

The Impact of Green Supply Chain Management on Inter-Organizational Supply Interaction : A Review

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Abstract — In the maximum business, Supply Chain Management is the technique of transforming raw materials into final products and services within the same limited procurement procedure with a minimized waste capacity. Concept of Green Supply Chain Management seems to be an upgraded process of Conventional Supply Chain Management, which focuses primarily on green production, green packaging, green distribution, and marketing. Surveys show that conventional supply chain management is the key explanation for dangerous concerns about environmental degradation, deforestation, carbon emissions, loss of resources and significant waste of manufactured goods. To suppress and reduce these adverse issues, logisticians and consultants have introduced the Green Supply Chain Management concept. After introduction of that same Green Supply Chain Management framework, experts found that the level that the above harmful problems had been reduced. The first section of very paper deals with the principles of Conventional and Green Supply Chain Management. It also addresses the increasing problems in Conventional Supply Chain Management and then how Green Supply Chain Management was implemented to address these problems. The next section addresses the transformation difficulties and challenges faced by Green Supply Chain Management. Hopefully, the main objective of this study is the effect of Conventional Supply Chain Management on Green Supply Chain Management and now the solutions proposed for many of these details.

Keywords — *Traditional Supply Chain Management, Green Supply Chain Management, SCM, GSCM*

I. INTRODUCTION

Mostly as result of technological advancement and globalization of production economy, most companies and businesses are encouraged to understand the needs and requirements of consumers. When considering the market strategies, certain organizations are responsible for

increasing the production capacity and increasing the product availability of the goods. Throughout this competitive environment optimizing the cost, it is important to research the definition of Supply Chain Management as businesses are faced with several challenges in producing goods that meet consumer needs outside an affordable price point.

The context Conventional Supply Chain Management (TSCM) in industrial jargon can simply be defined as the transformation of raw materials to finished products and products and even the timely distribution of products to end-users[1]. In addition, there is a combination of main business applications that deliver goods and services from manufacturers to break down within the same short period of delivery[2]. TSCM has also been used to achieve essential requirements including certain optimizing profits, maximizing organizational efficiency, as well as to establish inter-relationships and improved performance even within organization[3]. Even though studies have stated, the history of TSCM has been around since the 1980s and indeed the idea itself would be launched mostly by management experts and thus the logistics consultants[4]. TSCM has always been the most important and critical provides access although since inception.

The philosophy of Green Supply Chain Management can even be described as either the implementation of sustainable environmental protections with either the conventional supply chain management concept and practice[5]. TSCM deals with five major elements, including raw materials, industry, distribution, customer and waste[6]. As logisticians and management experts note, there are also several risks to that same linkage and relationship of the above-mentioned essential aspects, including environmental degradation and environmental degradation. Mostly as alternative to that same destruction caused by TSCM, the idea of GSCM had first been implemented in 1994[7]. Subsequently, the problems listed above have been minimized to both a higher extend. In addition, companies and businesses have begun using environmentally supply chain operations to provide even a huge incentive to end environment degradation[7].

Although setting up the GSCM rather than TSCM, corporations as well as enterprises were accompanied by significant drawbacks and including benefits when understanding the expectations of end-users. Organizations would then have to weigh both socio - economic factors when launching the definition of GSCM only within organization[5]. In addition, there are already different attitudes and limitations within society (basically among employees) when they moved to GSCM concepts, because those companies did not prefer to adapt, and they liked to continue with the current definition.

II. METHODOLOGY

The whole dissertation highlights the problems faced by Conventional Supply Chain Management with the advent of Green Supply Chain. As stated, in almost all the prior reports, the principle of GSCM was established to address inhumane including certain ecological destruction and environmental collapse (Rahman et al., 2020). The objective of this report is to examine the effect of Conventional Supply Chain Management on Green Practices as well as to identify how changes have arisen throughout the manufacturing processes. Throughout this way, with the first phase of the analysis, it explicitly explains the idea of conventional supply chain management and how it should be first implemented. With respect to a reference phase, the analysis poses the challenges mostly in TSCM. The evolution of Sustainable Development despite the challenging problems of TSCM and indeed the simple implementation including its GSCM definition is defined mostly in third part of the study. That this next section demonstrates the obstacles and difficulties that face the implementation including its GSCM definition. As part 5 including its study, it explains the effect of TSCM on GSCM and demonstrates the potential alternatives throughout the last part of the application.

The research employed the descriptive approach and therefore a clear understanding of literature since sampling strategies are aimed at defining rules of etiquette and indeed the sense of understanding on specific subject. Grounded theory analysis facilitates the discovery and investigation of either a specific issue in detail or helps to draw a systematic assumption. Systematic Literature Review (SLR) can be a form of literature review that seeks to resolve the matter by reviewing, objectively assessing, and incorporating the secondary information.

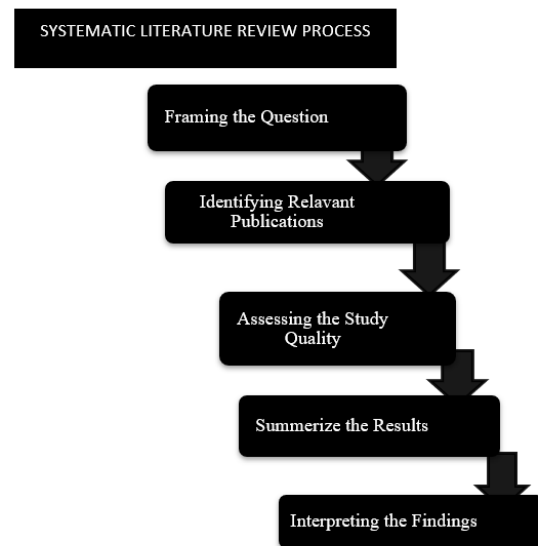


Figure 1 Systematic Process of Review

Source: Author Designed

Moreover, given that perhaps the research is highly conceptual but also that the idea of environmentally operations management still is a potential concept mostly in maximum business, research methodology was accomplished primarily through document analysis. While it is an obstacle to just the questionnaires, the findings provide substantial arguments to confirm the purpose of the research. Throughout the course of the research, 30 review scientific publications among 2000 and 2019, including organizations, organizational culture and logistics academics and published articles by logisticians and economic consultants would be used to collect data by analyzing in terms of achieving the objectives of this research.

III. LITERATURE REVIEW

The word Supply Chain Management (SCM) can also be evidenced as managing the process of putting inventory into throughput that meet consumer demands and deliver those products and services to the consumers in a timely manner[9]. It may be the method of integrating critical business processes again from production to the final. Despite incorporating the concept of Conventional Supply Chain Management (TSCM) throughout the mid-1980s, the finished product in almost all of the enterprises was increased substantially and primarily concentrated on primary focuses including certain optimizing revenues, establishing based on cross, maximizing operational efficiency and managing only within organization[3]. Fundamentally, the inventory management should be seen as an interdependent number of interactions, associations, operations, resources and developments involved in the production sector, and the administration of that kind of mix would produce the expected products or services to customers at quite a reasonable price[10]. Appropriate and productive utilization of a conventional manufacturing process, companies around the world want benefits including certain connecting producers, wholesalers and retailers, making the most use of mutual capital, both international and

domestic, reasonable prices, revenue generation and better consumer satisfaction[3]. As when the experts have pointed out, Technical, Administration and Relationships seem to be the 3 main perceptions that challenge Supply Chain Management[11]. These 3 kinds of viewpoints have an influence on either the application of its SCM framework. Most researches note a few other problems that arise throughout the implementation including its manufacturing process, such as project governance and globalization[12]. After that, procurement management corresponds to either the obstacles that really should be met whenever buying goods and services, and globalization refers including how to minimize expenses and maximize at around the same time. Besides which, it's indeed important to research the concept including its Conventional Supply Chain Management in particular on its main processes, obstacles and challenges associated with the implementation of the supply chain, since obtaining an undoubted understanding of these concepts could begin to understand the problems in manufacturing and industrial terminology.

As when the consultants and logisticians point out, there can be 5 major stages mostly in TSCM, which serve mostly as loop of preparation, growth, processing, delivery and return[13]. As that of the beginning period of both the TSCM, at both the preliminary stages, it's indeed important to come up with a plan or strategy that demonstrates how well the consumer goods can satisfy the requirements and expectations of the consumers. At both the development stage, it really is crucial to concentrate on not just the building a competitive edge in the market of manufactured goods, but also to the effectively implementing monetization strategies and online transactions both for commodities.

Once this plan has been implemented, essential component of modern, including certain supply managers, may utilize every one of these mechanisms in order to influence their inventories. The start including its manufacturing processes and according to customer 's requirement would be at the third phase and indeed the subsidiarity should plan the all activities required to be carried out somewhere in the procurement, evaluation, storage and transportation stages. This stage was therefore regarded as some of the most unit of measurement unit throughout the traditional supply chain management. Factory - made services and goods are scheduled to either be shipped to consumers at their appropriate positions mostly in stage 4: the distribution step. The very last step is indeed the stage including its return, which would also be referred to this as the return. Damaged and lost goods are returned to something like the manufacturers by that of the customers at that same point. It is necessary to talk with either the reactions and reviews including its consumer. That would be the method of its conventional manufacturing process, which demonstrates the usual flow of a conversion including its manufactured goods into another basic commodities prior to the actual distribution and return of each of these products. [14]

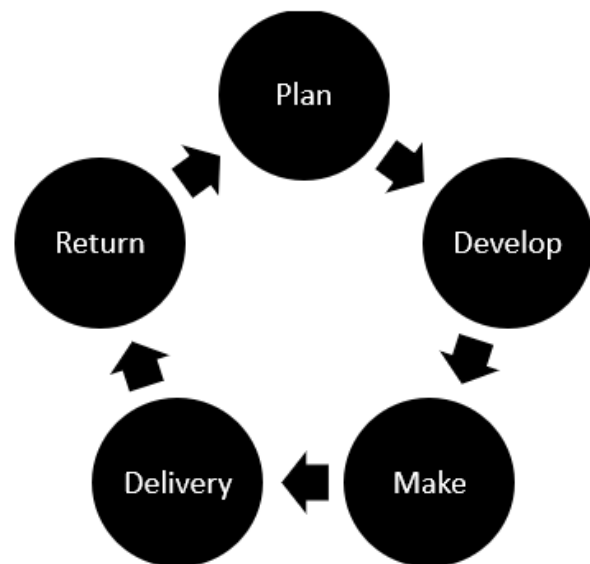


Figure 2 The Process of Supply Chain Management
Source: Author Designed

With both the instability of industrial growth, companies and related industries had to face many risks and problems not just socially and furthermore economically, as when the Traditional Supply Chain Management Structures are the cause for some of these problems [15].

- Ecological degradation, particularly environmental consumption, and waste degradation.
- Waste of time and resources, pollution, and chemical and solid waste.
- Market preferences reflect a need for more premium consumer goods.
- Unforeseen silence.

In order to address the above-mentioned problems and challenges, consultants and logisticians first presented the idea of GSCM in 1994 as a higher modification of TSCM after performing a range of surveys and questionnaires, and noted that some of these problems could be mitigate by launching the GSCM concept through industries and organizations[16]. GSCM has adopted the basic practices used in TSCM only with integration of eco-sustainable practices as a concern has been raised that even the TSCM principle triggers environmental destruction, especially radioactive pollution and environmental depletion[7]. To avoid this destruction of the environment, the consultants and logisticians have changed the TSCM definition into more of an ecological operations management concept[17]. Strictly speaking, the GSCM definition can even be described as green purchasing, green manufacturing, green packaging, green delivery and marketing[18]. Apart from that, it reduced waste product of electricity, pollution and chemical and solid waste[5]. To mitigate these negative realities, a constructive GSCM has indeed been proposed to strengthen the idea of an environmentally responsible manufacturing process. In terms of greening the TSCM definition, the Modification Strategy Modeling (ISM) techniques has been used and implemented in Indian industries[8].

This ISM technique was effective in eliminating the obstacles arising from the introduction of the GSCM definition. The major objective and focus including its GSCM definition was to examine the advantages, costs and benefits related to the environmental efficiency. According to other reports, there seem to be 3 phases in the manufacturing process, namely the decrement in resource use, the decrement in waste and, finally, the decrement in emissions[19]. The turnaround process of GSCM focuses primarily on either the return of goods and materials to be recycled, remanufactured and refurbished or disposed of something in a healthy manner[20]. GSCM can even be recognized as being among the best guidelines and rules to mitigate destruction of the environment because, in that same unprecedented tumultuous industrial upheaval, environmental impacts cause the much more harmful damage to the economy throughout the technological and technological arena[21]. Once the specialists have recognized need for an eco-sustainable supply chain only for manufacturing industries, several obstacles have emerged during the implementation of its GSCM concept[22]. The Following figure 3 illustrates the concepts .

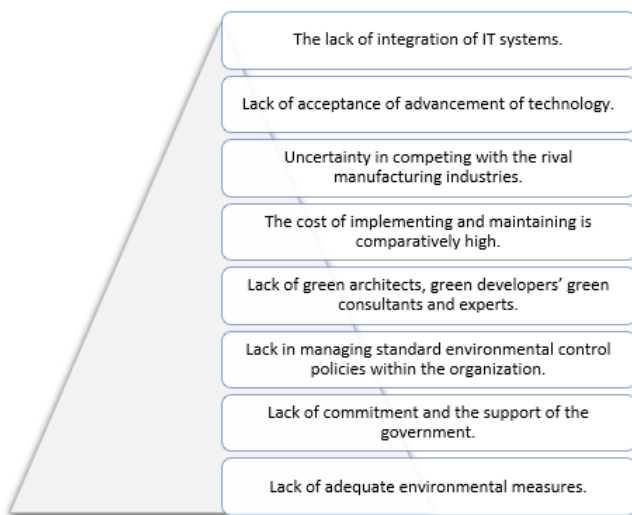


Figure 3 GSCM concept
Source: Author Designed

These transition hurdles were negotiable and should therefore be resolved prior to the introduction of both the GSCM definition. At the time, the pace of technological change was not in a significant set of circumstances. In order to enforce and sustain the process, there was a high need for various computer-based applications, programs and software resources to share data and information. In this case, there was an issue with the implementation of the GSCM definition, such as the lack of accountability of IT systems. The proportion of organizations of both the industries declined to adjust to the transition due to lack of technical expertise and chose to ensure that its employees definition. Similarly, the lack of acknowledgement of technological development was a significant obstacle to that same creation of a new paradigm. Due to the revolution of industrial revolution, internationalization was strong, giving rise to confusion in competitiveness with rival manufacturing sectors. The process of incorporating and sustaining the GSCM model was so very high compared with the traditional systems integration scheme, and that there were

various types of green methodologies to adopt including certain green production, ecological infrastructure, green distribution and marketing[5]. When introducing a green strategies rather than just a conventional one, the industry requires a huge amount of specialists, consultants and logisticians to support employees and manage the scheme. Unfortunately, however, again at this time, the number of specialist managers, such as green architects, green developers and green consultants, was very limited to incorporate this green idea in industry. [18] Additionally, for above obstacles caused several problems mostly during transition from TSCM to GSCM.

As the administrative challenges of study remain compatible with the encounter, GSCM's thinking can be divided between the components of the review, in particular internal challenges or external challenges[20]. Here, the internal problems are aligned such that the challenges faced by the workers of the Agency also manifest the intestinal concerns of the organization. And the problems that need to be met beyond the business known as external challenges. When thinking about the inner problems, half of the simple statistics have to be seen, so the idea of GSCM has to be imposed. Almost all of the time, earlier than those of the implementation of the imposing methodology within the organization, this is fundamental in view of the lack of attention given to both the existing practice of the organization. The goals, objectives, creative and prescient and also the topic including its Agency to be implemented shall be updated within a duration of time.

It's really important to always have a commitment to top management when implementing an immediate idea in imitation of the business, but since success or miscarriage including its company focuses exclusively upon this willingness of the managers to behave in compliance with the inspiration including its workers within the organization. Managers should empower employees; educate workers and others in need to educate them about the imitation of Inure in line with either the organization's transfer of experiences. When the pinnacle administration does not understand these considerations at this point, the option of assignment is retained as when the overall functionality of the organization is dependent on pinnacle management.

It's not just the obstacles and limitations, but also all the effect of TSCM on GSCM should always be taken into consideration when planning the definition with GSCM[16].

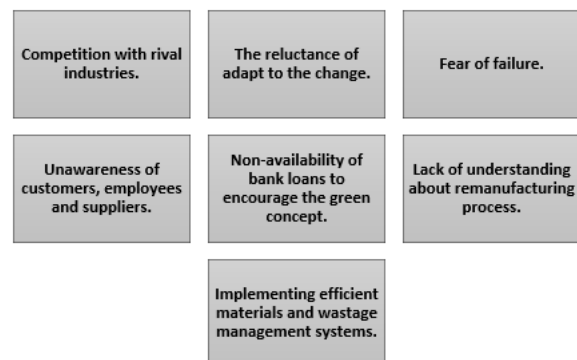


Figure 4 Impact of TSCM on GSCM
Source: Author Designed

Monopolistic tendencies can be considered to have been one of most influential impacts on GSCM. The business opposition in TSCM will be disproportionate attributed to the reason that GSCM's thinking should be a beginning of a journey for the manufacturing jobs, and the trip gained by this revolutionary change is less than the journey won by the notion of TSCM. As a result, the manufacturing process will collapse daily until the workforce adapts to that same transition. In comparison, the majority of clients only practiced conventional thinking and new novice idea. So that it is additionally having a significant impact on the GSCM of TSCM. Because that is a new way of doing things for all users, there might have been a concern for failure. Only certain consumers have quite a conventional system of expertise, but a small number of consumers have a modern concept of expertise. And there's a high risk of failure. Not only the unawareness including its customer but subsequently the lack of comprehension of the dealer may also have an adverse impact on either the GSCM concept. As the implementation of an inexperienced concept requires unnecessary costs, the vast majority of businesses have to apply for commercial loans. But the issue is that financial institution loans are not available to motivate an inexperienced idea, and this could be due to inadequate of knowledge including its inexperienced definition. In contrast, these should be seen as an influence of TSCM on GSCM. Prior to actually working with an inexperienced thinking, all the agencies used the features including its ordinary definition. In the traditional definition, corporations no longer thought about either the concept of recycling or reuse. While businesses have begun to apply a fresh, inexperienced idea, they just don't really care about both the remanufacturing process. It is therefore additionally a substantial influence on either the GSCM of TSCM. In comparison, the regulation of environmentally sustainable substances and waste management systems could have been seen as having a significant influence on GSCM by TSCM. [5]

In view of the above, organizations should propose solutions as follows with the above details.

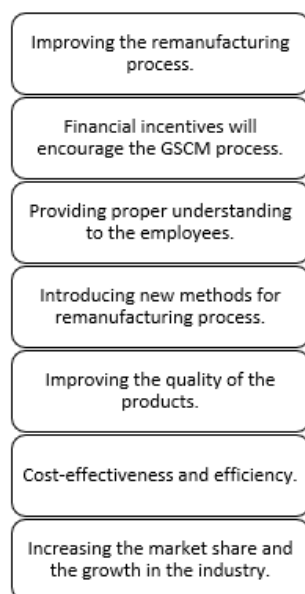


Figure 5 Solutions
Source: Author Designed

At first and, many of the other experts note that only the process of manufacturing new the industries will strengthen as a result of a construction of activities some of which have less deteriorated to either the environment. Reasonable government subsidies, such as tax subsidies and government funding, will indirectly promote and improve the management of building, and will also ignore the effect of the TSCM principle when introducing the GSCM concept. Providing the staff of the company with sufficient information, education programs and experience would help to prevent the effects caused by the TSCM definition. The implementation of new methods of reusing, recycling and packaging will prevent the loss of energy and raw materials. The latter could have been seen as a solution to just the issues affected by TSCM. Preceding cost-effective and reliable ways would help counteract the costs of implementing and managing the process. Growing sales and reducing liabilities would aid in a cost-effective operation. Maximizing brand awareness and brand development even within sector would indeed be a huge motivation also for effective GSCM of either a company or organization. [18]

Therefore, above for the listed factors can even be viewed as solutions again for effect of TSCM on GSCM.

IV. BARRIERS TO IMPLEMENT GSCM

The execution method of the GSCM thinking inside industries and agencies induced some widespread obstacles and it is essential to overcome these boundaries to enforce a profitable GSCM. It is apparent that it prices greater quantities for the implementation manner and the preserving technique of the GSCM notion offers with the eco-sustainable practices [22]. Industries have to introduce new recyclable, reusable and refurbish techniques to execute a whole GSCM system inside the enterprise [21]. Thus, it takes greater fees to introduce these new techniques and that brought approach ought to be maintained true to defend them from the damages which can happen due to a variety of stipulations [23]. Machines and different tools must be upgraded when it is required. The costs for protection are additionally high. Most of the personnel in the industries are skilled in working with the traditional system. This can be a cause for rejecting the new GSCM thinking inside an industry. This new thought consists of more than a few sorts of superior technological ideas and due to the lack of information concerning the superior applied sciences amongst the personnel reasons the foremost purpose for lack of acceptance of superior applied sciences [17]. Surveys nation that this GSCM thought was once first of all brought in 1994 and in this era, the technological development used to be very poor. But as cited above, this new thinking consists of tons technological equipment. Given that, lack of built-in IT structures was once a big hassle when enforcing a GSCM. As this is a new thinking for the manufacturing industry, all the industries and the agencies feared that their industries will face disasters in the manufacturing manner [8]. Because of that they had labored challenging for the survival in the enterprise and to preserve the competitiveness of the enterprise with the rival industries. If the new notion is now not working properly, corporations face losses as a substitute of having profits. [18]. Unlike in traditional furnish chain management, to put into effect a GSCM thought inside an employer it is vital to have inexperienced developers, inexperienced architects, inexperienced consultants and experts. Without having aids structure these experts,

businesses can't put into effect a profitable GSCM. It is recognized that these consultants are very uncommon in the subject and the price to procure such professionals is very high. Such that, lack of inexperienced consultants is a large trouble to put in force a GSCM [23]. Top administration ought to contain when enforcing the new notion as they have to train and inspire the employees for a profitable implementation. Top managers ought to supply the essential assets when it is needed. If the pinnacle managers pass by their responsibilities, problems can occur when enforcing the new concept. Lack of dedication of the pinnacle managers and lack of sources are different foremost troubles that have to be encountered whilst imposing the GSCM notion [18].

Thus, the above-mentioned statistics depict the obstacles when enforcing the thought of GSCM inside an organization.

V. CONCLUSION

Supply chain administration is the technique of changing uncooked substances into completed items and offerings and turning in them to clients in a speedy shipping time [1]. Traditional Supply Chain Management was once delivered in the early 1980s. This TSCM idea was once the fundamental cause for the income maximization, improvement of the interrelationships, maximization of running overall performance and administration inside the corporation [24]. Not solely that however additionally this TSCM thinking used to be a fundamental motive for some environmental issues which have an effect on socially and economically for the industries and organizations. Environmental degradation, wastage of energy, greater costs, want for fantastic merchandise and offerings and unexpected delays are some issues that occur when practicing the TSCM concept. To overcome these troubles logisticians, consultants and specialists brought the thought of GSCM in 1994 [7].

GSCM notion can be described as the method of inexperienced planning, inexperienced developing, inexperienced making, inexperienced handing over and returning [5]. GSCM usually focuses on returning merchandise and substances to ahead them to recycling, remanufacturing and refurbishing or secure disposal. Consultants identified that the above-mentioned issues can be decreased after enforcing the new notion of GSCM. But some different issues passed off when enforcing the idea of GSCM. Lack of integration of IT systems, fee of enforcing and retaining is comparatively high, lack of inexperienced consultants and experts, lack of resources, lack of technical know-how and experience, lack of sufficient environmental measures and uncertainty in competing with the rival manufacturing industries are some issues that have to be overcome whilst enforcing the manner of the GSCM [18]. Those issues ought to be solved for the preservation of a profitable GSCM process.

After the transmission of TSCM to GSCM companies and the industries ought to think about the have an impact on of TSCM on GSCM and some motives have been identified with the aid of the consultants. Competition with rival industries, the reluctance of adapt to the change, worry of failure, unawareness of customers, personnel and suppliers, non-availability of financial institution loans to inspire the inexperienced concept, lack of appreciation about remanufacturing method and imposing the environment friendly substances and wastage administration structures are the diagnosed influence of TSCM on GSCM [20]. To

overcome these affects some options can be recognized. Improving the remanufacturing process, monetary incentives will inspire the GSCM process, imparting suited grasp to the employees, introducing new strategies for remanufacturing process, enhancing the excellent of the products, cost-effectiveness and effectivity and growing the market share and the increase in the enterprise are some proposed options to overcome the above-mentioned impacts.

With the technological upheaval in twenty first century; all the problems, limitations and the affects brought on through the GSCM and TSCM have been decreased and some vanished and now the majority of the industries and the businesses are practicing the idea of GSCM due to the fact of its large benefits to the industry. Practicing GSCM can lead to blessings such as aid utilization decrement, waste decrement, the emission decrement and different blessings received from the TSCM in an superior manner.

Finally, if the industries and groups are successful of practicing GSCM concept, these businesses can compete with rival industries and exist in the market and can obtain the perfect role in the industrial arena.

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