

Importance of facility location



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Logistics and the supply chain involve many complex activities which require optimal strategic decisions in order to operate efficiently and effectively.

Logistics managers are under a great amount of stress as the industry is ever changing. Management needs to adjust and improve all activities being conducted. Facility location is a crucial element in the supply chain and has a great impact on the efficiency of numerous logistics activities. Facility locations involve numerous aspects, such as the location of manufacturing plants, assembly locations as well as distribution centres. The location of the facility plays a vital role in the success of logistics networks.

The importance of facility location is gaining much attention in today's day and age as companies are rapidly realising the importance and advantages of a successful facility location as well as the disadvantages involved in the selection of an unsuccessful facility location. The main focus of logistics is to reduce costs, improve efficiency as well as customer service. Successful facility location decisions may lead to drastic cost reductions as well as an improvement in the customer service levels. An unsuccessful facility location decision may lead to inefficient operations and additional costs which drastically affects the competency and effectiveness of the overall operation. Logistics managers are critically evaluating the performance of current facility locations.

The factors effecting the facility location decision include among others; personnel which most importantly consider the availability and cost of labour, informational technology infrastructure which includes advanced technologies found in certain countries that can improve an organisation's service and performance, moving and installing equipment, company

preferences, supplier networks which consider the costs of component, raw materials and transport, quality of life which mainly affects employee well-being and therefore standard of work, availability of transportation, proximity to market and customers, tax and industrial development incentives, which includes business taxes and inventory taxes as well as personal taxes and land costs and utilities including constructions costs and codes. When an organisation's facility location no longer offers advantages previously achieved, the relocation of the facility can be seen as the optimal solution. There are various reasons why an organisation may decide to relocate the facility. These reasons include; inadequate size and infrastructure to capitalise on growth, clusters which present great advantages, competition as a threat or opportunity, downsizing of operations therefore reducing costs resulting in improved services, lower labour and manufacturing costs found in certain countries, especially developing countries such as those in Africa and China, proximity to distribution channels as well as the opportunities for government incentives which could include subsidies, tax incentives and much more. South Africa is a popular location for the facilities of successful organisations due to growth potential and investment opportunities in addition to improved competitive advantage. BMW and Toyota are only two examples of many organisations who have chosen to establish and distribute in South Africa.

Logistics management needs to critically evaluate the opportunities and advantages offered by different facility locations as well as the effectiveness of relocation. The importance and usefulness of a successful facility location must not be overlooked or underestimated.

Reasons in general for companies to relocate facilities

2. 1 Inadequate size and infrastructure to capitalise on growth:

Companies often relocate due to inefficient current capacity and infrastructure and increasing growth and therefore an increased need for greater capacity and capability.

Companies established in emerging markets/developing countries are usually the most common reason for this type of relocation. In emerging markets, the lack of a physical structure to support improving economic activity is epidemic and will often get in the way of a developing country's capability to capitalise on its full growth potential. Some countries face the problem of limited financial resources. This in turn results in infrastructure scarcity which is extremely difficult to overcome. Even when multinational investment institutions make development funds available, time setbacks are usually evident in correcting the issue because of the size and difficulty of necessary projects. (Russell R. Miller, 1998, pg. 23) This makes it extremely difficult for those companies that have been created, developed and grown in their home country to properly succeed and prosper, due to all the restrictions. Relocating to countries or areas that offer better growth opportunities and infrastructure might seem like the only viable option in order to compete profitably.

When targeting a country with an infrastructure shortage, enlarged product and distribution costs are the key marketing limitations a company will encounter. Attaining effective and cost efficient methods of distribution is predominantly challenging in emerging markets. The lack of satisfactory transportation facilities will hinder a company's capability to move its

products from the point of origin to the end consumer. This restraint is particularly damaging for companies that market low-margin consumer items that entail extensive distribution methods. For companies with buyers concentrated in more limited geographic areas, the lack of transport is less important. This is why industrial products are more effortlessly marketed in the early phases of emerging market development than are consumer products. (Russell R. Miller, 1998, pg. 23)

When importing a product, substantially higher costs and lengthened delivery schedules are a result of limited inbound and unloading facilities – typical characteristics of emerging markets. (Russell R. Miller, 1998, pg. 23) This could be expensive and frustrating to new companies who rely on and need imported products to survive.

Some countries, especially developing countries, have poor power infrastructure which results in power shortages that create periods of downtime and plant shutdowns that increase product costs and scheduling delays. (Russell R. Miller, 1998, pg. 23) This could be extremely damaging to companies who are already struggling to survive given all the other issues mentioned.

It must however be remembered that these emerging markets are actually attractive for established and financially stable companies as they present opportunities for cheap factors of production. In this case, you would find companies relocating to these countries to attain the advantages mentioned. This would in turn allow companies to grow due the cost savings achieved and the new markets attracted in the new country. Even though these

emerging markets pose infrastructure challenges, financially stable and well off companies can create and develop their own infrastructures and handle the challenges presented.

All of the above factors discussed are clear reasons as to why companies would choose to relocate to other areas, or even countries. Companies want to be located in areas that will allow growth and will provide the appropriate infrastructure for it. There is no reason to be located in an area that hinders development or has no opportunity for it. With the development in technology and globalisation, companies have even more reason to relocate to more suitable locations – as it is much easier today than it ever was before.

2. 2 Clusters:

A cluster is a location in which similar or complementary companies choose to establish. Choosing to relocate to clusters could be advantageous to a company. This occurs for a variety of reasons. Firstly, clusters provide encouragement to entry through better information about opportunities. Companies could choose to relocate to a cluster if they were considering entering a new market. The existence of a cluster is an opportunity in itself. People who work in or in close proximity to the cluster more effortlessly perceive gaps in products, services or suppliers to fill. Clusters are great opportunities because barriers to entry when located in a cluster are lower than elsewhere. Valuable resources, skills, inputs and staff can be attained more easily when located in a cluster. Local financial institutions and investors that have an awareness of the cluster may require a lower risk premium on capital. This is even more reason to relocate, especially if a

company is considering acquiring additional capital. The cluster also presents a significant local market. The company may also benefit from well-known relationships. The barriers to exit at a cluster are also lower due to lower need for specialised investment and deeper markets for specialised assets. (Michael E. Porter ; 2008, pg. 240)

All of the above are reasons as to why companies would choose to relocate to clusters.

2.3 Competition as a threat or opportunity:

The rapid pace of globalisation has resulted in widespread competition, causing companies to minimise costs and serve customers better than ever before. As information and products move freely across countries, industries and workers are competing with everyone all around the world. (John L. Meyer, Carolyn C. Shadle; 1994, pg. 6)

Companies could decide to relocate to other destinations due to this competition. Although competition is healthy and may encourage the company to improve on their services and therefore better serve customers and improve profits, certain companies may have such monopoly and competitive advantage that it drives other companies out. Companies therefore choose to relocate to locations where there is an opportunity for them to achieve the competitive advantage and where it is more profitable to serve customers. Other than being forced out, companies may simply choose to relocate to destinations where they know they will be superior.

Companies could also choose to relocate because by locating in a certain country, it becomes more competitive due to certain factors present in that

country. These factors could include lower wages, newer more efficient equipment, more productive work systems, lower transport costs, better market exposure or large amount of demand. (John L. Meyer, Carolyn C. Shadle; 1994, pg. 6)

2. 4 Relocating from cities to smaller areas and from smaller areas to cities:

Recently, there has been a trend of relocations of companies away from main metropolitan areas towards small and medium-sized communities. Some companies are restricted in their relocation choices by customer demographics and other reasons, but ample companies, especially entrepreneurial companies, have abandoned large cities for smaller towns. Pollution, crime, and other factors associated with large cities, together with the developments that have made telecommuting an actuality, have resulted in numerous entrepreneurs relocating to more rural locations in search for quieter lifestyles. ([http://www. answers. com/topic/relocation](http://www.answers.com/topic/relocation))

On the other hand, companies that begin and grow in these small towns may want to expand and move to cities in order to become more successful and profitable. Several obstructions exist that could push companies in small areas to relocate to larger cities. These include the challenge in finding competent employees, agreeing with the neighbours and the fact that less significant communities do not provide the same quality of services that larger cities provide. These inefficient services could include electric service issues (creating a need to purchase backup generators), the unavailability of overnight delivery services (USPS, etc.), and a lack of local access numbers for Internet service (forcing companies to pay inflated long-distance

telephone expenses to access the Internet). ([http://www. answers. com/topic/relocation](http://www.answers.com/topic/relocation))

Moving away from and into large cities are reasons companies choose to relocate – both of these posing both valid reasons as to why a company would make this important decision.

2. 5 Downsizing of operations:

“ Downsizing is the method of reducing the total number of employees at a company through terminations, retirements, or spinoffs.” ([http://www. investorwords. com/1571/downsizing. html](http://www.investorwords.com/1571/downsizing.html))

Relocating a company in order to downsize it is often the outcome of an aspiration to modernise operations and raise profitability, as opposed to a decline in sales. When downsizing a company, this may not always be the ideal procedure to implement, but it can be a life-saving method for the short term. (How to Relocate a Business to Downsize | eHow. com)

Downsizing a company however is not the ideal option and can negatively influence a company from a business perspective. This is due to the company releasing and retrenching key employees resulting in less personnel being available to perform the various tasks and ensure efficient operation. Remaining employees will therefore be assigned additional tasks that they have no experience or skill in and training will have to be provided. (Cody Hodge ; 2010)

On the contrary, fewer employees lead to lower salaries and wage expenses, resulting in vital cost savings which is an advantage for the logistical

function of a company as this capital becomes readily available. This is why relocating due to downsizing is a popular trend today, especially due to the economic conditions that society is facing. (Cody Hodge ; 2010)

2. 6 Lower labour/manufacturing costs:

Relocating to developing countries is an advantageous move, as lower labour and manufacturing costs are associated with these geographic regions. (J. Rink; 2006)

The globalisation of production is the procedure in which companies move their production facilities to reduce costs and be more competitive. The location manufactured merchandise is produced or assembled and is often in a different location in a different country in comparison to where the company is originally registered. The rationale behind numerous manufacturing jobs moving “ offshore” is profits, which depend partly on reducing the expenses of production. If the expenses of production and shipping are low enough then market forces promote companies to move at least some manufacturing operations to low cost areas. It is most often explained that the relocation of assembly and other production facilities to recently industrialised countries in Asia, Africa and other continents is motivated by relative labour expenses. Labour is cheap in countries like China, Africa and India for various reasons. They have an ever growing population of immigrants who have migrated to cities looking for factory employments making the labour supply bountiful. Most unskilled labour is not organised by unions for various reasons. One reason being that government and local supervisors want to keep wages down so that their employees are competitive in the global market for labour. Employees’ skills

levels are at such a low level that they take on work that others decline due to low wages. Low labour expenses are not the entire reason for the globalisation of production. Further costs of offshore production for companies are low because plant safety and environmental regulations are more undisturbed than in the companies' home countries. (G. Bailey; J. Peoples; 2002; Pg. 103)

Offshoring also occurs due to restrictive and counter-productive government regulations and the lower cost of materials as mentioned. Technology has also made it unproblematic for companies to relocate as it enhances communication and co-ordination with offshore facilities. This makes it less intimidating for companies when organising events at the offshore facility. (J. Rink; 2006)

2. 7 Proximity to distribution channels:

Companies choose to relocate in order to be within close proximity to specific distribution channel members. Being within close proximity to distribution channel members ensures transports costs and lead times are drastically reduced. An effective relocation will ensure customer service improvement in efficiency and effectiveness. The distribution channel forms a critical part of the supply chain, a location close to the distribution channel presents many advantages.(Barbara Cooper, Cresa Partners Orange; 2007) and ([http://www. multimediamarketing. com/mkc/distributionchannels/](http://www.multimediamarketing.com/mkc/distributionchannels/))

A basic distribution channel consists of a set of locations which ship, store and receive materials, as well as a set of desired routes to ensure the goods are at the right place at the right time. When considering relocation, focus

needs to be placed on the availability of desired routes as well as a suitable location to store, ship and receive goods. When dealing with manufacturing and exports, an ideal location would be in a central geographic area with immediate access to a port or freight facilities. The type of distribution channel (direct or indirect) has a major impact on the ideal location, management need to determine the type of distribution channel as well as the optimum operations of the distribution channel to ensure efficient operations. (Encyclopedia for Business, 2nd ed.)

A well chosen location, within close proximity to the distribution members, constitutes a significant competitive advantage, with long term profitability opportunities. . (Encyclopedia for Business, 2nd ed.)

2. 8 Opportunity for government incentives:

Relocating facilities in a foreign country offers many benefits; among these benefits is the opportunity for government incentives. Developing countries seeking employment opportunities and economic growth offer incentive programs to businesses. These incentives and benefits entice businesses to relocate. (<http://australiangovernmentgrants.org>)

Governments develop incentives such as tax credits, tax reimbursements, payroll rebates as well as R&D tax credits. These incentives encourage desirable businesses to expand into their area. In order to qualify for such incentives, a number of requirements need to be fulfilled. The most important requirement is the creation of a specific number of jobs at a predetermined salary over a period of time.

(<http://australiangovernmentgrants.org>)

Another incentive offered by governments is a business development fund. This program is designed to support strategic investments in business opportunities for large-scale, export-based production and manufacturing. (<http://australiangovernmentgrants.org>)

Governments offer another incentive known as a training assistance. This incentive involves providing financial funding to encourage long term employment opportunities, with regard to unemployed people and post-secondary graduates. (<http://australiangovernmentgrants.org>)

The South African government has introduced a range of incentive schemes which aim to attract new foreign businesses. This is part of the Accelerated and Shared Growth Initiative for South Africa (ASGISA). All nine provinces offer regional incentives, including reduced interest rates, reduced rent for land and buildings as well as cash grants for the relocation of facilities. These incentives offered provide many strategic advantages to the supply chain and the associated logistics companies. By receiving incentives from governments, logistics companies can save costs and receive cash grants to improve revenue and profits. (<http://www.minara.co.za>)

The South African government offered Mercedes-Benz a R2- billion grant. This incentive has made South Africa a good candidate for the location of the new manufacturing plant. This grant as well as other aspects has had a positive impact on the decision of the relocation. The investment provides for skills development and training, as well as for equipment and the latest manufacturing technology. (<http://www.southafrica.info>)

The opportunity for government incentives has a positive impact on the decision to relocate. Various advantages arise when governments offer companies incentives. These advantages include high level of growth, cheaper production as well as long term business relationships that benefit the organisation and the country. (<http://www.southafrica.info>)

Factors that influence a company's facility location decision

Personnel

A variety of elements related to labour climate influence a company's facility location decision. Some industries are highly labour-intensive such as textiles and home appliances. Availability and cost of labour are therefore key issues of concern to these industries. (Logistics Management 3A textbook) Key personnel are essential to the success of all logistics activities as well as the overall supply chain performance. (Encyclopedia for Business, 2nd ed.)

Companies need to establish the labour criteria and requirements, as well as the amount of people needed to ensure the success of the logistics activities. The criteria need to include the desired education, experience and skill levels required. (Encyclopedia for Business, 2nd ed.) A company needs to have assurance in its ability to secure a workforce capable of completing operations and ensuring the success of the logistics requirements. (Larry Gigerich – Managing Director, Ginovus)

Other elements include the workforce's degree of unionisation, work ethic, productivity, and the enthusiasm of local public officials. The presence of government right-to-work laws which disallow union membership as a circumstance of employment and the unionisation of key region employers disclose the region workforce's degree of unionisation. Government

information concerning productivity, work stoppages and skill levels is accessible for most regions. Hourly earnings figures by industry and career are obtainable from governmental agencies. (Logistics Management 3A textbook)

The rate of unemployment in the local areas is also considered. Low levels of unemployment may require an organisation to considerably enlarge its hourly wage to draw qualified workers. This increase which is most often unexpected, may affect the attractiveness of a well-liked local area under consideration. The team selected to evaluate the location will need to visit sites to gather impressions and perceptions as well as learn about attitudes regarding work ethic, absenteeism, potential labour-management issues, and the co-operativeness of state and local public officials. (Logistics Management 3A textbook)

When developing a location strategy, management needs to consider the possibility of loss of personnel. The loss of key personnel has a major influence on the facility location decision. When considering the potential loss of personnel when relocating the facility, management needs to consider experienced employees such as middle management and lower management. These employees have intimate knowledge of critical operations, and a loss of these employees may lead to inefficient operations. New employees are subject to a significant learning curve. This will postpone operations and lead to a loss of turnover. (Stephen Rosenhek)

When relocating, management needs to evaluate the trade-off between the loss of key personnel and the cost of training new employees in the desired

location. Management need to consider the trade-off as well as the impact on the efficiency of the logistics activities. (Stephen Rosenhek)

South Africa has a low level of skilled labour in the manufacturing industry, however this is changing at a vast rate. Major motor manufacturers are relocating and making decisions to locate their manufacturing plants to South Africa. The geographic area is central and the workforce are developing their skills. Manufacturers that locate facilities in South Africa experience the benefits of a large labour force at a low cost, presenting strategic advantages to international manufacturers. (Stephen Rosenhek)

3. 2 Informational technology issues

The IT function is an essential part of any operation. The success of the IT function will impact the efficiency and effectiveness of the entire operation. Significant time and money is required to implement a successful IT system. Management need to ensure the desired location can meet the IT needs. http://www.richterconsulting.com/Newsletters/articles200509/relocating_facilities.html

Motor manufacturers require a high level of informational technology. This needs to operate efficiently to compliment the required operational requirements. The availability and efficiency of informational technologies is a major issue when considering the location of a facility. The employees require skills in IT as well as IT development. http://www.richterconsulting.com/Newsletters/articles200509/relocating_facilities.html

Developing countries have underdeveloped IT infrastructure and this may affect the efficiency of the logistics activities causing companies to relocate <https://assignbuster.com/importance-of-facility-location/>

abroad to more sophisticated countries. Management need to research the level of IT skill in the desired area, as well as the IT requirements needed for efficient operations. http://www.richterconsulting.com/Newsletters/articles200509/relocating_facilities.html

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Certain countries are more developed when it comes to IT than others.

Companies needing specialised IT may relocate to countries that are able to satisfy their specific needs. A competitive advantage can be achieved by relocating to countries that can satisfy the IT requirements. http://www.richterconsulting.com/Newsletters/articles200509/relocating_facilities.html

South Africa has a highly skilled workforce with regards to IT. This will benefit the manufacturer when deciding on a location. South Africa has a strong IT infrastructure with the latest technologies to meet the needs of businesses. With the country still developing, skilled IT personnel are increasing with experience and innovation. http://www.richterconsulting.com/Newsletters/articles200509/relocating_facilities.html

3.3 Moving and installing equipment

Moving and installing equipment is a factor that will affect a company's facility location decision but it is seen more as a risk factor which could possibly influence the company in a negative way. According to Rosenhek (2005) moving and installing equipment is one of the most logistically difficult fundamentals of the reallocation of a company. He recognised several problems that may occur when you move and install equipment which include:

Inappropriate set-up or damages in shipment, resulting in major initial downtime and/or production quality issues in the new location. (Rosenhek, 2005)

A deplorable new plant arrangement can result in inefficiencies and a preliminary drop in productivity. Becoming accustomed to a new arrangement may be difficult if the company does not keep hold of experienced production managers at its new site. (Rosenhek, 2005)

The infrastructure in the latest location may be insufficient to sustain the manufacturing equipment. For example, the waste disposal, sewage system and electricity supply may be unsatisfactory and may necessitate a significant investment to upgrade. (Rosenhek, 2005)

The above mentioned negative factors could play a huge role in influencing a company's facility location decision. Companies could for example choose a different location in order to ensure adequate infrastructure and to prevent any of the above mentioned problems.

Continuing to explain his views on this subject, Rosenhek explains how there are multiple issues in inventory management and he states that similar to moving and installing equipment, relocating and arranging stock into a new warehouse can result in considerable challenges. An insufficient system that would be needed to trace the movement of inventory can result in increased expenses, reduced fill rates, and loss of inventory therefore making moving and installing equipment a very important factor to consider when choosing a new location as choosing the wrong location could result in negative consequences as mentioned.

Although, after extensive research the discovery has been made that moving equipment to new facilities is not only a harmful activity that takes place, but one that has a positive side to it as well. George Hack (1999: 143) confirms this through a statement in his book, *Site Selection for growing companies*. Depending on the size of the facility and types of goods made, bountiful amounts of key pieces of both old and new equipment can be installed and incorporated into the new facility. This is said to ensure that there is a clear understanding that regardless of all the above-mentioned implications of moving and installing equipment in a new facility, the task of moving to a new facility still has to be completed and cannot be avoided. Hack (1999: 143) is of the opinion that with the potential mix of old and new equipment, a cautiously put together, flexible plan is needed. One needs to consider that any delays in building could setback the installation of the equipment in the new location. Hack (1999: 143) mentions that close co-operation is needed between different groups involved such as engineering, production, sales and marketing in order to achieve a positive effect. Hack confirms the movement of equipment as no risk, but views it in such a way that he believes there is a solution to the risk and the risk is therefore avoidable. This therefore indicates a further reason as to why movement and installation of equipment influences facility location.

3. 4 Availability of transportation

Many companies require high-quality, efficient transportation services. This factor is of major importance in many location selection decisions. An appropriate site may require one or more of the following features depending on the product type and industry to be served: accessibility to

major highways, availability of local rail facilities, ease of access to a major airport facility, closeness to inland or ocean port facilities, etc. (Logistics Management 3A textbook)

There has been a major service improvement in recent years by many transportation organisations, and therefore, most regional and local areas are physically powerful in at least one or more areas related to transportation. For companies that produce high-value, low-weight products, such as computers, TV's, video camera's etc., the location decision might be for a single national or international geographical area from which to distribute the company's total production. (Logistics Management 3A textbook)

3. 5 Proximity to markets and customers

This issue considers both logistics and competitive variable. The availability of transportation, the freight cost and geographical market size that can be served are examples of logistics variables. A competitive advantage offered by the potential site is superior when the numbers of customer within the market area are large. (Logistics Management 3A textbook)

Majority or companies have a high concern to locate logistics facilities near markets and customers, however a extremely complicated logistics network can be harmful from a cost viewpoint. (Logistics Management 3A textbook)

Another factor to keep in mind is that the availability of high-quality transportation services and proficient information technologies has caused a growth of the geographical regions to be served in a timely approach from major logistics facilities. (Logistics Management 3A textbook)

3. 6 Quality of life

Quality of life is complicated to measure, but it has resulting effects on the well-being of workers and the quality of the work they produce. For companies that employ and keep hold of a movable professional and technical labour force who are able to move to any location, the quality of life is very important. This is commonly found in the high-tech industry.

Quality of life is rated according to the following factors: climate, housing costs, health care and e