WOMEN LEADERSHIP IN SUPPLY CHAIN MANAGEMENT

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Abstract: Women leadership has gathered momentum and is gaining acceptance. Women are equally competent in performing their roles and responsibilities as men. However, in the field of Supply Chain Management (SCM), the incidence of women leadership is relatively low. This conceptual paper attempts to address this inconsistency. The paper outlines the evolution of SCM and the challenges of Supply Chain (SC) leaders; particularly, how women as SC leaders can tackle challenges and enhance the overall performance of the Supply Chain. A conceptual model for women leadership in SCM has been proposed and the direction for future research has been laid out.

Keywords: Women leadership, Supply chain management, Trait theory of leadership, Supply chain collaboration, firm performance.

JEL classification: M11, M14, M16, M38, M53.

INTRODUCTION

The field of Supply Chain Management (SCM) has witnessed transformation over the last 20 years. Such transformation leads to creation of new opportunities for leadership in the domain of supply management, logistics and procurement, distribution, sourcing and consulting. The factors catalysing the need for strong leadership in SCM are:

(i) increasing speed of business operations, (Koenig, Eagly, Mitchell, and Ristikari, 2011);

(ii) increased levels of outsourcing and global sourcing, (Murray, Kotabe, and Westjohn, 2009);

(iii) unprecedented evolution of technology, (Colwill and Townsend, 1999); and

(iv) cut-throat competition (Schwartz, 1989; Colwill and Townsend, 1999).

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SCM is a critical factor for success of any business, according to the Handfield and Nichols (1999) and Ketchen and Giunipero (2004), future of competition will be 'chain vs chain' rather than 'firm vs firm'.

All these factors lead to the need of strategic supply chain leaders. As the turf of business, especially SCM, changes, women leadership in the context of SCM is gaining momentum. Traditionally the field of SCM is dominated by men (Linehan, Scullion, and Walsh, 2001). But a growing number of women are getting educated in the field and acquiring skills and experience to be effective leaders. The quest for becoming effective SC leaders is gathering momentum as the number of women being trained in the areas of transportation, supply management, planning, logistics and procurement, distribution, sourcing and consulting is increasing.

There are studies that discussed the role women leadership in the business context (*e.g.*, Davidson, and Burke, 2000; Eagly, Johannesen-Schmidt, and Van Engen, 2003; McClure, and Puisto, 2012; Dworkin, Ramaswami, and Schipani, 2015). Most studies have also dealt with women leadership in the general overall business context (*e.g.*, Schwartz,1991, Cretekos *et al.*, 2011) but with no special focus on SCM domain. Duflo (2011) and Rudman and Phelan (2015) argued that women leadership in male dominated areas is a game changer. So, the focus of our study would be to address the existing gap in literature and add clarity to the concept of women leadership in SCM.

OBJECTIVE OF STUDY

The present study focuses on women leadership in SCM, a domain highly dominated by men. In particular, the study addresses the following research questions:

- What are the factors that lead to changes in supply chain industry?
- What are the challenges of leaders in the new supply chain arena?
- Why is the field of SCM lagging behind in women leadership?
- What could be the impacts of women leadership in a variety of SC roles?
- What is the future of women leadership in SCM?

The paper has sections dealing with theoretical understanding of concepts, research methodology to be adopted for the study, and finally the discussion, conclusion and future research directions.

2.   THEORETICAL BACKGROUND

Women Leadership

Women leadership is a controversial topic in leadership literature. One side of the continuum deals with the question of whether women leadership can materialize and

establish itself as an independent trend, whereas on the other side, gender has always been projected as one of the important traits of leadership (Zaleznik, 1977). As per Chin (2007), the issue of gender can be traced in all the major evolution stages of different leadership theories.

Trait theory of leadership was one of the earliest methodical and consistent endeavours to study leadership. Trait approach was based on identification of the traits of leaders and focused on the relationship between leadership and traits. For a considerable period academic literature was dominated by individual's characteristics, for example, self-confidence, intelligence, ambition, masculinity and courage, contributing towards leadership and was solely connected with male activities and masculine area (Mann, 1959; Zaleznik, 1977).

In the middle of the 20th century researchers shifted to modern theories of skills, owing to lack of prediction and drawbacks of the trait theory of leadership. The modern theories of skills were built on the communicative, conceptual and technical skills of leaders, and not just related to personality traits (Katz, 1955; Mumford *et al.*, 2000; Northouse, 2009). Leadership studies affirmed that male and female leaders have significantly different skills. Male leaders tend to avoid analyzing the subtleties of interpersonal relationships, take individual decisions and exhibit impersonal reactions. On the other hand, women leaders are high on socializing with team, favour collaboration and are good in communication.

How the leader motivates the followers in terms of goal setting and goal achievement is the essence of almost all leadership theories (Gardner, 1995; Rost, 1995; Bass, 2000). The issue of gender with respect to leadership is reflected through the dominance of diverse leadership styles. Studies have shown that male leadership is transactional leadership *i.e.,* focused on goal achievement, whereas female leadership is transformational, *i.e.,* promoting team work and collaboration, personal respect and creativity (Wood, 2005; Jogulu and Glenice, 2006; Werhane, 2007).

Evolution of gender leadership theories can be grouped into three different research trends as follows:

1. The first is based on studies of trait leadership, and the personality traits and essential skills of male and female leaders.

2. The second is the leadership approach, based on the leadership styles of males and females.

3. The third is a broad approach based on research on female leadership as an independent phenomenon.

Researchers faced difficulties in exploring women leadership based on the first two research trends since the underlying logic in the first two research trends was to ascertain the similarities and differences between male and female leadership styles

based on personality traits, skill sets, behavior characteristics etc. Two important approaches for demonstration of gender diversity have prevailed in leadership literature in recent years. The first approach views the leadership style of male and female leaders as similar (Andersen and Hansson, 2010; Brinia, 2011). The second is the acceptance of the differences of leadership styles in male and female, and the necessity to model the differences independently (Powell, 2012; Arnold and Loughlin, 2013).

3. RESEARCH METHODOLOGY

As the objective of the study is to explore the relation between women leadership and supply chain management, literature review is an appropriate method to do so. Meredith (1993, p.5) defined literature review as 'a summary of the existing literature by finding research focus, trends and issues.' Literature review is conducted by methodically collecting the extant literature over a period of the last 30 years and is based on the review conceptual framework. The direction of future research has also been proposed.

4. DISCUSSION

RQ 1) What are the factors that lead to changes in Supply Chain industry?

"SCM is the systematic, strategic coordination of business functions and flows of materials, products, information and money, within a particular company and across the businesses in the supply chain, to improve the long-term performance of the SC as a whole." (Mentzer, 2001, p.111). SC is an integral part of any business and is a source of competitive advantage (*e.g.*, Cao and Zhang, 2011; Priem and Swink, 2012). Figure 1 shows the general supply chain of a typical consumer product. How a firm's supply chain is managed directly affects the performance of the firm. The topic of SCM has attracted the attention of scholars and various authors have studied SCM and contributed to the body of literature.

Today, supply chain is about how we help grow the top line. In healthcare, for example, 25 years ago the primary growth vehicle was a sales representative carrying a bag to the doctor's office, to surgeons in hospitals, to drugstores. Today it is about
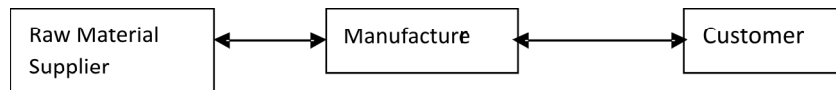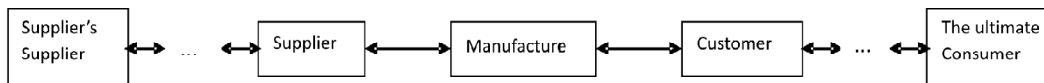

Figure 1(a): Direct/1st order SC

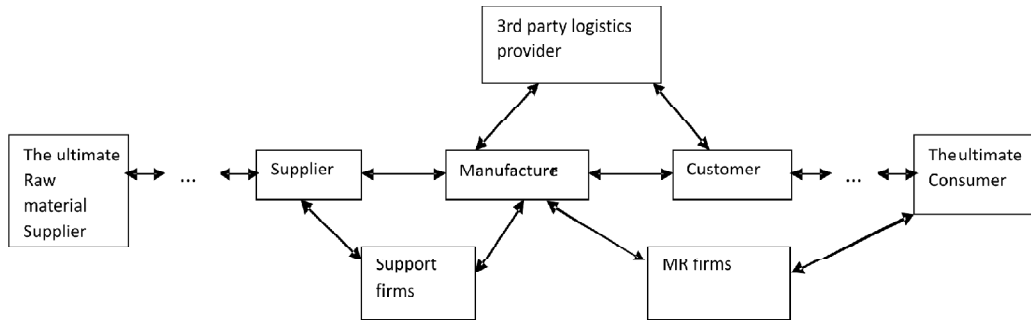**Figure 1(b): Extended/2nd order SC**

Figure 1(c): Ultimate/n^{th} order SC

bringing value-added services into hospitals to help lower the cost of healthcare. And that is where it opened up a whole other world of opportunity and needs. The company needs experts to help bring a whole new dimension to those customer interactions. The field of SCM has undergone transformation over time. The reasons for this transformation are many folds as listed below.

4.1.1 SCM is taking on a more strategic role

In the last decade, SCM has changed its role, has changed its orientation from activities solely as functional activities focused exclusively on meeting operational objectives (Carter and Easton, 2011). SCM is not limited to tactical activities of the shop floor but is a strategic leveller. Firms such as Amazon, Dell, Fedex are using SCM as a source of competitive advantage and improving their performance in this highly competitive marketplace (Patel, Azadegan, and Ellram, 2013). Interestingly, the addition of a new member to the top management committee called 'Chief Supply Chain Officer' reiterates the strategic role of SCM.

4.1.2 Supply chain is having an impact on the top line as well as the bottom line

SCM is expected to grow the top line and help to grow business, SCM is not just limited to controlling cost or cost reduction. SCM is not limited to its typical cost control view, but is a tool for leveraging the cash flows of the overall business by optimal utilization of assets, better inventory management, and enhanced production planning and order fulfilment (Cao and Zhang, 2011). By focusing on the holistic view of SCM as financial leverage, SC leaders can effectively invest the company funds leading to higher business performance (Wang and Sarkis, 2013).

4.1.3 Companies are looking to supply chain professionals to provide expertise in customer relationships

As the landscapes of business are changing, customers getting the locus of control, the role of SCM leaders becomes very important to win customer loyalty. The power

of customers and the degree of customization is continuously growing. SCM leaders are more frequently being called upon to bring innovative solutions and ideas to the customers (Droge, Vickery, and Jacobs, 2012).

4.1.4 There is a greater reliance on data analytics

The ability to collect data in real time and analyze it at a rate faster than the competitors is the key to business success (Brown and Manyika, 2011). SCM leaders rely heavily on consumer data as this data leads to business intelligence and, in a way, to strategic advantage.SCM leaders are using the point of sales (POS) data to track the changes in customer behaviour, for example, 7/11, Walmart, PandG. POS data analysis has helped to capture the real requirements of the customer and boosted the firms' innovative solutions to increase customer value such as, smaller orders, direct-to-consumers (Waller and Fawcett, 2013). In a way data analytics has helped to enhance supply chain agility and improve customer satisfaction.

4.1.5 Expectations for speed-to-market are higher

SCM is crucial for the success of any new product. As the time between innovation cycle-time and the time-to-market is shrinking, SCM is the only solution to aid how swiftly and efficiently companies can counter to changes in the marketplace and deliver new products, services, etc.(Khan, Christopher, and Creazza, 2012). SC agility and speed become even more critical owing to factors like dynamic customer demands, high proliferation of stock keeping units (SKUs), and technology advances (Gligor, 2013).

4.1.6 Performance measurements now include a focus on point-of-sale availability

The availability of the right product at the right time, at the right place and in the right quantity is the responsibility of SC leaders. Just having the product available at the distribution centres is not sufficient, but availability of the product at the POS is need of time. SC integration is required to make effective product availability at the POS. SC leaders must try to strive for ways to improve the collaboration between SC members. Another factor that affects POS availability and SC integration is the rise of e-commerce and e-tailers (Waller, and Fawcett, 2013).

4.1.7 There's an increased need to manage an extended supply chain, including suppliers as well as customers

SCM leaders always face the dilemma of make or buy. The typical trade-off is between reduction of costs that comes with outsourcing, and the need to control the quality and integrity of the SC (Wisner, Tan, and Leong, 2015). Managing the extended SC requires strong leadership. The key is to find right partners and build the core competencies. The ability to view the SC as a single entity with the ultimate objective

of enhancing ultimate customer value is required, leading to higher level of performance, *e.g.*, Amazon. SC leaders should create the environment of trust and collaboration (Min and Mentzer, 2004).

RQ2) What are the challenges of leaders in this new supply chain world?

As SC will continue to play significant and strategic roles in the success of abusiness in today's global economy, SC leaders must develop and improve their skill sets accordingly. The most important quality of a leader in today's competitive environment is to be a leader at the business as well as functional level (Conger and Fulmer, 2003). Being able to apply business acumen is described by Cross and Parker (2004, p. 108) as "really getting out of our silos, understanding the compelling business need and what value we can bring in." Along with having a deep understanding of the SC, business leaders should create an environment of collaboration and trust. Following are the challenges of leaders in the new SC:

- Be a business leader as well as a functional leader; gain experience in a variety of roles.

- Demonstrate that you are a long-term player.

- Strengthen your communication skills – both listening and speaking.

- Learn to mine data and reach conclusions of value to the organization and to face the challenges at hand.

- Develop creativity and skill at scenario planning.

- Have strong ability to relate to people.

- Be ready to break down silos – foster collaboration.

- Be willing and able to make tough decisions in a timely manner.

- Support and recognize innovation.

- Find a company with a culture that is suitable for the kind of leader you want to be.

From RQ1 and RQ2 it is clear that SCM has become challenging and in order to keep pace with the dynamic SCM, new ways and methods have to be devised. A woman as SC leaders is an option for this. Women have proved themselves in many other areas of business (*e.g.*, Rosener 1990; Brush 1992; Hamel and Prahalad, 2013). RQ3 and RQ4 discuss women as SC leaders.

RQ3) Why is the field of SCM lagging behind in choosing women as leaders?

Women have proved themselves as competent as men. There are many women who have outperformed men in several fields. But in the context of SCM the situation is a

little different. SCM is a predominately men oriented field. Since more than half a century, SCM aspects of the organization are managed by male employees (*e.g.*, Eagly, and Johnson, 1990; Waismel-Manor, and Shamir, 2012; Dotson, DavA, and Miller, 2015).

The number of women as SCM leaders is rising slowly. As discussed in RQ1 and RQ2, the field of SCM is changing rapidly; in order to survive and progress, innovative style of leadership is required. A woman SC leader is one of the solutions in this scenario. However, there is disparity in women as SC leaders, some of the reasons for which are listed below:

1. The top spots are generally occupied by men. Top management positions help men to create a strong network, in which women are not included. According to Barney (1991) such network is highly effective for both professional and personal growth. So men are able to reap network benefits and women completely miss out on this dimension.

2. Work life balance of women is completely different from men and this effect is compounded with the addition of leadership roles (Schueller-Weidekamm, and Kautzky-Willer, 2012). Women lack a level playing field while competing with men. No matter what type of career women peruse or their level of education or expertise obtained in respective areas, parenting is still assumed to be a woman's primary role (Greenhaus, Ziegert, and Allen, 2012).

3. To compound the difficult work life balance ratio, perceptions towards job continuity of women employees is poor (Kahn, García Manglano, and Bianchi, 2014). There is an unspoken bias towards women employees having families compared to their male counterparts in terms of job continuity (Barnett, 1998; Davidson and Burke, 2011).

4. The criteria for judging women leadership is different than the male counterparts. As there are few established women leaders- role models-compared to men, there is lack of a common leadership style of women leaders (Vinkenburg *et al.*, 2011). Their leadership styles are often surpassed by just the image of a male leader (Berkery, Morley, and Tiernan, 2013).

5) Another prevailing issue is the degree of discrimination. Irrespective of the efforts to promote women leadership, the issue of discrimination is still rampant.

6) There is very low level of awareness among young women about careers in SC. This causes delay in women SC leaders building the necessary skill-sets.

7) SCM is a 24/7 job, and chances of relocation and travelling are very high; this further deteriorate the work life balance of women in SCM.

8) There are some cultural issues prevalent in society that also hampers the women in SCM.

9) Many organizations have not implemented the schemes/policies, for example, flexible working hours, work from home etc., that help women to maintain proper work life balance.

10. Stereotypes based on misconceptionsabound such as, women possess detrimental traits or lack in desirable traits. There is a tendency to perceive women as either extremely strong or assertive. Sometimes women are seen as emotional and unable to take strong decisions.

11. Interactions at the workplace can sometimes deter women leadership. Not all men are comfortable to report to or work under a lady boss. Some men even think that woman belongs to the home and man should work in offices.

12. A women committed to the family is perceived to be unreliable compared to male counterparts.

13. Young women who are on the verge of starting their career have the following issues in addition of the above problems:

- Overall economic uncertainty,

- Challenging job market,

- Education debt,

- Need to manage international opportunities,

- Need to be current with all technology,

- Facing a "faster always" environment with increased need to master a much faster, steeper learning curve,

- Higher expectations,

- Need to differentiate themselves among the competitive peer set, and

- Discrimination that might be too subtle and more difficult to identify and manage.

To summarise, RQ3 signals that men are typically given opportunities based on their potential whereas women have to prove themselves.

RQ 4) What are the impacts of women leadership in a variety of SC roles?

"Women care about people – not just business" (Rosener, 1990, p.121). Women are relatively better in terms of interpersonal relationships and building bridges; therefore women as leaders can easily apply these skill-sets in customer relationships. An additional strength in the repository of women is the ability to do various tasks at the same time *i.e.*, multi-tasking (Stoet *et al.*, 2013). This ability is very much required as this empowers a women leader to handle a broadarray of tasks, to manage priorities, and to envision achievable plans/targets.

- Women are capable of seeing both the bigger picture and the smaller nitty-gritty at the same time -another dimension of effective leadership. With the intuition and ability to see the bigger picture aided by her communication skills, women leaders can help followers to envision the future, and thus effectively lead the people. Other skills that are mastered by women to be effective SC leaders are: being focused on goals/results, inclination towards problem-solving, creativity, collaboration and courage. Women leaders are adding value to SCM. There are more than 500 women working in various SC leadership roles.

- Women working in the SC domain are seen as potential candidates for executive level posts, as the SC exposure is very beneficial for moving up the career ladder.

- Visibility of women SC leaders is increasing. Women are now beginning to take high profile and prominent roles. The number of women speakers, opinion leaders and panellists in events or as discussion leaders is increasing. The topic of women and women leadership is a common part of many events, major publications, meeting agendas, awards and other social/business recognitions. In a way, women's achievements are being highlighted in a bolder manner than in the past.

- Women are forming their own networks. As networking is very beneficial for the success of the business/social entrepreneurship, women are making special efforts to get connected.

- Visionary leaders are promoting women leadership and making special efforts to harness women power. Though this trend is relatively new, it is picking up slowly.

- Women are getting trained within organizations to move up the career ladder.

- Women are trying to create a fertile environment for the overall growth of women leadership. There is lot of scope for structural improvement for boosting women leadership such as modifying human resources policies to improve the work life balance of women employees.

- Women are becoming more confident and have belief in their own strength.

The impact of women leadership in SCM can be summarized as *"Organizations know they need people who can connect the dots to link pieces together across the organization – and women can do that especially well." (Schein 2010, p. 168)*

RQ 5) What is the future of women leadership in SCM?

Young women should be the focus of planning for women leadership in the SCM context. The number of young women entering SCM is increasing, and proper training and development will enhance their performance. In particular, the following initiatives need to be taken to secure and promote women leadership in SCM.

4.5.1 Developing women SC leaders at the college/university stage

Young women enrolling in university SCM programmes and related courses are on the increase. The level of awareness is slowly going up, but there are still serious concerns in the minds of young women about career paths in SCM. The role of colleges/universities in shaping women leadership in SCM is very crucial. Universities should compulsorily expose young women to the opportunities available in the industry. Colleges/universities must give exposure to young women via guest talks of role models at the school/college programs forums, fairs, workshops etc. They must actively involve young women students in industrial conferences/events/workshops, creating opportunities for young women to work as 'shadow' and observe real time SC experts. The colleges/universities should make strategic use of the alumni and other professional networks for recruitment and training and development purposes.

Colleges/universities must create courses and programs that are relevant and valued by the industry. They should work in collaboration with the industry to come up with courses that will enhance employability and leadership qualities of young women. This will save a lot in training cost and time from an industrial point of view, and aid employment opportunities and skill set development from the students' point of view.

Colleges/universities should also motivate young women to take up SCM domain *via* provision of special scholarships and internships. The logic behind such scholarships and internships is to introduce young women to the real life SC domain and help her to understand various SC roles and gain practical experience.

4.5.2 Developing women SC leaders at company level

The development of women SC leaders at the company level will work as a catalyst in the career path of women leaders. Support of the top management is very important for the success of this process. Company level development of women SC leadership can be implemented via mentoring programs and nurturing relationships. The mentors provide the mentee with valuable insights that are tacit in nature. Honest opinions and much needed counselling sessions are added advantages of mentorship programs. Following are some of the actions that a company can take to develop women SC leaders:

- Provide role models by increasing enhancing the visibility of successful female leaders.
- Foster interaction by involving younger women in various women leadership events/workshops/programs.
- Exchange ideas and best practices regarding internal leadership development programs.
- Provide opportunities for conversations about navigating through the industry, future career planning, work/life balance, etc.
- Sponsor women for industry-specific trainings and workshops.
- Develop mentoring programs.
- Organize sponsor relationships.
- Provide internships and scholarships aiding emerging leaders to expand and improve their skills.

4.5.3 The future of women leadership in SCM

Women are covering all arenas of leadership including business and government sectors. There is greater visibility and diversity is highly promoted now a days. (REF) There is growing evidence that firms who have proactively developed and utilized women leadership are more successful compared to their rivals. Also, as discussed in RQ1 and RQ2, the skills and leadership qualities needed to head SC roles are changing. Women are ideal candidates for coping with these changes owing to skills like relationship management, problem solving, multi-tasking, team building and communication skills. Some of the prominent reasons for a bright future for women leadership in SCM are -

- As the economy continues to recover, more positions will open at all levels.
- More women are now in senior level positions and can spearhead efforts as well as serve as mentors and role models.
- With more females in executive positions at manufacturing and retail companies, consultants and service providers have a greater incentive to reflect similar diversity among their own executives.
- Technology has allowed more flexibility in the way people work and this helps women balance family and career.
- The current generation of future leaders doesn't have the same male/ female issues, so there is likely to be more openness to leaders of both genders.
- The pool of talented women is increasing as more women choose non-traditional college degrees and career paths.

4.5.4 *Conceptual model*

A conceptual model based on the above arguments is shown in Figure 2.

Antecedents   **Consequences**

| Networking Opportunities |
| Training and education at college/university levels |
| Development at company level |
| Mentorship programme |
| Availability of role models |
| Awareness about SCM opportunities |

Women Leadership in SCM

SC Performance
SC collaboration
SC agility
SC flexibility
Optimum inventory
Reduction of lead time

Business Performance
ROA
ROE
Growth
Revenue
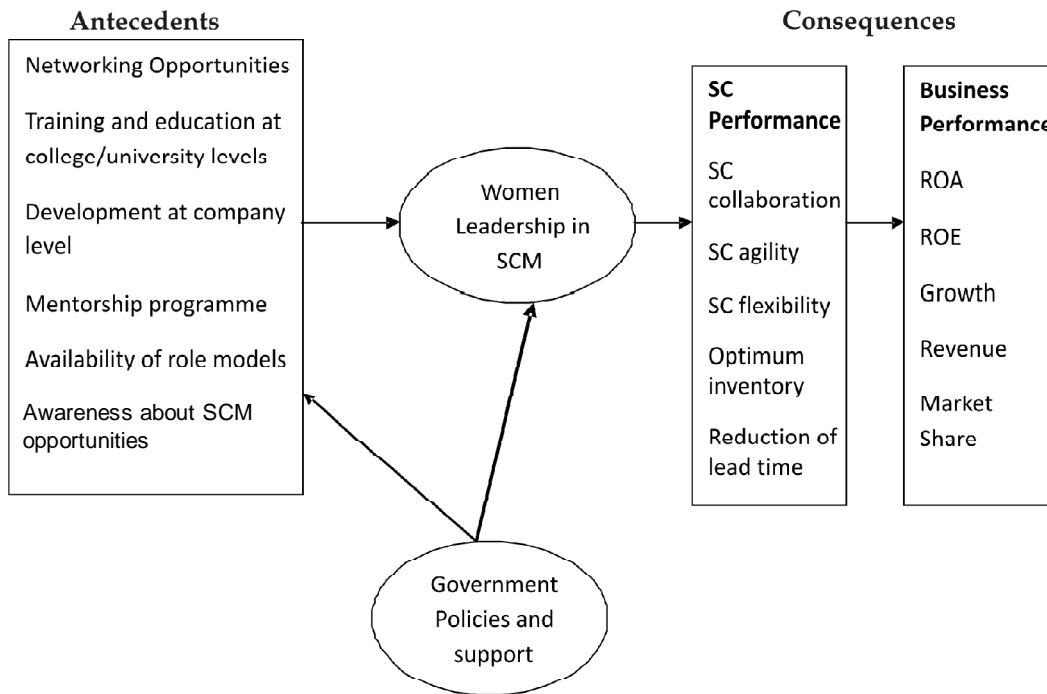Market Share

Government Policies and support

Figure 2: Conceptual Model

5.   CONCLUSION AND SCOPE FOR FUTURE RESEARCH

This paper is an outline of women leadership in SCM. Women leadership is gaining momentumin the business and social contexts. Various government norms and rules are promoting diversity at the workplace, including top management roles. SCM, a male dominated field, is also not an exception in witnessing women power. As the nature and structure of the SCM field is changing, the ability to device new ways and skills are demanded for achieving success. Women as SCM leaders present one of the solutions to this new SCM challenge. The unique skill sets and leadership style possessed by women can help them achieve new heights in the SCM domain. Women are particularly good at relationship management, problem solving, multi-tasking, and team building and communication skills, leading to SC collaboration and higher performance.

However there are several issues that obstruct the speed of women leadership in SCM. Factors, such as, lack of training, low levels of awareness, lack of networking, high male dominance etc., are detrimental to the progress of women leadership in

SCM. Various initiatives at colleges/university and at the company level can help to nurture women leadership in the SCM domain. This paper is a novel attempt to throw light on women leadership in a highly male dominated area. To the best extent of the author's knowledge, this is the only paper that deals with women leadership in the SCM context.

This paper has opened a new research thread that has been neglected altogether by the research community. Some research opportunities in the domain of women leadership in the SCM domain are listed below:

- Future research should empirically test the conceptual model proposed in this study.
- The effect of specific women SCM roles (say, procurement, distribution, inventory manager etc.) on the firm's performance can be studied in detail.
- A comparative analysis of men SCM leaders and women SCM leaders, and its impact on business processes and performance, is also an area of research.
- Longitudinal studies of women SCM leadership can also bring valuable contributions to the body of knowledge.
- The empirical analysis of strategies and ways for nurturing young women for SCM roles is a valid area for future research.
- The design and implementation of mentorship programs for entry level women working in the SCM domain is an important research question.

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