INFLUENCE OF JUST-IN-TIME INVENTORY STRATEGY ON PERFORMANCE OF VEHICLE MANUFACTURING FIRMS IN KENYA

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ABSTRACT

The study’s main objective was to establish the influence of Just-in-Time inventory strategy on performance of vehicle manufacturing firms in Kenya. The study guided by the following specific objectives: to determine effects of lead-time, examine the effect of cost reduction, effects of organization policy and buyer/supplier relationship on performance of vehicle manufacturing firms. This study used a target population of 400 employees and targeted a sample size of 100 respondents that represented 25% of target population. Primary data collection method was used. This was derived mainly through the administration of questionnaires to the respondents personally, which was further processed and analysed. The data was collected from target respondents through the questionnaire administrative technique. The study findings revealed that lead time, cost reduction, organization policy and buyer supplier relationship have a significant role in ensuring full implementation of JIT as well as ensuring that performance of vehicle manufacturing firms is achieved to the best of an organization. The study recommends that manufacturing organizations continuously institute or improve on prevailing strategy due to its immense benefits especially in enhancing coordination and stock replenishment, also organizations should adopt and appreciate new information technology equipment in order to improve customer relations, which is a cornerstone for customer satisfaction. The study findings were of significance to vehicle manufacturing companies in Kenya in order to achieve benefits that accrue with the adoption of JIT inventory strategy.

Key Words: Lead-Time, Cost Reduction, Organization Policy, Buyer/Supplier Relationship, Organization Performance
INTRODUCTION

Just-in-Time is a Japanese philosophy of management which has been put into viable use since the mid-1970s in numerous Japanese assembling firms. It was first created and idealized inside the Toyota producing firm by Taiichi Ohno as a method for accomplishing buyer requests with least deferrals. Because of this reason, Taiichi Ohno is currently alluded to as the initiator of Just-in-Time (Swati Vijay and Abbas Sadikot, 2016).

Toyota plant was the first to use JIT. It increased support during the 1973 oil ban and was later received by different firms. The oil ban and the expanding lack of other natural sources were viewed as a noteworthy improvement for the broad appropriation of JIT. Toyota could address the expanding difficulties for survival through a way to deal with administration distinction from what was normal for the time. This approach concentrates on plant, individuals and framework. Toyota understood that JIT would just be effective if each person inside the association was completely included and focused on it, if the plant and procedures were orchestrated greatest yield and proficiency and if quality and generation programs were booked to precisely meet requests (Taylor and Francis Group, 2012).

As per Gupta (2012), JIT in its beginnings was a strategy for diminishing stock levels inside Japanese shipyards. This days JIT has advanced into an administration rationality containing an assortment of learning and including careful arrangement of assembling standards and strategies. At the point when JIT manufacturing is appropriately received it fortifies the association's intensity in the commercial centre, generously the association's aggressiveness in the commercial centre, considerably by decreasing squanders and enhancing item quality and effectiveness of generation. JIT likewise rose as a method for getting the exceptional returns out of constrained resources available. Looked with limitations, the Japanese progressed in the direction of accomplishment of the ideal cost and quality relationship in their assembling forms. This includes decreasing waste and utilizing accessible resources in the most effective way conceivable. The contribution of maintained exertion over a significant period of time in the system of constant change is critical. This is accomplished by focussing on persistent stream of little upgrades and has been perceived as a standout amongst the most critical components of JIT logic.

Recently, as part of the restructuration of the global economy, new technologies and new consumer trends have led to changes in markets around the world. Based on this restructuration, some markets have faced extremely high degrees of competition, which led to the emergence of new concepts in the productive sector. One of the most important concepts is expected to be the spread of JIT systems outside Japan in the early 80s. Currently, another prominent concept, named supply-chain management is emerging (Kootanaee & Babu, 2013).

According to report for selected countries (PPP valuation of Kenya GDP) 2015, the manufacturing sector is a key industry in the Kenyan economy. The economic contribution of this sector is immense, with significance linkages to the manufacturing and services sectors. Given the significant challenges facing the industry, in particular globalization, liberalization and increasing competition, has resulted a considerable amount of pressure on Kenyan manufacturers to shorten time to market, increase customer service levels, provide higher level of conformance and quality, and offer more variety in product lines. Manufacturers must therefore enhance their resilience to remain competitive domestically and identify new potential for exploiting the local, as well as the global market.

JIT manufacturing consist of several elements which have to be integrated together to function in harmony to accomplish the JIT objectives. These
components basically incorporate the HR and the production, buying/procurement, assembling, arranging and sorting out capacity of an association. In other terms, these elements can be grouped together into the above mentioned Toyota production system of people, plants and system (Taylor & Francis Group, 2012).

Acquiring backing from all people associated with the accomplishment of hierarchical objectives is a central prerequisite for JIT achievement. Getting backing and agreement will require including, and illuminating, all gatherings who have an enthusiasm for the organization. This can incredibly lessen the measure of time and exertion associated with executing JIT and can limit the probability of making usage issues.

Various changes happen about the plant which includes multi-work specialists, plant layout, demand pull, self-assessment, MRP (Material Requirement Planning) and MRP II (Manufacturing Resource Planning) and nonstop improvement. Plant format Under JIT generation, the plant design is organized from most flexible worker and also according to item instead of process. This type of layout requires the use of multi-function workers, i.e. the focus shifts towards training workers and providing them with the skills necessary to perform many tasks rather one or two highly specialized tasks.

Frameworks inside an association allude to the innovation and process used to connection, plan and organize the exercises and materials utilized underway. Two such frameworks are MPR and MRP II. MRP is a PC based strategy for dealing with the materials required to complete a calendar. It is a combination way to deal with arranging, i.e. it includes the arranging of lower level items inside the item family, for example, segment parts. Planning for MRP can be broken down essentially into two parts. These incorporate a creation plan, which is an expansive arrangement showing the accessible limit and the way in which it is to be dispensed about the plant, and an ace generation plan which is a point by point plan of what items to deliver in determined time spans. MRP II is a PC based program which can be utilized to give data on monetary assets accessible to complete the plans of MRP. A case of the data MRP II gives is stock venture. Different frameworks inside an association incorporate those that furnish linkages with providers and help with the co-appointment of the general working of the association. Given the idea of JIT, quality will accept an expanding significance. The utilization of aggregate quality control is an extra component of JIT and is essential in guaranteeing that the quality models set generation are accomplished. JIT quality incorporates quality at the source. Quality at the source suggests there is a complement on making things successfully all of a sudden. Quality at the source stands out fundamentally from the standard method to manage quality or conveying a thing by then exploring it. This methodology does not take into account limiting stock levels and improve costs. In this manner, it doesn't integrate with the objectives of JIT to kill squanders (Kootanaee, Babu and Talari, 2013).

According to Kootanaee, Babu, & Talari (2013), Just-In-Time (JIT) is a Pull’ (demand) driven inventory system in which materials, parts, sub-assemblies, and support items are delivered just when needed and neither sooner nor later. Its objective is to eliminate product inventories from the supply chain. As much a managerial philosophy as an inventory system, JIT encompasses all activities required to make a final product from design engineering onwards to the last manufacturing operation.

JIT Production System is an assembling theory which implies making exactly what is required, exactly when it is required, and in the sum required. The association creates just what the client demands, to real requests, not to estimate. It helps to have minimal amounts of inventory, reducing the inventory holding costs. It also means total
elimination of waste associated with time, labour, and storage space (Taylor & Francis Group, 2010).

Statement of the Problem

Inventory is an asset that is owned by a business that has the express purpose of being sold to a customer. This includes items sold to end customers or distributors. It includes raw materials, work in process, and finished goods (Cavitt, 2010).

It is through JIT stock strategy that assembling firms can accomplish top of the line results for instance the Toyota Company which is considered by numerous to be the perfect case for JIT achievement. The Toyota generation procedure is featured by the way that crude materials are not conveyed to the creation floor until the point that a request is gotten and this item is prepared to be fabricated. No parts are permitted at a hub except if they are required for the following hub, or they are a piece of a gathering for the following hub (Taylor and Francis 2012).

By making just what is needed, just when it is needed, and in just the amount needed by use of JIT, better response to customer needs, cost effectiveness and reduced inventory is experienced. However, making just what is needed, just when it is needed, and in just the amount needed first requires a flow in the factory. The factory’s flow is what brings all of the waste to the surface, where we can apply JIT techniques to totally eliminate the waste (Taylor & Francis, 2010).

Studies have been done in other industries but not specifically in the Vehicle manufacturing industries in Kenya. Kenyan vehicle manufacturing firms experience challenges in inventory management which has resulted into low customer satisfaction, high inventory holding costs, high rate of obsolescence and frequent stock outs. Accordingly this examination tries to set up the impact of Just-in-Time stock technique on execution of vehicle manufacturing firms of Kenya.

Objective of the Study

The general goal of this examination is to set up the impact of Just-in-Time stock technique on performance of vehicle manufacturing firms in Kenya. The specific objective were:-

- To assess the impact of lead-time on performance of vehicle manufacturing firms in Kenya.
- To determine the effects of cost reduction on performance within vehicle manufacturing organizations in Kenya.
- To determine the effects of buyer supplier relationship on performance of vehicle manufacturing firms in Kenya.
- To find out the effect of organizational policy on performance of vehicle manufacturing firms in Kenya.

LITERATURE REVIEW

Theoretical Review

Theory of Just in Time production

JIT Based Quality Management is a mix of value control, stock control, and creation administration work that tries bona fide endeavours for quality change by two different ways. First it focuses on philosophical part of value change by making quality everybody’s duty and afterward centred around compelling usage of value control procedures. It perceived that most profitable assets of an association are its specialists, and labourers work best when they are inspired, esteemed, urged to contribute, and permitted to settle on their own choices. Under this approach, Workers investigate the item quality after each progressive task. They are prepared alongside chiefs in readiness and translation of process control diagrams. Supervisors spur the specialists to think quality first and generation rate second. The specialists have expert to end the creation line or cell, if quality issues are revealed.
Consequently, this idea gives the quality obligation to specialists as well as matches that duty with expert to share the quality control works so quality issues can be revealed and understood rapidly. Additionally, JIT creation framework requests to purchase parts in little parcels. Little parts require less space and time. Less space and time require less people groups and offices to finish a similar activity. Furthermore, little parcels simple to investigate, and imperfections can be promptly identified. In this manner, the parts that are obtained relentlessly in little lot sizes with visit conveyances add to higher quality and efficiency through lower levels of stock, low levels of obsolete products bring down investigation costs for approaching parts, and early recognition of deformities. Numerous scientists distinguished the idea of JIT framework as dealing with the material stream in a plant so as to diminish or lessen the levels of stock (Rahmani and Nayebi, 2014). In different terms, JIT based methodologies can possibly enhance item quality and profitability to critical levels however organizations must embrace its standards in manners that meet their hierarchical structure, outline and procedures.

Theory of Constraints

The hypothesis of requirements is an administration rationality that tries to expand producing throughput effectiveness or framework execution estimated by deals through the recognizable proof of those procedures that are stressing the manufacturing framework (Ainapur & Singh, 2011). This hypothesis of limitations depends on the rule that a chain is just as solid as its weakest connection. The theory is established on the conviction that an association that boosts the yield of each machine won't execute and in addition one that guarantees improvement of the stream of materials and esteem made through its operational execution. Hypothesis of constrains stresses on successfully dealing with the limit and capacity of these limitations on the off chance that they are to enhance the operational execution of their association. Organizations have hustled to put resources into the innovation and authoritative structures expected to accomplish to-date frameworks synchronization that empower facilitated stream of stock (Bricker & Tollison, 2011).

Lean Theory

Muthkeke, Magutu & Akelo (2014), surveyed the impact of lean hypothesis on money related execution of a firm. They say that the hypothesis may dispense with cushion stock and limit is required to be underway process. Eroglu & Hofer (2011) found that leanness emphatically influences productivity of a business firm. They contend that stock leanness is the best stock control apparatus. The hypothesis explains on how producers gain adaptability in their requesting choices, decrease stock held on site and totally takes out stock conveying costs therefore diminishing pointless expenses. If manufacturing firms are able reduce their inventory holding costs as well as other inventory related costs then they will be able to realise profit margin.

Satyendra & Singh (2013), talk about their discoveries of lessening inventories at firm level. They continue saying that at the total level, the exact quality of the lean clarification lies both in the planning and the extent of the selection. Anyway in the theory, stock compels a company's capacity to react to changes sought after.

Researchers demonstrate that organizations effectively improve stock through JIT stock methodology to accomplish more elevated amounts of benefit use and consumer loyalty prompting authoritative development, profitability and expanded piece of the overall industry (Waller, Tangari, & Williams, 2010).

Another research recommending a positive connection between stock administration and execution was that of Roh & Lee (2013), in which their examination concentrated on US fabricating
firms covering the period between years 2003 and 2008. They found that leanness decidedly influences overall revenues in the assembling firms included. As indicated by Eroglu & Hofer (2011), firms that are more slender than the business normal by and large experience positive comes back to leanness. They utilized observational leanness pointer as estimation for stock administration. As opposed to the present examination, their investigation concentrated on surveying the connection between stock execution and generally speaking firm execution. Feedback levelled against the hypothesis is that it must be material when there is a nearby and long haul cooperation and sharing of data between a firm and its trading partners.

**Contingency Theory**

Most administrations research look into centres around the determinants of performance. The present investigation received possibility hypothesis on administration of assignments in various operational settings. The substance of possibility hypothesis is that prescribed procedures rely upon the possibilities of circumstance. As per Nohria & Khurana (2010), the adjustments in subordinate measures are considered to speak to execution caused by varieties in the autonomous measures. Following Carton's conjectured relationship; stock control frameworks are determinants of changes in stock level of assembling organizations. In this regard changes in stock control frameworks will speak to operational execution. The pith of operational execution is making of significant worth through requesting at the perfect time, the correct amount and at the ideal place. Esteem creation might be a mix of money related and non-budgetary goals. Effective operational execution of a firm can be compared with fruitful esteem expansion. Associations’ operational execution can be made a decision by numerous points of view. Each assembling organization has a remarkable arrangement of conditions making operational execution estimation intrinsically situational. The commitment of stock control framework in operational execution of the association is centred around monetary and non-money related advantages, productivity of systems and adequacy of store network exercises.

**Institutional Theory**

Institutional Theory provides a theoretical lens through which researchers can identify and examine influences that promote survival and legitimacy of organizational practices, including factors such as culture, social environment, regulation (including the legal environment), tradition and history, as well as economic incentives, whilst acknowledging that resources are also important (Chelangat, 2015). Institutional Theory is traditionally concerned with how groups and organizations better secure their positions and legitimacy by conforming to the rules (such as regulatory structures, governmental agencies, laws, courts, professions, and scripts and other societal and cultural practices that exert conformance pressures) and norms of the institutional environment. According to Institutional Theory, external, social, political, and economic pressures influence firms’ strategies and organizational decision-making as firms seek to adopt legitimate practices or legitimize their practices in the view of other stakeholders.

Institutional Theory describes three firms of drivers that create isomorphism in organizational strategies, structures and processes. These drivers are coercive, normative, and mimetic. Coercive occurs from influences exerted by those in powerful positions, in this case within the dairy supply chain. Coercive pressures are crucial to drive environmental management and hence sustainability. Normative drivers ensure organizations conform in order to be perceived as partaking in legitimate actions (Sarkis, 2011).
Conceptual Framework

**Lead-Time**
- Timely Delivery.
- High Customer Key Level.
- Effective customer management function.

**Cost Reduction**
- Duplication minimization.
- Monitoring and Evaluating.
- Optimal Allocation of Resources.

**Organizational Policy**
- Close Collaborative Relationship
- Top Management support
- Allocation of resources

**Buyer Supplier Relationship**
- Timely delivery
- Lead-time reduction
- Quality goods

**Performance of Vehicle Manufacturing Firms**
- Efficient and Effectiveness in delivery
- Organized Procedures and Systems
- Supplier collaboration

**Independent Variables**

**Dependent Variables**

Figure 1: Conceptual Framework

**Lead-Time**

Javadian, Nagendra and Fooladi (2013), demonstrated that suppliers represent roughly 80% of lead-time issues. This would require consummate synchronization between the provider and the purchaser, which can be accomplished by coordinating their creation arranging and control frameworks. Kumar (2010) indicated the significant job of diminishing lead time on the capacity of the provider to wind up lean and responsive. He additionally showed that provider lead time decrease limits the potential issue of moving inventories to the provider firm and kills quality issues related with holding cushion inventories.

Taylor and Francis (2010) observationally found that lead time execution was influenced by data quality and close connections between the purchasing firm and the supplier firm. They likewise indicated the significance of the calculated connection between the buyer and supplier, especially under JIT framework, where providers need to totally react to the prerequisites of the buyer as far as quality and amount. They argued that such link would be enhanced by small lot size and coordinated schedules between the two parties.

**Cost Reduction**

Operational performance provides the basis for a manufacturing firm to assess how well it is progressing towards its predetermined objectives. According to Teeravaraprug, Kitiwanwong, & Nuttapon (2011), there is need to analyse the costs of maintaining certain levels of inventory as there are costs involved in holding too much stock and there are also costs involved in holding too little inventory. In the cost structure of most of the products manufactured, the cost of materials exceeds 50% of the total cost.

Yasuhiro Monden (2012), argues that inventory control systems provides an opportunity to reduce manufacturing costs and be treated as a profit centre, this may affect the operational performance of manufacturing firms. Theory of constraints minimizes investment in stock and allocates resources optimally through ensuring visibility and tracking of products along the supply chain as well as reducing labour costs and other costs involved that may adversely impact on performance of vehicle manufacturing firms (Yugang, 2010).

**Organizational Policies**

Burt et al., (2010) expressed that each association creates systems to empower its staff actualize strategies and plans; intended to meet destinations. In an investigation of the inspiration of workers to utilize the web as an asset for different components of the assembling procedure (for instance, renewal process and following requests), it was reasoned that authoritative attributes and hierarchical impacts were noteworthy helpers in execution.
Hashimoto et al., (2014) propounded that information of the mission, the presence of best down targets with related execution measures, and process rules connect individual or gathering execution to the organization’s objectives and desires for upper administration require great capabilities. The utilization of groups, cross-practical supervisors, wide process and linkage arranged employment obligations, and broad data frameworks empower people to adjust clashing destinations and enhance forms. Proficient capabilities are the support around which execution turns. Without all around propelled, capable and very much prepared staff, even the more splendidly considered plans and techniques can come up short. An inspired group whose individuals work for and with each other can beat a group of less propelled individuals regardless of whether they are more noteworthy in ability. To enhance execution of vehicle producing firms, it is fundamental to comprehend the parts that are to be played out, the gauges to be accomplished and how execution is assessed.

**Performance of Vehicle Manufacturing Firms in Kenya**

As indicated by Oprean and Grecu (2010), a store network is a system of facilities and conveyance choices that play out the elements of acquisition of materials, processing of these materials into finished products and the circulation of these completed items to clients. For inevitable item or services to be monetarily invaluable to the association included esteem must be added to the procedure of production network administration quicker than the cost. Erik (2010) upheld the contention by characterizing supply chain management as administration of upstream and downstream associations with providers and client to convey better an incentive at less cost than the inventory network in general.

Supply Chain Management includes joining, co-appointment and joint effort crosswise over associations and all through the supply chain of such capacities as dispersion arranging, demand determining, buying, requirement planning, order processing, warehousing, material handling, stock, bundling, arrange handling, and transportation, and so on. Every one of these capacities are considered as building squares of SCM in the present business condition. As indicated by Agus and Hajinooor (2012), SCM tries to upgrade execution by nearly incorporating the inward capacities inside an organization and viably connecting them with the outside tasks of providers and chain individuals. This exertion requires a firm’s exercises to be firmly organized with that of clients and providers.

**Methodology**

Research configuration is an arrangement and structure of examination so considered as to acquire answers to the exploration questions (Mugenda, 2013). Target populace alludes to a particular gathering of people to which the analyst is interested in generalizing conclusion (Catillo, 2010).
objective populace of this investigation was from vehicle producing firms. This study targeted a sample size of 100 respondents that represents 25% of target population. From the target population of 800 a sample size of 10% was taken, giving a base of 80 respondents. Data was analysed using both qualitative and quantitative techniques. Qualitative method involved content analysis and evaluation of text material, while quantitative method basically dealt with numerical which was used to produce frequency.

RESULTS
Lead Time Reduction

Table 1: Production Efficiency Affects Lead-Time Thus Affecting Performance of Vehicle Manufacturing Firms

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly agree</td>
<td>72</td>
<td>81.8%</td>
</tr>
<tr>
<td>Agree</td>
<td>16</td>
<td>18.2%</td>
</tr>
<tr>
<td>neither agree nor disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>strongly disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>88</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The research showed that lead time affect the performance of vehicle manufacturing firms where 81.8% strongly agreed and 18.2% agreed that it had an effect on vehicle manufacturing performance and thus it need to be reduced.

On timely delivery of material minimizes the chances of lead time occurring 59.1% of the respondents strongly agreed that delivery of material help reduces the chances of lead time, 25% did agree and 15.9% neither agreed nor disagreed. This indicates that a large number of employees understand the effects of lead time but measures must be taken so that the 15.9% of the respondents are also made aware of the effects.

On high key customer satisfaction factors contribute to low or no lead-time, the research showed that 60.2% of the respondents strongly agreed that customer key factor helped reduce lead time, 23.9% did also agree, none did agree nor disagreed, 9.1% did disagree and 6.8% strongly disagreed. This showed that a good number of the respondents agreed that the key customer satisfaction factor was essential, however a small number disagreed.

On the process taken to come up with a decision in the company is buyer/supplier involving, the research showed that 40% of the respondents strongly agreed, 43% agreed, 9% neither agreed nor disagreed, 6% disagreed and 3% strongly disagreed that buyer supplier relationship resulted to better performance of vehicle manufacturing organizations.

On whether the process of handling both customers and suppliers in vehicle manufacturing companies was friendly and effective, 47.7% of the respondents strongly agreed that the process of handling customer complaints as well as those of suppliers is effective and friendly within the vehicle manufacturing sector, 39.7% agreed, 6.8% neither agreed nor disagreed and 5.8% disagreed.

On whether the mode of channel relationship between the organization and its supplier should be favourable to all parties, the research showed that 48.6% strongly agreed, 20% did agreed, 8.5% neither
agreed nor disagreed, 10% disagreed and 2.9% strongly disagreed that the channel of communication between suppliers and vehicle manufacturing companies is based on arm’s length kind of relations.

In conclusion of the information above it was clear that decision making process, mode of handling customers and suppliers as well as channel relationship should be vital components when it comes to buyer supplier relationship.

**Cost Reduction**

**Table 2: Introduction of JIT has helped the vehicle manufacturing companies to reduce cost of operation and service**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly agree</td>
<td>53</td>
<td>60.2%</td>
</tr>
<tr>
<td>Agree</td>
<td>17</td>
<td>19.3%</td>
</tr>
<tr>
<td>neither agree nor disagree</td>
<td>12</td>
<td>13.6%</td>
</tr>
<tr>
<td>Disagree</td>
<td>6</td>
<td>6.9%</td>
</tr>
<tr>
<td>strongly disagree</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total 88 100%

60.2% of the respondents strongly agreed that JIT introduction has helped cut the cost of manufacturing as well as other related cost, 19.3% did agree, 13.6% neither agreed nor disagreed and 6.9% disagree. This indicated that a large number of vehicle manufacturing firms’ employees understood the benefits that accrued when a manufacturing organization adopt JIT.

On whether monitoring and evaluating had helped in tracking on cost in an efficient and effective manner, the research showed that 40% of the respondents strongly agreed, 31% agreed, 9% neither agreed nor disagreed, 11% disagreed and 9% strongly disagreed that through monitoring and constant evaluation can greatly impact in cutting down the cost.

On whether introduction of JIT in supply chain management had helped vehicle manufacturing companies to reduce cost of operation and service, the research showed that 51.1% strongly agreed, 28.4% did agreed, none neither agreed nor disagreed, 13.6% disagreed and 6.9% strongly disagreed that introduction of JIT in supply chain management helped cut down on cost.

On whether optimal allocation of resources had helped in reducing the cost of manufacturing within the vehicle manufacturing industry, the research showed that optimal allocation was necessary in vehicle manufacturing organizations as it helped cut down the cost. 64.7% of the respondents strongly agreed with this statement, 15.9% agreed, 14.7% neither agreed nor disagreed and 4.7% disagreed.

**Organization Policies**

On whether organization policy had helped to improve the operation and collaboration of vehicle manufacturing companies and their suppliers, the research showed that 79.5% of the respondents agreed that organizational policy in place affected performance from the evaluation carried out in various vehicle manufacturing companies while 20.5% of the respondents disagree. This showed that a good number of the respondents agreed that an organization should come up with a policy that favours the manufacturing system in place.

On whether effective communication among employees and senior level had resulted to improved quality and productivity 57.1% of the respondents strongly agreed that effective communication

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between the top level management, middle level employees and bottom level employees within the vehicle manufacturing firms resulted to improved performance of these manufacturing firms, 20% also agreed, 14.3% neither agreed nor disagreed 8.6% disagreed and 0% strongly disagree.

On whether organizational policy helped vehicle manufacturing companies in system integration of JIT to make sure service delivery to all clients was of quality, the research showed that with good organizational policy in place, the organization was able to adopt and implement systems that could be integrated in various departments. 51.1% of the respondents strongly agreed with this statement, 36.3% also agreed, 6.8% neither agreed nor disagreed, 3.4% disagreed and 2.4% of the respondents strongly disagreed.

In summary of the above result, good organizational policies result to flexibility thus bringing efficiency and effectiveness. Burt et al. (2010) stated that every organization develops procedures to enable its personnel implement policies and plans; designed to meet objectives.

CONCLUSIONS

The purpose of this study was to determine the influence of JIT on Performance of vehicle manufacturing firms. Based on previous studies the components of JIT were expected to have positive relation with performance of vehicle manufacturing firms in Kenya.

The output given from the findings indicated that there is a significant positive relationship between the components of JIT namely lead time, cost reduction, organization policy as well as buyer supplier relationships.

Manufacturing firms face a lot of challenges when it comes to adoption of JIT. The survey established that manufacturing firms are faced with challenges like lack of robust and professional relationships with suppliers, organizations rules, procedures and policies and resistance to change by employees.

RECOMMENDATION

James & Daniel (1996) states that lean can resolve severe organizational problems and additionally can be a powerful approach to gather and unite several change initiatives that are running through. Most organizations pursue lean in response to their need to fundamentally improve business competitiveness by reducing cost while increasing quality and customer responsiveness which includes meeting delivery time.

Organizations should continuously improve on prevailing inventory information system due to its immense benefits especially in enhancing coordination and stock replenishment.

Organizations should also adopt and appreciate new information technology equipment in order to improve customer relations, which is a cornerstone for customer satisfaction.

Vehicle manufacturing firms should improve on their capacity levels by recruiting more personnel who are conversant with JIT inventory strategy. This will in turn enhance their ability to supply their products in the market.

For companies to remain competitive and profitable, they should adopt JIT inventory strategy.

In order to boost production in Kenya, the Kenyan Government should provide adequate infrastructural support particularly in the areas of power and transport.

Manufacturing companies are encouraged to increase their resource commitment to staff training so as to develop skills and to update knowledge on JIT inventory strategy. As such, professionalism should be encouraged at all levels of the organization and should not be restricted to the top management only.
Suggestions for Further Research

Further research need to be carried out on the influence of JIT inventory strategy on performance of vehicle manufacturing sector in Kenya. A focus on other variables rather than lead time, cost reduction, organizational policy as well as buyer supplier relationship to come up with a comprehensive knowledge of the concept. Second, the study was only done in vehicle manufacturing sector; the same can be done in other sectors such as service sector among Universities in Kenya.

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