

A Study of Supply Chain Management Process in Indian Industry

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Abstract

The use of IT (ICT) solutions in the Supply Chain Management (SCM) field, in particular e-business, ensures improved competitiveness and sustainable development in broad and MSMEs worldwide. Today, e-business is a vital aspect of many companies and offers development opportunities. The effect of e-business on supply chain components and performance is thus required for understanding. Both scholars and practitioners profit from this. In the past many research using information technology (IT) or e-business were conducted which are apparent from the supply chain literature. Most studies address the consequences, but not comprehensively, of one or two parts of the supply chain, strategies, instruments and procedures. Moreover, little attention was paid in particular to the impact of Indian MSMEs on the e-business system for successful SCMs. This research trial seeks to provide a comprehensive view to the impact e-business systems have on the supply chain components and performance variables for micro, small and medium-sized companies (MSMEs). MSMEs need all v-company operations to be connected to relevant e-busting systems electronically and to be updated on a regular basis as the study shows. In addition, inventories leveraging logistics from third parties and JIT supplies were recognized as key SC facilitators. The supplier - MSME connection and supplier engagement are two key variables to improve the effectiveness of the MSMEs SC. In order to develop SC operations, MSMEs' financial performance is addressed in terms of increasing profitability, market share, investment return and a reduction of the amount of cash-to-cash cycles.

Keywords: Chain Management, Indian Industry, IT, MSME, e-business.

1. INTRODUCTION

SCM focuses on procurement, production, delivery of products and services to end consumers to reduce costs, promote operative efficiency and efficiency, increase rentability, enhance customer service, thus achieve competitive advantage and positioning in the market. It serves as an incentive for increasing the financial structure and functioning, formulating cooperation activities such as the formulation of common goals & issue resolution, long term planning for new markets to be achieved, technological acquisition, creation of products, profit sharing, and a decrease in behavioural uncertainty, which leads to overall competitive strength. SCM is recognised in SSIs as a critical instrument to improve Asset Productivity & Inventory Turns, customer focus & Product positioning in various markets, strengthen intra- and inter-organizational networks, enhance technical ability to develop and deliver quality goods and so effectively enhance inter-company interactions. The connection of variables on the basis of the research hypotheses was tested using a Chi-square test. Friedman's test and multivariate analysis have been used to quantify the degree of effect e-commerce has exercised on different elements. In order to reduce numerous subfactors into a few of important factors for MSMEs, the approach of factor analysis was applied. The study has shown the use of electronic business systems such as ERP, MRP, CRM and SRM. About 40 percent of companies are not content with how their supply chains are operated on their own account. Although the use of e-business systems cannot be the only test of success for SCM, it is noteworthy that all MSMEs use one form or another of e-business systems. It must be noted that, while on average 49.03 percent of the MSMEs began to use e-business enablement, 69.5 percent are not prepared to use EDI. It is obvious that e-business systems have an average impact on the use of third-party logistics in MSMEs. MSMEs need all v-company operations to be connected to relevant e-busting systems electronically and to be updated on a regular basis as the study shows. In addition, inventories leveraging logistics from third parties and JIT supplies were recognized as key SC facilitators. The supplier - MSME connection and supplier engagement are two key variables to improve the effectiveness of the MSMEs SC. In order

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2. MSME

Small and medium-sized enterprises (SMEs) build their economy in a growing nation such as India in the same manner as their major position in the globe. In the last several decades, the MSME sector has influenced the economy of the nation actively and dynamically. Industrialization allows the development of rural and remote regions, since MSMEs provide a substantial contribution to job creation and GDP growth. Consequently, it is feasible to achieve equilibrated regional growth, which will assist the nation to go from traditional segments to contemporary segments in the economic transition of small industries. This historic procedure is in line with the diverse characteristics of these sectors (Dixit & Pandey, 2011). While basic skills and the mechanism characterise some tiny units, many others employ contemporary and advanced technology to tackle the growing problems of the business. SSIs are thus always engaged in improving production technology in speeding the productivity of many essential fields, such as agriculture and manufacturing. Therefore, to meet the demands of these sectors it is essential to adopt a more economic and varied manner. Because of its strategic framework, they consistently contribute to the national planning scheme. In India, both farming and medium and big businesses are directly linked to the dynamic and effective decentralised sector. The SSIs thus form a crucial aspect of the Indian economy (Feeney & Madill, 2002). The decentralisation and widespread dispersion of economic activity, enterprise and economic rewards depend entirely on the whole socialist design of society with a job.

The Indian planning plans follow the fundamental principle of using current technology and then use it in medium and large-scale development. SSIs are required to take an active role and make adjustments in size required both horizontally and vertically in order to create mutual collaboration. As a result, there are two separate kinds of industrialization in each country: small and major industry (Srinivas, 2013). As for others, the Indian planning framework was thus valued in this nation as well, intellectually and commercially. In addition to its own nation, India also operates in other developing nations the biggest and oldest development programmes for small enterprises (Brouthers & Hennart, 2007). It goes without saying that in recent years the small industry has now emerged as the dynamic and most dynamic sector in the Indian economy. A great number of efforts with a growing investment limit in Rupees One Crore plant & equipment and trade operations in the MSMEs area was conducted with the inception of the Small, Small, and Medium Enterprise Development (MSMED) Act from 2nd October 2006, in order to further grow the sector within the previous definition of 'small scale industries.' Second in the nation for job creation, the MSME sector is regarded to be an excellent driver for both inclusive and dispersed development (Cheah & Cheah, 2005). The National Small Industries Corporation Ltd. (NSIC), a supplier to this sector, is thereby encouraging the growth and promotion of small and medium-sized firms and of MSME companies. A number of customer-specific plans are thus put in place to enable small- and medium-sized businesses to achieve competitiveness, finance support, support of technological technologies and other assistance services. However, as a strategic instrument for entrepreneurial development, marketing drives growth for their survival in the SME sector. As the MSME industry lacks sufficient resources for the promotion of its goods and services, institutional help is required to handle this field. In this aspect, NSIC is quite helpful in facilitating the marketing support system (Feeney & Madill, 2002). This study proposal thus discusses the efficiency of the marketing support scheme for small manufacturing companies in the Gujarat state. Moreover, in view of the issues the MSME sector is experiencing to advise on boosting more productivity in such companies, the topic of efficient cluster management has been investigated.

3. SIGNIFICANCE OF MSMES IN THE PRESENT CONTEXT

The Indian industry shows significant improvement in numerous industries, such as the production, food processing, textiles and garments, and agro-services, as the fast expansion of the Indian market. As a result, small and medium-sized companies are quickly developing in the form of auxiliary industry (Srinivas, 2013). The Indian economy is predominantly agricultural, with the rise of other sectors, such as industry, services and manufacturing, essential to support its development. SMEs are thus a key element of the supply chain of the large-scale industries, which is an essential connection to the broader industry industry. The small-scale enterprises have a particular position in the development planning framework because of their substantial contributions to Indian economy in figure 1.1

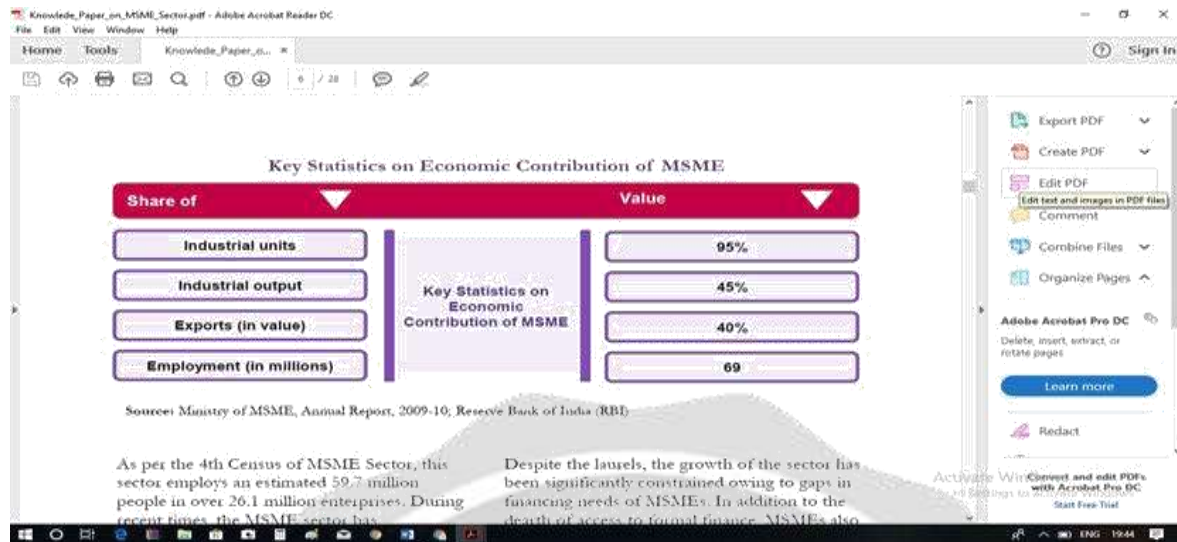


Fig 1.1: Statistical data on MSME contribution

The MSME sector plays a key role in employing around 60 million people in more than 26 million companies, according to the 4th Census Report. An analysis of the entire industry picture may show that in recent years the MSME sector has consistently increased its growth rate. The MSME industry may be divided into two divisions in accordance with the MSMED law of 2006-

- Manufacturing companies- The first schedule of the Industrial Development and Regulation Act of 1951 shows clearly the production companies (Brouthers & Hennart, 2007).
- Service companies – The Act expressly includes service providing companies in terms of investment in equipment.

Despite all these successes, the expansion of this industry has suffered the following problems, namely: a) technical obsolescence, b) lack of infrastructure, c) skills shortages, d) marketing limits, and e). Despite fast expansion of various registered and unregistered companies, India faces the issues of geographic inequality (Brouthers & Hennart, 2007).

The state of Gujarat has demonstrated pioneering effort in the adoption of development ideas and has significantly improved physical and social infrastructure. In addition to setting up a nodal agency for private involvement to encourage infrastructural development, this state also has adopted the PSP (Private Sector Participation) Law to stimulate fast industrial expansion inside the state. However, this State has sought to ensure balanced regional development with enough infrastructure by implementing this rule as laid forth in the Gujarat Infrastructure Development Act(GIDB) of 1999. In addition, owing to their crucial role in maintaining these major projects and giving necessary support to existing infrastructure, the State is encouraging a rising number of vital international and domestic investments. MSMEs in Gujarat are impacted by world and domestic economic trends, which are associated with company performance and technological and commercial advances (De Ferranti & Ody, 2007). In the MSMEs which are regarded a significant part of this sector, the manufacturing industry in Gujarat has its solid foundation. The Gujarat now has more than 320 000 MSMEs, which is why they play a key role in the State's economic contribution, notably with regard to value added services, the production of employment and growth of enterprises.

Most MSMEs in India are composed of a cluster. The 4th MSME Census Report stated that over 2 443 categories include around 321 goods in India. In addition, Gujarat is projected to build 16 more new clusters, as suggested by the Associated Chambers of Commerce and Industry of India (ASSOCHAM), which would accommodate 32,000 small and medium firms in the nation and government with the greatest number of clusters, 369, with the nation and the government approval of six additional clusters. The result is that an estimated 6.5 lakh employment would be

produced by the State (Cheah & Cheah, 2005). The ASSOCHAM Gujarat Council has offered the name of the seven clusters that would provide a basis for growth with the right use of a Construction Fund, apart from allocating the amount of the capital to the development of the basic and required infrastructure in the proposed clusters, the cluster consists of 16 groups: Rajkota, Surat, Benedictine, Gandhinagar, Gonda, Gondal, Wankaner, Wanganer, Savarkundla, Kalol, Morbi, Dhoraji, Ankleshwar and Jamnagar. In 2009-2010, the micro-electricity industry contributed 40 percent to GDP by producing the estimated products and services of around 20 lakh crores. Due to its crucial role in the creation of jobs, cost competence, quality improvements, increase of productivity, infrastructure development and expansion of the export market via competent market competition management the many smaller industrial clusters have enormous importance in the Indian economy (Cheah & Cheah, 2005).

4. INDIA GOVERNMENT POLICIES ON SMALL SCALE INDUSTRIES

The Indian government promotes small-scale enterprises, which are the backbone of Indian economics, with different investment limitations and terms to meet their requirements. This whole process is altering according to global demand.

The concept and standards of SSIs have undergone radical revisions since 1991 with Dr. M. Singh's introduction of LPG policy. Although the modulations with a large variety of products make an enormous contribution to the economic growth of the nation, the SSI industry is generally recognised. Modern SSIs mostly produce goods, such as plastic, ceramic, hardware, automotive components, glass, bicycle, infrastructure, handloom, etc. Due to the supporting role of the Government of India, SSI businesses with lower capital investment and Flexible capital needs may be created very easily (Srinivas, 2013). With the ever-growing quantity of SSIs, SSIs may play an essential role in creating jobs and meeting necessary requirements for export. The Government has established different development and promotion policies for small-scale companies after the adoption of the MSME Act, 2006. The SSI is intended to meet market demands and meet the targeted export objectives to increase this segment's profitability with the support of the Industrial Policy Resolution.

Production has been one of the core sectors in the India economy, accounting for 16% of FY12's real GDP and 12% of the workforce of India. But it is apparent from the pattern in recent years that growth in this sector is strongly correlated with the total GDP growth rate. Between addition, in FY05-FY12, the manufacturing sector saw a slightly greater growth rate of roughly 8.5% than the GDP total of 8.4%. This high expansion has been accompanied by a changing sector, i.e. from a dominated public sector to a more private company (Brouthers & Hennart, 2007). In recent years UNIDO has named India, because of the industry's worldwide impetus, as the biggest producer of textiles, medicines, machinery, chemical goods and machinery. The significance of this industry, both at the national and worldwide level, is likely to be increased in the next years as a combination of supply-side benefits, governmental measures and private sector activities in figure 1.2

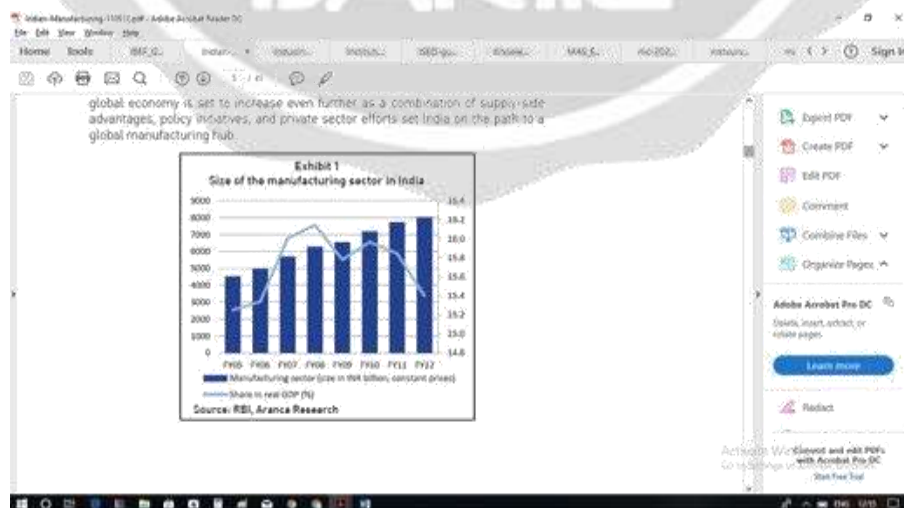


Fig 1.2: Growth of Manufacturing Sector

Increasing industrial exports from India have been driven by demand in sophisticated economies. The statistics clearly state that 29% of the total items exported from India are used by sophisticated economies. In addition, the US and Western Europe are significant customers in the advanced economies. This pattern will certainly alter with the expansion of developing economies and Asia, Africa, and the Near East will soon be outperforming the developed market (Brouthers & Hennart, 2007). With the advent of the Middle East as an important market for a variety of Indian items such as ready-made clothing, gems and jewellery and technical items, some obvious shift is already evident. It may also be projected that the aforementioned tendency will increase in the near future with greater commercial relations with ASEAN countries, Latin America, China and Africa.

Manufacturing exports had a steep 15.6 percent decrease in the year-earlier period from 310.35 BN to USD 262 BN in the year-earlier period 16 in FY 15. This decrease could only be associated with a 17.2% decrease in exports of manufactured items, representing 23% of overall manufacturing exports. Gems & Jewelry, petroleum and textiles are other important items which have a large contribution to overall FY16 manufacturing exportations. However, the other key causes for the steep fall in exports include sluggish worldwide demand and turbulent global monetary markets (Cheah & Cheah, 2005). In compared to its rivals, the robust position of the rupee might also be seen as another cause for exports to decrease in figure 1.3 and figure 1.4.

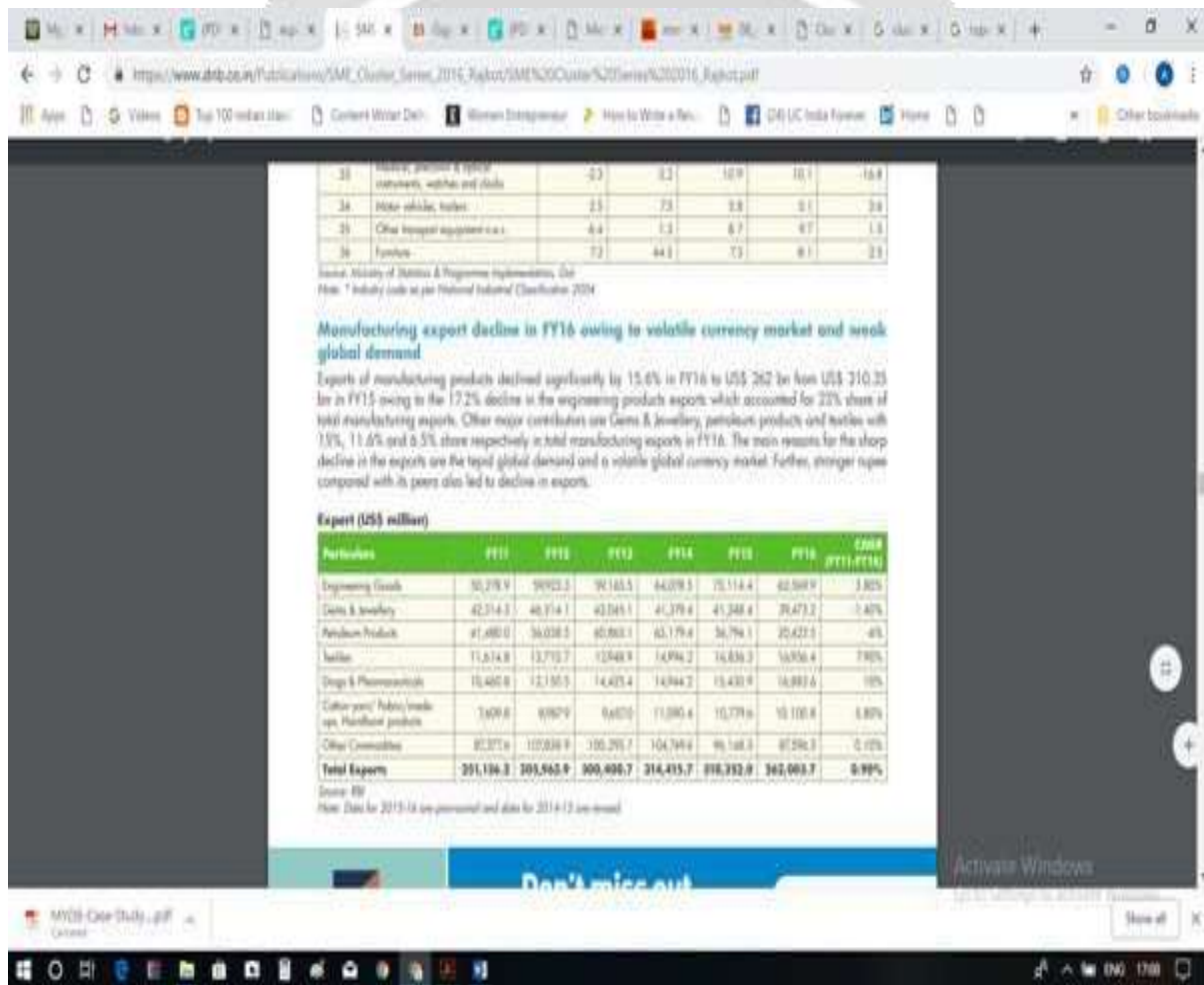


Fig 1.3: Export Percentage decline

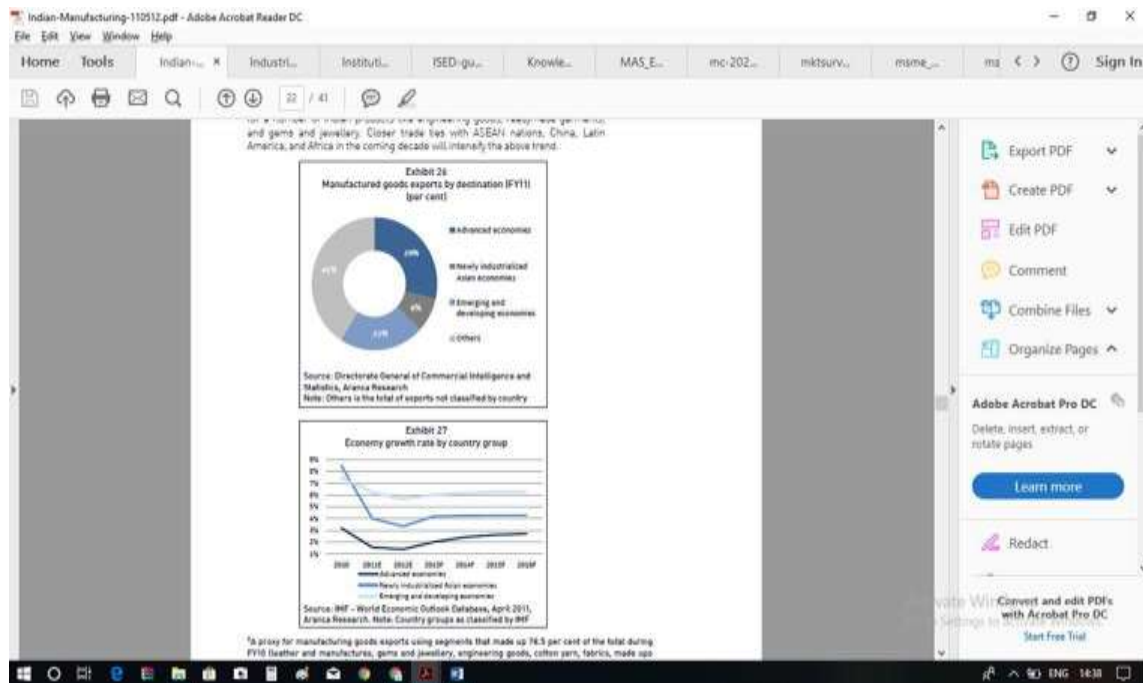


Fig 1.4: Manufacturing Goods Export and Economy Growth rate

But, for the export and general expansion of manufacturing as well as services, India's Government has undertaken a variety of programmes. This breadth of economic changes and globalisation must thus be used by small enterprises to promote holistic growth (Kotler & Keller, 2008). In addition, the following three-stage technique may be used to get actionable insights from risk reduction and portfolio analysis. In this context, they should analyse the data via active client monitoring and aggregate performance monitoring (MSME Foundation, 2012). All these analyses assist SMEs to identify important areas of credit risk and to strategically allocate credit to risk intelligence in figure 1.5

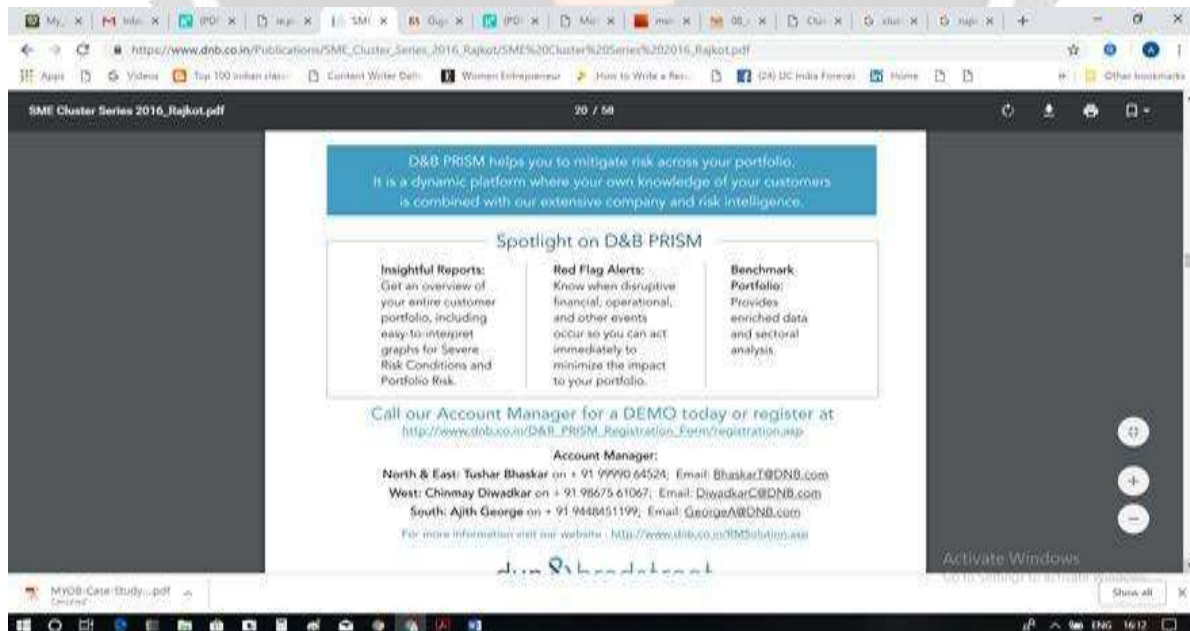


Fig 1.5: Systematic Analysis of Project Portfolio

5. CONCLUSION

SCM is not yet developed by MSMEs, according to the literature. In general, or for SCM, MSMEs seldom use strategies. Customer and supplier integration is overlooked and often MSMEs have a power imbalance with bigger customers or suppliers. IT is relatively rudimentary or does not support SCM, which is a precondition for SCM. The primary reasons why SCM is not being implemented seem to be the limitation of resources in the form of personnel and finances. The lack of personnel increases the strain for MSME employees and management but is also causing a lack of experience and know-how for SCM. In addition, MSMEs seem to be distinct from LEs in several aspects. MSMEs have their own distinctive features and working methods, which in MSMEs establish a distinctive culture. Some case studies on SCM adoption in MSMEs are reported in the literature. There can be no significant difference between MSMEs and LEs after examining the level of SCM and comparing case studies to SCM practices in LEs. Therefore, the distinction between SCM and SCM in LEs in MSMEs is alleged. Nevertheless, especially due to resource scarcity of human resource, knowledge, time and financial funds, MSMEs need to be more selective regarding the SCM practices they choose to implement in order not to overstretch the resources, but still achieve high impact. MSMEs assist SCM deployment with many enablers. MSMEs operate at regional level and have a small number of suppliers and consumers in general. This shows that the supply chain is quite basic. In general, MSMEs look strong in the formation of relationships because of the strong position of an MSME's leader but also because of the personal communication preferential. MSMEs tend to have strong customer interactions. Thanks to their strong qualities, supplier development may still be achieved. Overall, the facilitators provide a good foundation for the integration of SMEs with outside partners.

6. REFERENCES

1. Lee, S., Dekker, I. R., & Colak, A. E. (2019). Memetic algorithm for stochastic inventory optimization with seasonal demand. Master Thesis, Erasmus University Rotterdam.
2. Mendenhall, W., Beaver, R. J., & Beaver, B. M. (2012). *Introduction to probability and statistics*. Boston: Cengage Learning.
3. Mousavi, S. M., Hajipour, V., Niaki, S. T. A., & Aalifar, N. (2014a). A multi-product multi-period inventory control problem under inflation and discount: A parameter-tuned particle swarm optimization algorithm. *The International Journal of Advanced Manufacturing Technology*, 70(9–12), 1739–1756.
4. Mousavi, S. M., Hajipour, V., Niaki, S. T. A., & Alikar, N. (2013). Optimizing multi-item multi-period inventory control system with discounted cash flow and inflation: Two calibrated meta-heuristic algorithms. *Applied Mathematical Modelling*, 37(4), 2241–2256.
5. Olešovský, V. (2016). Advanced methods of mathematical modelling and their use in the inventory management model. *Journal of Eastern Europe Research in Business & Economics*, 2016, 1–18.
6. Pasandideh, S. H. R., Niaki, S. T. A., & Mousavi, S. M. (2013). Two metaheuristics to solve a multi-item multiperiod inventory control problem under storage constraint and discounts. *The International Journal of Advanced Manufacturing Technology*, 69(5–8), 1671–1684.
7. Rahdar, M., Wang, L., & Hu, G. (2018). A tri-level optimization model for inventory control with uncertain demand and lead time. *International Journal of Production Economics*, 195, 96–105.
8. Sadeghi, J., Mousavi, S. M., Niaki, S. T. A., & Sadeghi, S. (2013). Optimizing a multi-vendor multi-retailer vendor managed inventory problem: Two tuned meta-heuristic algorithms. *Knowledge-Based Systems*, 50, 159–170.
9. Shenoy, D., & Rosas, R. (2018). Inventory control systems: Design factors. In *Problems & solutions in inventory management* (pp. 13–32). Springer, Cham.
10. Shenoy, D., & Rosas, R. (2018). Selective inventory control models. In *Problems & solutions in inventory management* (pp. 211–229). Springer, Cham.