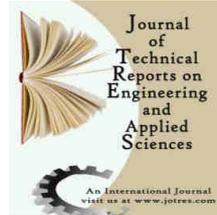




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A literature review on: Application of SWOT analysis to increase manufacturing productivity.

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ABSTRACT

REVIEW ARTICLE

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Chhattisgarh production by manufacturing output, at a percentage of total world production by manufacturing output, decreased from 0.61% in 2010 to 0.5% in 2016. This indicates the need to strengthen India's production by manufacturing position, given the potential for employment creation, economic growth and export earnings. Chemical products, chemicals, rubber and plastic as well as metals, metal products, machinery and equipment and food, beverages and other are the largest sectors in the economy. The current sectors that dominate exports include Non-ferrous metals, Iron and steel products, and motor vehicles. Non-ferrous metals and Iron and steel products have great potential to provide additional value add to the raw, unworked products, while the motor industry imports 70% more than what they export, showing the immense potential in this industry. The analysis section in this report aims to provide a clearer picture on each sector making up the production by manufacturing sector as a whole, by providing a top view of the subsector and identifying and discussing the various literature to identify the problems.

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1. Overview

According to World Bank research, there are an estimated 19.3 million micro, small and medium-sized enterprises in the European Union that provide work to around 65 million peoples, two-thirds of all employment. The average EU business provides employment for four people (including the owner). Figures also show that SMEs account for 66% of employment within the EU (with micro enterprises accounting for 34%, small enterprises accounting for 19% and medium-sized enterprises accounting for 13%). SMEs also account for more than half (52%) of private sector turnover within the EU. [2]

In Latin-America the vast majority (80-90% of companies) is micro enterprises, and the government have vastly reduced red tape to ensure their needs are attended to swiftly. According to the research, SMEs represent over 95% of enterprises in most OECD countries and generate over half of private sector employment.

In a lot of developing countries, the roles of SMEs remain in traditional activities with low levels of productivity, poor quality products and serving small localized markets. There is sometimes little or no technological dynamism, and in many poor countries, there is also a large underclass of

(formal and informal) micro enterprises that ekes out of bare survival.

Seligman also mentioned that small SMEs constitute almost 90% in all practices in every country. Due to their crucial importance to the economy, government and international agencies are constantly working to promote and sustain them in a highly competitive environment. According to the research, the World Association of Small and Medium-Sized Enterprises (WASME) are extremely active to support SMEs, having members in 112 countries, promoting cooperation as well as providing enterprises with industrial, technological and trade information, training and research facilities and support for the development of micro and rural enterprises [8].

2. Literature Review

Boppana v. chaudhary et, al. (2012), implement the lean manufacturing in a pharmaceutical company, in this paper take a case study of the product line is creams and ointment. Also in industry problem was fixed operating cost and inability to supply products. In this paper improve the operation with help of lean manufacturing so detect the problem where is the waste are occurs, and use the lean tools is VSM. VSM is a mapping method, with the help of detecting value added and non value added process. Prepare a current state map and use the 5-why method for the collect information. And after create future state map for the improvement with the help of 5s tool. and also used cellular manufacturing and after get the result is reduce inventory, and customer satisfaction, and on time delivery, total cycle time reduced , non value added time has been decrease. [1]

Burke et al. (2011) based on the nominal wage rate from the Agricultural Labour Survey in the Philippines, on the statutory wage or the local market rate in India, on the local average wage earned by paid employees in Mauritius, and on the median hourly wage reconstituted at the local level

for each kind of farming activity for Zambia. Thus, it implies that different sources of information can be used - specific agricultural labour surveys, statutory levels or information on the local labour market – with more or less possibilities to differentiate costs according to farming activity or time in the cropping season. Additionally, wages are weighted according to the World Bank Consumption Adult Equivalent by Burke et al. (2011) for Zambia but are not differentiated according to age, sex or skills in other studies.[2]

Cesaro et al. describes a variety of approaches used to assess the efficiency of a sample of main insurance companies in Angola between 2003 and 2012. Starting out with the bootstrapping technique, several data envelopment analysis (DEA) estimates were generated, allowing the use of confidence intervals and bias correction in fundamental estimates to test for significant differences in efficiency levels and input-decreasing/output-increasing potentials. Earlier studies have focused on the measurement and explanation of the factors affecting the performance rather than the prediction. The usage of neural networks combined with DEA results as part of an attempt to produce a model for insurance companies' performance with effective predictive ability is investigated. The findings indicate that older insurance companies with Portuguese origin tend to be more efficient. Results also suggest that opportunities for accommodating future demand appear to be scarce.[3]

Davies et al. (2007) point out that the industrial marketing literature suggests that pioneering applications originated in the 1960s with the introduction of 'systems selling' strategies. In the evolution of servitization, several manufacturing companies have moved dramatically into services and so caused the limitations between products and services to become blurred. The most highly cited papers have

come from the USA followed by contributions from the UK and Western Europe. These papers are general found in managerial and business practitioner literature (e.g.: Harvard Business Evaluation, International Journal of Operations and Production Management, Industrial Marketing Management, International Periodical of Service Industry Management and European Management Journal). The authors of these papers incline to be from the Operations, Production, Services, Business Management and Marketing fields.[4]

Davies (2005) accomplishes that suppliers of capital goods are moving into integrated solutions provision from different position up and down the value stream; he notes Alstom's transport solutions, Ericsson's mobile networks and Thales's training solutions as exemplifying this move. In addition companies such as W S Atkins and Cable & Wireless with strong systems integration capabilities, exemplify the move into providing services previously carried out by their customers. Native and unusual diversity were positively correlated at all three scales; it is rarer to detect a positive relationship at the small scales within which connections between individuals occur. However, although positively correlated on average, the small-scale relationship between natural and exotic diversity was positive at low-productivity sites and negative at high-productivity sites. Thus, the change in the relationship between natural and exotic diversity does not depend on spatial scale per se, but happens whenever environmental conditions change to promote species coexistence rather than competitive exclusion.[5]

Jennies angelis et, al.(2012) Lean is a globally competitive standard for product assembly of discreet parts. Successful Lean application is conditioned by an evolutionary problem-solving capability of the rank and file. This is in itself contingent

on employee involvement in improvement programs and the implementation of appropriate practices. [8]

Muthiah et al. (2006) consider this customer orientation to consist of two distinct elements. Firstly, a shift of the service offering from product-oriented services to 'user's processes oriented services' (i.e.: a shift from a effort on ensuring the proper functioning and/or customer's use of the product, to pursuing efficiency and effectiveness of end-user's procedures related to the product). Secondly, a shift of the nature of customer interface from transaction-based to relationship-based (i.e.: a shift from selling products, to establishing and maintaining a relationship with the customer). There are a variety of forms of servitization with the features differing for all. The literature identifies potential applications along the so-called 'product-service continuum. This is a variety from traditional manufacturer where companies merely offer services as add-on to their products, through to service providers where companies must services as the main part of their value creation process.[9]

Pravinshaswat at, el.(2015) apply the value stream mapping on bearing industry and reduce the work in process and inventory and lead time. In this article gives the information about value stream mapping and gives the methodology for the implementation of VSM. In this case study paper to apply the 5s and kanban system for the reduction of work in process inventory and lead time. [10]

Santoshkumar et, al.(2014) apply the lean tool by method time measurement and line balance efficiency and reduce the cycle time in a truck body assembly line and improve efficiency in that product line. Also says that lean manufacturing is a business attitude that continuously improves the process involve in manufacturing. [11]

According to Seliger [7], sustainability is directed at enhancing human living

standards while improving the availability of natural resources and ecosystems for upcoming generations. More than half the global value created today is achieved by less than one tenth of the worldwide population. Sustainable political, economic and social stability can only be achieved if mankind is able to create – worldwide and not only in the first world – jobs and living conditions of human dignity. The exponential population growth [7] on the planet is endangering SD. A higher standard of living may increase this growth rate even further.[12]

Seuring (2004) has led to the development of integrated chain management. A comprehensive analysis must take the actors and their contact in chain management into account. By assessing integrated and supply chain management, this paper is intended to contribute to future growth of industrial ecology, in that it addresses the importance of actors along the chain as well as their interaction. Five case studies from the textile industry are used to show the changes between the objectives of the single actors in the chain and the overall chain. This illustrates that co-operation is the only way for companies to increase the competitiveness of the chain while reducing environmental burdens.[13]

Rachna shah et.al. 2007 Lean manufacturing is an integrated socio technical system whose main objective is to eliminate waste by concurrently reducing and minimizing supplier, customer, and internal variability. Lean manufacturing and lean production is a synonyms of lean management. Lean manufacturing can be achieved through time. that is not possible to use it as a result to solve short term competitive. And also lean manufacturing is applied in any industry. In this article applying lean management for the hospital and improve the quality of the service, and give customer satisfaction and service of the patient. All the improvement are success by lean tools,

in this study apply the lean tool kaizen for the improving the service level and 5s are also apply for cleaning and systematic activities.[15]

Taho yang yiyokag (2014) suggested and implement lean production system for fishing net manufacturing, use the various lean tools and Simulation method and make to order (MTO) process are apply for the regular shipment. And also use the VSM tool and produce future state map and increase service level and reduce lead time, also says that gives the guide line for the implement the value stream mapping. How to implement VSM and which factor to be consider, and after says that lean manufacturing are apply in any manufacturing industry successfully and reduce cost by elimination of waste. [16]

Thilak et al. has been witnessing the application of agile manufacturing paradigm. The literature review reported in this paper was carried out to study this development. This literature review was carried out in two phases. The field of manufacturing arisen in the world during ancient days when humankind began to shape the naturally available components to fulfill precise needs. Particularly, the humankind that lived during ancient days would have sharpened the stones for killing animals. Thus, the manufacturing field has ancient day roots. On further development, the manufacturing field expanded to produce little more sophisticated products like tackles and furniture. In order to manufacture these little more sophisticated products, the humankind began to adopt manufacturing paradigms.[17]

Trung et al. oriented SMMEs tend to be larger in size and mostly belong to the medium sized category. They are unevenly distributed among regions and are mainly concentrated in the south-east of the country. They are owned both by domestic private companies and by foreign investment enterprises. Amongst SMMEs,

the export-oriented firms are most likely to survive in business, expand their operations, generate jobs and become large enterprises. Though they perform well in terms of growth rate, especially foreign investment enterprises, the effectiveness of export-oriented SMMEs is relatively low. The promising findings are that among export-oriented SMMEs there is progressively sustainable development, and that this sector is becoming more efficient and productive. Those SMMEs in the medium-sized category, and which are owned by foreign investors operating export-oriented industries positioned in the South-East and the Red River delta, have a higher probability of participating in the export market. [18]

Venkataraman (2014) says that various organizations are implement lean manufacturing in recent year for reducing and eliminate waste. In this article use the value stream mapping for reducing cycle time of crank shaft. Various type of tools are apply and get benefits, create a current state map of the crank shaft assembly line and also creates a future state map for improving procedure of crank shaft assembly, here is a three assembly available for producing a crank shaft. And improve the process and decrease waste so that apply three type kaizen, and also used the analytical hierarchical process(AHP) for decision making which process are apply and after than get result of the crank shaft assembly to reduce the inventory, and apply the single piece flow for crank shaft manufacturing and give quick response to the customer demand. [19]

Skills development to meet the pharmaceutical production by manufacturing sector's and the SA public and private healthcare sector's demand for qualified staff

This programme aims to cater to the requirements of the skills shortage within the pharmaceutical sector including research

and development as well as production by manufacturing. The programme will address scarce skill training by adjusting training programmes to meet the demand. [8]

Illegal imports programme

This programme is designed to eradicate the prohibited importing of clothing and textile products to INDIA. The programme also aims to promote the policy of Country of Origin labeling. The entire elimination of illegal imports will level the playing field for local manufacturers.[12]

Skills development

This programme focuses on the improvement of skills within the textiles sector. The programme will include the finalization of funding agreements with the National Skills Fund (NSF). The strategy will be implemented done the Textiles and Clothing Centre of Excellence established at the CSIR in Port Elizabeth in order to speed up the implementation process.

3. Conclusion

Some of the key findings that emerged from the research include:

- The production by manufacturing sector is declining due to higher labour and production costs. Certain goods are cheaper to import and retail, rather than produce locally.
- Banks are reluctant to borrow money to SMMEs as they are seen as a perceived risk, and the nature of their business is sometimes difficult to compute. There needs to be partnerships that will benefit rather than demoralize SMMEs.
- There is a huge opportunity for Foreign Direct Investment across the country, and China is taking advantage of that.
- There exists a need for a central management / support agency that will have the capability to assist firstly provincial government with translating their policy documents into actions. Secondly, there needs to be more awareness created amongst SMMEs and Co-operatives on the availability of

business support services. Lastly to bridge disconnect between government support agencies who duplicate services, work in competition rather than as a synergy even though they are striving for the same developmental goals (IPAP2 and the New Growth Path).

Government needs to invest more in research and development to ensure that opportunities are well researched before a strategy is informed to implement it.

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