A CASE STUDY FOR ITTEHAD TEXTILE ON SUPPLIER INTEGRATION

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I. Abstract

Examiner: Helena Forslund
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Title: Supplier Integration – a case study with ITI

Background: The textile industry is one of the most important sectors of Pakistan. The Pakistan textile industry contributes more than 54% to the country's total exports, which amounts to around 9.57 billion US dollars. The industry contributes around 46% to the total output produced in the country. Internally the increase in cost of utilities, (Power, Gas, Transport, and Petrol) has impacted viability. The power & gas outages have further deteriorated capacity utilization. The shortage of cotton crop in China increased the prices of cotton. The increased demand of yarn export created problem of raw material shortage in the local market.

Research Questions: What kind of supplier integration should ITI implement to avoid the raw material shortage in the current situation of Pakistan?

What would be the outcomes of having that integration for ITI?

Purpose: The purpose of this thesis is to investigate what kind of supplier integration ITI should adopt to avoid raw material shortage in the current situation of Pakistan. Further, the thesis leads toward the possible outcomes of integration which may be positive or negative by keeping in view the theory and practice.

Method: The empirical data is based qualitative data. A case study is carried out at the Pakistan textile company ITI Industries Ltd. The thesis is based on the positivistic perspective and with a deductive approach.

Conclusions: We suggest the quasi integration rather than the full supplier integration. By having the integration with supplier and making them partners ITI can avoid the raw material shortage. Because than supplier feels the more responsibilities to provide the raw material to its strategic partner rather than to go for other
buyers. At that time ITI has a limited approach on integration but integration with suppliers is more valuable than only providing raw material. These are dynamic capabilities and competitive advantages.
II. Preface

Writing the thesis we got the opportunity to enhance our concepts on supplier integration process. This work has extensively developed our understanding and allowed us to spread out on modern-day perspectives of the subject.

First of all, we are equally thankful to our families back home who have been the sources of continuous encouragement and support all the way long. Their overriding support and confidence always pushed us to go one step further in doing this task brilliantly to meet our degree requirements. Second, we are grateful to our tutor Roger stokkedal who helped us a lot in the completion of this thesis and without his guidance we would not be able to complete this thesis. His critical finding and review shaped this thesis up to the mark of being a quality manuscript. Third, we are also thankful to our opposition group for his critics, comments and suggestions on our script. Moreover, we are also very much thankful to our examiner Helena Forslund for her understanding and feedback throughout the seminars. Finally, we are single handedly thankful to each other in a group to stand committed and cooperative in completing the Thesis.

At the end; we are whole heartedly thankful to Mr. Shahbaz Sabbir, Manager of Accountancy and Taxation (ITI), Mr. Iftikhar Ahmad Production Manager (ITI) and Mr. Aabas Ahmad procurement and purchasing manager (ITI) for their confidence encouragement throughout our entire thesis. They have been supportive enough to in time provision of relevant data and information whenever we asked for. Their continuous review of the work helped us to secure scientific credibility of The Thesis.

Mubashir Hasan

Mubassir Ali Shah

Görkem Güler
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VI. List of Abbreviations and Acronyms

GDP .................. GROSS DOMESTIC PRODUCT
PVT .................. PRIVATE
LTD .................. LIMITED
PKR .................. PAKISTANI RUPEES
ITI .................. ITI INDUSTRIES
SWOT ................... STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS
TQM .................. TOTAL QUALITY MANAGEMENT
SC .................. SUPPLY CHAIN
SCM .................. SUPPLY CHAIN MANAGEMENT
SCI .................. SUPPLY CHAIN INTEGRATION
HR .................. HUMAN RESOURCE
US .................. UNITED STATES
1. Introduction

This chapter includes the background about the textile industry of the Pakistan and its contribution towards the GDP, supplier integration for avoiding the raw material shortage(Yarn) and also provides some basic introduction of the selected company ITI along with the problem discussion and purpose of the study.

1.1 Background

Pakistan is the 4th largest cotton producer and the 3rd largest cotton user in the world which makes the textile industry of Pakistan is a very crucial sector of the country. It contributes to the country's GDP about 8.5% and the total contribution of 38 percent of the work force of the country. From the exporting point of view, it has been the main driver of the country export for 50 years. Among Asian countries, Pakistan is the 8th biggest exporter for textile products. The last ten years, textile sector attracted US$ 7.5 billion investment to the country, which is very important if we compare to the total investment amount of US$3.04 billion in 2009. These data show that the textile industry is the backbone of the Pakistan’s economy (http://investinpakistan.pk, 24 March 2011, http://www.finance.gov.pk, 25 March 2011).

Increase of utility cost such as power, gas, transport, and petrol has had negative effect on viability. Capacity utilization has been deteriorated by outages on power and gas. Cotton prices were increased because of cotton crop deficiency in China. Yarn availability in the local market was reduced due to increased demand of yarn export. Textile sectors in production and export of yarn products aggravated until unviable level the reason why huge prices of cotton yarn for exporters of Garments, Knitwear, and Home Textile. Global deficiency of cotton availability especially shortage of Chinese crop gave chance to foreign demand of Pakistan’s cotton yarn to be risen exceptionally. Even though China is the biggest producer of cotton and the fiercest competitor of Pakistan in the world market, they have provided a big amount of yarn from Pakistan. In 2009 fiscal calendar shows that cotton yarn export was increased 50% in the first six months (Jul-Dec). Spinning industry makes the basic raw material for the downstream industry. The existing capacity in the spinning sector is more than local demand, and hence moderate quantities of yarn are exported each year. Nevertheless, intensive exports during the year caused the downstream industry face critical
shortages of yarn. Consequently, the downstream industry began to close down. In January, 2010 Government imposed a quota of 50 million kg per month for export of yarn. The availability of yarn in the local market remained scant and prices kept rising. The anxiety and pain suffered by the local industry intensified, as exports of value added textiles were declining at alarming rates (Decrease in: Cloth 16%, knitwear 8% and garments 8%). Textiles are exported in the form of Yarn, Fabric, Readymade Garments, and Bed Wear & Made Ups (www.finance.gov.pk, 12 April 2011).

Table 1-1The Economic Contribution of Textile Industry in Pakistan in 2008-2009 period.  

<table>
<thead>
<tr>
<th>TEXTILE INDUSTRY’S ECONOMIC CONTRIBUTION 2008-09</th>
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<tbody>
<tr>
<td>Exports</td>
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<tr>
<td>Manufacturing</td>
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<td>Employment</td>
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<td>GDP</td>
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<td>Market Capitalization (Listed Companies)</td>
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The Pakistan textile industry contributes more than 54% to the country's total exports, which amounts to around 9.57 billion US dollars. The industry contributes around 46% to the total output produced in the country. Pakistan takes place among the big exporter of textile products in Asia. Textile industry contributes 8.5% to the total GDP. In Pakistan, 38% of employment is provided by this industry, which equals to 15 million people. The rules and regulations in the industry are determined by the chief organization called “Pakistan Textile Mills Association” (Ministry of Finance of Pakistan, 2011).

According to Tracey (1999), Corporations have been strained to focus on supply chain management due to several reasons such as, customer demands increase and variety, communication and information systems advance, global competition, governmental regulations decrease, and increase of environmental consciousness.

The concept of supply chain consist the whole process from suppliers to customers. In this process, supplier management is one of the key issues because of the cost of raw materials and component parts mostly create the biggest portion of a product’s cost. Hence, supplier
selection is an important issue, and the firms which select right suppliers, significantly reduce purchasing costs and increase their competitiveness among others (Cebi and Bayraktar, 2003). The average spending on materials is about 45 to 65 percent depending on the product. Moreover, instead of the cost of a raw material or component part, quality and timely delivery is also important for companies to main their competitiveness, and this increase the complexity to outsourcing and the decision for selecting the right supplier. Therefore, many companies attempting to streamline their suppliers (Karpak et al., 2006).

In other words, global competitive world has changed the relationship and the perception between the buyer and the supplier. Alongside of the cost, other strategic and operational factors such as quality, delivery, flexibility has been considered in supplier selection process (Sarkis and Talluri, 2002). Traditionally, buyers used to focus on short term transactional purchases mostly based on cost considerations when buying materials from suppliers.

According to Sarkis and Talluri (2002), it is very important to understand that the processes of strategic supplier selection require consideration of a number of factors beyond those used in operational decisions. By the increased stress on the development and philosophies regarding organizations such as JIT and total quality management (TQM), and the growing importance of supply chain management concepts, the need for considering supplier relationships from a strategic perspective has become even more apparent.

ITI Industries (Pvt.) Limited is one of the famous and well known textile firm which produces the finished clothes after processing. Its major products are sold in the local market in different cities of Pakistan. Its subsidiaries are Ittehad (Private) limited (Spinning Unit) and Ittehad Fabrics (Pvt.) Ltd (Weaving Unit). Its spinning sector also fulfills the demand of local weaving industry (Interview with Mr. Shahbaz Sabbir, Manager of Accountancy and Taxation, 2011-04-12).

1.2 Problem Discussion

Textile industry in Pakistan has its own importance and contributing towards the nation’s economy, it includes spinning, weaving, dyeing and printing units (Ministry of textile Pakistan, yearly book 2007-2008). Due to the large scale of the industry it has great demand
of cloth on national and international level and also has plenty of suppliers and buyers in the market. As being mentioned Pakistan is suffering from the yarn shortage due to the less availability of the raw material and increase in the export of yarn to China (Bhatti, 2009). But now, Pakistan has a great economic, political and social crisis which leads to less availability of the supplier and customers in the market now a day especially in textile industry. On the other hand energy crisis also affecting the smooth flow of the businesses in the Pakistan, most of the small units are unable to survive due to the shortage of the electricity. The shutdown of the factories creates problems for the suppliers to provide raw materials on the required time. Using alternative means for generating electricity it is also increasing the material cost. Due to the less availability of the raw material there is a price fluctuation and suppliers has to suffer from losses on the other hand when there is shortage of raw material in the market supplier also take benefits of high prices due to the high demand and more buyers (The News, 2010). Sometimes supplier also sells their yarn in the open market at high prices and not delivers the full supplies to the actual buyers which they are responsible for delivery of material. In other words supplier have a contract with a buyer for providing them a specific quantity of raw material but at the delivery time supplier notices the high price in the market so he delivers less quantity because of shortage of electricity and sells the remaining raw material in the open market at high price (Iftikhar Ahmad, Production Manager). By keeping in view all these problems most of the companies are working on integration with the supplier and buyers to avoid the risk of failure in the business. Our selected company ITI has supplier and commission agents for selling out the finished products (Sabbir, Manager of Accountancy and Taxation, 2011-04-12). But due to the crisis suppliers are not able to provide raw material and buyer (commission agents) are dependent on commission which increases the cost of the product. ITI has no such integration with supplier but it has only contracts with suppliers for the availability of the raw material, so it has to face the problems of supplies of material (Sabbir, Manager of Accountancy and Taxation, 2011-04-12).

1.3 Research Questions

- What kind of supplier integration should ITI implement to avoid the raw material shortage in the current situation of Pakistan?
• What would be the outcomes of having that integration for ITI?

1.4 Purpose

The purpose of this thesis is to investigate that what kind of supplier integration ITI should adopt to avoid raw material shortage in the current situation of Pakistan. Further the thesis leads toward the possible outcomes of integration which may be positive or negative by keeping in view the theory and practice.

1.5 Limitations

In The Thesis we are focusing on the supplying of raw materials of the respected firm in a certain economic situation. No other concepts and approaches will be considered.
### 1.6 Time Schedule

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<td>15/04 PM3</td>
<td>10/05 PM4</td>
<td>25/05 Submission</td>
<td>31/05 Final Seminar</td>
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**Figure: 1.1 Time plan of our master thesis**
1.7 Disposition

Introduction
- Background
- Problem discussion
- Research questions
- Purpose
- Limitations
- Time plan
- Disposition

Methodology
- Scientific perspective
- Science approach
- Research method
- Empirical data collection and selection
- Scientific credibility
- Reliability

Theory
- SCM and Integration
- Supplier integration
- Improving performance
- Supplier’s integration levels
- Outcome of integration

Analysis
- Analytical model
- Research questions
- Supplier integration
- Outcome of integration
- Discussion and recommendations

Empirical Data
- Company introduction
- Decision making
- Integration
- Production process and order fulfillment
- Adv. of contracts with suppliers
- Forces driving for integration

Conclusions
- Answers to research questions
- Summary of analysis and recommendations
- Suggestions for future research

Figure: 1.2 Disposition of the thesis
2. Methodology

The purpose of this chapter is to present how this thesis was conducted. The scientific perspective applied is positivistic. A deductive approach is chosen. Qualitative research methods were required to conduct this descriptive case study. Primary and secondary data were collected by different methods. Finally, the scientific credibility and reliability for this thesis are discussed.

2.1 Scientific Perspective

In scientific perspective we have further two broad concepts, which are Positivism and hermeneutics.

2.1.1 Positivism

Positivism researches often use experiments and statistics and prefer quantitative data. In recent age the word positivism is most often used synonymously with empiricism as a point of view that disregards the theoretical work of researchers. Positivism advocates that the knowledge should be based on valid facts and that the knowledge is assimilated through logic, for example mathematical models and experiment. Positivism claims that science provides us with the clearest possible ideas of knowledge (Ghauri and Gronhaug, 2005).

According to Neuman (2003), positivism has been an extremely influential tendency, not only in research, but also in other areas of society. Many applied researches imply positivism. Positivism has a long history within the philosophy of science and among researchers. Positivism seeks thorough measures and objective research and hypothesis is tested by carefully analyzing numbers from measures (Payne and Payne, 2004). As per, Cohen et al., (2007), in the social sciences and the philosophy of the social sciences, positivism has supported the emphasis on quantitative data and precisely formulated theories.

2.1.2 Hermeneutics

Hermeneutics is an approach based upon the analysis and interpretation of texts. It focuses on interaction and language; it seeks to understand situation through the eyes of the participants. It emphasizes a detailed reading or examination of text (Cohen et al., 2007). It is a special form of documentary analysis (Robson, 2002).
A researcher tries to discover the meaning rooted within the text. When studying the text the researcher tries to absorb or get inside the viewpoint it presents as a whole and then develop a deep understanding of how its parts relate to the whole (Neuman, 2003).

### 2.1.3 Scientific Perspective of the Thesis

The scientific perspective of The Thesis is positivism. The thesis studies things that can be observed with human senses. The thesis starts with the introduction followed by the methodology used then comes the theory and literature review on the subjects of political, economical, social and energy crisis in Pakistan and how it affects textile industry of Pakistan, how can ITI integrate with suppliers in these crisis. Then the thesis answers the research questions based on both literature and empirical data collected from the ITI mills.

### 2.2 Scientific Approach

According to Hyde (2000), there are two general approaches in western research that may result in the acquisition of new knowledge, namely the inductive and deductive research approaches. Further Hyde (2000), argues that he inductive research approach is a theory development process that starts with observations of specific cases and seeks to establish generalizations about the phenomenon under investigation. The deductive research approach is a theory testing process, which began with an established theory or generalization, and seeks to see if the theory applies to specific occurrence.

#### 2.2.1 Deduction

In deductive method conclusion are drawn through logical reasons. In this type of research hypotheses are builds from existing knowledge, generated from literature. The hypotheses do not essentially need to be true. The hypotheses are then tested empirically after which it can be accepted or rejected. In this type of research theories and hypotheses comes first, observation and findings are drawn from the build theories. The entire research process is initiated by theories (Ghauri and Gronhaug, 2005). The deductive research approach is a theory testing process, which starts with an established theory or generalization, and try to find if the theory applies to specific case under observation (Hyde, 2000).
2.2.2 Induction

Induction is based on empirical evidence and deduction is based on logic. In induction method we draw conclusion from what we have observed empirically. In induction the research process starts from observation followed by findings and then theory building (Ghauri and Gronhaug, 2005). In inductive methods theories developed are the outcome of research (Bryman and Bell, 2003). Inductive method is often used in qualitative type of research, where process goes from assumption to conclusions. In this method the process starts with ideas which then lead to propositions, theories and prediction (Ghauri and Gronhaug, 2005).

2.2.3 Scientific Method of The Thesis

The thesis uses a inductive approach. It starts with the study of the literature and relevant information regarding company and theory to the research area and research questions and then tests the theory with the help of empirical information collected. The thesis first develops a theoretical background for the research topic and moves on to test it through practical information taken from the company.

2.3 Research Method

Both Quantitative and Qualitative data are important for research purpose. As Cohen et al. (2007) emphasizes, quantitative data analysis has not greater or lesser important than qualitative analysis, the use of it is entirely dependent on fitness of purpose. On the other hand, they are not mutually exclusive (Ghauri and Gronhaug, 2005).

2.3.1 Quantitative Method

Quantitative analysis which is also called structured method is more scientific by its nature as it employs statistical methods and other measurements for finding results (Bryman and Bell, 2003). The purpose of quantitative methods is to explore causes and make predictions, the perspective is objective through use of precise measurement, when the sample size is large and data is generated through responses to objective measurement and analysis is statistical (Thompson and Walker, 1998). Quantitative data are usually associated with numbers, as numbers possess specific characteristics that make them very useful for analytical purpose (Ghauri and Gronhaug, 2005).
2.3.2 Qualitative Method

Qualitative research does not employ measurement and statistical data as qualitative does. Findings in qualitative research are not arrived at by statistical methods or other procedures of quantification. In qualitative research the skill and experience of the researcher are very important for the analysis of data, that’s why we can say it is a mixture of rational, explorative and perceptive method, where the perception of the researcher can have effects on the results (Ghauri and Gronhaug, 2005). Qualitative research most often use cases and contexts. According to Cassel et al. (2006), Qualitative methods have had a long history within the social sciences generally and have for many years made a significant contribution to numerous substantive areas of management research.

2.3.3 Research Method of The Thesis

Qualitative methods have been used in the thesis, where information on practices and operation of case company has been collected using interviews with the personals of the company and observation. The qualitative method is more appropriate for the research area since the research questions are more related to practices and policies rather than quantitative method.

2.4 Case Study

A case study is a particular instance that is commonly designed to demonstrate a more general principle. It is the study of an instance in action. It enables readers to understand ideas more clearly than simply by presenting them with abstract theories and principles. As per Cohen et al. (2007), it provides a unique example of real people in real situation. It strives to portray ‘what it is like’ to be in a particular situation. Case studies go for analytical rather than statistical generalization that is they develop a theory which can help researchers to understand other similar cases, phenomena or situations (Robson, 2002). A case study establishes cause and effect; they observe effects in real life contexts (Cohen et al., 2007). Case study approach is particularly valuable when the researcher has less control over events (Hitchcock and Hughes, 1995). A case study often involves data collection through several sources including both primary and secondary. The main characteristic is the intensity of the study, enabling to explain the unique features of the case and to point out the characteristics that are common in several cases (Neuman, 2003). In business studies, case study research is
particularly useful when the phenomenon under investigation is difficult to study outside its natural setting and also when the concepts and variables under study are difficult to quantify. Case study method is often preferred for studying with a single organization and for identifying factors involved in some aspects of an organization’s behavior or smaller unit, such as a marketing or financial department (Ghauri and Gronhaug, 2005).

2.4.1 Case Study of the Thesis

In this Thesis descriptive and comparative case study methods are used. A benchmarking approach with other companies in industry will be applied with the research questions and those research questions tried to be answered.

2.5 Data Collection

There are basically two types of data sources, Primary data sources and secondary data sources.

2.5.1 Primary Data Sources

In business studies majority of researcher need to collect primary data to be able to answer their research question. The data collected by researcher is relevant to their particular study and research problem is called primary data. The sources of the primary data are observations, experiments, surveys, questionnaires and interviews. The advantage of such sources is that they are used for the particular project at hand (Ghauri and Gronhaug, 2005). All those sources which are capable of transmitting firsthand account of an event are therefore considered as sources of primary data.

Primary source are considered as life blood of historical research. Primary sources are those items that have a contact with the events being researched, which could include written and oral testimony provided by the participants (Cohen et al., 2007). The most widely used method of primary data source is interviewing (Payne and Payne, 2004). The structured, semi structured and unstructured are three types of questionnaires, which can be put off on an interview. In structured interviews question are closed ended and have specific answers may be in form of alternate options prejudged by the interviewer. They are questions that are going to help you get answers to the research question. The second type i.e. Semi-structured interviews are based on open-ended questions; the answers are freely probe by the interviewer.
for elaboration. The third type un-structured interviews do not have pre-defined questions, rather they have topics. The interviewer tries to enables respondents to give answers based on their experiences, opinions and feelings in their own way (Payne and Payne, 2004). According to Robson (2002), primary data can be collected by the help of survey techniques, known as another method for data collection. It is frequently used in descriptive or exploratory research. Written questionnaire are sent by mail or handed to people in whom the researcher asked questions regarding the ongoing research. By the help of survey techniques, a researcher gets a picture of what majority of people think regarding specific issues.

2.5.2 Secondary Data Sources

Secondary data are information collected by others for purpose that can be different from ours. Secondary data is the data or information which is already available in one form or other. The sources of secondary data include books, journal articles, quoted material, textbooks, encyclopedia, other reproduction of material, online data sources such as web pages, commercial research companies, and researches conducted by students, government, semi government organizations and catalogues. The choice of source depends on the reliability of the information. Secondary data are useful not only to find information but also to better understand and explain the research problem. While using the secondary data it should be contented that the data is updated (Ghauri and Gronhaug, 2005; Cohen et al., 2007).

The first and foremost advantage of using secondary data is the enormous saving in time and money. Secondary sources also facilitate cross-cultural/international research, as it is easier to compare similar data from two or more countries; it is inexpensive and easier to access (Ghauri and Gronhaug, 2005).

2.5.3 Data Collection of the Thesis

Both primary and secondary sources of information have been used in the thesis for the purpose of collecting data. The secondary sources have been used to establish the relevant theoretical framework for the thesis which discusses the relevant literature to the research area and company website have been used for collecting information on industry and the case company. The primary sources of data collection have been used in form of interviews to the responsible persons in ITI. The interviews are semi structured for the convenience of the managers to understand the exact context of the questions.
Table 2-1: Contacted responsible people for the thesis

<table>
<thead>
<tr>
<th>Contact persons</th>
<th>Position</th>
<th>Location</th>
<th>Interview date</th>
</tr>
</thead>
<tbody>
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<td>Iftikhar Ahmad</td>
<td>Production Manager</td>
<td>Faisalabad Pakistan</td>
<td>2011-04-04</td>
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<tr>
<td>Shahbaz Sabbir</td>
<td>Manager of Accountancy and Taxation</td>
<td>Faisalabad Pakistan</td>
<td>2011-04-12</td>
</tr>
<tr>
<td>Aabas Ahmad</td>
<td>Procurement And purchase manager.</td>
<td>Faisalabad Pakistan</td>
<td>2011-04-12</td>
</tr>
<tr>
<td>Muhammad Ijaz</td>
<td>HR Manager</td>
<td>Faisalabad Pakistan</td>
<td>2011-04-14</td>
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2.6 Scientific Credibility

Validity and reliability are two concepts, which the thesis will discuss in scientific credibility.

2.6.1 Validity

Validity is an important key of effective research, even if a piece of research is invalid then it is worthless. Validity is the touchstone of all types of educational research. At its core, measurement validity refers to how well the conceptual and operational definitions mesh with each other. Validity means that research is capturing whatever it is supposed to capture. It is used to measure true or correct. A research will be consider as invalid if it was not meeting certain type of validity, e.g. generalizability, replicability and controllability (Cohen et al., 2007).

Validity thus is a requirement for both quantitative and qualitative research. Both qualitative and quantitative methods can tackle with construct validity, internal and external validity, which are the three common kinds of validity.

According to Cohen et al., (2007), the term internal validity describes the extent which we can conclude that a casual relationship exists between two variables. Internal validity tries to demonstrate the explanation of a particular event, issue or set of data which a piece of research provides, can actually be sustained by the data. In some degree this concerns
accuracy. To be able to establish internal validity many observations should be done to make sure that the final conclusion isn’t made up of assumptions.

As per Neuman (2003), and Cohen et al., (2007), external validity refers to the extent to which the findings can be generalized to the whole population, wide cases or situations, particular persons, settings and times, as well as across types of persons, settings and times. It is used primarily in experimental research. It is the ability of generalize findings from a specific setting and small group to a broad range of settings and to wide population, cases or situation.

According to Neuman (2003), construct validity can be defined as the extent to which an operationalization measures the concept which it purports to measure. In this form of validity articulation of the construct is important, this means; is the researcher’s understandings of this construct similar to which is generally accepted to be constructed? In this type of validity the agreement is sought on the operationalized forms of a construct, clarifying the meaning of the construct. It used a variety of measures which look at how well similar indicators converge or on the other hand how well different indicators diverge or distinguish dissimilarity (Cohen et al., 2007). Cooper and Schindler (2001), suggest that construct validity is addressed by convergent and discriminate techniques.

2.6.2 Reliability

Reliability in quantitative research is essentially a synonym for dependability, consistency and replicability over time, over instruments and over groups of respondents. It is concern with precision and accuracy. For a research to be reliable it must demonstrate that if it was to be carried out on a similar group of respondent in a similar context, then similar results would be found (Cohen et al., 2007).

2.6.3 Validity and Reliability of the Thesis

To bring the validity in the thesis we formulate the questions for the interviews in a simple and clear way to avoid the ambiguity, the questions are formulated after through study of the theories to create the relevancy. The production process in the textile mills is more or less the same in many textile companies regarding spinning, dying and weaving etc. Therefore, a generalization of the results would be possible but depends on how similar is the comparing company to ITI. Interview with a company manager brings reliability in the thesis as, he is
working with this company for a long time and he knows the true picture of the company. The data provided by the company managers is up to date and reliable.
3 Theory

This chapter includes the theoretical knowledge about handled issues through the study. Informing reader with the essential knowledge about main field, which play key role for understanding of the study, is aimed.

3.1 SCM and Integration

Companies are increasingly looking to differentiate themselves from other market players (Dewhirst and Davis, 2005; Gummesson, 1994) and they are always trying to make strategies that will give them an edge to differentiate themselves from the competitors in the eyes of their customers (Letelier et al, 2003) This differentiation is achievable by the practices of supply chain management. These practices includes, linking the processes of buying and selling between suppliers and manufacturers, its resellers as its customers and its end-users as consumers, using technology, companies can achieve unexpected results (Simatupang and Sridharan, 2002; Walker, 2005).

In the business state of affairs where practical resources become increasingly limited, it is often a hard task to be an expert in all competitive capabilities. Also, even if a firm has the sufficient available resources to realize all of these capabilities, another firm in the supply chain (SC) may possibly be better suited to implement one or more of the practical resources because its relative position and location in the supply chain may be better to demonstrate the resources. In such situation, a firm needs to attempt alignment or integration with other members in the chain with special resources and technological knowledge to keep a range of competitive capabilities (Kim and Cavusgil 2009).

SCM (supply chain management) strives to enhance competitive performance by closely integrating the internal functions within a company as well as effectively linking them with the external operations of suppliers, customers, and other members of the channel. Accomplishing SC integration is a complex assignment. The strategy must span material and product flow from producer to final consumers and it should include a variety of organizational entities, both external and internal. (Kim & Cavusgil, 2009)

This means that a firm which is committed to the effective construction of SCM practices needs to consider more about SC integration. SCM practices strive to accomplish superior supply chain performance (cost, quality, flexibility and time performance) which require
internal cross-functional integration within a firm and external integration with suppliers or customers to be successful. (Swink et al., 2007)

Such strategic coalition can be more crucial in cases where a company is not large and strong enough which makes control of the entire supply chain from suppliers of raw materials to final customers (Kim, 2009).

Applying this in a supply chain context, SCI can be defined as the extent to which a manufacturer strategically collaborates with its supply chain partners and collaboratively manages both intra- and inter-organization processes. (Barbara et al., 2010)

3.1.1 Supplier integration

Supplier integration is achieved through alignment, information sharing, and interactions between firms and their suppliers (Ragatz et al., 2002). Regarding the extent of collaboration, the supplier integration/involvement is defined in different ways. Supply chain integration involves the processes of collaboration across functional departments, suppliers, and customers to arrive at mutually acceptable outcomes (Pagell and Krause, 2004). Collaboration is a key element of supply chain integration because strategic collaboration is required to enable cross-functional communication and joint efforts (Flynn et al., 2010).

3.1.2 Extent/Level of integration:

Supply chain integration can be one of the three types, according to spekman et al., (1998).

Low level of integration: in low level of integration, there is open market negotiation, based on price discussion and argumentative dealings. Here the no. of supplier to deal with will be more.

Medium level of Integration: in medium level of integration firm is coordinating with fever suppliers. It is characterized by the exchange of essential information and establishing long term relationship.

High level of integration: High level of integration in the model of Spekman et al. (1998) is defined by collaboration with supply chain integration, joint planning and processes, all based on trust and commitment and with a common future vision.

Another level of supply chain integration was discussed by, (Lee, 2000; Bagchi and Skjoett-Larsen, 2002). According to their discussion, supply chain integration could be one of the two types, i.e. Information integration and organizational integration.
In informational integration according to them, the firms exchange information and shares knowledge, in process management, design, planning and control, technology exchange and new technology adaption and the sharing of resources and risk.

Organizational integration in their definition is about sharing ideas, institutional culture, decision making, skills, trust building, and creation of bonds. Bagchi and Skjoett-Larsen (2002) further include joint performance measurement and problem-solving among the organizational integration characteristics.

Cooper et al., describes the level of integration among partners, based on different processes. According to their school of thoughts the extent of integration and importance for different process with partner should be identified, which will give us different level of integration.

According to Forslund and jonsson (2007), supply chain integration for a focal company is two dimensional, i.e., Up-stream process integration and down-stream process integration.

Upward integration is combining business processes with supplier and downward integration is combining activities with costumers.

Furthermore different authores((Handfield, 1993; Choi and Hartley, 1996; Morash et al., 1996; Fawcett et al., 1997; Birou et al., 1998; Bozarth et al., 1998; Daugherty et al., 1999; Waller et al., 1999; Stank et al., 2001) has stated integration to be of three dimensions, i.e. internal integration, supplier integration, and customer integration.

Internal integration is the one between different deparment of the organization itself.

Supplier integration is combining processes with supplier, and Customer integration is integrating activities with customers.

From all the above definition, we conclude that supplier integration/Up-stream process integration is most suitable for our case company. Supplier integration is the most common form of supply chain integration (Fawcett and Magnan, 2002). Supplier integration involves the effective alignment, information sharing, and participation in the interactions between firms and their suppliers (Ragatz et al., 2002). Supplier integration requires a change in attitude away from one of adversarial to one of cooperative, including joint efforts in product development, problem solving, technology exchange and design support.

Supplier integration is achieved through alignment, information sharing, interactions between firms and their suppliers (Ragatz et al., 2002).
In this research, supplier integration into organization process chain can be defined in two ways, quasi supplier integration and full supplier integration, Fig. 3.1.

The term quasi supplier integration refers to joint development efforts with suppliers, interaction taking place only at certain times. The development process of both organization and supplier remain half-connected and the basic knowledge and information stays with each party’s business, taking other side only advantage of the other side’s input and response. In the full supplier integration form, both organization and supplier contribute and share resources to a much greater degree (Tang, 2007).

![Figure 3.1](image.png)

**Source:** (Tang, 2007)

A number of studies have been made from a relationship and network perspective, which observe the relationships between various types of small and medium sized suppliers, their capabilities and opportunities and customer.

Different types of material providers may require different current and future resources to address the opportunities and innovation in their relationships. There is relatively very limited study about how the smaller supplier aligns their resources with the customers to take advantage of available opportunities (Ford *et al.*, 2003).

Different authors writers from various perspectives have interest in understanding conceptualizing and characterizing the interaction between suppliers and customers (Araujo *et al.*, 1999).

A dramatic shift has been observed in recent years which have taken place from a transactional to relational-oriented approach to understand how suppliers and customers engage with each other. Although the relative importance may have shifted to the relational...
approach, may be not all suppliers could follow this strategy in all situations (Ford et al., 2003).

Customers sometimes may only have limited resources to handle suppliers, and sometimes they might not be able to constantly fulfill the resource-demanding requirements of the relational approach. Similarly, suppliers may have seen potential benefits, which are accruing to established relationships with one or a few major customers, focusing many of their resources on just one customer. (Johnsen, 2002)

3.1.3 Different types of suppliers

According to Araujo et al., (1999), many authors propose that both customers and suppliers need to have a reasonable collection of different types of relationships that may supply them with a wider range of payouts. Different authors proposed different supplier portfolio models in their literature. These are typically two-dimensional matrices for categorizing multiple relationships for the purpose of balancing relationship investment relative to relationship intensity, and for guiding firms in suitable relationship development and managerial activities (Wynstra and Pierick 2000). Portfolio models can enable firms to choose better types of relationships required under different sets of “external contingencies” and how best to manage each relationship (Philipsen et al., 2008).

As per Blenker et al., (2001), this paper takes on distinction between three types of suppliers:

- Standard goods suppliers,
- Traditional suppliers
- Partnership suppliers.

Under this research, the framework was recognized as most suitable because it is applicable to small and medium-sized suppliers, i.e. the standard goods supplier is characterized by supplying standardized components and goods; the traditional supplier delivers customer-specified operations; the partnership supplier has a strategic value for customers and delivers goods developed together with the customer.
Table 3-1: comparison of three types of supplier
Source (Philipsen et al., 2008)

<table>
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<th>Standard goods supply</th>
<th>Traditional supply</th>
<th>Partnership supply</th>
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DESCRIPTIONS OF SUPPLY CHARACTERISTICS:

| Products and services delivered by the supplier | Standard products or services which can be ordered from a catalogue or order list | Products, processes and services developed from customer specifications/drawings | Customer-adapted products, services, processes and systems developed in cooperation between supplier and customer |

REQUIRED CAPABILITIES FOR SUPPLIERS

| Managerial systems, skills and knowledge base, values and norms | Internally focused | Governance capability. Monitor and manage the flow of information, material, components and products | Governance capability. Monitor and manage the flow of information, material, components and products |
| Relationship management systems | | | Capability in management of relationships and collaboration |

Each type of supply is based on a bunch of competencies. Andersen and Christensen (1998) and Moller et al., (2000), argue that the distinction between a standard goods supplier, a traditional supplier and a partnership supplier is based on two main dimensions, discussed earlier.

3.1.4 Improving outcomes through supplier integration

According to Krause (1997), efforts by purchasing and materials managers should promote an environment that enhances performance by working to create efficient value-added manufacturing processes, small work-in-process inventories, high-quality products, and reliable on-time delivery (Krause 1997). When suppliers are selected with the above mentioned capabilities, both supplier performance and the firm’s manufacturing performance are expected to increase. Here it is noted that the 2nd critical practice is supplier involvement, especially involving suppliers in product development and continuous upgrading. The modern accord is the responsibility for designing and manufacturing components and subassemblies, which are not core competencies, should be shifted to those suppliers which have the appropriate technology and experience for it. Under this methodology, the companies with the rich experience, capabilities specially regarding production of each component in which they
are expert. Thus partnerships between various customers and suppliers provide help in the creation of supply chain that focuses on the needs of the final customer. According to Vonderembse and Tracey (1999), strategic alliances cause increasing of purchasing and consequently expand the sphere of material managers. Most importantly the interaction and communication with the different parties, for example, suppliers, customers and other concerned actors within the business circle is very much essential to ensure internal and external resources, necessary to understand for the improvement of overall performance. The ultimate goal of integration between suppliers and their customers is to provide the product with the best value to the final customer. This includes actively involving suppliers into the organization’s design process and establishing a pattern of cooperation in continuous expansion efforts (Towler, 1996).

These processes assist the supplier to deliver goods efficiently; in a cost-effective way and to quickly react to changes (Swink et al. 2007)

These integration practices consists of not only operational supplier integration activities which aims to share information but also structural processes and strategic decisions including new initiatives supply chain to manage changing and creating both cost effectiveness and process flexibility.

3.1.5 Supplier’s integration levels

Integration with supplier can be of many levels, ranging from data sharing to contribution in production. Good working relationships with suppliers are often a requisite condition for supplier integration in production processes (Handfield, Ragatz, Petersen and Monczka 1999).

Following are different levels up to which integration with supplier could be achieved.

- Contribution of suppliers in process of procurement and production
- Organizing of Quick ordering system
- Integrating Data in both internal functions and production
- Real time searching of inventory level
- Level of computerization for customer ordering
- Periodic contacts with customers
- Sharing of production schedules, capacity, plans and inventory information with suppliers and customers
Coordination of orders and invoices
Supply management, Stock holding arrangements, Direct line replenishment
Supply chain engineering for process standardization across supply chain. (Kim 2009; Barbara et al 2010; Prabir et al 2005; Rodney and Daniel, 2001)

3.2 Outcome of integration

In the outcomes of supplier integration, Handfield (1993) wrote, it is more likely that supplier integration enables frequent deliveries in small lots, use single or dual sources of supply, evaluate alternative supply sources on the basis of quality and delivery instead of price, and establish long-term contracts with suppliers to improve supplier delivery performance. Furthermore, Narasimhan and Carter (1998) point out that strategic long-term relationship i.e. can have a positive impact on the on time delivery capability. Likewise, Li et al. (2003) reported that direct supplier development and supplier’s strategic objective alignment have proven to be significant predictors of purchasing performance in terms of on-time delivery and quality performance.

3.2.1 Integration as Dynamic Capability

A dynamic capability is a special type of capability that allows a firm to become accustomed with environmental changes over time. Integration practices can be applied in a way that allows a firm to acclimatize to environmental changes. Supplier Integration as a dynamic capability can be used by firms to deal with change through supply chain agility. This dynamic capability includes routines embedded in the relationships between buyer-supplier and assists in the adaption of environmental changes. In the context of SI, the capabilities are reflected by the integration practices that direct the physical flow between buyers and suppliers, based on various types of data and knowledge in the supply chain. The ability to sense opportunities requires access to supplier information, which creates the capability to identify the need for new developments in the relationship between buyer-supplier. Different projects such as supplier development or additional investment in coordination systems may motivate and continuously improve integration in the supply chain. These projects allow firms to learn from each other, co-specialize, and administrate the supply chain better. (Vanpouckke, 2009)
Dynamic capabilities can be disaggregated into three different ordinary capabilities: (1) the sensing of opportunities and threats, (2) the grasp of opportunities, and (3) the preservation of competitiveness through enhancing, combining, protecting, transforming the business enterprise’s tangible and intangible assets when required. (Helfat et al., 2007)

3.2.2 Competitive Advantage

The ability of a firm to integrate its operations with partners is a skill that can be used to gain competitive advantage as closely integrated partners; to align more effectively their business plans and strategies together under emerging market conditions (Philipsen and Damgaard, 2008) In general a firm has a competitive advantage when it is able to create more economic value than rival firms. Economic value is simply the difference between the perceived benefits gained by a customer, which purchases a firm’s products or services, and the full economic cost of these products or services. There are two different ways a company can have competitive advantage. One way is to create a greater perceived customer benefits compared to its rivals where the costs of the companies are the same fig 3.2. The difference between the higher perceived customer benefits and the cost gives the economic value created. The companies’ competitive advantage is equal to the difference between the economic values of respected companies. The second way for a company is to have lower costs compared to its rivals when the perceived customer benefits are the same fig 3.3. The difference between perceived customer benefits and the cost gives the economic value created, thus the competitive advantage of the firm.
Firm A’s competitive advantage when it creates more perceived customer benefits

Total perceived customer benefits = $260

Total cost

Economic Value Created

Figure 3.2: Firm A’s competitive advantage when it creates more perceived customer benefits

Source: Adopted from the theories of the sections 3.2.2
A firm’s competitive advantage can be temporary or sustained. A temporary competitive advantage is lasts for a very short span of time. Sustained competitive advantage may last relatively much longer (Barney and Hesterly, 2008). Another competitive advantage is to improve customer service through increased stock availability and reduced order cycle time (Cooper & Ellram, 1993). It is premised here that for some of the world’s most successful organizations competitive advantages is sought and achieved primarily through its direct and indirect network of suppliers (Hines, 1997).
4 Empirical Data

The purpose of this chapter is to present the collected empirical data. First an introduction is made to ITI. Further the empirical data will be presented starting with, integration in ITI, SWOT analysis and outcomes of contracts. Following parts will be the advantages of contracts with suppliers and the forces driving for integration (contracts) in ITI.

4.1 Company Description

In 1980 ITTEHAD registered as a private limited company. At the moment ITI is one of the leading textile processing industry of Pakistan, owing assets more than 362 million PKR which equals to 3 million € with the 588 employees including 240 Permanent Workers and, 348 Temporary Workers (Muhammd Ijaz, HR manager, 2011-04-14). ITI Industries Private Limited is one of the famous and well known textile firm which produces the finished clothes after processing. Its major products are sold in the local market in different cities of Pakistan (Shahbaz Sabbir, Manager of Accountancy and Taxation, 2011-04-12). Its other business units are Spinning Unit, Weaving Unit, Printing Unit and Embroidery Unit (www.ittehadtextiles.com, 2011-04-21).

The structure of the ITI Industries Pvt Ltd is totally centralized. The management takes all the key decisions. All issues are resolved from the head office by the management. The main departments such as Marketing, Finance, Accounts, Purchase and Information technology works in the head office. The director’s offices are also in head office (Muhammd Ijaz, HR manager, 2011-04-14) As far as the suppliers are concern they have nothing to do with anything else except providing raw material to ITI. No one has any contribution towards the organization decisions all decision are taken by the top management of ITI. (Iftikhar Ahmad Production Manager, 2011-04-04)

4.2 SCM and Integration in ITI

ITI has no specific integration with suppliers and customers. ITI has only concern with the stakeholders according to specified terms; suppliers are only responsible for in time delivery of raw material on reasonable competitive price, suppliers have nothing to do with any other process and department. While in the modern era integration is consider important part of the business success. Suppliers and customer involvement is also an important perspective for
success of business entities (Aabas Ahmad, Procurement and Purchase Manager, 2011-04-12).

4.2.1 Raw materials

There are four inputs as raw material.

- Yarn
- Grey Fabric
- Dyes
- Chemical

Presently ITI is not facing any shortage in the Dyes and Chemical but they are facing the shortage problem of Grey fabric and specifically in Yarn. It's mainly because of low production of industries providing us raw material and export of yarn. Due to the less availability of Grey fabric and yarn, the bottle neck effect created and disturbs the smooth flow of business and production process (Aabas Ahmad, Procurement and Purchase Manager, 2011-04-12).

4.2.2 Supplier integration or contract with suppliers

ITI contracts with the supplier for in time delivery of the raw material. Contracts with the suppliers have two types:

- Cash on delivery
- Credit basis

In cash on delivery suppliers deliver the raw material or other required material and claim the payment from the ITI and organization paid the amount on the spot but it is very rare happened in some certain cases like when there is no other solution or need the material without any requisition. This term is decided with specific supplier and not widely accepted in ITI. Mostly credit terms are used with the suppliers that are consisting of 60-90days. Means that company pay the amount after 60 or 90 days after the delivery of the raw material and it is very common and also vary suppliers to suppliers. The said terms are based on profit margins as ITI increased the credit tenure the suppliers quote the rate with maximum profit margin.
In this contract, suppliers try to minimize the credit tenure and want to get high price, on the other hand ITI tries to make this credit period long at the low price of the raw material. After negotiation both parties agreed on the specific credit period and amount then they make a contract for a certain period of supplies of material. Contract with the buyers plays vital role in the business. If ITI repeatedly abuse the contract with the buyers, they stop the supply of raw material that may cause loss of production efficiency (Shahbaz Sabbir, Manager of Accountancy and Taxation, 2011-04-12).

Due to the shortage of the raw materials, there is almost 20% to 30% increase in the prices (Aabas Ahmad, procurement and purchase manager, 2011-04-12). Therefore ITI also change the minimum inventory levels and increase the lead time. ITI is also facing raw material shortage of About 30 (M) Mtrs in textile unit. Shortage of raw material by the suppliers caused cancellation of contracts with the buyers and damages the credibility among its clients (Iftikhar Ahmad Production Manager, 2011-04-04).

4.2.3 Different types of supplier

ITI has no such differentiation in suppliers but spinning unit of ITI is treated as partership suppliers and other main supplier Kamal Spinning, Chenab Textiles, Rahat Spinning are as traditional and standard goods suppliers. (Iftikhar Ahmad, Production Manager, 2011-04-04)

4.2.4 Supplier’s integration levels

When inventory software of ITI give the report that particular item has reached to re-order level quantity, ITI do order; this order basically based on consumption and material requirements for fulfilling the order from the customer of ITI. Mostly phone calls and email is used for placing an order. Written requisitions for ordering the raw material is in hard form is merely issued for receiving the material (Iftikhar Ahmad Production Manager, 2011-04-04).

4.3 Outcomes of supplier integration in ITI

ITI has contracts with suppliers which facilitate the organization in different ways which are as follows.

- Speedy supply of raw material when it is needed. ITI and suppliers has pre-defined terms and condition but due to the energy crisis or to meet the market demand ITI
need speedy supplies so they have good relation with suppliers and got the raw material. But this action depends upon the suppliers stocks and production.

- On time Availability of raw material when there is shortage in market. When ITI has contracts with suppliers for the raw material delivery so they tried to deliver it even when there is shortage in the whole market.

- Supplier has certain targets, achievement of these targets regarding fulfillment of contracts on time increases goodwill of ITI as well as increases volume of business.

- Production efficiency is also accelerating due to the smooth and in time delivery of raw material.

- Contracts with the suppliers also help full for Cost reduction like inventory cost, storage cost and fixed cost (Iftikhar Ahmad Production Manager, 2011-04-04).
5 Analysis and Recommendations

In this chapter the collected data form ITI is analyzed with respect to the described theories and further we analyzed the different elements of research question. The chapter starts with analytical model and research question for developing the understanding for the readers about what is going to be analyzed.

Research Questions 1

What kind of supplier integration should ITI implement to avoid the raw material shortage in the current situation of Pakistan?

To be able to answer this research question, firstly it’s important to remind the SCM and integration given in the theories and then try to implement it practically in ITI. The analysis given is not that much because ITI is having the lack of integration and supply chain concept. It is important to mention that in ITI there is no such integration and supply chain management so there might be low comparison between the theory and empirics. Therefore we include recommendation part which contain more data rather than the analysis part.

As we have mentioned in the theoretical part that strategic integration is more important when the firm don’t have size and strength to control whole SC form raw material to final consumer. ITI is a big group and have abilities to control the internal process but it external factors are not under its control for the accurate raw material deliveries.

Below supplier integration and its main types are discussed according to the different theories given in the theoretical part and it has been compared with ITI.

5.1 Supplier Integration

Types of supplier integration is an important part of the thesis so here the supplier integration and its main types are described according to the different theories and then it has been compared with ITI.
5.1.1 Types of Supplier Integration

Regarding the collaboration and integration, supplier integration/Up-stream process integration is most suitable for our case company. Further supplier integration as given has two broad ways quasi supplier integration and full supplier integration. In the quasi supplier integration both integrated partners interact with each other at certain times and remain half connected. In full supplier integration both parties are fully connected and share resources to great extend, but in the ITI they don’t have quasi or full integration they only have the contract with the suppliers for the in time deliveries of the raw material.

There are three types of suppliers; Standard goods suppliers is characterized by supplying standardized components and goods; the traditional supplier delivers customer-specified operations; the partnership supplier has a strategic value for customers and delivers goods developed together with the customer. In ITI, there is no such categories and differentiation about suppliers they treat them as main and mini suppliers their own spinning unit is considered as partnership supplier and other main supplier as Kamal Spinning, Chenab Textiles, Rahat Spinning are treated as tradition and standard goods suppliers.

As we observed the 2nd part of the research question which is about the raw material shortage and this shortage occurs due to the current slump in the economy of Pakistan. It is important to discuss the outcomes by integrating with the suppliers.

5.1.2 Integration levels of suppliers

There is different level of supplier integration like Participation of suppliers in process of procurement and production, Establishment of Quick ordering system, Data Integration in internal functions and production, Real time searching of level of inventory, Level of computerization for customer ordering, Periodic contacts with customers, Sharing of production schedules, capacity and plans and inventory information with suppliers and customers, Coordination of orders and invoices, Supply management, Stock holding arrangements, Direct line replenishment, Supply chain engineering for process standardization across supply chain. As mentioned above there are different levels of supplier integration which are feasible for the different firm according to their structure and size but in ITI there is no such supplier integration and therefore they don’t have such levels of integration but they have Periodic contacts with customers.
5.1.3 Improving outcomes through supplier integration

Purchasing and materials managers should foster an environment that enhances performance by working to create efficient value-added manufacturing processes, small work-in-process inventories, high-quality products, and reliable on-time delivery. In ITI, the procurement and purchase managers are trying to foster only the on time deliveries while they are ignoring the value-added manufacturing processes, small work-in-process inventories, high-quality products. ITI has contracts with the suppliers for supplying them the specified quantity and quality at the agreed rate, accordingly as mentioned in theory, supplier helps a firm by offering outstanding product quality, performance, availability, and delivering consistently. Other important issue is to select the right supplier for integration which can increase the performance and business process.

As given in the theory the ultimate goal of integration between suppliers and their customers is to provide the product with the best value to the final customer. This is the main focus of the selected company ITI, but they are lacking in that field due to the shortage of material. Supplier's integration assists the supplier to deliver goods efficiently, i.e. in a cost-efficient and flexible way, and to quickly react to changes. Before going for the suppliers' integration, companies should know to what extent they have to make collaboration with the suppliers.

Research Questions 2

What would be the outcomes of having that integration for ITI?

5.2 Outcomes of Integration

To be able to answer this research question, which is about the outcomes of the supplier integration? In the other words, what are the benefits of having such supplier integration? We are giving the following arguments.

5.2.1 Integration as Dynamic Capability

As mentioned in theory supplier Integration as a dynamic capability can be used by firms to deal with change through supply chain agility. This dynamic capability includes routines embedded in the relationships between buyer-supplier and assist in the adaption of environmental changes. Dynamic capabilities can be described into three different ordinary
capabilities, the sensing of opportunities and threats, the grasp of opportunities, and the preservation of competitiveness. The preservation of competitiveness can be brought through enhancing, combining, protecting, and transforming the business enterprises tangible and intangible assets when required. ITI can gain dynamic capability when they will integrate with its suppliers. Any change in textile market regarding the prices, new competitors and cheaper transportation sources can ITI share and discuss with their integrated partner suppliers. When there will be shortage of raw material, for ITI it wouldn’t be a big problem as their supplier will prefer them, as having integration binding.

5.2.2 Competitive Advantage

Competitive advantage is to improve customer service through increased stock availability and reduced order cycle time, and this competitive advantage is achieved through direct and indirect supplier integration. While having integration ITI and its supplier will have strong communication, so there will be a positive impact on the on time delivery capability. Supplier integration will have a more significant impact on customer delivery performance when technological uncertainty increased. Supplier integration will have a more significant impact on customer delivery performance when there is a low level of demand uncertainty. ITI can have competitive advantage over its competitors through supplier integration by improving customer service through increased stock availability and by reducing order cycle time.

5.3 Discussion and Recommendations

We have the following recommendation for ITI in the future, which we have drawn from the research study.

5.3.1 SCM and Integration

Organizations are focusing to differentiate themselves from their competitors (Dewhirst and Davis, 2005; Gummesson, 1994). This is achievable through SCM, by creating a link between buying and selling, suppliers and manufacturer and by using these links desired results can be achieve (Simatupang and Sridharan, 2002; Walker, 2005). ITI wants to differentiate itself from the other players in the market by providing quality product at competitive prices but ITI has no such SC integration for better quality and cost reduction.
ITI is one of the large groups of companies and have sufficient resources for further expansion. To be able to overcome the internal crisis ITI try to develop their own business to facilitate them like have their own weaving, spinning, printing units. By having all resources you still cannot overcomes the external crisis such as social political economical etc. Sometimes you can not use the resources in the perfect manner as the other integrated partner can use. According to the Kim (2009), even organizations have sufficient available resources and capabilities but other firm in the integration may use and implemented the available resources in good way by having good position and location in the supply chain integration. ITI establish its own power generation plant to overcome the energy crisis and also have its own spinning unit for the availability of the raw material but it is facing the shortage of yarn but ITI has the benefit of the electricity availability.

In the analytical model this thesis tries to analyze the difference between the theory and practice in the ITI, in the analysis part, there is narration of theories and actual situation of the selected company ITI. For the convenience of the reader we describe the purpose of the thesis which is to suggest the supplier integration to avoid the raw material shortage.
In the above figure 5.1 there is the actual situation in ITI they have energy crisis and due to this they have shortage in raw material and there is no integration with suppliers and they are receiving the available raw material and paying the amount for that supplies.

It is mentioned in the SCM and integration part that ITI has no such supplier integration and according to theory organization can achieve desired result by having the integration. Although ITI has resources but they are still facing the problem of material shortage. This shortage is due to the energy crisis, export to China and down fall of the economy but if they have supplier integration they may control the external factor as raw material shortage. ITI has its own power generation plan and have resources so they can integrate with their key suppliers. By providing them electricity to their suppliers for production they can help to remove the major reason for raw material shortage. It is depicted in the figure 5.2, that there is still raw material shortage because ITI just providing electricity but don’t have supplier integration. As mention in the problem discussion that supplier sometimes sells the raw material (yarn) in the open market at high prices without taking care of their customer and gives the excuse of energy shortage and other market problems. By keeping in view the thesis suggest ITI should have an integration to take the benefit of the full quantity of supplies at the reasonable price.
In figure 5.3, ITI has good inter organization integration and currently facing the problem of the raw material therefore they should apply quasi integration because they need to integrate with supplier to a certain extent it is better for the company first to implement quasi integration. If Raw material shortage still exists and if ITI feel the need of full integration they may apply it. ITI should categories its suppliers as standard, partnership and traditional suppliers which will help itself to allocate the integration and collaboration level.

There are some different levels of integration but ITI has problem of raw material shortage. Major reason in the current situation of Pakistan as mention in the background and problem discussion are three (exporting yarn to China, energy crisis and selling in the local market at
high prices) by keeping in view these problems ITI should have to apply for integration such an extent, where the suppliers feels responsibility and coalition with ITI. Then it will be the supplier’s responsibility to provide raw material on time at the specific quantity and quality. For that purpose participation of suppliers in process of procurement and production is feasible. There should be an integrated system with the suppliers and they can check the minimum inventory level and should send the required raw material. By adopting this practice supplier feel responsibility and business growth having the integrated partner of the big firm. In the figure 5.4 now there is an integrated model which ITI giving electricity and payments and by data sharing ITI is improving performance and overcome the shortage problem.

As far as the answer of the research question 2 is concern we have described the outcomes of having integration. According to the empirical study ITI focus on Speedy supply of raw material, Availability of raw material, achievement of targets, production efficiency, and cost reduction. According to the theory and analysis, outcomes of the integration are more than raw material availability and cost reduction. ITI can obtain competitive advantage through supplier integration by avoiding the raw material shortage at competitive prices. Firm can also learn from its suppliers by knowledge sharing and ideas about improving the production process. Other outcome of the supplier integration is dynamic capability and the ITI can adopt changes in the market with the help of the integrated suppliers and also can foresee the opportunities and threats. ITI can be informed about the market situation, and when there could be a shortage or price fluctuation by its suppliers fig 5.5.
Outcomes

Figure 5.5: Quasi integration
Source: own
6 Conclusion

In this chapter there is a conclusion of the thesis by keeping in view the research questions. Furthermore it leads towards the further research opportunities.

<table>
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<th>Summary of Analysis and Recommendation</th>
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<td><strong>Kind of Integration</strong></td>
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Table 6-1: Summary of Analysis and Recommendation

For proper understanding of the conclusion for the reader, firstly the purpose of the thesis is described.

- What kind of supplier integration should ITI implement to avoid the raw material shortage in the current situation of Pakistan?

After analyzing the theories about supplier integration and data collected from the selected company ITI. We can conclude that integration with supplier is much important in the current era for competitiveness. As Pakistan is facing the problems of energy and economic crisis...
most of the firms are facing the problem of shortage of raw material like ITI. In this crucial situation supplier integration is utmost important. In the recommendation part we shows in the figures the process of integration with suppliers and at the end by having quasi integration at the level of Participation of suppliers in process of procurement and production ITI can overcome the problems by involving the key suppliers with their production process. On the other hand ITI establishes its own power generation plant and can also sharing the electricity can remove the major problem of energy shortage. According to the production manger of ITI they also hesitate to involve the supplier due to the copy and piracy issue of design and process. By keeping in the view we suggest the quasi integration rather than the full supplier integration. By having the integration with supplier and making them partners ITI can avoid the raw material shortage. Than suppliers will feel more responsibilities to provide the raw material to its strategic alliance partner rather than to go for other buyers.

- What would be the outcomes of having that integration for ITI?

Presently ITI has a limited approach on integration but ITI should think of integration with suppliers as it is more valuable than only providing raw material. ITI is bit hesitate to create linkage with their suppliers but according to the theories there are both tangible and intangible potential benefits can be derived from the supplier integration. These are dynamic capabilities, competitive advantages, learning organization and cost reduction. At the end we can conclude that all outcomes which occurs due to the integration of suppliers are valuable for ITI to operate in the current changing environment of Pakistan, ITI can gain the competitive advantage in the form of in time deliveries at competitive rate and can learn from its supplier about price and market changes which will be helpful for increase the production at low cost.

Suggestions for future research

Supplier integration is the major focus of the thesis, but there might be further extensive and advance research should be done on the supplier integration. Supplier integration can be done in different ways and for different purpose but The Thesis is just considered the supplier integration to avoid the raw material shortage. In our selected company(ITI) there is no such
integration so it is limited by its analysis. Further research on vertical or horizontal integration also is feasible.

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