SRM is a comprehensive approach to manage the activities and interactions with the firm who supplies goods and services. In the past three decades, SRM has been based on trust and commitment and this has got massive attention from both industry and academic. Companies have received many advantages and values from SRM including lower costs, higher quality, better forecasting, and win-win relationships with suppliers (Fan et al., 2013).

The trust and commitment, motivates suppliers to share their manufacturing, engineering, transport expertise with the organization. By gaining access to this intellectual capital, the firm will be able to design better products and implement leaner and more efficient manufacturing processes. Supplier expertise on transport economics can also be employed by the firm to cut distribution costs and get to market quicker. Cost reductions can be passed onto consumers as decreased prices and this, together with increased speed to market, increases the organization's profitability and strategic competitive position (Zyl, 2003).

Two of the greatest benefits of SRM are co-maker ship and the development of more responsive and competitive supply chains. According to Du Plessis et al. (2001), co-maker ship, as mentioned above, is based on the concept that a traditional organization's supplier contact is characterized by interaction over quality, price and delivery. However, through SRM, the firm and their suppliers come to realize that their businesses can be much more profitable if they adopt close co-operation and implement comprehensive communication with suppliers that include the areas of product development, quality, engineering and logistics. Mutual trust, continuity of the relationship, and the willingness of each party to create a profitable business for the other, are the foundations on which the relationship is built. These relationships have impacts on a number of specific areas such as: product specification, quality, and lead time flexibility.

Upstream activities can sometimes hold great importance for companies, because many qualities that are valued by end users might be influenced directly by partners maintaining upstream activities. Likewise, many strategic plans are taken by various companies for quality improvement, timely delivery or innovation are often directly linked to the performance of upstream activities. Therefore it is of pivotal importance that companies have good relations with their upstream partners, and that companies actively seek to spread knowledge to their upstream business partners.

Companies might actively engage suppliers in research and development (R&D) projects to secure the capabilities of suppliers, or develop other competencies of suppliers such as speedy delivery, high quality and high reliability. The key is to identify what is valued by the end consumer, and thereafter secure or develop the needed competencies required of suppliers. If companies are not able to maintain the needed level of competency at their upstream counterpart, companies may conduct a related diversification into the business of their counterparts (Van weele, 2009).

Evans and Jukes (2000) state that the integration of suppliers into the operational process involves approaches and activities which will help simplify, standardize, and coordinate the operational processes of the firm. They suggest that coordination can be achieved through the following four key steps: alignment of existing practices, process standardization, knowledge sharing and continuous exclusion of waste within joint development cycles. They emphasized the importance of joint team-working and multi-firm participation within the alignment process. In order to achieve effective planning and delivery of any task, the skills and knowledge of suppliers should be integrated.

Earlier research by Clark (2006) stated that, in the engineering phase of a product development, extreme supplier involvement creates advantages in terms of lead times, costs and quality. McGinnis and Vallopra (2000) demonstrated that including suppliers in the value creation procedure of a purchasing firm can be a beneficial alternative, however one that is hard to accomplish by application. They argued that purchasing and supplier involvement can contribute to process development/improvement, especially in manufacturing industries. Similarly, Vonderembse and Tracey (1999) found a positive correlation between the dimensions of both supplier involvement and supplier performance and manufacturing performance. Furthermore, they concluded that this correlation has a positive effect on the buyer's performance.

Many firms activities directed towards suppliers are uncoordinated, possibly carried out by different departments and thus not integrated into an overall supplier management. This stands in contrast to the growing expectations concerning the impact of the purchasing function on overall value creation. Different aspects of supplier management provide valuable insights and approaches. Still an overall framework integrating all these insights into a SRM framework remains desirable.

According to Chenoweth et al. (2002) after their review of literature and interviewing with representatives of firms that have a successful SRM programs, they found that the six practices listed below characterize best SRM practices:

- Manage total business with each supplier (consolidate contracts, tie future business to performance).
- Measure and shape supplier performance (establish performance measurement system, rank suppliers, set targets, reward performance).
- Involve key suppliers early in product design (leverage their design capabilities and knowledge of manufacturability and innovation, reduce complexity).
- Host high-level meetings that promote dialogue with suppliers (demonstrate mutual commitment to the relationship, promote dialogue on expectations and ways to improve, share future plans and technology roadmaps, present awards).
- Recruit skilled personnel (recruit experienced personnel who have the right qualitative and quantitative skills).
- Develop personnel so they have a thorough knowledge of suppliers (educate personnel so they know suppliers' processes, costs, capacities, and capabilities and can work with and help suppliers fix processes to meet current needs and continually improve).

3. Research Methodology

In recent literature, SRM research mainly focused on examining the different SRM methodologies and practices and their impact on the manufacturers and suppliers' performance. However, there was an apparent lack of research that investigated the application of SRM in Egypt and the Middle East region. Therefore, in order to fill this gap in knowledge, this research will be exploratory to describe and identify the extent of SRM applications in Egyptian companies and how these applications are impacting the manufacturers' performance. Through the use of semi structured interviews, the researchers investigated the implementation of the six SRM practices described in the previous section. The study targeted companies belonging to four main business sectors – fast moving consumer goods FMCG, pharmaceutical, steel, and fertilizers– to provide a comprehensive and yet a multi-faceted view of the topic being investigated. Table 1 provides a brief description of the companies for the purpose of understanding their scope of operations.

Table 1: Description of Companies

Company	Sector	Description
A	FMCG	A global FMCG manufacturer with 400 brands. It always has a significant place on Gartner Supply Chain Top 25 which recognizes the world's leading supply chain across all industries.
B	FMCG	One of the biggest and most diversified food companies in the Middle East and it exports to more than 130 countries all over the world.
C	FMCG	A well-known leading firm is Egypt and Middle East specialized in food and beverages and their name has become synonymous with a range of quality Fresh and Frozen products in local Egyptian and Export markets.
D	FMCG	A multinational beverage corporation and manufacturer, retailer and marketer of nonalcoholic beverage concentrates and syrups.
E	Pharmaceutical	A group of nine health care companies operating in the pharmaceutical field for development, manufacturing, marketing, distributing and exporting of a comprehensive array of branded and generic drugs, together with a rising number of licensed pharmaceutical products.
F	Steel	The largest independent producer of steel in the MENA region and is the market leader in Egypt. The firm produces long and flat steel products.
G	Fertilizers	A specialized company in producing high quality nitrogen fertilizers mainly Granular Urea (46.5%) as a final product and Anhydrous Ammonia as intermediate product using advanced technology.

Purposive sampling was used in this research to contact potential interviewees. They were chosen on the basis of their size and market reputation. The semi-structured interviews were conducted on site with purchasing/procurement specialists and each interview lasted for approximately 1 hour. It is worth noting that the identities of the individual companies have not been disclosed on the basis of protecting commercial confidentiality. It is anticipated that sufficient information is provided to understand the nature of the companies' operations within each of the four sectors mentioned previously and to draw relevant conclusions without revealing individual identities.

4. Research Analysis and Findings

This section will present the research analysis and findings by presenting each case separately and then conducting a comparison between the scopes of SRM applications in each.

4.1 Company A

As a multinational firm, the procurement team at Company A is purchasing from tens of thousands of suppliers worldwide. They have made the strategic decision to introduce a Global Supplier Qualification System (GSQS) to manage the complexity of their supplier information. The procurement team selects suppliers, then those selected are invited to register in GSQS and this system helps in qualifying those suppliers to do business with Company A. Then a group of suppliers is selected based on quality, price, lead time and efficiency. Company A has very strong relationships with its suppliers and this relationship builds on strategies which are 'working together and partner to win'. Delivering Company A's goal of doubling the size of their business while halving their environmental footprint and improving their social positive impact is not something they can achieve on their own. Every day, they work with more than 76,000 suppliers helping them achieve success in the 190 countries where their products are sold. The fantastic suppliers they work with help them innovate; create value, capacity and capability, deliver quality and service and drive market transformation with responsible and sustainable living. In terms of early supplier involvement (ESI), some of their suppliers involve in design and manufacturing process to assess their capabilities, understand manufacturing processes and to discover new design and production efficiencies. Supplier engagement program in Company A depends on the importance of each supplier by measuring their overall spending for a certain period; it categorized the suppliers into 3 levels: gold, silver and bronze; meetings with each level is held monthly, quarterly and semi-annually consequently. Suppliers are evaluated based on non-conformance rate and on time fill rate. The gold suppliers' employees are trained at Company A's factories to understand the production requirement of their customer. Company A's Partner to Win Awards celebrates supplier partners who, over the past 12 months, have made a significant contribution to grow Company A's businesses in a mutually-beneficial and sustainable way. The awards recognize the areas of Innovation, Responsible & Sustainable Living, Value, Capacity and Capability Building, as well as Quality & Service. In conclusion, the relationship Company A has with its suppliers, is a true joint partnership which is delivering tangible mutual business success; it enhances their quality and get the right products to their customers in the optimal way, ensuring they all benefit from working together.

4.2 Company B

Company B deals with more than 1200 suppliers and 60% of their suppliers remained unchanged for over 30 years. They have more than one supplier for each ingredient; in every order required by Company B they distribute their needs among all their suppliers to keep the relationship strong with each one of them. EIS is limited to packaging processes as suppliers provide Company B with recommendations and ideas about the latest designs and calculating its cost according to its specifications. Despite the large number of suppliers the company deals with, Company B does not apply an integrated software with their suppliers' base. Company B does not give an official training to their suppliers but they allow them to attend production processes to gain more knowledge about their requirements and to work more efficiently. Company B evaluates their suppliers every month according to their scorecard of lead time, quality, packaging and shortage in quantity. However, Company B does not give any kind of rewards to their suppliers. Company B's purchasing manager declared that approximately 50% of quality is affected by their suppliers' performance and that they are planning on further develop SRM.

4.3 Company C

The essential criterion used by Company C in supplier selection is quality. Although it is more expensive to select suppliers solely on quality, Company C mainly focuses on its target customers. EIS is shown in the packaging process like Company B. The supplier is involved to recommend the best packaging materials for products. Company C deals with a large number of suppliers through a very limited number of agents. And as Company B, Company C is not linked with its suppliers through any software, they rely on the traditional communication means: emails, telephone, fax, etc. Performance is measured by regular quality checks and they do not offer their suppliers any rewards in case of satisfactory performance. Company C's suppliers go through its factories, staff and end users to understand how their supplies are being processed by the different production lines to ensure efficiency and effectiveness. Company C's quality depends on their suppliers' credibility. The suppliers they work with are only committed to them, so if any other firm wants to deal directly with their suppliers, they have to first get Company C's permission. Company C's procurement manager concluded that the company's supply chain is committed to continuously decreasing the lead time through collaboration with their suppliers, since this will assist them on decreasing costs by having low levels of inventory, as well as increase the cash conversion cycle.

4.4 Company D

Company D starts by scanning the market for the appropriate suppliers who will meet their requirements and specifications previously determined by the purchasing department. Then a group of suppliers is selected based on: quality, price, delivery time, commitment, productivity and efficiency. Once a supplier meets the above criteria, he is added to the approved suppliers list. It is not allowed to deal with suppliers which are not registered in this list. Company D deals with many suppliers for the same ingredient to avoid any possible delays in production. Suppliers participate in the process of new product design, as sometimes it needs new machinery and molds and it would be beneficial for Company D to involve their suppliers early on to understand the requirement and provide suitable solutions and recommendations. Company D does not have a software to link them with their suppliers. Company D offers suppliers training in order to help them understand the nature of the firm, its requirements and policies. Training is also provided when a new product is developed to ascertain that the supplier is capable of playing his part in this process and providing the required results. Company D evaluates their suppliers quarterly based on their commitment to the contracts, delivery time and quality. This is done through using a scorecard in which a weight is assigned to each criterion and contracts are renewed annually with suppliers who has consistent performance over the year. SRM practices – although quite limited - has a remarkable impact on quality in Company D and this resulted in lowering the product failure rates.

4.5 Company E

Company E classifies its suppliers to classes such as A, B, C, etc., whereas class A is the supplier with the best lead time performance. When they select the supplier they do not disagree on the price and quality but what differentiates one supplier from other suppliers is his commitment to lead time. All suppliers must follow three requirements: lead time commitment, fair price and quality. For every order Company E makes, they order it from several suppliers, ranging from 10 to 20. Their strategy is to have a variety of suppliers that are substitutes so that their requirements are always met no matter what the situation is. Some of the suppliers they deal with have remained unchanged for a long period of time, approximately over 20 years, and they account for 50% of the total number of suppliers. EIS is not applicable in this case because the entire production process of pharmaceuticals is monitored by the Ministry of Health. They currently use Oracle as a software and they are working on developing their software to link them with their key suppliers. Company E annually evaluates its suppliers based on the price, quality and lead time. If the supplier stays committed to these three requirements, then they sustain the business relation and renew the contract. Company E does not reward its suppliers but in fact their suppliers provide them with offers and discounts when they have long term relationships with them. Company E allows their suppliers to visit their firm to make sure they can provide them with their needs and the right specifications. The essential two elements for SRM in Company E is quality and lead time due to the sensitivity of the products they provide to the market. Therefore they plan on further development and improvement.

4.6 Company F

Company F's criteria when it comes to suppliers' selection depend on strong historical data. Suppliers are classified into classes whereas class A stands for the highest rank, having three basic qualifications which are quality, lead time and response. EIS is practiced with their suppliers since it is assumed that these suppliers have several business communications in a specific area and therefore more experienced when deciding to take measures in the process of a product. Therefore frequent meetings are held with suppliers to assure or renew any mutual business plans. Company F is in the process of implementing a new software to facilitate and ease the relationship with their suppliers, by sharing data and information but it will take three years for implementation. Supplies are being evaluated bi-annually and Company F does not provide any rewards or incentives for suppliers. Company F allows suppliers to visit the production plants every 6 months to follow up production and be updated about any development. In conclusion, their purchasing process depends on quality performance. Company F uses just in time (JIT) strategy, which is an inventory strategy that companies use to increase efficiency and decrease waste by receiving goods only as they are needed in the production process, thereby reducing inventory costs and make sure their products are quality guaranteed. One of their main requirements in this process is their ability to forecast demand accurately and of course maintaining a very strong relationship with their suppliers.

4.7 Company G

The supplier selection process in Company G is a very important process as it selects its suppliers based on numerous criteria: ISO 14001, 9002, number of labor, history, qualifications of the team, site visits, sample tests, payment terms, delivery terms and commitment. After selecting the suitable suppliers, Company G makes a supplier approval list and deals only with the suppliers on this list. The firm has a list of 6000 suppliers with 50-10 suppliers for each product or spare part. Normally, Company G does not implement EIS, but willing to do so if the case necessitates. Although the company uses oracle and they have the e-procurement module, they did not activate it and they communicate with their suppliers through email, telephone and fax. Company G evaluate their suppliers on an order basis, which means that the supplier is evaluated for every order completed. At the end of each year, Company G gathers the evaluations for all orders and conduct a final assessment of the supplier. Company G does not provide any training to its suppliers, and does not offer any kind of rewards, the only thing they do if the supplier was committed to each of their criteria, they expand the volume of transaction between them. Company G uses score card that has 5 categories where each criterion has a weight of 20% with total 100%. Each supplier has to maintain at least 80% to maintain his place in the approval suppliers list. The criteria used in this scorecard is: quality, lead time, delivery terms, payment terms and environment & safety which was added this year. The impact of the limited SRM applied in this company is shown in the high quality level which results in lowering the percentage of defects and failure rates to 0.05%.

4.8 Key Findings

The data collected through the semi-structured interviews allowed the researchers to examine the SRM practices implemented in the sample companies. The most implemented practices were suppliers' evaluation, penalties, training and early involvement and the least implemented were rewards, software communication and score cards. Each firm addressed each of their practices uniquely and some identified their practices as the most beneficial. Table 2 shows the extent of SRM practices implementation in the sample companies.

Table 2: The Extent of SRM Practices Implementation

	Early involvement of suppliers	Communication with suppliers (Software)	Evaluation	Training	Rewards	Penalties	Scorecard
Company A	✓	✓	✓	✓	✓	✓	✓
Company B	✓		✓	✓		✓	✓
Company C	✓		✓	✓		✓	
Company D	✓		✓	✓		✓	✓
Company E		✓	✓	✓		✓	
Company F	✓	✓	✓	✓		✓	
Company G	✓		✓			✓	✓

As shown in the previous table ESI was applied in many companies and this proves that it enables proactive communication and collaboration on product specifications, performance, design, materials and much more. In addition, adopting ESI practices may offer additional benefits to the firm, including the management of supply risk in new product development and the upstream supply chain. Companies view that coordination with critical suppliers through ESI as important enablers to product, process and supply chain structure development and as a cost reduction exercise. In addition, companies which evaluate their suppliers found that they are having better visibility into supplier performance. This is why in all the seven firm cases that are studied, they show that they applied evaluation and assessment as a part of their SRM practices. This is due to their ability to uncover and remove hidden cost drivers, reduce risk, increase competitive advantage by reducing order cycle times and inventory and align practices between themselves and their suppliers. Also, companies which are practicing supplier assessment commonly see improvement in supplier performance metrics such as on-time delivery, quality, and cost. Measuring the performance of suppliers is vital for ensuring a well operated supply chain. The goal of supplier evaluation should be supplier performance improvement and by simply measuring performance has a positive effect, supplier evaluation can be most effective when it leads to continuous improvement activities and actual supplier performance improvement. The performance and past history of the suppliers help in taking decisions for its selection, as a result selecting the right supplier helps in getting more improved quality.

Quality is a key factor of suppliers by which they can improve and maintain quality assessment and delivery performance. Therefore the SRM practices introduced in this research points out its relevance to quality performance. It is very important for the firm and suppliers that quality and availability of the products are always precise. In today's business environment, quality is a basic requirement needed to deliver a superior product to consumers. Assessing a supplier for overall risk to the business is through risk assessment and auditing. The result of the risk assessment will help to determine the higher risk suppliers to the business and at what frequency the firm may want to review or audit suppliers for risks or gaps in their business. More and more of the supplier audits will look at all aspects of the supplier's ability to be a consistent source of the highest quality materials that is used to deliver a quality product to the end consumer.

Hence, the ability to control quality means through suppliers' usual audit and assessment means that products are correct the first time without extensive physical trials, repeated testing and related costs. Early and continuous real-time visibility to predict, track and systematically resolve issues ensures on-time delivery and faster time-to-market. Constant feedback from the suppliers ensures constant improvements. This as well frees up the firm's capacity to focus more on innovation and driving increased market share and revenue.

Lead time reduction is a great way to improve productivity, increase output of finished products and streamline operations. To improve the firm's performance, it is better for both parties, the firm and the supplier, to focus first on lead time reduction, or instead concentrate on improving the transfer of the demand information upstream in the chain. It has been concluded from the previous cases that avoiding delays during the SRM process not only saves time and money, but also allows the on time fulfillment of contracts. A delayed contract could cause a sequence reaction of delays on other dependent procurements processes in the firm.

Although many companies desire to implement supplier relationship management (SRM), the reality is that most firms do not implement it to the full extent necessary to achieve their desirable goals and objectives due to the challenges associated with full-scale implementations. However, there are mixed views from the visited companies as to whether the benefits exceed the potential risks. Some companies though, that did not implement most of the practices, such as having a software that connects them with their suppliers, was because they felt that long-term relationships with key suppliers may create barriers to exit. This is because these relationships build dependency, for example by investing in shared IT systems. This can create a barrier to switching suppliers and the risk is that the new entrants to the market are discouraged and may miss out on innovation from other suppliers. As well as the huge investment that it would require in implementing the software and getting employees trained to it.

One of the least implemented practices in the cases provided was the idea of passing rewards from the firm to the supplier. This is due to heavy costs that would be required to reward each supplier, and if the firm has several suppliers that would even increase the firm's expenses.

SRM is about representing a new type of procurement operating model, a philosophy about how to engage with suppliers more broadly. These practices continue to be not very persistent because of poor performance and failure to deliver the promised benefits. This could be because of the fact that major suppliers need to be seriously screened and evaluated well before they are brought into any new system, because establishing close relationships with suppliers means that buyers have to conduct the necessary research to make sure that they select the right suppliers to their companies.

5. Conclusions

This study was conducted with the purpose of examining the effects of SRM on supply chain performance in generally and particularly on the manufacturing companies. For most companies, establishing strong, mutually beneficial long-term relationships with strategic SRM is a critical step in improving performance across the supply chain, generating greater cost efficiency and enabling the business to grow and develop.

Any SRM program will be unique to the business, as to what it is trying to achieve and the nature of its suppliers will support it. The next step would be the working of the firm to implement the different approaches to manage, measure and drive improvements with key suppliers and back up the supply chain. The firm can also help realize joint working and collaborative relationships with the most strategic suppliers, that will be aligned to work towards specific goals or outcomes that will make a significant difference.

Lastly, as the SRM is developed well, it will be implemented for the future, this will increase the capability of the entire firm to better interact with suppliers as well as manage the supply base through focused learning and development. Then the firm can get equipped with the tools, techniques and common ways of working and the actively engage persons, will need to make this implementation a success.

The research revealed that the major benefits associated with SRM are cost, risk and lead time reduction, quality improvement as well as innovation. From the cases interviewed, the companies outlined a number of actions that they should take if they want to improve their approach to SRM. These include listening to suppliers, investing in training and ensuring that the role of SRM is clearly defined.

Frequent interactions and close relationships with suppliers can have a positive effect on the exchange and flow of information and knowledge, and thus can improve processes and performance. Suppliers play a vital role in the success of the business. The supplier management process helps in measuring the time, money and energy used to raise positive supplier relations. A well managed supplier relationship results in increased customer satisfaction, reduced costs, better quality and better service from the supplier. Consequently, supplier management process is a crucial factor for safeguarding competitive advantage, lead time and quality improvement through continuous improvement and development of the supplier base.

Moreover maintaining good relations with a supplier should be as important to a contract administrator as getting the best price. A good buyer-seller relationship is a partnership, a win-win situation over the long run. A supplier who is treated with good manners, honesty and fairness will deliver a quality product at the best price and will provide good service and will be responsive to emergency situations and special requests. A responsive supplier is an asset for the whole organization.

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Biography

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