

OBSTACLES OF JITS IN MANUFACTURING SYSTEMS IN LIBYA

Dr. Entsar Kouni A Alhaj Mohamed
 Faculty of accounting; Zawia University, Zawia City, Libya

ABSTRACT

Recently, all businesses and manufacturing environment's competition depend on the highest quality of its products and lowest cost. Just in time system changes the global competitive business environment, which has forced the organization to transform to achieve their goals. JIT focus on the concept of the human resource development and zero inventories, in other word inventory should be as less as possible. It appears that the Libya manufacturing management may not quite understand what JIT is and what is involved in implementing a successful system. Therefore, it is necessary to try to benefit from JIT in improving the production by taking in consideration the difficulties that Libya struggled in the last decade. The researcher hopes that, the study results will be helpful in reaching decisions to develop the industry system through adopting JIT in order to increase the growth in the industry sector in Libya.

Key words: JITS: just in time system, IM: inventory management, MENA; middle east and North Africa Countries

I. INTRODUCTION

The challenge to achieve a sustainable development of the Libyan industry is to develop the manufacturing systems to improve the management of the most productive public enterprises. To achieve that objective, a high level of development is required, which demand a strong and healthy industry sector capable of attracting more foreign industries and upgrading of domestic. The JIT philosophy maintains that a manufacturing floor be laid out by product rather than by function. All equipment should be dedicated to a product or family of products and organized logically in the order, in which the various processes are performed on that family of products. This production strategy is to reduce the process, by new methods to manage the consequences of the change because inventory reduction is the centre of this system, which raises the level of risk, in addition to other problems that may result (Dalton, 2013; Greb, 2009). This system will be guided to develop production stages to get high product quality, it represents the real guarantee to reduce the cost, and increase manufacturing flexibility and increase efficiency (Hirano, 2009; Nair, 2010)

II. STUDY AIM AND STRUCTURE

The main aim of this study was to address the main obstacle that would influence the adoption of the JIT in Libyan environment. In doing so, the study was based on interviews with many responsible people in a Libyan industrial environment regarding the problems that believed to affect the adoption of this system. A thematic network was used to analyze the qualitative data. The result indicated that the most obstacles were as follows:

Table 1: 1 Respondents' Response

Q: What are the problems that face JIT?		
	Finding	Discussion
1	Supplier	A majority of those questioned have assumed that The raw materials make the change impossible, because many kinds of raw material should be available, not just one or two kinds, which means that the overseas suppliers are the most crucial factors behind the absence of JIT. Furthermore, the opinion of Cheng (2011) about the transportation strategy may be helpful in Libyan situation. About 31.25 % of the respondents stated that a lack of financial resources is the cause behind this matter. In brief, the absence of the vital governmental support in implementing effective and sufficient production programs has negatively affected this sector in having any development. The same percentage of the respondents has attributed the non-existence of JIT to the absence of the leadership support. 18.75 % of the related participants have attributed this matter to the difficulties to the unclear
2	Suppliers & Financial	
3	Supplier & Unclear Benefit	
4	Leadership convinces	
5	Unclear benefit, old factories	
6	Supplier	
7	General condition Suppliers & Technology	
8	Technology	
9	Supplier	
10	Suppliers, Leadership	
11	Lack of many main elements	
12	Financial, suppliers Leadership	
13	Suppliers, Financial	
14	Leadership	
15	Suppliers, & Financial	
16	Suppliers & Unclear the benefits, Leadership	

		benefits. A small percentage of the interviewees have demonstrated that a lack of enough technology is the most obstacles that hinder the JIT implementation. In comparison, less than 6.5% of the interviewees have described that the reasons of this matter are the need of some condition for these kinds of industries, as a lack of many necessary elements. Finally, These views were also supported by the researcher's observation in doing some visits to the locations of some factories in Libya.
--	--	---

Details are, however explored in the excerpts below:

a. OVERSEAS SUPPLIERS

The respondents disclosed that suppliers are demonstrably the most problems that are faced in the JIT implementation. Respondent 16 explained that the suppliers have considered the main problems that are faced in the Libyan industries. He explained that changing to JIT will require eliminating the warehouses, which mean multi- delivery; the cost will be very high. Moreover, Respondent 15 said that, the application of JIT will not be possible because of the need for suppliers in the local environment to eliminate the warehouses.

Indeed, this finding is in line with many studies, which pointed that trading off reduced the inventory against a higher transportation cost, becomes the critical factor for the total cost minimization.

The JIT approach allows a small margin for the transportation cycle variation to avoid the production processes. In addition to, the external factors on whether congestion and unexpected accidents could cause a serious delay that leads to a negative impact (Kanek&Nojiri, 2008).

2.1 FINANNCIAL RESOURCES

According to one interviewee, a lack of financial resources is one of the most crucial factors of the JIT implementation. Respondent 12 stated that the main problem is that the cost of implementation is high taking in consideration that Libya developing country. To apply the new manufacturing method will cost the industry sector a lot, and that need government financial support. This claim is supported by the fact that the high cost of the change bans the implementation decision.

This answer gives evidence of the importance of financial sources that are needed for the JIT application, and reflects

the most challenging to the implementation decision that typically is supplied virtually in all developing countries. As mentioned in previous studies that some company managers do not accept the idea of change due to the high cost in the beginning, such as training cost, contracts and others (Elbishtawi&Elmatarna 2005).

b. ABSENCE OF LEADERSHIP SUPPORT

Based on the above assertion, it can establish through the findings of the interview that a little over one-third of the respondents see that the absence of leadership support negatively affects the implementation decision. According to respondent 10, it's necessary to convince the superior managers by this idea first to have enough support and search for a way to provide the whole structure that is needed for implementation, then start to plan the change in many stages to ensure its implementation steps. This fact pointed by Hokoma 2010, that the management body should be more attentive to the updated operations management technology.

c. UNCLEAR BENEFITS

Other interviews with respondents illustrated that, the main problem is unclear benefits of JIT in a short term, which makes the superior management ban the decision for now. In the same vein in an interview conducted with respondents 8, he claimed that the application in its current stage will be a failure, especially if the benefits of change cannot be recognized. Therefore, the superior management needed to be more attentive to the updated operations management technology to can develop the appropriated strategy that might help in JIT, in order to become more efficient in driving the implementation steps.

2.5 NEW TECHNOLOGY

The respondents further lamented that a lack of technology is the recurrent crisis in and around JIT, as revealed by interviewee 5, when he insisted that to apply JIT, there should be the needed technology to change the production system or the application will fail. This point supported the research problem that the production system is very old. Also, According to him the factories do not apply the JIT system in their manufacturing system. The main problems are a lack availability of new machines because the talents that can depend on implementing new systems are available, which supported the questionnaire finding that there are enough talents about JIT.

2.6 GENERAL CONDITION

According to respondent 7 the production system is still a traditional system and in the current situation, it's impossible to apply JIT; many kinds of industry need special care. For example, the materials need to be kept in a special condition, such as the correct temperature to avoid damage. This is a very difficult issue for eliminating material warehouses. This means that the management needs to take

immediate and strategic actions, in order to improve their manufacturing and managerial operations of this kind of industry to achieve a successful and effective implementation of JIT.

This, in fact, agreed with Kumar (2010) opinion, according to him, the management should pay more attention on applying the most reliable programs and provide more support and flexibility to implement the related up-to-date techniques and technologies throughout their companies.

III. RESULTS AND DISCUSSION

Most of those questioned have believed that the overseas suppliers are crucial factors behind the absence of JIT. Some of them insisted that the local suppliers will be the only way to apply it. In contrast, the other believed that the transportation strategy will have a great impact in a short term. Other respondents stated that a lack of financial resources is behind this matter. In the light of this, half of those respondents believed that it's difficult to overcome; however, the other asserted that government actions towards such kinds of those problems are required. They revealed that the restructuring monetary should include a new role to achieve the goals of the development growth. In brief, the absence of the vital governmental role in implementing effective and sufficient production programs has negatively affected those related factories in having any development. Moreover, more than 16% of the respondents have attributed the non-existence of JIT to the absence of the leadership support. In answering this question, a small percentage of those questioned asserted that in a short-term, there will be big risks on their factories to make the change. The related participants have attributed this matter to the lack of technology, in addition to the special condition that these industries need, and difficulties of recognizing the benefits. However, in a long run adoption to JIT, it will accelerate structural shifts toward a stronger and more sustainable economic future. Although, the superior management gradually started steps toward the development, such as made contracts to import new machines and equipment in the factories, it did not do a real action to plan the implementation because of the high cost problem to supply the other requirements besides the main problems, which are overseas suppliers, and lack of government support. Finally, the findings of this study agreed with the findings conducted by Palito et al., (2006) which showed that the constraints and problems that JIT faced are logistics, the organizational culture and conditions, intractable accounting and finance practices. He explained that some of the logistics are a stumbling block to the application because any problem in the delivery of the material will affect the production stages, which leads to the lack of availability of the manufacturing items that will affect the ability to meet the demand of the client, also will affect the inability to meet the market demand and sometimes lead to the closure of the factory. The logistics of the transport may lead to an increased cost, which is contrary to the objectives of the application of JIT.

IV. CONTRIBUTION TO KNOWLEDGE

- a. The Libyan industry, in the long term, will benefit from increasing the growth in the industrial sector. It will determine the relationship between applying the new industrial ways and financial growth, like many other MENA countries.
- b. This study could be considered as a step towards raising and improving the comprehension of the management of industrial companies in Libya by providing recommendations to overcome the difficulties that face the implementation steps of JIT in Libya.
- c. This study provides an example to invite the industrial companies in Libya to apply and accommodate the essential elements and requirements for JIT application.

V. CONCLUSION

In summary, a large proportion of interviewees stated that the overseas supplier is the main problem. This is followed a high implementation cost, and a lack of management and government support, also, difficulty to recognize benefits and lack of technology. Further, some of interviewees believe that the change needs a long time compared to the benefits, and lack in the whole JIT structure or necessary elements. About the solutions to those difficulties, the majority of answers indicate that the local suppliers will be the only way to implement JIT. This is followed by the management support to the application idea, also some of them believe that creating a transportation strategy and a technology have a great impact in applying JIT. However, smallest percentage is the most thought that it is difficult to apply this system with the current condition.

REFERENCES

- [1] Adeyemi. S.2010. Just in time production system (JITPS) in developing countries the Nigerian experience. Department of business administration, University of Ilorin, Ilorin, Nigeria.
- [2] Al-Yaqub. S. N. 2009. The Impact of Applying JUST-IN-TIME System to Maximize Profits of Industrial Shar holding Companies in Jordan. Middle East University for Graduate Student.
- [3] Dalton, J.T. (2013). A Theory of Just In Time and the Growth in Manufacturing Trade: Wake Forest University.
- [4] Elbishtawi, S. H. & Elmatarna, GH. F. (2005). Just In Time System and its Effect on Making Strategies Decision. PhD Thesis: Al Albeat University. Jordan.
- [5] Greb, E. (2009). Is JIT Manufacturing the Right Prescription? Academic research library, 33
- [6] Hamoda. M. M. The Development of Standard Costing System to Meet Requirements of Modern Manufacturing Environment. King Abdulaziz University Faculty of Economics & Administration Accounting Department.

- [8] Hokoma, R. A. (2010). The current Awareness of JIT techniques Within the Libyan Textile Private Industries. A Case Study. Faculty of Engineering: AlfathUniversty, World Academy Of Engineering & Technology, Libya.
- [9] Hirano, H. Y. (2009). JIT implementation Manual. CRC Press. Taylor& Francis Group. United State of America.
- [10] Javed. Z. H., Farooq. M. &Akram. S.2010. Cost-push shocks and inflation: An empirical analysis from the economy of Pakistan. Department of Economics, GC University, Faisalabad, Pakistan.
- [11] Jose. O. 2008 .Strategic Human Resource Management, Small and Medium Sized Internship and Strategic Partnership Capability. University Of Pennsylvania,
- [12] Kumar. V. 2010. JIT Quality Management, Concepts and Implications in Indian Context. International Journal of Engineering Science and Technology, 2 (1), pp40-50. India.
- [13] Kumar. B. S&Sampath. V. R. 2012. Garment manufacturing through lean initiative. An empirical study on WIP fluctuation in T- shirt production unit. European journal of scientific research <http://www.europeanjournalofscientificresearch.com>
- [14] Kaneko, J., Nojiri, W. (2008). The Logistics of Just In Time between Parts Suppliers and Car Assemblers in Japan. Journal of Transport Geography, 16. (3), pp. 155-173. Japan.
- [15] Nair, M. A. (2010). Relationship between Just in Time Manufacturing Practices and Performance: A meta- Analytic Investigation. Jopermanag.
- [16] Polito, T. &Watson, K. (2006). Just- In- Time Under Fire. The Five Major Constraints upon JIT. The Journal of American Academy of Business, Cambridge, 9(1).