement of goods/supplies in support of manufacturing processes, in accordance with customer demand. |
| Cyber Security Administrators | <ul style="list-style-type: none"> • Design, organize, modify and support a company's computer systems. |
| Cyber Security Directors | <ul style="list-style-type: none"> • Oversee IT security measures throughout an organization. • Perform strategic oversight of every aspect of security – from staffing and budgets to protocols and incident response. |
| Cyber Systems Engineers | <ul style="list-style-type: none"> • Administer network based perimeter security solutions. • Work with various perimeter security tools including, but not limited to internet proxies, web applications, firewalls and malware protection appliances. |
| Database Specialists | <ul style="list-style-type: none"> • Create and maintain databases, including all |

| Type of Occupations | Main Functions |
|---|--|
| | ancillary tasks that accompany such a job. |
| Dredge Operators | <ul style="list-style-type: none"> • Operate dredge to remove sand, gravel, or other materials in order to excavate and maintain navigable channels in waterways. |
| Electricians | <ul style="list-style-type: none"> • Install, operate, maintain or repair electric devices or electrical wiring. |
| Environment Officers | <ul style="list-style-type: none"> • Monitor the environmental impact of products and processes of organizations. • Operate environmental management systems. |
| Equipment Operators | <ul style="list-style-type: none"> • Operate heavy equipment used in engineering and construction projects. |
| Executive Sea Chefs | <ul style="list-style-type: none"> • Supervise kitchen personnel • Responsible for hiring, discipline, performance reviews and initiating pay increases. • Oversee special catering events. • Offer culinary instruction and/or demonstrate culinary techniques. |
| Fabricators | <ul style="list-style-type: none"> • Create components that go into small and large scale products, from toys to tanks. |
| Freight Forwarders | <ul style="list-style-type: none"> • Organize shipments for individuals or corporations to collect goods from the manufacturer or producer to a market/customer. |
| Garbage Collectors | <ul style="list-style-type: none"> • Work either for the Municipal Government or for a private waste management company. • Pick up and remove waste, recyclable waste or yard debris from residential neighbourhood, commercial business centres, and public parks. |
| Heavy Duty Equipment Mechanics | <ul style="list-style-type: none"> • Adjust, service and repair a variety of heavy mobile equipment (usually diesel powered) used in Construction. |
| Hospitality Workers | <ul style="list-style-type: none"> • Perform friendly and generous reception and entertainment of guests, visitors or strangers. |
| Industrial and System Engineers | <ul style="list-style-type: none"> • Design, install and manage operations and improve systems that produce goods and services. |
| Information Communication Technology (ICT) Managers | <ul style="list-style-type: none"> • Plan, organize and direct computer and telecommunications technology based projects. • Liaise with other managers to decide on the project plan. • Ensure that the right equipment and personnel are available and used for the project. |

| Type of Occupations | Main Functions |
|-------------------------|--|
| | <ul style="list-style-type: none"> • Schedule tasks, and oversee them from implementation to completion. |
| Crime Investigators | <ul style="list-style-type: none"> • Find facts and analyze information about legal, financial and personal matters. • Verify people's backgrounds. • Find missing persons. • Investigate computer crimes. |
| Investment Bankers | <ul style="list-style-type: none"> • Work in a financial institution that primarily raises capital for companies, governments and other entities. |
| Lawyers (Maritime) | <ul style="list-style-type: none"> • Research legal problem. • Advise clients on legal aspects of problems. • Review or draft contracts. • Represent clients in judicial proceedings before the courts. |
| Logistics Clerks | <ul style="list-style-type: none"> • Administer and maintain the acquisition, deployment and supply of stock for warehousing, manufacturing and other businesses that deal with large quantities of stock. • Organize the transfer and transport of stock between departments or warehouses and from other companies or organizations. |
| Logistics Managers | <ul style="list-style-type: none"> • Organize the storage and distribution of goods. • Ensure right products are delivered to the designated location on time and at an appropriate cost. |
| Machine Operators | <ul style="list-style-type: none"> • Work with heavy machinery, from setup to operation. • Work with computer-controlled equipment or more mechanically based machines to make sure they are set up properly, working well and producing quality product. |
| Marine Surveyors | <ul style="list-style-type: none"> • Conduct inspections, surveys or examination of marine vessels to assess, monitor and report on their conditions. |
| Mechatronics Engineers | <ul style="list-style-type: none"> • Create and improve automated processes. • Review assembly lines and draw conclusions. • Use Computer-aided Design Software to develop and test potential solutions. |
| Multi-skill Technicians | <ul style="list-style-type: none"> • Perform a variety of tasks at institutions, from working in laboratories and offices to helping |

| Type of Occupations | Main Functions |
|------------------------------|---|
| | individuals one-on-one. |
| Nurses | <ul style="list-style-type: none"> Care for sick or injured persons; usually work in a hospital or doctor's office. |
| Port Managers | <ul style="list-style-type: none"> Oversee the operation of one or several ports. Responsible for all aspects of the business, from monitoring profit and loss to ensuring that an efficient service is provided for all port clients. |
| Programmers | <ul style="list-style-type: none"> Compose instructions or write softwares for computers. |
| Project Engineers | <ul style="list-style-type: none"> Design structures. Design site plan and layout. Produce cost estimations and planning schedule. Perform quality management. |
| Resource Management Analysts | <ul style="list-style-type: none"> Ensure effective and transparent utilization of financial resources and integrity of financial services. Analyze and interpret financial rules and regulations. Provide solutions to a wide spectrum of complex financial issues. |
| Safety Personnel | <ul style="list-style-type: none"> Provide workplace safety consultation, training, staffing, program planning and implementation. |
| Security Guards | <ul style="list-style-type: none"> Patrol or monitor premises to guard property against theft and vandalism. Control access to establishments and maintain order at public events and within establishments. |
| Ship / Maritime Pilots | <ul style="list-style-type: none"> Manoeuvre ships through dangerous or congested waters, such as harbours or river mouths. |
| Ship Repairers | <ul style="list-style-type: none"> Repair, install or maintain vessels |
| Social Workers | <ul style="list-style-type: none"> Assess social needs of individuals, family and groups. Assist and empower people to develop and use skills needed to resolve social and other problems. |
| Stevedores | <ul style="list-style-type: none"> Load and unload ships. |
| Teachers | <ul style="list-style-type: none"> Teach theory and practice of one or more disciplines at different educational levels. Conduct research and improve or develop concepts, theories and operational methods. |

| Type of Occupations | Main Functions |
|-----------------------------------|--|
| Trade Logistics Service Providers | <ul style="list-style-type: none"> Plan and coordinate stowage for efficient, cost effective loading and dispatching of shipping containers or cargo into and from available port spaces. |
| Truck Drivers | <ul style="list-style-type: none"> Drive truck (usually semi truck, box truck or dump truck). |
| Tug boats crew | <ul style="list-style-type: none"> Operate boats that manoeuvre vessels by pushing or towing them. |
| Waiters | <ul style="list-style-type: none"> Serve customers in food establishments. |
| Warehouse Operations Managers | <ul style="list-style-type: none"> Responsible for workplace health and safety standards and for the security of buildings and stock. Manage teams of workers through the use of team leaders and supervisors. Deal with personnel issues such as the recruitment, training and disciplining staff. |
| Warehouse Personnel | <ul style="list-style-type: none"> File inventory records and inspect packages. |
| Welders | <ul style="list-style-type: none"> Specialize in welding materials together. |

Some of the skills considered necessary include knowledge and expertise in:

- a) clearance of goods;
- b) overseeing the operation of one or several ports;
- c) planning and coordinating stowage for efficient, cost effective loading and dispatch of shipping containers;
- d) enforcing customs laws;
- e) speaking other languages such as Spanish, French, Mandarin, Arabic and German;
- f) designing, organizing and modifying computer systems;
- g) designing temporary structures, site planning and layout, cost estimation, planning and scheduling;
- h) deployment and supplying of stocks for warehousing, manufacturing and other businesses that deal with large quantities of stock;
- i) designing, installing, managing, operating and improving systems that produce goods and services; and

- j) working with various perimeter security tools such as internet proxies, web applications, firewalls and malware protection appliances.

One interviewee pointed out that the logistics hub will facilitate the need for ship breaking or ship demolition. Ship breaking involves disassembling ships that have reached their lifespan for the purpose of scrap recycling. Some of the jobs associated with this sector include Electrical Engineers, Environmentalists, Ocean Experts and Support Service Workers (See Figure 3). The interviewee proffered that this is a new industry from which persons could gain employment because of the increased shipping activities that are likely to occur. She also mentioned that ship breaking will require Environmental workers as well as persons in Maritime Laws and Intermediation.

Potential job opportunities due to ship breaking industry



Figure 3

3.6 Areas of employment opportunities for low and unskilled persons

Respondents were asked what employment opportunities will be available for low and unskilled persons. A few participants suggested that there will be employment opportunities in occupational areas that do not require much skill. The areas identified were Garbage Collection and Janitorial Service. Persons will also be needed to sort, pack and assemble goods. One respondent articulated that *“there is always need for low skilled labour in the port.”*

The majority articulated that there will not be any area of employment opportunities for unskilled individuals, as some level of certification will be required. It was felt that *“all the countries that have become successful in logistics hub development utilized highly skilled workers to drive productivity.”*

3.7 Areas of training needs

Interviewees were asked to identify areas of training that will be needed as a result of a logistics hub development. One respondent suggested that *“for Jamaica to move forward, persons would need training in ethics, civic pride as well as developing a sense of responsibility to the importance of time and proper work attitude”* (See Figure 4). A few others shared this view and suggested *“we need to train our people to have the right attitude.”* The reason is that it is often felt that despite having the necessary skills, many persons in the labour force lack the requisite behavioural qualities to operate in a work place setting.

Training needs were identified in Logistics and Supply Chain Management, Dry Docking, Freight Forwarding, Security Operations, Legal and Engineering. Training will also be needed in almost every aspect of the shipping industry, for example Marine Piloting and Stevedoring. Foreign languages were mentioned as a ‘key’ area of training due to the interconnectivity with persons from various nationalities who speak different languages such as Spanish, Mandarin, French, German and Arabic.



Figure 4

3.8 Training measures being undertaken by institutions

Interviews were conducted with four major education and training institutions to ascertain whether programmes are in place to prepare the labour force for the logistics hub initiative. Results indicate that several programmes have been introduced in the education and training curricula. These programmes range from Certificate courses to Post Graduate Diplomas. Some institutions were able to provide information on the type of qualifications needed for entry into the programmes, as well as the nature of businesses that could facilitate employment after completion (See Table 4).

Table 4

Types of training programmes, entry requirements and businesses that could provide employment upon completion

| Programmes | Entry Requirements | Type of Businesses |
|---|--|---|
| Masters in Logistics and Supply Chain Management | Bachelor of Science Degree (any route) | Any company or organizations offering logistics and supply chain related activities, warehousing and inventory management |
| Bachelor of Science in Logistics and Supply Chain Management | Five (5) subjects, inclusive of English Language and Mathematics at CSEC or GCE Ordinary Level | Organizations offering logistics and supply chain operations, warehousing and inventory management |
| Bachelor of Science in International Shipping | Five (5) subjects, inclusive of English Language and Mathematics at CSEC or Ordinary Level GCE | Companies that offer shipping services such as shipping agencies, courier services, trucking and other transportation companies |
| Bachelor of Science in Cruise Shipping and Marine Tourism | Five (5) subjects, inclusive of English Language and Mathematics at CSEC or Ordinary Level GCE | Organizations that provide cruise services, tourism attraction, shipping agencies, customs brokerage services and luxury yachts |
| Bachelor of Science in Port Management | Five (5) subjects, inclusive of English Language and Mathematics at CSEC or Ordinary Level GCE | Establishments that offer port operations and services |
| Diploma in International Shipping and Logistics | Five (5) subjects, inclusive of English Language and Mathematics at CSEC or Ordinary Level GCE | Organizations, operating in logistics and supply chain, shipping services, warehousing and inventory management. |
| Bachelor of Science in Customs Processes, Freight Forwarding and Immigration | Five (5) subjects, inclusive of English Language and Mathematics at CSEC or Ordinary Level GCE | Customs and Immigration Departments, Customs Brokers and Freight Forwarding Companies |

| Programmes | Entry Requirements | Type of Businesses |
|---|---|--|
| Bachelor of Science in Marine Transportation | Five (5) subjects, inclusive of English Language, Mathematics and Physics or Chemistry at CSEC or GCE O' level. Integrated Science and Electronics may be considered in place of Physics or Chemistry | Organizations involved in shipping line. Engineering companies, including manufacturing, power plants, water commission and industrial plants. |
| Masters in Industrial Systems | Bachelor of Engineering in Industrial Systems | Engineering companies , including manufacturing, power plants, water commission and industrial plants |
| Bachelor of Science in Industrial Systems | Five (5) CSEC or GCE Ordinary level subjects including English Language and Mathematics and two (2) science subjects | Engineering companies, including manufacturing, power plants, water commission and industrial plants |
| Associate of Applied Science Degree (AASc.) in Industrial Systems Operations and Maintenance | Five (5) CSEC or GCE Ordinary level subjects including English Language and Mathematics and two (2) science subjects | Engineering companies, including manufacturing, power plants, water commission and industrial plants |
| Bachelor of Science in Security Administration and Management | Five (5) subjects inclusive of English Language and Mathematics at CSEC or Ordinary Level GCE. Provision for mature entry candidates | Jamaica Defence Force, Jamaica Constabulary Force, Customs Department, Immigration Department, Correctional Services, Private Security Companies, Port and Cruise Terminals, Bauxite Companies |
| Master of Science in Security Administration and Management | Bachelor of Science Degree. | Jamaica Defence Force, Jamaica Constabulary Force, Customs Department, Immigration Department, Private Security Companies, Port and Cruise Terminals, Bauxite Companies |

| Programmes | Entry Requirements | Type of Businesses |
|--|---|--|
| Post Graduate Diploma in Logistics Management | First Degree/Associate Degree/Professional certificate with 2 years work experience | Organizations that offer Inventory and Shipping |
| Professional Diploma in Warehouse Management Logistics | 2 CSEC subjects including English Language | Companies that provide Inventory Control, Warehousing, Supply Chain Management |
| Professional Development Certificate in Supply Chain Management | 3 CSEC subjects | Any company that does delivery of goods and services |
| Associate Degree in Supply Chain Management | 5 CSEC subjects including Mathematics & English Language | Any company that offers Supply Chain Management and Quality Assurance |

Other training programmes identified include:

- a) Bachelor of Science Degree in Occupational Health and Safety
- b) Bachelor of Engineering in Construction Engineering
- c) Bachelors Degree in Information and Communication Technology
- d) Bachelor of Science Degree in Environmental Health
- e) Diploma in Information and Communication Technology
- f) Certificate in Web Development Fundamentals
- g) Certificate course in Logistics Manpower Training

3.9 Possible skills to be sourced internationally

The respondents were asked to indicate the extent to which Jamaica will need to recruit skilled migrants for the logistics hub development. Most respondents did not feel that there will be a need to recruit skilled workers from overseas. Others felt that a foreign country which is investing in the development of the logistics hub, will initially utilize their nationals to manage all operations. An individual suggested that *“overseas skills could be imported for planning and strategizing in order to ensure that international demands or standards are met.”* A suggestion was that *“there is a need for trainers to train machine operators.”* There will also be the need

for technical skills in areas such as Network Architecture, Quality Control and System Operations. Figure 5 gives an indication of other areas that were mentioned by some respondents.

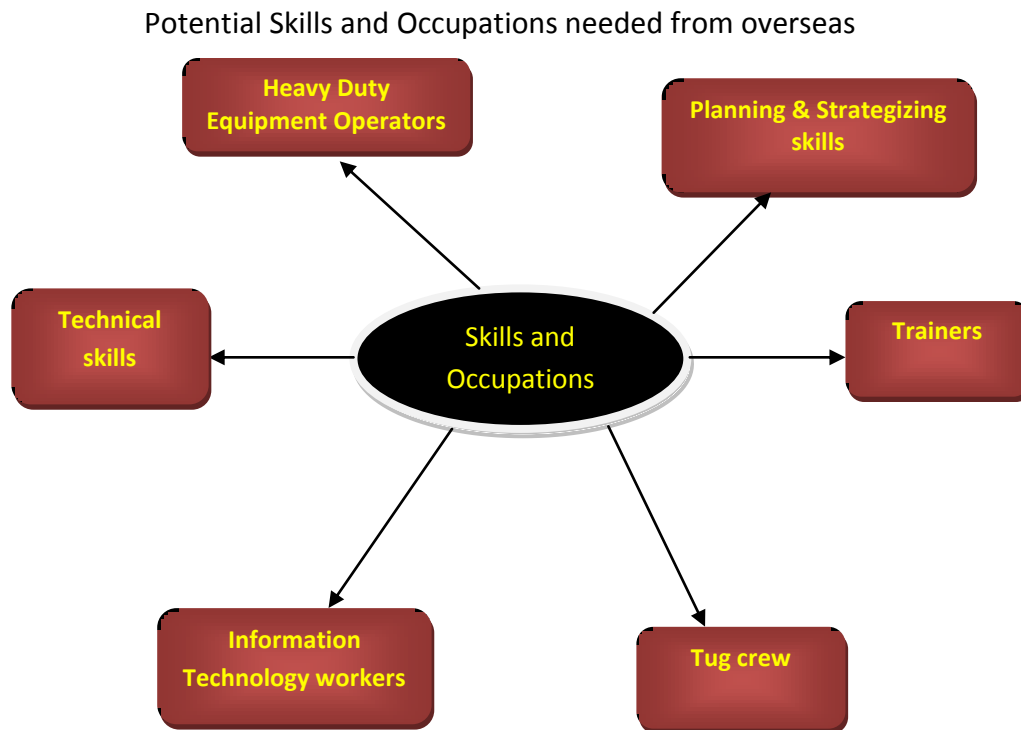


Figure 5

3.10 Challenges to logistics hub development in Jamaica

Several challenges were identified by the respondents (See Figure 6). One alluded to the “*high cost of energy usage,*⁴³ *the need for improvement in ease of doing business,*⁴⁴ *violence - high murder rate,*⁴⁵ *unfavourable costs in clearing goods, lack of proper infrastructure and the poor work attitude of the labour force.*” Given the decline in productivity, Jamaica will require a productive labour force. In terms of productivity, the country was ranked 111th by the Global Competitive Report (2015) from a total of 140 countries.

⁴³ According to The Global Energy Architecture Performance Index Report 2014, JAMAICA'S high energy cost and power infrastructure was ranked 112 globally

⁴⁴ According to the World Bank Group doing business report (2016), Jamaica is rank 64 out of 189 countries

⁴⁵ According to ABC News Point Report (2015), Jamaica is ranked 6th among countries with the highest murder rate

Legislative challenges were also mentioned by some respondents. This view was supported by (Pinnock and Ajagunna, 2012) who explained that *“the need for a light-handed, flexible and clear legislative and regulatory framework has been cited as critical elements of a successful logistics services sector.”* They went on to suggest that countries which are ranked high on the World Bank’s Logistics Performance Index such as the Netherlands and Singapore have regulatory frameworks that are transparent and tax-friendly. The quality of the regulatory framework is critical for achieving competitiveness and this is going to be an issue for Jamaica.

Others felt that getting the ‘buy in’ from Jamaicans is critical. Although there have been sensitization about the logistics hub, there is still a lot of ambiguity as to how the hub will operate, as well as its physical attributes.



Figure 6

4.0 Conclusion

It is quite evident from the report that the logistics hub will facilitate increased employment. Some of these jobs include Electricians, Freight Forwarders, Project Engineers and Maritime Lawyers. It will also facilitate cyber jobs such as Cyber Logistics Management Specialists as well as Cyber Systems Administrators. The study shows that in order to take advantage of employment opportunities from the logistics hub initiative, persons will need to be certified. This is due to the limited scope for employment of low or unskilled persons. Evidence from the study also indicates that there will be opportunities for entrepreneurship as the logistics hub will facilitate expansion of some industries as well as the creation of others.

The role of education and training institutions cannot be overemphasized since it is important for programmes to be aligned to the needs of the labour market. This is critical since human capacity development was highlighted as important in order to facilitate efficiency and increased productivity. Several training institutions have begun making preparations to improve the quality of the labour force in anticipation of the logistics hub initiative which should help reduce the need to recruit skilled foreign labour.

A number of issues were also identified that needed to be rectified in order to facilitate a successful logistics hub. High energy costs were highlighted as a major problem that could prove a challenge or a deterrent for investors to the country. The belief is that the general public is not fully sensitized about the logistics hub and its potential benefits; as such, there is vagueness about its operation and this needs to be resolved in order to have acceptance from citizens.

5.0 Recommendations

The recommendations are as follows:

1. Due to the fact that the logistics hub is primarily geared towards employing skilled persons, greater level of public awareness is needed so that persons can have a better understanding of a logistics hub, its opportunities for employment as well as the institutions that can facilitate training in the areas. These institutions need to also incorporate teaching foreign languages as part of their logistics hub preparation. This will ensure that Jamaica has a highly qualified work force in order to reduce the possibility of recruiting skills from overseas.
2. Increase the level of knowledge and education about logistics from the primary level so that students can not only have knowledge about logistics, but also be aware of other job opportunities outside the traditional areas inculcated within the culture.
3. Encourage job seekers to participate in employability skills sessions to ensure that they are better prepared for interviews as well as have the relevant 'soft skills' in order to obtain and keep a job.
4. Examine and adapt best practices from other countries in order to ensure that Jamaica can become successful in logistics hub operations.
5. The Government needs to put measures in place to encourage entrepreneurship, so that the process of setting up businesses is easier, for example providing easier access to funding at lower interest rates.
6. Introduce Government scholarships and subsidize fees for programmes that are geared towards preparation for logistics hub. This will encourage persons to pursue these programmes which will ultimately improve the quality of the labour force.

7. Establish one stop centres to facilitate full registration and ease of doing business.
8. The anticipated increased use of energy will result in higher foreign exchange costs for importation of oil. It is therefore recommended that the Government increase its investment in alternative energy sources to supplement the anticipated demand. This would result in increase need for training as well employment opportunities.

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APPENDIX I

Interview Guide

1. What is your understanding of the logistics hub?
2. Do you think the development of the logistics hub will create a lot of new business? If yes
 - A. Probe: What type of businesses?
3. What type of skills, occupations and qualifications would be needed in these businesses?
4. What are the opportunities for entrepreneurship that will arise through the logistics hub development?
5. What are the areas of employment, if any, for persons who have low or are unskilled?
6. Which industries in Jamaica do you think can readily take advantage of the logistics hub development? Why those?
 - B. Probe: How could each benefit?
7. What are the areas of training that you think would be needed as a result of the logistics hub development?
8. What measures are you aware of that are being undertaken by training institutions to ensure that Jamaicans have the requisite skills to be able to take advantage of the opportunities posed by development of a logistics hub?
9. Identify the possibility or the extent to which Jamaica will have to recruit skills from overseas?
 - C. Probe: Could you identify these skills?
10. Are there any particular challenges that you foresee as Jamaica embarks on the development of a logistics hub?