Qualitative Assessment of the Impact of Political Disruptions on Textiles Supply Chain Performance in Pakistan

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DECLARATION

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

Muhammad Asif
January 2017
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<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>APTMA</td>
<td>All Pakistan Textile Mills Association</td>
</tr>
<tr>
<td>APS</td>
<td>Army Public School</td>
</tr>
<tr>
<td>FATA</td>
<td>Federally Administered Tribal Areas</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>HRM</td>
<td>Human Resource Management</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>ITMF</td>
<td>International Textile Manufacturers Associations</td>
</tr>
<tr>
<td>KPK</td>
<td>Khyber Pakhtunkhwa</td>
</tr>
<tr>
<td>MQM</td>
<td>Muttahida Quami Movement</td>
</tr>
<tr>
<td>PD</td>
<td>Political Disruption</td>
</tr>
<tr>
<td>PML (N)</td>
<td>Pakistan Muslim League (Niwaz)</td>
</tr>
<tr>
<td>PPPP</td>
<td>Pakistan People Party Parliamentarian</td>
</tr>
<tr>
<td>PTI</td>
<td>Pakistan Tehreek-e-Insaf</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>ROS</td>
<td>Return on Sales</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>SCD</td>
<td>Supply Chain Disruption</td>
</tr>
<tr>
<td>SCP</td>
<td>Supply Chain Performance</td>
</tr>
<tr>
<td>SPDI</td>
<td>Sustainable Development Policy Institute</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>WTC</td>
<td>World Trade Centre</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organisation</td>
</tr>
<tr>
<td>GMM</td>
<td>Generalised Method of Moments</td>
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ABSTRACT

With growing regional competition, burgeoning global demand, increased pressure for service improvement and heavy reliance on the textile industry, it is important to understand the complex relationships between political disruptions and supply chain performance. Political disruptions within or outside the textile production system not only affect the processes of ginning, spinning, and weaving, but also the distribution of goods to the end consumers. For firms it is relatively easy to control the production systems, but it is challenging to manage disruptions that emanates from external stimuli. An improved understanding of this relationship will enable Pakistan to enhance its competitiveness in a globalised market.

There are a number of studies that have investigated transportation risks, disruptions associated with systems failure, and the impacts that natural disasters such as flooding and bushfires have on supply chain performance. The impacts of political disruptions on supply chain performance in Pakistan however are rarely examined empirically. In particular, there is a lack of interdisciplinary research that provides a deeper understanding of the role of political structures and processes resulting in a political disruption while linking it to the efficiency of production and distribution systems of the textile industry.

This thesis investigates the complex relationship between political disruptions and the supply chain disruptions that are linked with supply chain performance. This research was conducted using a structuration theory framework, with reference to domination, signification, and legitimation, which collectively provide the basis for exploring the role of agents, the methods they adopt to communicate message and how they used power and resources to fulfil their demand for change through creating disruptions. In-depth semi-structured interviews were conducted with twenty five agents representing textile organisations, third party logistics providers, and interest groups.

An investigation into the role played by agents shows the complexity of the interwoven relationships between political disruptions and supply chain performance. Interviewees have recognised political disruptions as a key threat to the efficiency of textile supply chain. Yet they are inadequately understood and insufficiently managed. They have
multiple forms, sources and variegated effects. It is found that they collectively create interlinked and interlocking vicious cycles within which political disruptions across different stages of supply chain are embedded as a repetitive system.

The interpretation of interview data enabled the development of a typology of political disruptions that further indicates external political disruptions to have a much wider impact on external supply chain operations than they do on internal processes. These disruptions can slow down or in some cases stop external supply chain operations such as procurement of materials and distribution of finished goods to markets. External disruptions also have a direct effect on the internal operations in that they cause an interruption in the production process. Internal textile production operational performance is based on external supply chain activities; this is because external disruptions lie outside the direct influence of the textile manufacturers.

The findings of this study indicate that textile supply chain disruptions reflect the multitude of methods used by agents to exchange the messages to bring social and economic change through political resistance. It is often achieve through systematically organised disruptions of the supply chain systems by agents which directly or indirectly interrupt the seamless flow of raw materials between facilities or the distribution of finished goods to end-customers political groups, manufacturers, the labour force, labour unions, supply chain operators, interest groups and customers. The findings from the interview data indicate that, disruptions in the Pakistan textile industry can emanate from internal or external environment, especially when agents are intentionally or unintentionally enabled to allocate resources. Manufacturers exercise their transformative capabilities to bring about desirable changes towards achieving the optimum utilisation of finite resources (raw materials, labour input) through production planning, scheduling, and execution.

With reference to signification, agents can have the most impact on supply chain performance through their interpretive schemes used to plan and deploy different methods of communication to transmit their messages to the targeted audience. It is found that politically motivated strikes are often considered as a means to communicate the messages for change and social transformation to the authorities in power to achieve certain purposes such as a pay rise in case of labour strike or resistance to certain laws
by political parties or interest groups. These disruptions, some subtle others extreme, create major transportation bottlenecks, delivery delays, and labour supply issues which in turn have had significant implications on supply chain performance. Lower performance was shown to be attributed to the constant threat of political disruptions that were affecting the efficiency of supply chain operations.

Interview results show that, textile supply chain disruptions are a result of agent’s mismanagement or intentional use of their allocative powers and the methods that they used to communicate the message. The means of communication depends on the agent’s situation and thus the impact occurs accordingly. Results show that, militants groups use extreme methods as a tool to communicate their messages to the targeted audience which in turn create direct effect on the transportation infrastructure and service operations. Pakistan’s political system has been affected as a result of conflicts from both inside and outside the country. These conflicts have included wars with neighbouring countries, a lack of political leadership, internal political conflicts, and interference from non-political agents. The results indicate that, political disruptions are not isolated events but are part of the political processes and institutional structures within which the disruptions germinate and grow. The political disruptions are not just linked to political systems but also the way textile manufacturers organise work within their organisations. This politically organised structure within the production systems has significant impact on supply chain performance.

In this thesis, a supply chain strategic framework was developed to help mitigate the likely impact of political disruptions on textile supply chain performance. This strategic framework can work as a comprehensive guide for textile manufacturing firms to engage in continuous improvement, information sharing, process integration, process synchronisation, and the establishment of mutual trust. Firms can adjust supply chain operations by devising and deploying tactics and strategies to adapt to the potential threat from political disruptions. Further research however is required to evaluate the effectiveness of these strategies to help firms employing politically-engaging practical methods to tackle the threat of political disruptions to textile supply chain. Future research will consider collecting objective data to gather information of the scale and intensity of political disruptions to find ways to enhance textile supply chain performance in Pakistan.
CHAPTER 1: INTRODUCTION
1.1 INTRODUCTION

The textile industry is paramount to the success of Pakistan’s economy (Aftab & Mehreen 2010). The textile industry in Pakistan has retained a significant share of world textile and clothing exports. Pakistan is the fourth largest cotton producer and the third major cotton consumer in the world (International Cotton Advisory Committee (2015). Producing a variety of textile products, from yarn to garments, for local consumption or export, the textile industry contributes about 8 per cent to its country’s total Gross Domestic Product (Siddique et al. 2012; Usmani 2012). The textile industry however focuses on the lower end of the world textile market. It supplies low-cost, yet high quality products as a means of attracting customers and retaining its customer base. The efficiency of a textile supply chain and its continual improvement are crucial for building customer trust, enhancing business growth and business competitiveness (Qi & Xiaoxu 2008). However, even though the size, production, and potential value of Pakistan’s textile industry are substantial and growing, there are weaknesses that exist at various stages of the supply chain, which makes it vulnerable to disruptions. Pakistan’s textile supply chain is more complex, geographically fragmented and relatively more vulnerable to disruptions than the supply chains of other manufacturing industries within Pakistan.

Among others, political disruptions in Pakistan are constant threat to the supply chain performance. Political strikes, political violence, corruption, terrorism and assassinations are commonplace (Tabassam 2016). Despite the significant, the impact of political disruptions is inadequately examined and poorly understood. In particular, the role of power, structures, rules and methods of communication as intervening factors necessitates a deeper interpretation of the interactions affecting political disruptions and supply chain performance. A structuration theoretical framework is employed in this thesis to explore the impact of potential supply chain disruptions and political disruptions on Pakistan’s supply chain performance. The thesis investigates the role of agents and the different methods of communication whereby the agent’s impact on the supply chain network will be explored. Chapter 1 presents the research problem, the research questions, the rationale for the research, the methodology and an outline of the thesis structure.
1.2 PROBLEM STATEMENT

In the late 1990s, textile manufacturing systems worldwide were simpler and the product flows between the point of production and the point of consumption was easier to control and manage (Thompson & Martin 2014; Whitney 2011). Textile production was not computerised, but this did not hinder manufacturers from producing and distributing textile products to local, regional and sometimes export markets (Majumdar et al. 2013). Nowadays, textile supply chains are becoming increasingly global, complex and competitive. Globalisation, strategic outsourcing and shorter product cycles of textile products are the consequences of cost pressure and competition among firms (Tang, O & Musa 2011). These changes create challenges for the textile industry attempting to meet burgeoning customer demand. With escalating global market competition, companies have realised that their success mainly depends on the lean and agility of supply chains (Bruce, Daly & Towers 2004). An increasing number of incidents in the supply chain operations has forced textile manufacturers to identify the causes of supply chain disruptions (Koprulu & Albayrakoglu 2007). But, none empirically investigated the impact of political disruptions.

One factor that contributes to these disruptions is the geographical dispersion of the textile industry across different parts of Pakistan (Memon 2015). The country’s textile industry is divided into small and large, or complex, units. Most of the textile production is based on small production units which are located elsewhere or away from each other (sometimes in different cities/regions) (Siddique et al. 2012). The textile supply chain has a complex supply chain structure due to separate production units and sequences of complicated processes required to complete value additions and supply chain operations (Sardar & Lee 2014). Another factor that increased the textile supply chain vulnerability is the time consuming production processes that obstruct the normal flow of supply chain operations (Bilal 2011). From the storage of raw material to the finished goods, textile production takes a long time. According to Sardar and Lee (2014, p. 7), from the “time that one garment product consumes from fibre to retailer is 66 weeks including storage time which is longer than any other product manufacturing process”.
In Pakistan, however, some supply chain disruptions occur due to unstable political conditions; in recent years, Pakistan’s textile supply chain operations have frequently been interrupted by political disruptions (Taha 2012). The continual failure of governments and their policies, military interventions, political strikes, political violence and terrorism have in isolation or combination contributed to lower supply chain performance (Tabassam, Hashmi & Faiz-Ur-Rehman 2016).

Pakistan has a long history of unstable political systems (Tuba 2016). Pakistan changed seven Prime Ministers from 1947 to 1958 (Abbas 2016). This was due to the country’s political system, which allowed the military to intervene in the political system (Jalal 2014). According to the World Bank Cross-Country Data (2015), political stability continually decreased in Pakistan during the years 1998 to 2013 (see Figure 1.1). In this figure, x-axis presents the score in relation to mean of zero and y-axis presents the value of each year from 1996 to 2013. Figure shows that, political stability is decreased from 1996 to 2002 and then starts improving but after 2004, again start decreasing. This gradual decrease in political stability has had a considerable impact on Pakistan’s economy, creating a situation in which industries are unable to maintain their supply chain performance and harness growth potential (Aneeqa 2015). The composite manufacturing operations of the textile supply chain, discussed above, have placed the textile industry in a particularly susceptible position in the wake of the country’s political disruptions (Aftab & Mehreen 2010).

![Figure 1-1: Political Stability from 1996 to 2013 in Pakistan (World Bank Cross-Country Data 2015)](image-url)
Another key cause of political disruption to the textile industry is terrorism. Terrorism has direct and indirect effects on supply chain operations (Afridi 2014). These include a decline in production, unpredictable interruptions in value and supply chain operations, difficulty in maintaining labour supply, and transportation delays. Terrorism in Pakistan also reduce the confidence of consumers and investors (Shahbaz 2014). Most of the textile organisations have been unable to predict future terrorist events that threaten to create deleterious impact on supply chain operations (Czinkota, Knight & Liesch 2004). These terrorist attacks specifically target critical logistic infrastructure including railways, road and sea ports (Yusuf 2014), which has significant impact on economic activities. Figure 1.2 present the number of people killed by terrorist attacks in Pakistan during 2003 to 2016 to show scale of this problem.

Figure 1-2: People Killed by Terrorist Attacks in Pakistan (Satp.org 2017)

Political violence is another cause of political disruptions in Pakistan. According to the Global Peace Index (2016, p. 11), Pakistan ranks seventh among the most politically violent countries in the world (see figure 1.3). Political violence has a negative impact on the supply chain operations, preventing manufacturers from adequately continuing their operations, due to insecurities (Bender 2014). Also, during political violence, many foreign investors abandon their operations and withdraw their investments (Nakao 2014). Currently, Pakistan’s textile supply chain is highly vulnerable to disruptions due to its complicated production operations. Frequently, supply chain disruptions and political disruptions have created major issues for local manufacturers.
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Chapter 1 – Introduction

and their supply chain operations (de Mesquita et al. 2014). Pakistan’s supply chain has been ranked in the bottom three, which indicates the susceptibility of the supply chain to disruptions (Andrew 2015).

Figure 1-3: Political Violence Index 2015; Source: (Global Peace Index 2016, p. 11)

The adverse effects that political disruptions has had on textile manufacturing and its supply chain operations have presented a serious problem for Pakistan. As a consequence of this unstable political environment, characterized by an unstable government system, and a less matured democratic culture (Shaikh et al. 2011), the government has been unable to assist industries by facilitating competition of their industry in the international market. According to the Abdulaziz et al. (2015, p. 17) “there has been drastic downfall of 14.4 per cent in textile exports of the country since July 2016 and country’s total export declined to $12.087 billion during the same period last year”. Although the Government attempted to show its seriousness towards industrial and business growth by introducing new trade policies (Sajid 2016), nonetheless this initiative is undercut by the impacts of the country’s political disruptions.

Pakistan’s textile industry thus suffers from internal political condition of instability, most of Pakistan’s textile producers are now moving to other countries, which provide
more stable political and economic conditions to be able to compete in a globalised marketplace.

1.3 RATIONALE FOR THE RESEARCH

The contribution of textile industry to the total Pakistan’s GDP is about 8 per cent (Siddique et al. 2012; Usmani 2012). This industry provides employment to more than 15 million people that are the 30 per cent of the total workforce of about 49 million proximity (Tahir et al. 2014). Pakistan is a major cotton producer with the largest spinning capacity in Asia (Memon 2015). The country contributes 5 per cent to the global spinning capacity after China and India. There are 1,221 ginning units, 472 spinning units, and 425 other small textile units installed to produce textile products (Ahmed 2010). The annual volume of total world textile trade is more than US$ 400 billion which is growing at 2.5 per cent, but Pakistan’s share is less than 2 per cent (TRIBUNE News 2013). The total spinning capacity of Pakistan textiles is 1550 million kilograms of yarn, with having 4368 million square meters of fabric capacity and a finishing capacity of 4000 million square meters. The total production capacity is 670 million units of garments and 53 million kilograms of towels (Siddique et al. 2012). These figures show the importance to textile industry for the success of Pakistan’s economic growth and employment. Pakistan’s textile and clothing trade is affected by multiple factors such as the rise in the price of raw material, increasing export duties, labour cost, and constant increase in commercial electricity and gas prices (Sohail 2012).

Previous research in the field of supply chain has mainly focused on the impact of supply chain disruptions on supply chain performance (Behdani 2013; Brenner 2015; Gurnani 2012; Handfield 2007; Hopp, Iravani & Liu 2012; Kevin, Hendricks & Sighal 2012; Lorentz & Hilmola 2012; Melnyk, Rodrigues & Ragatz 2009; Mizgier, Wagner & Arnez 2014; Oak 2009; Shukla, Lalit & Venkatasubramanian 2011). Some research has focused on the impact of political instability on economic growth (Aisen & Veiga 2013; Alesina et al. 1996; Butkiewicz & Yanikkaya 2005; Fosu 2002; Gyimah-Brempong & Traynor 1999; Jong-A-Pin 2009; Kjaer 2011; Nakao 2014; Oni & Awe 2012), but few linked political disruptions, supply chains and economic growth. No studies to date have targeted the impact of political disruption on supply chain
performance. Therefore, the present study addresses this gap in order to investigate the impact of political disruptions on Pakistan textile supply chain performance.

1.4 AIM OF THE STUDY

This study aims to explore the impact of political disruptions on textile supply chain performance in Pakistan using structuration theory.

1.5 RESEARCH QUESTIONS

The following three key research questions are developed to incorporate the effect of political structures and processes using structuration theory as a framework to interpret the relationships and interactions between political disruptions and supply chain performance:

- What are the key agents of change and how do they use power to allocate resources to disrupt supply chain?
- How do agents interact and how do they exchange information, meanings and messages of change or disruption in the textile supply chain?
- How do agents of change maintain or manage order and establish value standards for acceptable social behaviour?

1.6 RESEARCH METHODOLOGY

A qualitative research approach was chosen to explore the complex interaction between supply chain disruptions, political disruptions and supply chain performance. The qualitative research methodology enables investigator to get a deeper understanding of human experiences about their social and cultural values (Hesse-Biber 2011). The interpretive paradigm was chosen for this study because it helps to the understand the human behaviour and actions (Denzin & Lincoln 2005). There are 25 respondents were interviewed. Each participant/respondent was selected from their particular industry/field experience. In this study, textile manufacturers, third-party logistic providers, political group, influence group and community group were interviewed. A semi-structured interview format was chosen because this enabled several key questions to be designed (Britten 1999). Note-taking was also utilised in this study during data
collection to preserved respondents anonymity and increased their confidence which help to get more in-depth information.

Structuration theory (Giddens 1986) framework was used to explore the role of agents, the method they adopt to communicate the messages and how they used power and resources to fulfil their demand for change through creating disruptions in supply chain operations. To understand the impact of political disruptions on supply chain performance, it is important to analyse the interactive relationship between internal and external organisational disruptions. Structuration theory was suitable for this investigation as it is deemed more comprehensive, sophisticated, dynamic, and powerful compared to other theories such as institutional theory, political economy, actor-network and contextualise theory. The purpose of using structuration theory is to incorporate the interlinked nature of the content, context and process (Warren 2013), which is significant to explore the complex interactions within the production systems and the external disruptive forces that shape the textile supply chain (Catherine 2004). Structures, agency and structural dimensions used to gain a deeper understanding of the political processes and institutional structures within the textile industry in Pakistan. Vicious cycles also used to interprets the repetitive effects of political disruptions on supply chain operations.

1.7 THESIS STRUCTURE

This thesis comprises 8 chapters including the current chapter. The thesis structure is illustrated in Figure 1.4, and the following sections elaborate on the contents of each chapter.

Chapter 1 introduced the concept of political disruption and contextualised the broader field of study. The chapter included a brief description of the research problem and an explanation of the methodology. It provided an overview of the study and explained how qualitative research methodology will be employed to conduct this research. This chapter also addressed the research questions and procedures for collecting and interpreting data.
Chapter 2 provides a deep understandings and concepts of political disruptions. It provides the benefits of political stability for Pakistan. This chapter discusses the various forms of political disruptions their causes. It also provides the impact of political disruptions in context with Pakistan.
Chapter 3 provides a better understanding of the supply chain performance, textile supply chain performance, performance measurement techniques and supply chain disruptions. It also draws attention to supply chain definitions and different studies on supply chain disruptions. A detailed overview is provided, from an economical point of view, of the Pakistan textile industry. This chapter also focuses on the nexus of supply chain disruptions and textile supply chain performance within Pakistan.

Chapter 4 presents the structuration theory framework and outlines the key dimensions that underpin the relationship between political disruption and textile supply chain performance. Chapter four discusses the various frameworks suitable for this research and justify the reason for choosing the structuration theory framework. This chapter provides the detailed understanding of agents/actors, agency, structures, system and duality of structures. The application of structuration theory explained through nine propositions of structuration theory.

Chapter 5 outlines the research methodology used in this thesis. It also discusses the unit of analysis, ethical considerations, validity and reliability issues. A detailed comparison is made between qualitative and quantitative research to justify the choice of qualitative methodology for this research. This chapter also argues why structuration theory is used in this study to explore the agents’ role in the context of the social and political system.

Chapter 6 explores the different forms of political disruptions linking with supply chain performance. It describes the role played by agents in the political system and the way each agent exercise their power to influence the operations of production and distribution. It also interprets the key agents of change, matrix coding query results and vicious cycles to answer the first research question.

Chapter 7 provides a deeper understanding of the relationship and interaction between political disruptions and supply chain performance. This chapter interprets the views and opinions of interviewees to reflect the mechanism through which political disruptions are created and the context within which they emerge. Findings were discussed with reference to the dimensions of structuration theory: domination,
signification, and legitimation. This chapter also answers the last two research questions.

Chapter 8 presents a strategic framework to address the impact of political disruptions on supply chain performance in relation to the textile industry. It concludes the key findings of this research and provides the limitations and possible future research work. This chapter also discusses the research objectives and provide the detailed answers of each research question.

1.8 SUMMARY

This chapter provides an overview and establishes the broader context of how this research is carried out. It contains the rationale for this study and discusses the research problem in detail. The research questions followed by the aim of this study are presented in this chapter. This chapter also highlights the research methodology and research framework (i.e. structuration theory) to investigate the role that agent plays in disrupting the political system. Thesis structure also illustrated in this chapter to provide the overview of this thesis.

The following chapter develops discusses the concepts, forms, causes and impacts of political disruptions.
CHAPTER 2: UNDERSTANDING THE CONCEPTS AND TYPES OF POLITICAL DISRUPTION
2.1 INTRODUCTION

This chapter describes various meanings and types of political disruptions and their likely impact on supply chain performance. First, the reasons for the importance of political stability in Pakistan are discussed and, following this the forms, dimensions, causes and impacts of political disruptions are explained. Moreover, this chapter aims to provide a comprehensive literature review on political and supply chain disruptions of textile supply chain in Pakistan. Specifically, this chapter

- investigates the potential dimensions and forms of political disruptions;
- describes the causes of political disruptions; and
- explores the impact of political disruptions on the supply chain performance.

2.2 THE CONCEPT OF POLITICAL DISRUPTION

The concept of ‘politics’ originated in ancient Greek and is derived from the word *polis* which refers to “the art or science of government” and is “associated with competing power interest groups or leadership” (Ingram, Tabari & Watthanakhomprathip 2013, p. 92). Heywood (2004, p. 72) defines politics as “the activity in which people maintain and review general rules by which they live”. The concept of politics conveys a sense of people being protected from external and internal threats that jeopardise their general welfare. For the purpose of this study, though, this definition of politics is more useful when complemented by that of *government*. Given that a government has a responsibility to provide stability, financial guidelines, security and infrastructure to a country’s business community that plays a significant role in influencing supply chain operations (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). Higher levels of democracy reduce the chances of political disruptions (Nurudeen, Mohd & Mukhriz 2015).

The situation of a country characterized as stable or unstable depends upon these definitions. In the literature on political disruptions, there is not one definition or view of political disruption that is superior to its alternatives. According to an early definition by Lipset (1960, p. 37) “a politically stable country has been a democracy or autocracy for at least 25 years”. This definition suggests that political disruption is just a case of non-persistency in the form of government, regardless of its type of rule (Miljkovic & Rimal 2007). According to Ganfu (2015) “A stable political system is one where the ruling government is favored by the population and does not experience strong
indicators of social unrest”. Shaikh et al. (2011, p. 32) argues: “a nation with high political stability would be one with possibility to predict their political system or having extremely predictable political system”. Political disruptions, economic growth and supply chain performance are deeply interconnected (Tuba 2016). Political stability can lead to a country achieving its national goals, while an unstable political system can reduce a country’s investment and speed of economic development, also leading to poor economic performance and political unrest (Ganfu 2015). Table 2.1 presents the past studies of supply chain performance in relation to political disruptions.
Objectives | Findings | Methods | Country | Study
--- | --- | --- | --- | ---
Investigates the impacts of political disruptions on supply chain performance. | Political disruptions in the country have significant negative impact on supply chain performance. | Used Dynamic panel GMM estimation by regression firm and at country level. | Pakistan, USA, China and India | (Dogar 2014; Hameed 2014; Lee, C & Lin 2016)
Impact of political disruptions on the exporting and importing country | Political unstable conditions have negative and statistically significant impact on textile supply chain operations. | Used the alternative dynamic panel and dynamic system GMM | China and Pakistan | (Bashir et al. 2013; de Mesquita et al. 2014)
Assist managers or decision makers to undertake the political risk while preparing new schedules | Results indicate that political stability is important for building the customers’ through supply chain performance. | Used analytical hierarchy process | China and USA | (Jakhar 2015)
Political risk impacting on the supply chain operations | Disruptions risk, risk management and supply chain practices followed to gain optimum performance. | Used confirmatory factor analysis and | Pakistan | (Aneeqa 2015; Kauppi et al. 2016; Tabassam 2016)
Examines the multi dimensionality of political disruptions | Political disruptions have four dimensions which are politically motivated violence, mass civil protest, uncertainty of the political regime and political unrest. | Using a dynamic panel system and GMM | Pakistan | (Campos & Gassebner 2009; Hyder & Hussain 2011; Jong-A-Pin 2009; Tuba 2016)

Table 2-1: Past Studies on Supply Chain Performance and Political Disruptions

Pakistan is a country with rich resources and human capital. It is also an important atomic power in the region, facing serious problems from its unpredictable political system (Husain 2009). Poorly managed governance, ineffective government policies and political selfishness are the main problems currently faced by the nation (Bilal 2011; Zubair & Mukaram 2014). For Pakistan to handle internal and external challenges for its survival, especially against non-state actors/agents (e.g., extremists),
political stability is important. An unstable political system is at risk of misusing and mismanaging the country’s resources (Hameed 2014).

Military coups, militant groups, religious conflicts and fights among political parties cause economic and social impact for Pakistan (Jalal 2014). Pakistan is directly involved in fighting terrorism, which doesn’t have the political inflexion of ‘war against/on terrorism, and political parties have failed to handle this issue due to their immaturity, selfishness and lack of interest in national issues. The war against terrorism badly affects the internal conditions (security and economic) of the country as well as its relations with neighbouring countries (Blank, Clary & Nichiporuk 2014). The country’s politically disrupted system does not help the country achieve positive results from the current war on terrorism; consequently, terrorists are free to attack anywhere throughout the country (Sara Brady 2012).

Pakistan’s geographical location also has an important role to play in its political stability. As Asian Development Bank President Nakao (2014) has commented: “Pakistan needs political stability and continuity of democratic process to ensure economic growth and development to achieve its huge potential of becoming a regional hub for trade and commerce”. Sanders (1981, p. 7) argue that “political disruption to the legitimacy of the political system could only be more or less stable compared to it or other systems or other countries”. Table 2.2 outlines the key definitions of political disruptions.

<table>
<thead>
<tr>
<th>Definitions</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Political disruption means activities which are irregular (outside of the bounds expectations) in the context of a given society, typically violent and directed against the governing regime or its policies.”</td>
<td>(Kobrin 1977, p. 41)</td>
</tr>
<tr>
<td>“Political disruption is usually understood as a condition under which political legitimacy, social order, and governance challenged.”</td>
<td>(Hall 1996, p. 106)</td>
</tr>
<tr>
<td>“Political disruption refers to a situation by which conditions and mechanisms of governance and rule are challenged because their political capacity by factors operating from outside the normal functions of the political system.”</td>
<td>(Katherine 2012, p. 301)</td>
</tr>
</tbody>
</table>

Table 2-2: Defining the concept of Political Disruptions
There are two dimensions of political disruptions that offer the understanding of how political disruptions impact on society as well as on supply chain performance. These include executive disruptions and socio-political disruptions (Alesina et al. 1996). In the executive dimension, political disruption is defined as a “propensity to observe government changes” (Alesina et al. 1996, p. 190). In this dimension, there is one difference between constitutional and unconstitutional government changes. This changes can take place within or outside the law, e.g., military interventions (Allard, Martinez & Williams 2012). The second dimension focuses on socio-political disruptions defined as “phenomena of social unrest and political violence” which is more “regime-related disruption” that “includes governmental crisis, purges and cabinet changes” (Alesina et al. 1996, p. 191). Feng, Yi (2003) considers how changes of government affect political disruption. He emphasises the difference between regular and irregular government change on the one hand, and major and minor government change on the other. Major and minor changes of government have a different impact on politics, society and supply chain performance (see Table 2.3):

<table>
<thead>
<tr>
<th>Change</th>
<th>Regular</th>
<th>Irregular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor change</td>
<td>Constitutional power transfers within the same party</td>
<td>Irrelevant</td>
</tr>
<tr>
<td>Major change</td>
<td>Constitutional alternation in office or un-constitutional power transformation</td>
<td>Coup (martial law)</td>
</tr>
</tbody>
</table>

Table 2-3: Conception of political disruption as government change (Feng, Yi 2003, p. 805)

Butkiewicz and Yankkaya (2005) identifies 18 measures of political disruptions, which they further categories into three: government stability, social stability and political violence (see Table 2.4). These according to Butkiewicz and Yankkaya (2005), are the most frequently used measures of political disruption. Some measures of political disruptions are more common than others.
Government stability | Social Stability | Political Violence
--- | --- | ---
Coup | External conflict risk | Political protests
Revolutions | Civil war risk | Assassinations
Civil war risk | Political terrorism | Purges
Anti-government demonstrations | Racial and nationality tensions | Deaths from political violence
Cabinet changes | Corruption | Riots
Government crisis | Government failure | General strikes

Table 2-4: Indicators of Political Disruptions (Kjaer 2011, p. 11)

Each of the measures of political disruptions is examined for their impact on supply chain performance following Kjaer (2011). Each political disruption measure has a different method of impact on political systems, e.g., political violence is generally regarded as the worst form of disruption to impact on political systems (Butkiewicz & Yanikkaya 2005).

Jong-A-Pin (2009) examines the multidimensionality of political disruption and outlines four main dimensions: politically motivated violence, mass civil protests, disruptions within the political regime, and the disruption of the political regime. Previous studies on the effect of political disruption on the supply chain (Bernholz 2006; de Mesquita et al. 2014; Suhrawarby 2014) have tended to be one-dimensional, which implies both errors in measurement and incorrect specifications of the causal linkage between disruptions and supply chain performance (Jong-A-Pin 2009). Sanders (1981) propose similar dimensions to Jong-A-Pin to include violent challenges to a regime or government, peaceful challenges to a regime or government, a change in regime, and a change in government.

The first two dimensions focus on challenges to the regime while the latter two are concerned with actual changes to the regime or government. However, Jong-A-Pin (2009, p. 21) does not fully agree with this formulation because, as he states, “the third dimension (disruption within the regime) clearly not only refers to actual changes, but also the potential for change as reflected by the number of elections and the degree of fractionalization”. Sanders (1981) expressed the multidimensional framework of
political disruptions: violent challenges to the regime or government, peaceful challenges to the regime or government, change in the regime and change in government. Jong-A-Pin’s (2009) multidimensional framework of political disruptions comprises politically motivated violence, mass civil protest, disruption of the government regime and disruption of the political regime.

Both Sanders (1981) and Jong-A-Pin (2009) emphasise four dimensions of political disruption which reflect the two basic elements. However, politically motivated violence and mass civil protests reflect socio-political unrest or civil-society induced disruptions, while political disruption within and of the regime reflects government and regime change (Zubair & Mukaram 2014). Socio-political unrest/civil-society induced disruptions are:

- Politically motivated violence /violent challenges to the regime or government.
- Mass civil protest / peaceful challenges to the regime or government.

Regime change /executive disruptions (minor, major, regular, irregular changes)

- Disruptions within the political regime /change in government.
- Disruptions of the political regime /change in regime.

According to Carmignani (2003, p. 18) “the dimension of socio-political unrest may manifest itself through religious, ideological and economic conflicts”. Such a high level of social unrest and conflict may disrupt supply chain operations. On the other hand, sources for government change can result from interactions between represented interests in institutions and the electorate (Carmignani 2003; Londregan & Poole 1990). A climate of political uncertainty and possibly threats to personal rights is created in the wake of government changes; these changes are usually related to economic, political, social and institutional variables (Alesina et al. 1996; Sara Brady 2012). Studies of political and supply chain disruption most commonly focus on one dimension of political disruption, for example, military interventions. Blanco and Robin (2009, p. 81) argue that “principal component analysis is an efficient way to capture the multidimensionality of political disruptions”.

One-dimensional studies (see table 2.5) refer to those in which indicators are covering only one side of political disruptions. Studies that cover two dimensions include the indicator of socio-political unrest and regime disruptions. Those studies categorized as
multidimensional make the difference even more clear with subcategories for socio-political unrest and regime disruptions (Blanco & Robin 2009; Kjaer 2011). These studies include many indicators of political disruptions and explore collective and individual impact of indicators on social and economic performance.

<table>
<thead>
<tr>
<th>Indicator of Political Disruptions</th>
<th>Dimensions of Political Disruptions</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government changes</td>
<td>One dimensional</td>
<td>(Lucifora &amp; Moriconi 2015, p. 325)</td>
</tr>
<tr>
<td>Revolutions, coups and political assassinations</td>
<td>Two-dimensional</td>
<td>(Galtung 2008, p. 392)</td>
</tr>
<tr>
<td>Political assassinations, mass violence (deaths), and democracy.</td>
<td>Socio-political unrest/stability</td>
<td>(Merrilees 2015, p. 390)</td>
</tr>
<tr>
<td>Major and minor government changes</td>
<td>One dimensional</td>
<td>(Gormus &amp; Kabasakal 2010, p. 1709)</td>
</tr>
<tr>
<td>Index of domestic and regional uncertainty</td>
<td>One-dimensional</td>
<td>(Winden 2015, p. 298)</td>
</tr>
<tr>
<td>Political disruptions and political violence: measured by revolutions, coups, riots, and strikes</td>
<td>Two-dimensional</td>
<td>(Feng, Yi 2001; Feng, Yi 2003)</td>
</tr>
<tr>
<td>Government change (Pr. Irregular government change)</td>
<td>One-dimensional</td>
<td>(Bandy 2016, p. 104)</td>
</tr>
<tr>
<td>Measures of government stability, indices of social stability, measures of political violence and war</td>
<td>Multi-dimensional</td>
<td>(Butkiewicz &amp; Yanikkaya 2005; Merrilees 2015)</td>
</tr>
<tr>
<td>Factor analysis of political disruptions.</td>
<td>Multi-dimensional</td>
<td>(Jong-A-Pin 2009, p. 93)</td>
</tr>
</tbody>
</table>

Table 2-5: The Development in Studies of Political Disruptions (Kjaer 2011, p. 15)

Alesina et al. (1996, p. 201) suggest an identifying assumption for choosing whether to focus primarily on indicators of socio-political unrest or government change, “for a given level of expected government turnover and phenomena of social uncertainty has no impact on economic decisions”. Therefore, one argument for focusing on government change is that the only policy changes relevant for economic decisions occur when governments change (Alesina et al. 1996). This assumption may be too strong, firstly, in its aim to capture the relationship between financial crises and political disruptions, and secondly, taking into account the effect of political disruptions on supply chain performance. It is likely that a main focus on government change is too
narrow to cover the important phenomena of political disruptions (Sara Brady 2012). As Jong-A-Pin (2009) suggests, political science provides sufficient evidence that political disruption is multidimensional, even though no consensus on the appropriate number of dimensions has been reached.

2.3 FORMS OF POLITICAL DISRUPTIONS

Political disruption and its impact on supply chain performance can be understood by exploring the different forms of political disruptions and their impacts on social and supply chain performance. According to Ferree, Mari and Ewig (2013), the most expressed forms of political disruptions are political violence, civil disorder, terrorism, coups (Martial Law), political riots, street demonstrations, revolutions, assassinations and guerrilla warfare. Definitions of various political disruption forms are presented in Table 2.6:

<table>
<thead>
<tr>
<th>Form</th>
<th>Definition</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political violence</td>
<td>“Violence outside the control of the state that is politically motivated is called political violence”.</td>
<td>(Ferree 2013, p. 238)</td>
</tr>
<tr>
<td>Civil disorder</td>
<td>“Civil disorder is a term that refers to the people purposefully choosing not to obey law and regulations in order to bring attention to their cause or motive”.</td>
<td>(Shao et al. 2011, p. 98)</td>
</tr>
<tr>
<td>Terrorism</td>
<td>“Terrorism is a method of repeated violent actions working by (semi-) clandestine individual, group, or state actors, for idiosyncratic, criminal or political reasons, whereby in contrast to assassination, violence direct targets may not be the main targets”</td>
<td>(Alex &amp; Jongman 2005, p. 13)</td>
</tr>
<tr>
<td>Martial law</td>
<td>“Imposition of military rule by military authorities when there are extensive riots and protests, and civilian authorities fail to function effectively, maintain law and order and provide security and essential services to the people”</td>
<td>(Akhtar 2011; Rizvi 2000)</td>
</tr>
<tr>
<td>Assassinations</td>
<td>“A murder or attack on a known person (generally politically important or prominent person) called assassination”.</td>
<td>(Terra 2011)</td>
</tr>
<tr>
<td>Demonstrations</td>
<td>Any peaceful gathering of almost 100 people for the main purpose of displaying or expression their opposition to government policies or</td>
<td>(Quaranta 2015, p. 21)</td>
</tr>
</tbody>
</table>
authority, excluding demonstrations of a distinctly anti-foreign nature.

| Guerrillawarfare | Any armed activity, sabotage, or bombings carried out by independent bands of citizens or irregular forces and aimed at the overthrow of the present regime. | (Databanks International 2005) |
| Revolutions | Any illegal or forced change in the top governmental elite, any attempt at such a change, or any successful or unsuccessful armed rebellion whose aim is independence from the central government. | (Databanks International 2005) |

Table 2-6: Definitions of Different forms of Political Disruptions

In Pakistan, Constitutional struggles due to military interventions, the absence of stable elected government, a lack of social growth, and increasing economic problems are the causes of political system failure (Kiran 2011). There are many other issues, for example, border conflicts with India, the socio-economic differences within a country and conflict among political parties for power (Tuba 2016).

Since 1947 in Pakistan, many democratic and military governments were established; unfortunately, none of them were able to succeed to sustain democracy. Consequently, the Global Peace Index (GPI) categorized Pakistan as the 5th most unstable country (Ahmar 2010). Pakistan stands among those countries where political disruption seriously impacts on social values and economic growth (Azad 2013). Development in Pakistan is not holistic because there is a large gap between developed and underdeveloped areas (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). Also, the administrators of Pakistan have not been concerned about the growth and production pattern of different manufacturing industries and their supply chains (Khattak 2011).

In the first ten years of Pakistan’s independence, from 1947 to 1956, the failure of politicians to establish a constitution enabled the military to interfere in the country’s political system (Kiran 2011). The judiciary, the third pillar of the state, also practiced double standards at this time (Akhtar 2011). The judiciary’s role of protecting powerful people created a situation of concern for the country, such as providing legal means for dictators to pursue unlawful acts (Kiran 2011). Historically, Pakistan’s divisions across
provinces, religious sects, and language have posed a major threat to the country’s stability and economic growth (Kanwal 2013). Pakistan has a high inflation rate, a large income inequality, deficit financing, and a lack of both a basic infrastructure and education system; all of these things have led to an unstable political system (Khattak 2011).

Political violence, a type of political disruption, can be considered as a complex form of terrorism (O'Neil 2012). Violence has predominated in the history of humankind throughout the centuries and wars have normally been fought between nations (Ferree, Mari & Ewig 2013). These wars or conflicts occur because of land, religion or other things always cause the violence in the form of killing and damaging human life (Bender 2014). Within this context, terrorism plays the role of bringing change into society and becoming an increasing threat to domestic and international security (Tilly 2002; Worcester, Bermanzohn & Ungar 2002).

Violence in Pakistan has internal and external dimensions due to its geographical conditions. Pakistan is vulnerable to the threat of violence because of the location of its region. Pakistan borders with India, Afghanistan, China, Iran and Russia. Afghanistan for example has been unstable for many decades (de Mesquita et al. 2014). Also, Pakistan’s border with Iran is crucial due to Iran’s conflicts with Arab countries: many people support Iran against Arab and other support Arab against Iran due to Sunni and Shia conflict (Bender 2014; de Mesquita et al. 2014).

Pakistan’s conflicted areas such as Baluchistan, Khyber Pakhtunkhwa (KPK), as well as its tribal areas are currently facing higher political violence (Zubair & Mukaram 2014). Baluchistan is a politically side lined province that faces major violence because it is located southwest of the bordering countries of Iran and Afghanistan (Hameed 2014). The fight between different religious sects (Sunni and Shia) which occurs in several parts of the country has its roots in the bordering areas of Iran and Afghanistan (Aneeqa 2015). The militants from these sects kill their opponents’ country-wide and hide in tribal areas. Pakistan’s main province that faces the major violence from terrorists is KPK, due to its location and cultural values that they share with those living in Afghanistan (Hameed 2014; Saeed, Syed & Martin 2014).
During the Afghan war, terrorists moved to the Federally Administered Tribal Areas (FATA) of Pakistan located next to KPK and commenced their activities in Pakistan (Afridi 2014). They start bombing, target killing, implementing suicide attacks and anything that could create violence in the country. During that time, they showed their presence by killing thousands of innocent people across the country (Saeed, Syed & Martin 2014). As well as being the business hub, Karachi is the most violent city of Pakistan. The reason for the violence is so that the terrorists can control the city through their activities (Hameed 2014; Saeed, Syed & Martin 2014).

Terrorists are involved in target killing, extortion and terrorism directly or indirectly (Afridi 2014). Pakistan is ranked very high in the Fragile States Index 2016 (rank number 14, just five ranks better than Afghanistan) (Fragile State Index 2016). Given the regional context of fraught neighbourhood relations and nuclear weapons, controlling political violence should be the main focus of the Pakistan government, due to the country’s importance in the region (Hippler 2008).

Terrorism is the resultant outcome of disrupted political conditions or systems (Wade & Maljevic 2010). There is still no single significant terrorism definition which can fully described the situation. Table 2.7 presents the several definitions of terrorism:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>US FBI</td>
<td>“The unlawful use of force and violence against a person or property to threaten or force a civilian government, population or any other segment for social or political purposes”.</td>
<td>(FBI 2005, p. iv)</td>
</tr>
<tr>
<td>UN Draft Convention</td>
<td>“Violence against a person or property with the aim of intimidating a population, to force or prevent action by government or international organisations”.</td>
<td>(UN 2004, p. 4)</td>
</tr>
<tr>
<td>US State Department</td>
<td>“Terrorism is premeditated, politically motivated violence committed against civilians by sub-national groups or secret agents, usually planned to effect an audience”</td>
<td>(US 1994, p. 766)</td>
</tr>
<tr>
<td>European Union</td>
<td>Intimidation used to force or prevent government action, to destabilize a state.</td>
<td>(EU 2007, p. 2)</td>
</tr>
<tr>
<td>Australia</td>
<td>“Violence or threat of violence against persons/property; intimidation with the purpose of advancing a political, religious or ideological cause. To coerce or influence a government”.</td>
<td>(Natasha 2014, p. 6)</td>
</tr>
</tbody>
</table>

Table 2-7: Terrorism Definitions
Terrorism in Pakistan causes a huge impact on business as well as industrial performance (Brandt & Sandler 2009). Pakistan is a nuclear-armed nation and terrorist attacks pose a grave threat to the security and stability of Pakistan’s 185 million citizens. The roots of modern terrorism in Pakistan can be traced back to the 1980s (Brandt & Sandler 2009). The following events took place in the international political arena at that time and had lasting effects on Pakistan’s political fate:

- The coup in neighbouring Afghanistan led by Muhammad Daud in 1973;
- The Soviet invasion of Afghanistan in 1979; and
- The Iranian revolution of 1979.

These events, coupled with opportunistic domestic politics in Pakistan, helped create a geopolitical environment that gave birth to a violent culture in the political landscape of Pakistan (Riedel 2008). After expelling King Zahir Shah from the command of Afghanistan in 1973, Muhammad Daud made territorial claims on the Pashtun territories of Pakistan (Rashid 2008). Afghanistan’s internal political issues eventually resulted in a communist coup in 1978. However, infighting among communist factions and a growing Islamist insurgency led to the Soviet invasion in 1979 (Cooley 2000). This was also a time when domestic politics in Pakistan were damaged by military intervention. Military intervention by General Zia-ul-Haq in 1977 and the hanging of elected Prime Minister Zulfiqar Ali Bhutto in 1979 left the entire nation in isolation (Yousaf & Adkin 1992).

On a world scale, the terrorist 9/11 incident diverted US attention towards Afghanistan because the mastermind of attacks on the World Trade Center (WTC) was linked or orchestrated in Afghanistan (Sandler & Enders 2006). The US Army commenced operations against militants across Afghanistan to tackle the terrorists, but due to the mind-set of local Afghan people, the Army almost failed to achieve its goals (Hyder & Hussain 2011). It killed the mastermind but is still struggling against newly motivated terrorists working against the American campaign (Yusuf 2014). The terrorist’s movements gradually took rooting in several areas of Pakistan after the US attack on Afghanistan.
The Taliban was based in the tribal areas of Afghanistan and Pakistan. Hussain (2010) explains that the rise of this group impacted on foreign countries fighting or supporting the fight against the Taliban in Afghanistan (Bravo & Dias 2006; Gassebner, Keck & Teh 2005). Terrorist incidents devastated road infrastructure in Pakistan and the government was forced to spend vast sums of money to ensure public properties were safe from terrorism. Pakistan has lost almost US$102.51 billion due to terrorism and the costs still continue (Afridi 2014).

Pakistan has faced three major martial laws and the army has ruled for almost half of life of Pakistan (Yusuf 2014). In the first instance, President Iskandar Mirza declared martial law throughout the country on 7th October, 1958, appointing the Army Chief, General Muhammad Ayub Khan, as Chief Martial Law Administrator, abrogating the Constitution, dismissing the Central and Provincial Governments, dissolving the National and Provincial Assemblies, and abolishing all political parties (Akhtar 2011; Rizvi 2000).

The 1965 martial law was established because of the unfriendly and uncertain situation as well as the unstable political condition caused by fast political exercises and changes that took place in the country (Rizvi 2000). During 1955-57, uncertainty prevailed as four Prime Ministers changed because President Iskandar Mirza was unable to grow a proper relationship with them (Akhtar 2011). The second instance was when martial law was declared by Yahiya Khan, who dissolved the national assembly on March 25, 1969 (Akhtar 2011; Rizvi 2000). The constitution was partially suspended, political activities were banned, a four-man Military Council was formed and High Court Judges were made acting Provincial Governors (Hameed 2014). US Ambassador, President Zia-ul-Haq, and many high-ranking army officers were killed in a plane crash on 17th August 1988 (Rizvi 2000). On 12th October 1998, Pakistan again faced martial law under the command of General Pervez Musharraf, who dissolved the assemblies and arrested the politically elected Prime Minister Nawaz Sharif (Kronstadt & Kumar 2014).

Political revolution is not new for Pakistan because the birth of Pakistan was also the result of a well-organised revolution (Khory 2014). In recent years, a revolution in Pakistan was started against General Pervez Musharraf and it continued, in opposition
to the politically elected government whose policies it did not support (Zubair & Mukaram 2014).

Political assassination has also been one of the main forms of political disruption in Pakistan (de Mesquita et al. 2014). Political assassination was mostly encouraged by ideological, religious, financial or military motives (Malik, M, Iqbal 2007). When people were murdered for any reason, it was called an assassination, and when they were murdered because of their political causes, it was called a political assassination (Terra 2011). Table 2.8 presents the short list of famous political assassinations from 1951 to 2015:

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nawazza Liaqat Ali Khan</td>
<td>1951</td>
</tr>
<tr>
<td>Zulfiqar Ali Bhutto</td>
<td>1979</td>
</tr>
<tr>
<td>General Muhammad Zia-ul-Haq</td>
<td>1988</td>
</tr>
<tr>
<td>Murtaza Bhutto</td>
<td>1996</td>
</tr>
<tr>
<td>Hakim Muhammad Said</td>
<td>1998</td>
</tr>
<tr>
<td>Nawab Akbar Khan Bugti</td>
<td>2006</td>
</tr>
<tr>
<td>Benazir Bhutto</td>
<td>2007</td>
</tr>
<tr>
<td>Shahbaz Bhatti</td>
<td>2011</td>
</tr>
<tr>
<td>Salmaan Taseer</td>
<td>2011</td>
</tr>
<tr>
<td>Bashir Ahmed Bilour</td>
<td>2012</td>
</tr>
<tr>
<td>Mian Muhammad Mushtaq</td>
<td>2014</td>
</tr>
<tr>
<td>Sabeen Mahmud</td>
<td>2015</td>
</tr>
<tr>
<td>Shuja Khanzada</td>
<td>2015</td>
</tr>
</tbody>
</table>

Table 2-8: Political Assassinations from 1951 to 2015 (Malik 2007; Web 2014)

2.4 CAUSES OF POLITICAL DISRUPTIONS

Pakistan has been unable to maintain political stability in the state due to internal constitutional conflicts, immature political systems, a lack of economic growth and regular military interventions into the political system (Nakao 2014). According to Alesina et al. (1996, p. 189) “political disruptions are the major causes of the or a government’s weakness because political variability creates democratic unrest, frequent elections, intra-party conflicts, and an inconsistent regime or regime changes that leads to the political disruptions”. This socio-political uncertainty has various adverse effects (Carmignani 2003). It not only creates uncertainty in political and legal environments.
but also disrupts markets and production operations and impacts on social values. Government crises and regime changes have significant effects on economic and industrial growth (Campos & Nugent 2002; Gormus & Kabasakal 2010; Nadeem, Ali & Imran 2010).

The early years of Pakistan were moderately stable; the country was ruled by civilian government and large disruptions did not occur in the political system (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). However, during 1947 to 1958, Pakistan had a changeover of seven prime ministers; the ministers either resigned or, worse, were deported (Azad 2013). The political system did not mature due to continuous military interferences to the political system. Over the entire history of Pakistan, the country still has not been able to resolve the issues and struggle associated with civil unrest (Jalal 2014). Every new government stops following the policies of the previous government and introduces new policies during their government term (Cheema 2014). Terrorism plays the main role in destroying Pakistan’s political stability. The Pakistan government spends more of its budget fighting terrorism than addressing the welfare of its people (Ijaz 2009).

One of the major causes of political disruption is the flow of patriotic activity and ethnic conflicts within the country. Social and religious values are important to the middle class (Carmignani 2003). The gap between the upper and lower classes increases due to the political and unstoppable conflicts between the poor and the business communities in the country. The poor become poorer and the rich become richer due to unfair government policies (Tuba 2016).

If Pakistan society converted or broke up into different classes, political parties would take advantage of this situation for political gain (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). Each political party aims to protect a specific society or particular people. This situation is same for all parties in the case of Pakistan whether it be Pakistan People’s Party Parliamentarians (PPPP) or parties that represent a small sect of the society (Cheema 2014). It is important to have someone in power to fight for people’s rights but not only those connected to specific class issues. The ruling party must represent the whole nation to provide the best service to its people (Hameed 2014). Political and religious conflict within the country as well as internal and external
troubles have weakened the government; consequently, it faces an internal threat from within the country and an external threat from international countries (Azad 2013).

It is important to understand that being in power gives a government or ruler the opportunity to make changes in economic and social policies that will be compatible with their interests, views, and values (Omer & Safdar Ullah 2011). Governments and rulers must focus on maintaining infrastructures to enable industries to flourish. A failure to do this may lead to an increase in political tensions and conflicts (Kiran 2011). Regardless of whether government change is regular or irregular, this will ultimately lead to changes in policies that affect the welfare of the population (Dogar 2014). While irregular government changes that come into being because of events such as coups or politically motivated killings (political violence) will have obvious implications, even regular government changes can lead to radical changes in policies (Aneeqa 2015).

2.5 IMPACT OF POLITICAL DISRUPTIONS

Political disruptions have an impact on much of the country and cause low workplace productivity, a high inflation rate, a low investment rate, a high unemployment rate and a low supply chain performance for the major manufacturing industries (Abbas 2016; Aneeqa 2015; Ishaq 2016; Tuba 2016). Political disruptions severely hamper supply chain performance by damaging its infrastructure. Pakistan has gone through both military and political regimes (Dogar 2014). Frequent military interventions have caused economic problems for the country due to sanctions imposed by the European Union due to martial laws (Hameed 2014). Political disruptions have caused issues beyond manufacturers’ control.

In relation to foreign policy that encourages international business dealings with Pakistan, there has been a major loss of Pakistan customers from other countries because of its internal political conditions (Zubair & Mukaram 2014). Local governments have been unable to provide basic facilities to their textile manufacturers, business people and investors which cause a large economic loss to the country (Nadeem, Ali & Imran 2010). According to the Chairman of All Pakistan Textile Mills Association (APTMA), “at least 110 textile mills . . . closed down their operations in
the year of 2014 due to the high cost of production” (Memon 2015, p. 42). Political disruptions have led to a situation in which most of the industries are unable to continue their operations in Pakistan due to security, expensive raw material, government policies, transport infrastructure and load shedding of gas and electricity (Kiran 2011).

According to the Human Development Report (2014, p. 8) titled “Sustaining Human Progress: Reducing Vulnerabilities and Enhancing Resilience”, Pakistan has retained a 146th position in the category of low-income countries and ranks 157th in the Low Human Development category. According to the survey undertaken by Sustainable Development Policy Institute (SDPI), 58.7 million people are living in poverty; and 46% in rural areas with 18% in urban households living below the poverty line (Human Development Report 2014).

Terrorism is also the form of political disruption that causes the massive losses to the industrial and trading sectors of Pakistan (Natasha 2014). Militants are actively involved in bombing, suicide attacks, target killing and extortion of money which creates delays of supply and productivity operations (Yusuf 2014). Rising political obstacles are having a negative impact on the economy because most of the industries are closing down or reducing their production operations (Nasir, Ali & Rehman 2011). Due to International Monetary Fund (IMF) requirements the government is increasing the power tariff for their manufacturers, thus placing extra pressure on local manufacturers (Tabassam, Hashmi & Faiz-Ur-Rehman 2016).

Political environment may leads to reduce the supply chain efficiency. Across a number of specifications, political disruptions are directly related to the economic and social growth (Lucifora & Moriconi 2015). Various reports of Transparency International (TI) which publishes the corruption perception index (CPI) suggest that, countries with higher corruption faces greater challenges in their supply chain operations (Nurudeen, Mohd & Mukhriz 2015).

2.6 SUMMARY

This chapter has identified and defined different forms of political disruption and their impacts on supply chain performance in Pakistan. The literature documented different
forms of political disruptions which include political violence, civil disorder, terrorism, coups, political strikes and assassinations. These forms of disruptions have the ability to impact on internal and external supply chain operations. Energy crises, trade restrictions, international relation with neighbouring countries, terrorism and corruption are the causes of political disruptions in Pakistan.

The effect of these kinds of disruptions on supply chain are neither known nor theorized in supply chain literature. These political disruptions are also linked to supply chain disruptions, but the nature and characteristics of association are inadequately understood. This chapter placed emphasis on the importance of political stability for Pakistan. This chapter therefore provided the theoretical underpinnings and background of political disruptions in Pakistan, and the likely impact on supply chain performance. This chapter concludes with the following statements:

- The term “political disruption” is used in a generic sense to include all the forms of disruption related to the political system;
- Political strikes, political violence and terrorism are the major forms of political disruptions causing disruptions in supply chain operations;
- Pakistan’s political history indicates the higher level of complexity and the interwoven interactions and relationships between political processes, institutional structures and economic performance; and
- The impact of political disruptions indicates the sensitivity of the unstable political conditions for the supply chain operation of various manufacturing organisations.

The next chapter will introduce the textile supply chain and potential supply chain disruptions that impact on supply chain performance because of political disruptions.
CHAPTER 3: SUPPLY CHAIN PERFORMANCE
3.1 INTRODUCTION

Chapter 3 reviews the literature on the textile supply chain performance in Pakistan. Supply chain disruptions in the textile industry are also discussed with particular focus on production and distribution systems. This chapter is divided into three sections: the first section provides an understanding of the textile supply chain performance; the second section discusses supply chain disruptions, including those of the textile supply chain; and the last section describes supply chain performance with reference to measures of supply chain performance. The objectives of this chapter are three-fold:

- to describe supply chain performance of the textile industry;
- to discuss the supply chain disruptions; and
- to discuss the supply chain disruptions indication steps and explain dynamic probability of supply chain disruptions.

3.2 SUPPLY CHAIN PERFORMANCE

Stevens (1989, p. 3) define supply chain as “a system whose constituent parts include material suppliers, production facilities, distribution services and customers linked together via the feed forward flow of materials and the feedback flow of information”. According to Christopher, L (2004, p. 388) “the supply chain is a network of organisations that part of the linkages call upstream and downstream in the process that improves/produce value to the product for the final customers”. Supply chain performance has gained significant attention over the years (Wong, Lai & Cheng 2006). Studies (Brewer & Speh 2000; Gunasekaran, Patel & Tirtiroglu 2001; Stank, Keller & Daugherty 2001) have found supply chain performance as a discipline in which supply chain managers perform operational tasks effectively and efficiently to satisfy their customers. According to (Chow, Heaver & Henriksson 1994), it is difficult to define supply chain performance due to multiple and frequently conflicting goals within organisations. The most popular definition of supply chain performance, provided by (Mentzer & Konrad 1991, p. 34) is “effectiveness and efficiency in performing activities”. Fugate, Mentzer and Stank (2010, p. 44) define supply chain performance as “the degree of efficiency, effectiveness, and differentiation associated with the accomplishment of supply chain activities”.

Performance is a widely used concept in many areas such as production performance, logistics performance, service performance and organisation performance (Afonsoa & Cabrita 2014; Garcia et al. 2012; Kauppi et al. 2016; Moullin 2007). Typically, performance is an evaluation of how well a process achieves its purpose (Donglin 2009). Moullin (2007, p. 181) defines an organisation’s performance as “how well the organisation is managed and the value that organisation delivers for customers and other stakeholders”. Mohsen et al. (2014) conceptualise supply chain performance as a “multidimensional encompassing efficiency, effectiveness, and differentiation of services within the value chain that benefits the customers”. Table 3.1 summarise the key studies on supply chain performance.

<table>
<thead>
<tr>
<th>Study</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Afonsoa &amp; Cabrita 2014)</td>
<td>Supply chain performance and its influence on firms activities investigated by using balanced score card</td>
</tr>
<tr>
<td>(Flynn, Huo &amp; Zhao 2010)</td>
<td>Supply chain integration and its impact on supply chain performance</td>
</tr>
<tr>
<td>(Li, Ghadge &amp; Tiwari 2016)</td>
<td>Supply chain performance linking with customers’ trust building strategies</td>
</tr>
<tr>
<td>(Bode &amp; Wagner 2008)</td>
<td>An empirical examination of supply chain performance along several dimensions</td>
</tr>
<tr>
<td>(Mishra et al. 2010)</td>
<td>The effects of cooperation on supply chain performance</td>
</tr>
<tr>
<td>(Dominik et al. 2015)</td>
<td>The performance impact of supply chain agility and supply chain adaptability in the context of product complexity effects.</td>
</tr>
<tr>
<td>(Tarafdar &amp; Qrunfleh 2016)</td>
<td>The mediating effects of supply chain practices on the relationship between supply chain performance and supply chain strategies.</td>
</tr>
<tr>
<td>(Robinson 2007)</td>
<td>Supply chain performance and customer collaboration</td>
</tr>
<tr>
<td>(Li &amp; Ghadge 2016)</td>
<td>Factors influencing the supply chain performance</td>
</tr>
<tr>
<td>(Payman, Mohamad &amp; Cory 2016)</td>
<td>Supply chain performance assessment using multidimensional framework</td>
</tr>
<tr>
<td>(Esfahbodi, Zhang &amp; Watson 2016)</td>
<td>Supply chain performance linking with manufacturing firms operational activities</td>
</tr>
<tr>
<td>(Tarafdar &amp; Qrunfleh 2016)</td>
<td>Information sharing and its impact on supply chain performance</td>
</tr>
</tbody>
</table>

Table 3-1: Previous Literature Review on Supply Chain Performance
Efficiency and effectiveness are the two fundamental dimensions of performance which are emphasised by Neely, Gregory and Platts (1995, p. 82) “Effectiveness refers to the extent to which stakeholder requirements are met, while efficiency is a measure of how economically the firm’s resources are utilised when providing a given level of stakeholder satisfaction”. Efficiency is “the organization’s core standard of performance that measures the ratio of work performed in a process and whether the process using the best practices and making most of available resources” (Danese & Romano 2011, p. 221). To attain optimum performance, an organisation must achieve its expected objective with greater efficiency and effectiveness than its competitors (Banomyong & Supatn 2011). Efficiency and effectiveness, as noted by Fugate, Mentzer and Stank (2010), are not mutually exclusive supply chain functions and allow differentiation, which involves customer focus. For instance, an organisation could lose its customers if it focused on efficiency and not effectiveness or if it focused only effectiveness and efficiency but had no concern for customer value (Fugate, Mentzer & Stank 2010).

According to Fugate, Mentzer and Stank (2010, p. 45), “efficiency in the context of supply chain performance is how well the resources are utilised and the effectiveness in terms of how goals are accomplished”. Mentzer and Konrad (1991, p. 34) explained from a marketing perspective, that “the term effectiveness refers to the level to which customer necessities are met, whereas efficiency is how economically the firm resources are utilised when providing an agreed level of customer satisfaction”. This is defined by Colotla, Shi and Gregory (2003, p. 182) as “the ability of supply chain to create value for their customer through the uniqueness and distinctiveness of supply chain services”.

A number of factors contribute to the complexities of supply chain performance. For example, Tsao and Lu (2012) refer to the following factors that involve supply chain performance: warehousing, distribution, and transportation. Each of the supply chain factors has supporting units which accounts for some of the supply chain performance complexities (Manuj & Mentzer 2008). The supply chain includes several functions that must be integrated in order to realise a competitive advantage, an advantage that is indicated by higher performance levels that benefit customers (Namukasa 2013; Tsao & Lu 2012). Sakchutchawan (2011, p. 14) argue that “organisations suffer extensive supply chain costs because of failing to establish critical links between the functions and performance of the supply chain that extends to the consumers”. As explained
by Bogataj and Grubbstrom (2013), the supply chain involves a product flow that influences performance: “effective supply/product flow management results in industry performance thus benefiting the supply chain”.

Tsao and Lu (2012, p. 403) argue that “complicated link to the organisation’s finish goods represents a significant factor in warehouse, inventory, transportation and distribution management”. Complex supply chain operations makes it difficult for supply chain managers to control or manage all the supply chain operations that impact on supply chain performance (Grimm & Cheng 2006; Stank, Davis & Fugate 2005). Time management is a key factor of effective supply chain performance. Banomyong and Supatn (2011) noted that “effective supply chain management ensures that customers receive products in a timely manner”. This requires that during all their operations textile manufacturers manage and control time to meet customer deadlines, hence providing benefits to the industry’s performance (Fugate, Mentzer & Stank 2010). Companies strive to achieve excellence by improving their supply chain performance (Garcia et al. 2012). There is no denying that cost reduction is an important task for supply chain members. Managers need to understand the implications of supply chain functions and to be knowledgeable about supply chain performance which benefits to their industries (Mentzer & Williams 2001; Stank et al. 2003).

3.2.1 Supply Chain Performance Measurements

The measurement of performance is defined as the process of counting the success and efficiency in action (Cook & Bala 2007). Performance measurement plays a vital role in monitoring the performance, increasing the motivation and improving the communication to diagnosing the problem (Li, Ghadge & Tiwari 2016). Traditionally, some scholars (Brewer & Speh 2000; Droge, Jayaram & Vickery 2004) measured the supply chain performance based on time factors, fill rates, cost, and financial outcomes. Supply chain managers and researchers have an interest in understanding supply chain performance (Namukasa 2013) and its influence on the textile industry and business performance, which is important for creating customer value, customer satisfaction and loyalty (Olusola & Akinlolu 2012). Measuring supply chain performance is significant because of its influence on supply chain operations (Grimm & Cheng 2006). A
A performance measure metric is used to measure the efficiency and effectiveness of all the actions in the supply chain (Neely, Gregory & Platts 1995).

Measuring the supply chain performance at operational level deals mainly with the supplier, delivery, customer’s services, and inventory cost (Koprulu & Albayrakoglu 2007). Customer satisfaction is used as a method to measure the supply chain performance (Kiyani et al. 2012). If customer satisfaction for the particular company is assured, this indicates a good performance of the supply chain, while customer dissatisfaction indicates a poor performance of the supply chain (Li, Ghadge & Tiwari 2016). Meanwhile, the accuracy of the product specification is the most important factor of a customer’s satisfaction with textile manufacturer’s service (Christopher, L 2004; Koprulu & Albayrakoglu 2007). In the supply chain context, Gunasekaran, A and Kobu (2007) reviewed the extant literature and identify the four performance measurement frameworks that are based on different criteria (see Table 3.2):

<table>
<thead>
<tr>
<th>Measurement/Framework</th>
<th>Dimensions</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>The balanced scorecard perspective</td>
<td>Four areas: financial, customers, internal process, innovation and growth.</td>
<td>(Norton &amp; Kaplan 1992)</td>
</tr>
<tr>
<td>Components of performance measures</td>
<td>External process includes raw material and product distribution channels.</td>
<td>(Beamon 1999)</td>
</tr>
<tr>
<td>The location measures in supply chain links</td>
<td>Four categories: time, resource utilisation, output and flexibility.</td>
<td>(Gunasekaran &amp; Patel 2001)</td>
</tr>
<tr>
<td>Decision making levels</td>
<td>Three conventional planning levels: strategic, tactical and operational</td>
<td>(Gunasekaran &amp; Patel 2001)</td>
</tr>
</tbody>
</table>

Table 3-2: Frameworks to Measure Supply chain Performance

Financial metrics, information metrics, operation metrics and customer’s services metrics are important metrics for measuring supply chain performance (Donglin 2009). Financial metrics relate to financial performance measurement: they are associated to the interrelationship between organisational financial information and include balance sheets, cash flow statements and overall business performance (Donglin 2009). Dehning, Richardson and Zmud (2007, p. 810) assert that “financial measurement is a useful tool to understand the supply chain efficiency which includes, return on assets...
Information metrics are associated with information sharing, information quality effectiveness and bullwhip, each of which significantly affect supply chain performance. The bullwhip effect is an important phenomenon in the supply chain which can lead to longer lead time and poor inventory decisions (Fiala 2005). The bullwhip effect discussed in this thesis to consider its role in relation to how political disruptions impact on supply chain performance. Improving the bullwhip effect using information sharing strategy can improve customers’ demands and inventory decisions, leading to reduced delivery lead time (Fiala 2005). According to Chen et al. (2000, p. 281), “compared with deterministic demand, demand fluctuation led to a greater bullwhip effect that essentially could not be completely avoided. However the effects on cost could be minimised by sharing information”.

Operation metrics coordinate strategies including buyer vendor coordination, inventory distribution coordination and production distribution coordination (Thomas & Griffin 1996). Therefore, the implementation of operation metrics is complicated; it depends upon supply chain characteristics such as structures to share information among supply chain members, operation plans and schemes to benefits the coordination (Ayesha 2007). The operational performance metrics cover different areas including delivery cost, workforce, quality cost, and volume flexibility (Flynn & Schroeder 1995). Skinner (1985, p. 47) classifies supply chain operations in relation to five key characteristics: “process technologies, market demands, product volumes, quality levels and manufacturing tasks”.

Customer service quality is known as the key metrics representing the supply chain performance (Reiner 2005). Quality customer services include product support, pre-sale customer services, delivery lead time, delivery dependability and responsiveness (Stank et al. 2003). According to Jammernegg and Kischka (2005, p. 414) “customers’ satisfaction is one of the most important performance metrics in customers driven supply chains”. Operational performance, service platforms, availability, and perfect order can be deployed in customer services assessment (Bowersox & Cooper 2009).
Measuring the performance of a supply chain can be grouped into three categories (Chan 2003). The first is associated with the performance of the upstream activities of the supply chain (with respect to sourcing and procurement). The second refers to the measurement of the performance of the internal supply chain (with respect to conversion or manufacturing operations); and the third refers to the measurement of the performance of the downstream activities (with respect to delivery), as well as the logistics component of the supply chain which aims to satisfy the customer (Afonsoa & Cabrita 2014; Bichescu & Fry 2009; Donglin 2009).

### 3.3 TEXTILE SUPPLY CHAIN OPERATIONS

Not so long ago the textile industry was known as a cottage industry, which offered very little return (Memon 2015). Since then, the textile industry has been totally changed by technology; it now plays a vital role in many economies and is considered as the backbone of many countries (Memon 2015). Many Asian countries, such as China, India, Pakistan, and Bangladesh, are using textile as their main source of economic growth (see Table 3.3) (Usmani 2012). In many cases, the textile industry contributes 32 per cent to the GDP in different countries and this percentage is gradually increasing (Jasbir & Colin 2006). Clothing is a basic and necessary human requirement and it is important that its manufacture and supply can meets the demand for it (Qi & Xiaoxu 2008).

<table>
<thead>
<tr>
<th>Economy</th>
<th>Textile share in exports</th>
<th>Clothing share in exports</th>
<th>Merchandising share in export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>6.9</td>
<td>76.6</td>
<td>83.5</td>
</tr>
<tr>
<td>Pakistan</td>
<td>44.1</td>
<td>23.1</td>
<td>67.2</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2.2</td>
<td>44.5</td>
<td>47</td>
</tr>
<tr>
<td>Mauritius</td>
<td>3.6</td>
<td>35.5</td>
<td>39.1</td>
</tr>
<tr>
<td>Tunisia</td>
<td>2.9</td>
<td>27.6</td>
<td>30.5</td>
</tr>
<tr>
<td>Guatemala</td>
<td>3.0</td>
<td>25.8</td>
<td>28.8</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2.0</td>
<td>14.9</td>
<td>16.9</td>
</tr>
</tbody>
</table>

Table 3-3: Countries with a High Dependence on Textile exports (WTO 2006)

In the eighteenth century, the United Kingdom was the biggest producer of textile products (Chandresh 2008). Initially, wool and cotton were used to make textile products; later, other fibres were also used for this purpose (Memon 2015). Following
the textile revolution in the late eighteenth century, the textile industry has undergone significant changes (Jasbir & Colin 2006). Whereas more than one worker was initially required to handle single loom, after the technological revolution one worker was sufficient to handle the entire production unit (Chandresh 2008).

Currently, textile and clothing products are growing globally, and many companies are sourcing their manufacturing units from overseas or moving their units to countries with cheap labour and production costs (Bruce, Daly & Towers 2004). This sourcing strategy for the textile industry must reflect the capabilities of supply chain performance. Among the many other industries, there are differences in term of cost, flexibility of production and lead time in textile industry (Kevin, Hendricks & Sighal 2012). A textile is an industry which is part of our society (Jasbir & Colin 2006). We can barely conceive of how different our lives would be without textiles (Werner 1998). According to Jasbir and Colín (2006) textile fabrics can be broadly categorised into three main groups according to their end use: fashion and clothing; furnishing and the domestic; and the industrial and the technical.

A textile is anything that is the result of weaving natural or synthetic fibers, and it also includes fabric made by interlacing threads/yarn (Wang et al. 2012). Textile products can be made through various methods, but the raw material always comes from natural or synthetic sources (Jasbir & Colin 2006). The textile industry is mostly driven by cotton (natural source) and some synthetic fibres such as polyester and rayon (Whitney 2011). A textile is defined as “a material formed by putting the fibres or yarns together using different methods”, (Wang et al. 2012, p. 463) and “a textile fiber is defined as a unit of matter with a minimum length of 100 times its diameter, flexible, and capable of being woven” (Whitney 2011, p. 137). Textiles may be formed by the interlacing of yarns or threads by weaving, or by loop formation of yarns through knitting (Qi & Xiaoxu 2008). Animals are a primary source for natural fibres such as wool, silk, and hair (Memon 2015). The fibres from vegetable sources such as hemp, flax and cotton derive from trees and other vegetables (Chandresh 2008). The fibres used less frequently are called mineral sources and these include asbestos. The last but most important form of fibres is manufactured from the synthetic sources rayon and polyester (Whitney 2011).
3.3.1 Textile Production System

Textile manufacturing involves a number of processes, and it incorporates various types of raw materials processed by many different machines (Majumdar et al. 2013). The journey from fibre to finished good is remarkably long and complicated and includes many possible variations and complex processes (Memon 2015). As compared to other industries, the textile supply chain is difficult to control because its owing to quick changes in the demand for fashion and textile products (Wang et al. 2012). There are several stages involved in manufacturing a single textile product; these include ginning, spinning, weaving, dyeing, processing, garment manufacturing and apparel manufacturing (Jasbir & Colin 2006). Textile production units are particularly based on two types including composite and vertical. In vertical units, all processes from fibre to finished product can be formed into one production unit (Koprulu & Albayrakoglu 2007). In the case of horizontal production units, each firm deals in a specified product or operation and carries out other operations on a commission basis for other firms (Koprulu & Albayrakoglu 2007). For example, a textile unit dealing in the dyeing of fabric may send the un-dyed fabric to another dyeing factory that is dyed and returned in terms of commission settlement (Majumdar et al. 2013). This producing style is mainly used in Pakistan (Figueiredo et al. 2012). Compared to supply chains for other manufacturing industries, this textile supply chain is complex (Wang et al. 2012).

Textile manufacturing requires three steps: the preparation of raw materials, spinning, and weaving. The preparation of textile raw material varies for different materials such as cotton fibers, which requires a different process from synthetic fibers (Jasbir & Colin 2006). Following the preparation of the raw material, the textile fibres are converted to yarns and, on account of the difference between various materials mentioned above, wool and cotton fibres have different spinning procedures from synthetic ones (Werner 1998). Textile spinning involves blow room, carding, combing, drawing, roving and yarn manufacturing (See figure 3.1). These steps of preparing the raw material and spinning are interconnected with each other to form textile yarn to be used as a raw material for textile weaving (Ahmed 2010). Textile weaving involved warping and interlacing threads on different kind of looms to produce fabric (Doghri 2007). The final product that emerges from weaving these units cannot be used without further processing. Textile processing involves dyeing, printing, and bleaching according to the
customer’s requirements (Bruce, Daly & Towers 2004). The last process of textile product manufacturing is the garment or apparel manufacturing which requires a more intensive engagement than what was needed to carry out the previous steps (Chandresh 2008).

![Textile Production Line](image-url)

Figure 3-1: Textile Production Line (Cotton Australia 2014, p. 10)

The cotton supply chain commences with fibre preparations, which add value by separating the cotton from the seeds. All processes, from weaving to make-ups, have the option of adding value to the textile product according to customer demand (Doghri 2007). The success of the whole supply chain relies on the variation of the yarn quality, and if this is poor quality then fabric manufacturer will unable to produce quality fabrics (Qi & Xiaoxu 2008).
3.3.2 Buyer-Dominated Textile Supply Chains

The textile supply chain is more complex than other manufacturing industries (Majumdar et al. 2013). The entire textile supply chain consists of organisations or activities that range from design, product development, manufacturing, and outsourcing to logistics (Arslan 2006). According to Bruce, Daly and Towers (2004), there are two types of textile supply chain systems: buyer dominated and product dominated. In the producer-dominated supply chain, the textile manufacturers play a central role in the supply chain, while in the buyer dominated supply chain, textile buyers play a central role in the supply chain (Bruce, Daly & Towers 2004). The textile industry mainly works on the buyer dominated type because all textile buyers are from developed countries, and textile manufacturers are mostly from developing countries like Pakistan, India and Bangladesh (Hossain 2010). Leading brands prefer to control the designing and marketing segment of the supply chain and the rest of the processes are left for the manufacturers to control (see figure 3.2) (Thompson & Martin 2014). Major brands are from the US, the UK, and Europe, and they are all buyer dominated (Hossain 2010). China, India and Pakistan are the main textile producing Asian countries (Shaikh et al. 2011). Developing countries are responsible for handling all process from raw material to product manufacturing, but the developed countries only handle Research and Development, sales, and marketing (Hossain 2010).

![Textile Supply Chain Diagram](Hossain 2010)

Figure 3-2: Textile Supply Chain (Hossain 2010)
Textile products are usually categorised according to their domains, e.g., low priced-medium products, medium priced-medium products and high priced-medium products (Shaikh et al. 2011). All textile products have different demand volumes, or cycles, depending on the type and usage of the product. For example, fashion textile products have a shorter demand volume because people need new designs of textile products in every season (i.e. female clothes particularly are part of this short demand volume) (Wang et al. 2012).

Delivery lead time is an important factor in saturated markets like textiles (TROG 2012). In the present market environment, the delivery lead time is shrinking day by day because of the many textile and fashion brands on the market (Wang et al. 2012). Pakistan’s products are mainly produced for the western market, it is important that the country’s textile industry focuses more on how their supply chain operations can meet delivery lead time (Siddique et al. 2012). The availability of road and railway infrastructure is another factor for consideration of reducing the delivery lead time. In Pakistan, although every government that has been in power has spent vast sums of money on improving and upgrading roads, the railway system still needs to be upgraded (Aftab & Mehreen 2010). Railway infrastructure is always cheap, but in Pakistan the railway infrastructure is not good enough to help textile exporters to reduce their delivery lead time (Memon 2015).

3.4 CHALLENGES OF SUPPLY CHAIN DISRUPTIONS

In today’s competitive and unpredictable business world, cost reduction and good customer service are not the stand-alone efforts of any single supply chain member (Ramanathan 2013). The success of any organisation's product based on customer satisfaction relies on efficient and effective supply chains (Kim 2009). This may be possible through collaboration with supply chain partners (Beck, Chapman & Shrinkage 2003). Market demand and the changing nature of the end users can create greater opportunities for supply chain members and also increased competition (Hau 2002). According to Smaros (2007), nowadays, due to globalisation, supply chains who want to compete in the market will no longer benefit from operating alone. Also, supply chain operations are vulnerable to internal or external forces known as supply chain disruptions (Behdani 2013). Supply chain disruption is a term that has become more
familiar in Pakistan in recent years due to the latest events in the global supply chain networks (Arslan 2006).

Many definitions of supply chain disruptions exist in the supply chain literature. According to Snyder et al. (2012, p. 6) “disruptions are random and discrete events that cause an element of the supply chain to stop functioning for a random amount of time”. Some other supply chain disruption definitions from the literature are presented in Table 3.4:

<table>
<thead>
<tr>
<th>Authors</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albino &amp; Okogbaa (1998, p. 3057)</td>
<td>“Any event that causes variations in the expected behaviour of a production system called supply chain disruptions”.</td>
</tr>
<tr>
<td>(Desai 2011, p. 264)</td>
<td>“Transient occurrences that are difficult to foresee and whose impacts on organisations are potentially inimical”.</td>
</tr>
<tr>
<td>(Svensson 2002, p. 27)</td>
<td>“Unplanned events that may occur in the supply chain which might affect the normal or expected flow of materials and components”.</td>
</tr>
<tr>
<td>(Gaonkar &amp; Viswanadham 2004, p. 2702)</td>
<td>“Disruption in the supply chain occurs when the supply chain system and its structures radically changed due to nonavailability of certain production, warehousing, and distribution related facilities. These operations disturbed due to interruptions in the supply chain because of natural or man-made disruptions”.</td>
</tr>
<tr>
<td>(Yu &amp; Qi 2004, p. 16)</td>
<td>“Disruption as the cause of various uncertainties that is inherent in the supply chain”.</td>
</tr>
<tr>
<td>(Chopra &amp; Meindl 2004, p. 56)</td>
<td>“Disruption is a type or source of risk in the supply chain, which is unpredictable and rare but often quite damaging”.</td>
</tr>
<tr>
<td>(Craighead et al. 2007, p. 133)</td>
<td>“unplanned and unexpected events can disrupt the actual flow of goods and materials within a supply chain and expose firms in supply chains with more risks”.</td>
</tr>
</tbody>
</table>

Table 3-4: Key Definitions of Supply Chain Disruption (Brenner 2015)

The majority of the scholars from the supply chain literature define a disruption as an “event” (Albino, Garavelli & Okogbaa 1998; Craighead, Blackhurst & Johnny 2007; Desai 2011; Gaonkar & Viswanadham 2004; Rosenberger, Johnson & Nemhauser 2003). According to the definition of event in Collins English Dictionary by Denby (2003, p. 23), “anything that takes place or happens, especially something important
and it is regarded as a bare instant of space time as compared with an object which fills space and has endurance”. However, other scholars term an event as a “situation” which is a more static-term as it is not actively taking place, but rather passively existing (Hulsmann & Brenner 2011). The term “failure” is more static as it describes an effect and might be continuing as opposed to an event (Berman, Krass & Menezes 2009; Biao & Ying 2010). The failure will observed as the outcome of an event (Wagner & Bode 2007).

The connection of the event and a consequential threatening situation is especially highlighted by Bode and Wagner (2008, p. 208), who states that a disruption is “the combination of an unintentional, irregular event that occurs somewhere in the supply chain or its environment, and a consequential situation which significantly threatens normal operations of the firms in the supply chain”. This understanding implies that a disruption is a process which starts with one or more events in the operations and ends with a supply chain disruption or interruption in the supply chain operation (Stephan & Bode 2006).

The majority of disruption definitions mention the effect of a disruption (Svensson 2002). This is indicated in the following definitions: “structure radically transformed and non-availability” (Gaonkar & Viswanadham 2004, p. 2703), “inability to match demand and supply” (Hendricks & Singhal 2005, p. 513), “unintended, untoward risk” (Stephan & Bode 2006, p. 306), “unplanned, unanticipated towards risks” (Craighhead et al. 2007, p. 132), “unintended, anomalous and threatens” (Bode & Wagner 2008, p. 210), “periodic failures and unable to provide service” (Berman, Krass & Menezes 2009, p. 446), a disruption that is “inimical” (Desai 2011, p. 264), “failure and inability to meet customer demands” (Biao & Ying 2010, p. 1903) and “unprotected losses” (Cole 2010, p. 253). This is also highlighted by some of the definitions encountered, which speak, for instance, of “significant threats” (Bode & Wagner 2008, p. 211) or “radical transformations” (Gaonkar & Viswanadham 2004, p. 2704). Also, a disruption involves a significant negative deviation from a plan, which cannot attribute to common fluctuations, but which is exceptional (Behdani 2013).

Moving from a general discussion of disruption definitions to those that apply to the entire textile supply chain operation, the following definitions focus on disruptions that
relate to the operational process level of supply chains: “disruptions in the production system” (Albino, Garavelli & Okogbaa 1998, p. 3056), “structure of the supply chain system” (Gaonkar & Viswanadham 2004, p. 2704), “flows of goods and materials within a supply chain” (Craighead, Blackhurst & Johnny 2007, p. 103), “service facilities” (Berman, Krass & Menezes 2009; Kevin, Hendricks & Sighal 2012), “supplier facility” (Biao & Ying 2010, p. 1904), and “activity” (Cole 2010, p. 254). With recourse to the definitions of disruptions encountered in the literature, supply chain disruptions can thus be described in the following way:

“Supply chain disruptions are unexpected significant negative deviation(s) from process plans caused by one or more temporal events.” (Kevin, Hendricks & Sighal 2012, p. 3)

Most supply chain disruptions result from unexpected anticipated internal or external events which creates interruptions in the supply chain operations. Internal and external sources of disruptions to the supply chain include natural disasters, logistics issues, transportation failure, terrorism, political violence and political strikes (Berger, Gerstenfeld & Zeng 2004). Such events create disruption at different levels of the supply chain and affect the whole supply chain performance (Sheffi 2005). More detailed studies on supply chain disruptions are referred to in Table 3.5:
Qualitative Assessment of the Impact of Political Disruptions on Textile Supply Chain Performance in Pakistan

Chapter 3 – Supply Chain Performance

<table>
<thead>
<tr>
<th>Studies</th>
<th>Disruption Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Ningning et al. 2017; Simangunsong, Hendry &amp; Stevenson 2016; Sodhi &amp; Lee 2007; Stecke &amp; Kumar 2006)</td>
<td>Production facility failure</td>
</tr>
<tr>
<td>(Dani &amp; Deep 2010; Namukasa 2013; Pyke 2010; Tai-Sheng 2015; Vilhenac et al. 2017)</td>
<td>Quality problems in end product</td>
</tr>
<tr>
<td>(Meriem et al. 2017; Stecke &amp; Kumar 2006; Yuitim, Yui-Woon &amp; Chi-sum 2015)</td>
<td>Human resource problems</td>
</tr>
<tr>
<td>(Canbolat et al. 2008; Revilla &amp; Saenz 2017; Tsao &amp; Lu 2012)</td>
<td>Distribution network breakdown</td>
</tr>
<tr>
<td>(Buscher &amp; Wels 2010; Hashemi 2015; Tang, C &amp; Tomlin 2008; Zhou, Huang &amp; Zhang 2014)</td>
<td>Demand volatility</td>
</tr>
<tr>
<td>(Balfaqih et al. 2016; Buscher &amp; Wels 2010; Schoenherr, Tummala &amp; Harrison 2008)</td>
<td>Quality problems in supply of raw materials</td>
</tr>
<tr>
<td>(Brenner 2015; Ningning et al. 2017; Shahriar, Mohamed &amp; Bhaba 2017; Yang, J et al. 2017; Zhang 2014)</td>
<td>Longer delivery lead time of supplier</td>
</tr>
<tr>
<td>(Danese 2013; Reuveny 2010; Sodhi &amp; Lee 2007)</td>
<td>Supplier bankruptcy</td>
</tr>
<tr>
<td>(Bogataj &amp; Grubbstrom 2013; Wilson 2007)</td>
<td>Shipping delay</td>
</tr>
<tr>
<td>(Bogataj &amp; Grubbstrom 2013; Schoenherr, Tummala &amp; Harrison 2008; Yang, Z, Aydin, G., Babich, V. and Beil, D.R 2009; Zhang 2014)</td>
<td>Transportation infrastructure failure</td>
</tr>
<tr>
<td>(Bernholz 2006; Fuchs 2012; Lorentz &amp; Hilmola 2012; Lucifora &amp; Moriconi 2015; Schmitt &amp; Singh 2012)</td>
<td>Labour strikes</td>
</tr>
<tr>
<td>(Kum &amp; Vinh 2017; Reuveny 2010; Rivera 2004)</td>
<td>Natural disasters</td>
</tr>
<tr>
<td>(Reuveny 2010; Sunil &amp; Sodhi 2004; Weerakkody, Dwivedi &amp; Irani 2009)</td>
<td>Weather disruptions</td>
</tr>
</tbody>
</table>

Table 3-5: Key studies in supply chain disruptions (Zhang 2014, p. 352)

Many researchers (Hendricks & Singhal 2003; Kleindorfer & Saad 2005; Stephan & Bode 2006) argued that due to globalisation, human error, natural disasters, terrorist acts increased the chances of supply chain disruptions. Textile manufacturers are becoming more conscious of the impacts of supply chain disruptions in relation to a company’s reputation, earnings, profit values, image and ability to provide better returns to shareholders (Casey & Pasztor 2007).

The expected exposure of a supply chain to the potential impact of a disruption is measured by the possibility of the disruption and the impact of that disruption should it
take place (Zsidisin, Ragatz & Melnyk 2005). The supply chain disruption can occur in any node (e.g. supplier or the manufacturer) or link of the chain (e.g. the raw material transportation between supplier and manufacturer) (Zhang 2014). The source of the disruption may be located inside or outside the chain (Schoenherr, Tummala & Harrison 2008). An interruption in the expected flow of material from one supplier can be because of the economic failure of the supplier or a natural or human made disaster like an earthquake or a political event in the supplier’s region (Beamon 1999). The impact of the disruption, however, is not always immediate because it can take time for the defect to show its full impact on the system (Blackhurst et al. 2005). Also, a disruption may have a long-term impact on the company. For example, if a customer relationship or company reputation is damaged, the impact of disruption can be long lasting and difficult to recover (Sheffi 2005).

The supply chain risk has a long history (Biao & Ying 2010), initially starting with the study of inventory models and multiple sourcing policies to buffer organisations from the effects of supply chain disruptions (Chopra & Meindl 2004; Feitzinger & Lee 1997). However, most of the researchers tend to investigate organisational behaviours and responses to various facets of supply chain risk (Buscher & Wels 2010; Cavinato 2004; Hendricks & Singhal 2003) instead of considering other factors that account for supply chain risk (Dani & Deep 2010). For example, an incident related to supply risk involves the probability that the incident will have a detrimental financial effect on supply chain performance (David & Marija 2007). Such incidents fall into one of four categories: significant price increases, adverse impacts on firm reputation; problems of intellectual property; and supply chain disruptions (Hendricks & Singhal 2003, p. 507).

The first category of supply risk includes uncontrollable price increases due to commodity price volatility and currency rate fluctuations from pursuing global sourcing strategies (Carter & Vickery 1998; Kazantzis & Tesseromatis 2001). The second category of supply risk covers the detrimental effects on a firm’s reputation from its supply chain activities, such as environmental performance, labour practices at its supplier organisations, and overall ethical practices and philosophies associated with its supply chains (Jennings & Carter 2004; Magnan & Fawcett 2006). The third category is concerned with the loss of the firm’s intellectual property as the firm outsources production to the upstream supply chain (Jennings & Carter 2004; Magnan & Fawcett
2006). The fourth category of supply risk is supply chain disruptions, which can occur as a consequence of problems associated with suppliers being unable to provide products or services (Afsaneh, Muriati & Sulaiman 2010; Jennings & Carter 2004; Magnan & Fawcett 2006). Table 3.6 presents the sources of such supply chain disruptions and is followed by a description of the various kinds of disruption that affect the supply chain.

<table>
<thead>
<tr>
<th>Disruption</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural</td>
<td>Disruptions caused by nature. These include hurricanes, hail, fire, dust storms, lightning, and tornados.</td>
</tr>
<tr>
<td>Demand Shifts</td>
<td>Disruptions due to demand shifts that occur when the demand generated by customers exceeds the available capacity. It takes time to add capacity but create situations where the existing capacity is insufficient to meet demand.</td>
</tr>
<tr>
<td>Supplier Problems</td>
<td>If, for some reason, the supplier is unable to provide services and goods to satisfy the demand required for the firm, this is known as supplier disruption. This inability can be attributed to factors such as problems with producing goods that satisfy the customer’s minimum quality requirements or problems with delivery reliability.</td>
</tr>
<tr>
<td>Human or Organisational Behaviour</td>
<td>Any disruption that occurs directly as a result of a human or organisational action intentionally or un-intentionally such as terrorism, arson, human error, strikes, and slowdowns.</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Any disruption due to a breakdown in the information or technology systems. This could result from such factors as a system crash, corrupted data, or a computer virus.</td>
</tr>
<tr>
<td>Financial</td>
<td>Those disruptions caused by adverse changes in the financial conditions of any party involved in the supply chain (e.g., bankruptcy, or liquidation of a supplier).</td>
</tr>
<tr>
<td>Legal or Regulatory</td>
<td>Those disruptions caused by legal/regulatory problems e.g., health and safety violations or government mandated shutdowns.</td>
</tr>
</tbody>
</table>

Table 3-6: Sources of Supply Chain Disruptions (Ateeque, Aradhana & Pratima 2017; Zsidisin & Ritchie 2009, p. 104)

Chopra and Meindl (2004, p. 47) stated that, “logistics disruption is considered as a subset of the drivers of supply chain disruption risk”. Moreover, Wilson (2007, p. 255) elaborates by noting “the conception of logistics disruption, stating it as different from other disruption uncertainty, since the other disruption risks may stop the whole flow of goods”. Logistics disruption, will temporarily stop particular parts of the supply chain
network and it will not interrupt the whole supply chain operations (Jennings & Carter 2004; Magnan & Fawcett 2006). Following are the key types of supply chain disruptions:

- Natural disruptions include earthquakes, floods, and fires. Although these phenomena cannot be prevented (Brenner 2015).
- Transportation disruptions can cause delays in delivery of raw materials, parts and finished goods to the customers. Transportation disruptions can occur in the event of landslides, floods, traffic congestion and during festive seasons, given the number of people travelling between home and their destination (Chuantao et al. 2009).
- Social disruptions are conceptually similar to political uncertainties in that both refer to situations that affect societies (Ball & Craig 2010). Social uncertainties include employment issues, education levels and also lifestyle issues (Brenner 2015).
- Disruptions associated with input uncertainties relate to the quality of raw materials, technology availability, equipment and machine availability and reliability (Zsidisin & Ellram 2003). Input uncertainties can easily affect quantity, the quality of the product and the output of an organisation (Chuantao et al. 2009).
- Competitive disruptions include uncertainties associated with competitive rivalry among firms in the industry and potential entrants into the industry (Lieb & Miller 2002).

Modern supply chains are more vulnerable to disruptions than in the past, due to changes in economic and business environments (Lorentz & Hilmola 2012). Natural disasters such as floods, storms, earthquake, tsunami and hurricanes strike more often but have a greater impact on supply chains and a firm’s economic performance than was previously the case (Munich 2006). Meanwhile, the number of human-made disasters such as wars, political strikes, accidents, terrorist acts, technology failure and raw material shortages has increased the chances of supply chain disruptions (Colema 2006). The Centre for Research on the Epidemiology of Disasters (2004) comments that, surprisingly, disasters have increased during the last few decades. The reasons for an increase in disruptions over recent decades are four-fold.
First, supply chains are currently reducing their efficiencies due to disruptions (David & Marija 2007; Myers 2006). Second, the current supply chain structure is more complex than it used to be on account of factors such as manufacturing outsourcing and high levels of R&D, new technologies, a supplier-to-supplier relationships, regulatory requirements, increased dependence on supplier capabilities, security regulations, shorter product life cycle, and product and market expansion due to the international market (Christopher, T 2006). Third, executives from the supply chain struggle to improve their financial performance, which is measured on the basis of a return on assets (David & Marija 2007). Fourth, given the severe competition among supply chain providers and manufacturers, companies are forced to handle more calculated risks and risks that must be taken to improve efficiency and reduce long-term costs (Svensson 2002).

3.4.1 Identifying Supply Chain Disruptions

There are unique factors causing supply chain disruptions. These disruptions occur on account of events. For example, a fire in a textile manufacturing department can damage the whole production line (Clyde et al. 2017; Koprulu & Albayrakoglu 2007). Risk identification is the first step in identifying a disruption because it helps anticipate possible upcoming disruptions in the supply chain. Sheffi (2005) explains that a priori assessment of supply chain vulnerability is becoming increasingly important and difficult to achieve in the modern supply chain. Many researchers have undertaken studies that classify supply chain risk, supply chain vulnerability, and supply chain disruptions. Davis (1993) classifies distributors and customers as the main sources of manufacturing uncertainty. Rachel and Towill (1998) identifies the three main sources of supply chain disruptions as supplier side, (in particular, the manufacturing process), control systems, and the demand side.

Apart from the supplier and demand side factors, Craighead, Blackhurst and Johnny (2007, p. 104) suggested that “the risk may arise from inside the company, like price or demand disruptions” while Neshat and Wagner (2010) considered supply chain structure vulnerabilities another factor of disruptions identification. Beulens and Vorst (2002) defined supply chain uncertainty based on three dimensions related to the various sources of uncertainty: quantity, quality, and time. Peck et al. (2003) added a
dimension of exogenous events to the sources of supply chain insecurity. Sources of supply chain risks can be divided into two categories: internal and external disruptions (Juttner 2003). Sinha, Whitman and Malzahn (2004) added quite different dimensions for the categorization of supply chain risks, suggesting that these are physical, financial, informational, relational, and innovation. Sheffi (2005) classified sources of supply chain disruptions across transportations, facilities, information sharing, demand and logistics (see table 3.7).

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply chain disruptions</td>
<td>Supply chain infrastructure, the individual supplier characters, the required product quality, and quantity. Disruption in supply, schedules, prices escalation, technology access, quality issues, material design changes, improper manufacturing patterns, machine failure and labour shortages.</td>
<td>(David &amp; Marija 2007; Manuj &amp; Mentzer 2008; Neshat &amp; Wagner 2010; Stephan &amp; Bode 2006)</td>
</tr>
<tr>
<td>Transportation</td>
<td>Includes transportation delay, congestions, port stoppages, high levels of handling or inspection while crossing the border, and interruption in change of transportation.</td>
<td>(David &amp; Marija 2007; Wilson 2007)</td>
</tr>
<tr>
<td>Demand</td>
<td>The customer, the product and its characteristics, the physical distribution of products to the end-customer, the risk that the product will not be in demand, or that the planned and realized delivery will be slower.</td>
<td>(David &amp; Marija 2007; Manuj &amp; Mentzer 2008; Neshat &amp; Wagner 2010)</td>
</tr>
<tr>
<td>Supply chain structure Vulnerabilities</td>
<td>Stems to a large degree from the disintegration of supply chains and the globalisation of value-adding activities.</td>
<td>(Neshat &amp; Wagner 2010)</td>
</tr>
<tr>
<td>Security risks (terrorism)</td>
<td>Security of information system, infrastructure, freight, vandalism and sabotage security issues.</td>
<td>(Kleindorfer 2005; Manuj 2008)</td>
</tr>
<tr>
<td>Environmental risk, Macro Risks (social and economic environment)</td>
<td>Includes competitive risks due to the lack of history about opponents and their activities in the market place. Government actions including sanctions, legal and political due to mismanagement.</td>
<td>(David &amp; Marija 2007; Kleindorfer &amp; Saad 2005; Manuj &amp; Mentzer 2008)</td>
</tr>
<tr>
<td>Catastrophic Risk</td>
<td>Natural hazards, socio-political instability, civil unrest, economic disruptions, and terrorist attacks. Non-terrorist intentional acts.</td>
<td>(Kleindorfer &amp; Saad 2005; Parmar et al. 2010)</td>
</tr>
</tbody>
</table>

Table 3-7: Classifications of Supply Chain Disruptions (Zhang 2014, p. 18)
3.4.2 Dynamic Probability of Supply Chain Disruptions

Textile manufacturing companies depend on a range of upstream assets which lie totally outside their control. Also, managers have only incomplete information about their supply chain providers and sources which makes their manufacturing processes more risky (Peck et al. 2003). The dramatic outcomes of risky events in supply chains create more uncertainties for manufacturers as well as for consumers (Chopra & Meindl 2004; Eroglu, Zinn & Knemeyer 2009). Disruption uncertainty generally has an allow probability, and the potential for great losses referred to as “catastrophic event” (Eroglu, Zinn & Knemeyer 2009, p. 147). Such disruptions can badly affect the material supply, information, and the cash flow, given the increased product cost that is incurred (Pochard 2003).

Supply chain managers may use a divergent approach to manage their supply chain disruptions (Allon & Mieghem 2010). By using a divergent approach, they can develop resiliency, secure their supply chains, make recovery plans and modify inventory management policies for their supply chains (Yossi Sheffi 2005). Kleindorfer and Saad (2005) present a conceptual framework for estimating and reducing the effects of disruptions. Tang, C (2006) proposes robust strategies for mitigating disruption effects, and Pochard (2003) offers a detailed solution based on dual sourcing to reduce the chances of disruptions. Researchers (Christopher, T 2006; Meindl & Chopra 2007; Pochard 2003; Tang, C 2006) address different possibilities to reduce the impacts of supply chain disruptions (Tomlin 2006). However, the problems increase when a small segment of a disrupted firm no longer plays its role (Reinhardt, Chopra & Mohan 2007).

A situation in which the probability of supplier failure will be higher is in relation to sanctions (Behdani 2013). Sanctions apply in situations where companies and countries are not allowed to conduct business with a specific country because of political issues (Friman 2015). During sanctions, the suppliers are not allowed to contact manufacturers (Aisen & Veiga 2013). Compared to normal conditions, the probability of supplier failure is higher due to political disruptions (Allard, Martinez & Williams 2012). Sanctions can be enforced by one country on another, and this can affect trade between the sanctioned country and others, preventing all countries to buy or sell their product to
particular country (Friman 2015). In this scenario, the possibility of supplier failure is increased; following a political disruption and manufacturer needs to make a decision on how to continue sourcing (Salman 2013).

In this kind of situation, as Davarzani, Zegordi and Norrman (2011) explained, political events or uncertainties have a tremendous impact on supply chain performance over a longer period of time. Political disruptions and its impact on supply chain performance can be understood by investigating the different forms of political disruptions and their impact on supply chain performance (Jong-A-Pin 2009).

This study therefore proposed a conceptual framework, which explores the complex relationships between political disruption and supply chain disruptions and the resultant impact of performance in the textile industry in Pakistan (see Figure 3.3).

![Figure 3-3: The conceptual framework](image)

This framework will used to investigate the relationships among different types of political and supply chain disruptions and their impact on the supply chain performance.

### 3.5 SUMMARY

This chapter has identified the key textile supply chain disruptions and their impacts on supply chain performance. A comparison has been made between the different disruptions to investigate the causes of the disruptions and their impacts on different tiers on the supply chain operations. This chapter has also examined the association between supply chain disruptions and supply chain performance to help establish the complex interaction in the textile production network in Pakistan. The key conclusions of this chapter are as follows:
The textile industry contributes almost 8% to the total GDP in Pakistan. Thus, strategically, it is a vital industry for generating employment, economic growth and prosperity.

Textile production requires three steps: preparation of raw material, spinning and weaving. Textile processes are interconnected, and interruption in one process will impact on the next.

The textile supply chain is similar to other manufacturing industries, but it is more complex.

It is important that textile supply chain performance is maintained to achieve optimum customer satisfaction.

The following chapter establishes a theoretical framework for exploring different forms of political disruptions and their impact on supply chain operations.
CHAPTER 4: THEORETICAL FRAMEWORK
4.1 INTRODUCTION

This chapter establishes a theoretical framework for exploring the relationship between political disruptions and supply chain performance in the context of the textile industry. Various frameworks will be discussed in light of their suitability to interpret the complex way agents and agencies engage and interact within a political system to create political resistance and disruptions. The chapter begins with a brief introduction to four key theories and provides a detailed discussion of various aspects of structuration theory. Next, the reasons for choosing structuration theory are given; these take into account the appropriateness of the theory for exploring the impact of political disruptions on supply chain performance. The objectives of this chapter are two-fold:

- to compare the commonly used theoretical frameworks in the qualitative research; and
- to establish a theoretical framework driven by structuration theory to provide an in-depth understanding of the inter-locking relationships and interactions between political disruptions and supply chain performance.

4.2 THEORETICAL FRAMEWORKS

A theory allows researchers to put forward an argument and creates debates around the research area under examination (Ahrens & Chapman 2006). A theory can also assist researchers to explore and interpret a large volume of data and uncover less understood patterns and behaviour of a phenomenon within the realm of data. The role of theory in qualitative research is made clear in the work of Vaivio (2008, p. 67) in which Vaivio explains that “qualitative work comes in three forms which are: theory discovery; theory refinement; and theory refutation”.

Theories are often bundled around a framework, which provides the structure that can hold or support a particular field of investigation. The theoretical framework describes the theory that explains why the research problem under study exists and it can be best understood (Nagy 2010). Such theories intensively used in social research include Circuits of Power by Clegg et al. (2005), Institutional Theory by Powell and DiMaggio (1991), Actor Network Theory by Latour (1991), and Contextualise Theory by Walsham and Sahay (1999). According to Clegg et al. (2005, p. 55) Circuits of Power “provides useful tools for examining the power structures, but some elements of this
theory such as system integration require detail empirical research that would excessively constrain the scope of the study”. More precisely, Actor Network Theory offers the idea of enrolment but lacks aspects which are relevant to the organisational and behavioural changes required for this research (Clegg et al. 2005). In this study, different theoretical frameworks are presented to explore the relationship between political disruptions and supply chain performance. In particular, three key theoretical frameworks namely institutional theory, political economy and structuration theory are discussed in detail in the following sections.

4.2.1 Institutional Theory

Institutional theory provides a theoretical lens through which researchers can identify and examine influences that promote the legitimacy of organisational practices (Bruton, Ahlstrom & Li 2010). Included here are factors such as culture, social environment, regulation (including the legal environment), tradition and history, as well as economic incentives (Baumol & Litan 2009; Bruton, Ahlstrom & Li 2010). In institutional theory, legitimacy refers to the adoption of sustainable practices by stakeholders for proper and appropriate use of the rules in the organisation (DiMaggio & Powell 1983). Institutional theory seeks to secure the agent’s legitimacy and position through utilization of the rules at an organisational level (e.g., government law enforcement agencies, courts, regulatory structures and other activities to exert conformance the pressure) (Richard Scott 2005). According to institutional theory, the internal economic, social and political pressures of an organisation influence its decision making strategies. The internal environment is particularly influenced when firms seek to legitimise their practices and procedures in view of other stakeholders (North 1990; Zandbergen & Jennings 1995). Institutional theory is concerned with how different groups and individuals sustain their structure, legitimacy, position, and status by following the institutional rules, values, norms, and mechanisms defined by the institutional structure and the environment of the institution (Scott 2014). In this way, it can help establish a framework to understand the structures and interactions whereby the role of institutional rules, values, norms, and mechanisms on acts of political disruption and their effects on supply chain performance in the textile industry can be theorised.
Both institutional and structuration theories suggest that institutions and structures are likely to be linked and can be understood as part of a energetic and on-going process (Bruton, Ahlstrom & Li 2010). However, institutional theory has pursued an empirical agenda because its models of institutionalisation as a process are underdeveloped (Weerakkody, Dwivedi & Irani 2009).

4.2.2 Political Economy

Political economy theory, according to Weingast and Wittman (2006), involves understanding the economy particularly in relationship to power, class and the social issues of society. Political economy mostly understood as the application of economic analysis to the study of political process (Schnellenbach & Schubert 2015, p. 395). For Winden (2015, p. 298) political economy relates more to the management and generation of wealth in a society. Political economy is defined by Glaser (2005, p. 19) as “the science of wealth that deals with efforts made to satisfy the desires of man”. Williams (1977, p. 44) explains that “political economy meant the social customs, practices, and knowledge about how to manage the household, and then the community”. The term *economic* is rooted in the classical Greek *oikos* for house and *nomos* for the law. It is also necessary to note that from the very beginning, political economy combined the descriptive and the prescriptive approaches to define economic organisation (Williams 1977).

Fuchs (2012, p. 695) comments that, “political economy is the driving force and a theory which offers advice to the leaders of social organisations of varying degrees of complexity at various times and places”. The Dictionary of Economic Terms defines the original intent of political economy as a “branch of statecraft but which is now regarded as a study in which moral judgments are made on particular issues” (Gilpin 1977, p. 240). The political economy theory involves an insightful approach to understand the society particularly in relation to power, class and social relations of productions; these are issues of particular concern in analysing the structural dynamics relevant to supply chain operations (Peter 2010). Production and distribution of goods are therefore complicatedly interwoven in the political structure in Pakistan whereby power, class and social relations play a significant role in the supply chain performance. Political economy theory is closely related to social economic development in society,
but it does not address the issues of legitimation and the relationship between economic and production performance, which are important for this research. Also, political economy (or political economic theory) approach does not explicitly incorporate the role of agents and agency in the production systems which are vital drivers of textile supply chain performance because of the cultural embeddedness and weak institutional structure.

### 4.2.3 Giddens Structuration Theory

Structuration theory, originally formulated by Giddens, recognises the central responsibility of the agents in the process of production and reproduction of the industrial structures that in turn enable or restrain their actions. Giddens (1991) suggests two major types of structures: “rules and resources”. In structuration theory, rules provide normative legitimacy (legitimation) and meaning (signification) with respect to the organisational agents’ actions. Resources (domination) include both human (i.e. management or workers and politicians) and material resources (i.e. raw material and machines) within the domain of organisation (Lewis & Suchan 2003). The norms and values represent the general rules that are translated into specific rights and responsibilities (Lewis & Suchan 2003). These rights and responsibilities provide the basis upon which organisations formulate their goals, and impose sanctions (Clegg et al. 2005). Within the textile organisational environment, there are three main norms and values which are generally integrated. These are the organisational internal environment, the external social environment of the society and the internal production operational environment of the organisation, all of which are susceptible to the supply chain and political disruptions (Vallaster & de Chernatony 2006).

Lewis and Suchan (2003, p. 298) suggest that “structuration theory is a useful framework for studies related to the supply chain and supply chain management”. The structuration theory framework in this study follows the successful application of this framework in the field of management information systems and supply chain management (DeSanctis & Poole 1994; Orlikowski 2002). Holweg and Pil (2008, p. 293) used structuration theory “to explore firm level change activities, associated with implementing information technologies in supply chain systems, requiring managing the flow of information and maintaining the supply chain operations”. This study also
undertakes a macro perspective, focusing on the different organisational structural types and their interactions that are more relevant to the agents and agency and their varying roles in producing and reproducing the structures. Specifically, structuration theory provides a framework for analysing and making sense of the data that was collected to explore the relationship between political disruptions and supply chain performance. This study therefore uses structuration theory as a theoretical framework.

Structuration theory appeared as an important development in European sociology in the late 1970s (Rose & Hackney 2002). Giddens’ work has received significant attention due to the work on the relationship between agents and agency. Structuration theory is a theory of social organisation rather than a theory specific to social, economic and political concerns (e.g. political economy) (Manjunath & Andrew 2013). One of the primary objectives of structuration theory is to resolve a fundamental division within the social sciences about whether human agents and agency are influenced by social phenomena. For example, structuralism and functionalism emphasise the structure of social systems as having an exogenous objective influence on social phenomena (Kambanei 2014). Giddens thus made attempts to resolve this agency/structure debate. He suggests that agency and structure are neither independent nor conflicting but a mutually interacting duality. The structure is drawn from human interactions, whereby the social structures are continuously produced and reproduced. In other words, social structure is seen as being drawn by human agents in their actions, while human actions in social contexts serve to produce and reproduce the social structure (Catherine 2004).

Structuration theory seeks to integrate the two traditional approaches of objectivism and subjectivism in sociology (Catherine 2004; Kambanei 2014). Barley and Orlikowski (2001) explain that “the structuration perspective synthesises objective and subjective elements of social phenomena”. Alvesson and Willmott (1992, p. 433) explain that “the purpose of structuration theory is to provide different analytical levels for organisational analysis”. According to Barley and Orlikowski (2001, p. 147) “structuration serves as a meta theory and does not anticipate existing theories; rather, structuration theory provides a higher level of synthesis that permits us to see the connection between on-going human activities, social processes, and stable social structures”.
Largely, structuration theory remains a process theory of such abstraction that has a structure to explain the production and reproduction of the structures (Scott 2014). Structuration theory is suitable for this research because it is a process-oriented theory that treats structures of a supply chain as both a product of and a constraint on human actions. Institutional theory is relatively less focus on agency compared to structuration theory, due to its greater focus on context and the process of institutionalization (Bruton, Ahlstrom & Li 2010; Weerakkody, Dwivedi & Irani 2009). Thus, structuration theory provides an insightful explanation to the research problem and presents a model helpful for analysing the research questions from every angle.

4.3 AGENTS, ACTORS, AND AGENCY

Agents, also called actors, are the members of society (Giddens 1986). According to Giddens (1979, p. 56) “agents are knowledgeable”. They play an important role in society because they are knowledgeable about their actions. Their knowledgeability does not indicate that they are always in control or work under command. Giddens’ (1979) stratification model of action (see figure 4.1) explains that how action occurs:

![Figure 4-1: Giddens’ Stratification model of action (Giddens 1979, p. 56)](image)

The model commences with an analysis of the agent and the agent’s actions which believe that other agents do behave in the same way (Broger 2011). During the reflexive monitoring process, agents develop a firm understanding of the activities surrounding their actions. This reflexivity allows them to avoid the contradictions essential to structures or even to use them purposefully (Broger 2011). Giddens (1979, p. 59) suggests that “agents can engage in an explanation of their actions, although, under normal circumstances they are not asked to do that”. Giddens (1986) purposefully separates reflexive monitoring, rationalisation and motivation of action. The reflexivity process within this model is the “institutionalization of knowledge . . . the process of
Agents are knowledgeable and know a great deal about why they act in the way they do. In their reflexive monitoring of their own and others’ actions, agents rely on their understanding (Jochoms & Ruthers 2006). This enables them to clearly describe actions, motivations and awareness, which are the hidden stock of information or knowledge about how to act and react to internal and external contexts. The agents also rely on their ability to interpret events and the actions of other agents (Catherine 2004). However, while many of the consequences of agents’ behaviour are planned and known, the value of the agents’ action may be unknown to other agents. In structuration theory, agents have the capacity to intervene and to make a difference in an on-going course of social practices, activities and events (Giddens 1979). The relationship between subordinate and superior agents is referred to as the “dialectic of control” in structuration theory (Catherine 2004). Giddens (1979) described agents in terms of several notable characteristics:

- Agents are knowledgeable;
- Agents are self-reflexive;
- Agents have agency;
- Agents have intentionality; and
- Agents’ instantiate structures within their social practices.

In structuration theory “agency is the ability of individuals to be purposeful in their social settings and to be able to reflect and monitor their own and other agents’ actions in their respective settings” (Kambanei 2014, p. 84). Consequently, human beings (agents) are aware of the possible consequences of their actions in society that represent the potential of a change in their behaviour. Giddens (1981, p. 128) describes social life as an “actively constituted by individual agents who produce a shared understanding that guides them in their social settings”. Agents are capable of acting in a conscious and unconscious manner in their social environment (Kambanei 2014). Agents act in a conscious way when they are able to question the rationale for their behaviour in . . . prevailing patterns, rules, codes and procedures (Kambanei 2014).
4.4 STRUCTURE, SYSTEM, STRUCTURATION AND RESOURCES

The structure is both the medium and outcome of the reproduction of social practices. Giddens (1984, p. 16) illustrates “structuration as an on-going and emergent process rather than structure as a static property of social systems”. In order to stress this point, Giddens adopts specific and non-standard meanings for certain key concepts: structures, systems, and structuration. These are defined as follows:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Meanings</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures</td>
<td>Structures are rules and resources or sets of transformation relations, organised properties of social systems.</td>
<td>(Bryant &amp; Jary 2001; Busco 2009; Giddens 1991)</td>
</tr>
<tr>
<td>Systems</td>
<td>Systems are reproduced relations between actors or collectivities, organised as regular social practices.</td>
<td>(Bryant &amp; Jary 2001; Busco 2009; Giddens 1991)</td>
</tr>
<tr>
<td>Structuration</td>
<td>Structuration refers to conditions governing the continuity or transformation of structures, and therefore the reproduction of a social system.</td>
<td>(Bryant &amp; Jary 2001; Busco 2009; Giddens 1991)</td>
</tr>
</tbody>
</table>

Table 4-1: Key Dimensions of Structuration Theory

Giddens (1984, p. 17) defined “structures to consist rules and resources, and they exist in the obvious form only when it is unsatisfied in action, otherwise it persists only as memory traces in human minds”. Agents draw upon these rules and resources as they act and interact in specific time-space settings. These structures are the outcome of those actions and interactions (Giddens 1986). Social structures are not material objects because human beings produce, reinforce and monitor these structures. They may not always be aware of pervasive opportunities for change. Giddens (1986) explained that structures have two types of consciousness, which are practical and discursive.

There are two types of resources which Giddens defined: allocative and authoritative. Allocative resources are “transformative capacity and generating command over objects, goods, or material phenomena”, whilst authoritative resources are “transformative capacity generating commands over persons or actors”(Giddens 1986, p. 20). One particular implication of Giddens’ conceptualisation of structure is relevant to this study: the virtual order of transformative relations that exist as time-space...
presence memory traces of knowledgeable human agents (Giddens 1986). Giddens and Pierson (1998, p. 77) argues that “even in the case of the apparently material allocative resources such as land, which might seem to have a real existence, they only become resources when incorporated within processes of structuration”. The rules and resources constituting structure exist only in the agents’ heads (Kambanei 2014).

In structuration theory, structures are conceptualised as external or internal constraints with regard to human conduct (Giddens 1986). As virtual order, structures exist only as memory traces orienting the conduct of knowledgeable human agents. This implies that structures have only a bearing on human conduct if they are actively un-satisfied by the purposive agents (Rose & Hackney 2002). Giddens (1984, p. 21) argues that “structuration theory does not regard structures as internalized force that determines human conduct, but as a silent set of rules of conduct and resources upon which agents purposively draw in their day-to-day activities”.

The action is central issue to the theory of structuration. Giddens sees action as a “continuous flow of conduct” (Giddens 1998). It has an undivided quality. It cannot be considered as the preservative capacity of a combination of intentions or reasons. However agents and their knowledge ability are bounded in action. The flow of action produces unintended consequences and these in turn may form unacknowledged conditions of action in a feedback loop (Giddens 1986). The particular meaning of rules in this context is subjected to further amplification in which Giddens distinguishes between rules of social life and formulated rules (Giddens 1986).

4.5 DIMENSIONS OF STRUCTURATION THEORY

There are three key dimensions of structuration theory: domination, signification and legitimation (see figure 4.2). Domination relates to the power utilised by agents. Signification is used in this context as a general term for language. The signification dimension thus relates to how human agents interact in social systems and exchange meaning through communication (Giddens 1979; Scapens 1991). Legitimation, the last dimension of the structuration theory, describes the communication methods used by the agents to convey or deliver their messages (Catherine 2004).
4.5.1 Domination

The domination dimension has three constitutive elements: domination structure, facility and power. The domination structures refer to the “resources over which human agents exercise their power of transformative capabilities” (Giddens 1979, p. 112). In the domination dimension, Giddens uses “power” to represent the “capability of agents to bring about transformative changes in resources” (Giddens 1979, 1986). Through the use of power over resources, the agents achieve strategic outcomes through interactions in modalities (Giddens 1979). The facility is used by agents for its transformative capabilities to utilise resources (Giddens 1979). The facilities, which include land, buildings, technology, machinery and staff, are used to coordinate and control resources and power.

Power is defined by Giddens (1979, p. 134) as “the capability of agents to secure outcomes where the realisation of these outcomes depends on the agency of other agents”. Giddens (1979, p. 134) clarifies the definition of power as a “volitional act that proposes that the powerful person (agent) could have acted otherwise in deploying their power. The person against whom that power was deployed would have acted otherwise had the powerful person not chosen to exercise their power”. The power is unlikely to be distributed symmetrically among agents in any situation but rather is an instrument made by human in proportion to their power in a given situation (Gouldner 1955).
In the textile industry, power provides access to different operational opportunities which allow managers (production agents) to change or manage resources to achieve a set of known objectives (Lewis & Suchan 2003). A conscious agent/actor acts on his or her decision to deploy or withhold the deployment of that power in a given circumstance (Kambanei 2014). In relation to supply chain research, power deployment often stands in contrast to relational approaches, in which an agent could use his or her power to stabilize or manage the system (Rokkan & Haughland 2002) or to help improve the collaboration between suppliers. Unbalanced relationships involve less stability and more conflict, and in textile supply chain literature the volitional deployment of power appears as the phenomenon of opportunistic behaviour (Too, Souchon & Thirkell 2001; Wathne & Heide 2000). This behaviour is more pronounced in Pakistan where power is structured around traditional bases and concentrated in few groups who want to retain the asymmetry to protect their interest.

The structural properties of resources enable the means of production in the textile industry such as yarn production and fabric production knowledge, relations with other production factors to be dominated (Sydow & Windeler 1998). For example, the lack of information synchronisation and visibility between textile manufacturers and raw material suppliers could mean the difficulty for suppliers to carry out their manufacturing or distribution activities (Stewart & Pavlou 2002). Information flow delays or irregularities could also create confusion between the top management and the workforce on the production line in the textile industry. Textile manufacturers often benefit when they have unlimited and easy access to resources to help control or influence decision-making. Potential disturbances that could arise when such control is denied is minimised (Rokkan & Haughland 2002). Failure to deploy power in the textile industry in the context of unequal power will impact on the trust between manufacturer and suppliers. Similarly, granting access to resources over time can boost trust and produce commitment (Garling et al. 2002).

4.5.2 Signification

The signification dimension of structuration theory has three constitutive elements: structure, interpretative schemes and communications. Signification structure can be described as “codes or modes of coding agents used to communicate meaning”
(Giddens 1979, p. 149). Communication is an “aspect of the social dimension of signification through which agents exchange their understanding of the social phenomenon with other social actors” (Giddens 1979, p. 150). According to structuration theory, the regular reproduction of structural properties takes place across time and space through communication (Giddens 1984). Interpretative schemes are “standardized elements of stocks of knowledge that social factors apply to the signification structures to arrive at understandings in interactions” (Giddens 1979, p. 151).

As a structuring process, communication refers to the “formal as well as informal sharing of meaningful and timely information between firms” (Anderson & Narus 1990, p. 43). It also provides a facilitating source for successful partnerships between textile producers and raw material suppliers within the textile supply chain (Mohr & Spekman 1994). Furthermore, it enables textile producers, raw material suppliers and consumers (end product users) to establish and maintain trust and trusting relationships. Thus, they are able to develop and strengthen these relationships and remove barriers to competitive entry (Lindridge 2012; Patrick & Kitchen 2004). In the context of structuration theory, communication and reflexive monitoring applies interpretive schemes and which draw rules of signification (Sydow & Windeler 1998). In structuration theory, the communication role is bi-directional rather than uni-directional and the “lack of two-way communication between equal partners hampers the dependent agent’s responses to the dominating agent’s initiatives” (Rokkan & Haughland 2002, p. 213). However, the agents’ role in the supply chain is dependent on dominant agents with whom they share information and powers accordingly (Patrick & Kitchen 2004).

Useful communications include relational communication between textile producers and raw material suppliers which is important for determining their relationships. Interactive communication is concerned with how the message is conveyed and it explains the potential relationship between raw material suppliers and textile producers (Soldow & Thomas 1984). Interactive communication between raw material suppliers and textile producers provides an interpretive scheme; this makes sense of the context in which the communication between two parties or persons takes place (Soldow & Thomas 1984). Relationships in the context of supply chain “influence of structural
conditions (structure) on actions (agency) can be seen as mediated through this (relationship) atmosphere” (Hallen & Sandstrom 1991, p. 326). The atmosphere becomes secure and authorised by spatial and cultural values (Bernard, Crespin-Mazet & Robert 1998). The structural rules of signification in structuration theory are sense-making; they control and allow agents to make sense of the situation they act in and to communicate this meaning all of other agents (Sydow & Windeler 1998).

Relative factors both affect and are affected by communication between different tiers of supply chain networks (Shimp & Andrews 2013). Typically, the modality of interpretative schemes are taken for granted by supply chain members who draw from “standardized elements of stocks of knowledge” in their culturally established system, which means those elements are context specific (Shimp & Andrews 2013, p. 118). In structuration theory, the context of the communication can take on a greater significance than the message form, due to the specific stock of knowledge and information improved within the specific time and space contexts (Kambanei 2014).

4.5.3 Legitimation

Three elements constitute the legitimation dimension: legitimation structure, norms and sanctions. Legitimation structures consist of codes or rules of proper conduct (MacIntosh & Scapens 1991). Legitimation structures have their source in sanctions. All activities are backed by sanctions. Sanctions encourage rightful actions while discouraging wrong ones. Sanctions to actions in a social set-up are secured in two ways, either as coercion or inducement (Giddens 1979). Norms are regularly reproduced and a sustained flow of interactions follow in a social system. Through normative behaviour, human agents draw upon legitimation codes and rules. Legitimation is drawn in practice in the modality of norms. Norms apply to normative expectations of agents (Bryant & Jary 2001). They include codes of conduct and a set of values and ideas about what is approved or disapproved, the rights of some participants to hold others accountable for their act, and the use of certain rewards and sanctions to legitimate a social environment (Bryant & Jary 2001).

Sanctioning behaviour is a kind of interaction through which behaviour gets encouraged or discouraged, potentially through the application of reward, penalty, pressure, and
inducement (Giddens 1991). Norms are “suitable for expressing and supporting what agents consider right and wrong, in a particular context” (Ellis & Mayer 2001, p. 185). Legitimation, according to Giddens (1991), refers to the process by which involvement becomes socially legitimated in reference to established norms of behaviour. These are views suitable for speaking and satisfying what they consider right or wrong in a particular context (Ellis & Mayer 2001).

### 4.6 DUALITY OF STRUCTURES

The fundamental concept of structuration theory can be further explained by a schematic chart that provides the analytical dimensions of the duality of structures (see figure 4.3). In the duality of structure, the social and human interactions are broken down into three dimensions and are interlinked by three modalities (Kambanei 2014). Giddens (1979) explains that the duality of a structure refers to the essential of social life as constituted in social practices.

![Figure 4-3: The Duality of Structures (Giddens 1984, p. 25)](image)

A combination of reflexive monitoring and structural properties forms the basis of the duality of structure. The structural properties used within systems by agents are socially constructed before being created through the memory traces of the structures. Giddens (1979) examines behaviour at the agency level and the micro level, and then identifies interactions between social boundaries and forces at the macro level. However Giddens (1979, p. 103) also states that “social life is not determined by either individual’s random acts or as a direct result of social boundaries”. He argues that action is a result of human agency and social structure working in relation to one another. As social agents repeat certain acts this leads to the reproduction of social structure. Although
Giddens (1979) accepts this, he also believes that social structure is created through traditions, institutions and moral codes. As soon as the individual agents start to reject them, they will be replaced by new traditions, institutions and codes.

4.7 APPLICATION OF STRUCTURATION THEORY

The application of structuration theory allows the complexity of social, political and organisational effects on the operational disruptions in the supply chain network to be examined (Lewis & Suchan 2003). To understand the impact of political disruptions on supply chain performance, it was important to analyse the interactive relationship between internal and external organisational disruptions. Structuration theory is also suitable for this investigation as it is deemed more comprehensive, sophisticated, dynamic, and powerful compared to other theories mentioned previously. The key advantage of structuration theory is its ability to incorporate the interlinked nature of content, context and process (Warren 2013), which is paramount to understanding the complex interactions within the production systems and the external disruptive forces that shape the textile supply chain (MacIntosh & Scapens 1991). The notion of duality between structures, agency and its wide range of culture concepts, including structural dimensions will provide a deeper understanding of the political processes and institutional structures within the textile industry in Pakistan. In this way, both structure and the process will be captured to assess the impact of political disruption of supply chain performance. It takes into account both the production of the structure via an action, the ability of the action from the structure, and it deals simultaneously with power, cognition, and legitimacy issues as aspects of the process that are interrelated (Manjunath & Andrew 2013).

In this study, the structuration theory framework is applied using the eight-step guidelines of Eisenhardt (1989). These steps include: getting started, problem identification, data collection protocols, entering the field, data interpretation, dimensional propositions of structuration theory, enfolding the literature and reaching closure (see Table 4.2).
<table>
<thead>
<tr>
<th>Steps</th>
<th>Activity</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get started</td>
<td>Definition of research question and priority constructs</td>
<td>Provides better grounding of the research problem</td>
</tr>
<tr>
<td>Problem identification</td>
<td>Theoretical sampling and complete literature review</td>
<td>Retains theoretical background to the problem</td>
</tr>
<tr>
<td>Craft data collection</td>
<td>Defined multiple data collection methods</td>
<td>Justifying the reason for choosing the qualitative</td>
</tr>
<tr>
<td>protocols</td>
<td>Employed qualitative data collection methods</td>
<td>research methodology</td>
</tr>
<tr>
<td>Entering the field</td>
<td>Data collection, analysis and interpretation</td>
<td>Speeds analysis and making helpful adjustments to data</td>
</tr>
<tr>
<td>Data interpretation</td>
<td>Structuration and NVivo</td>
<td>To interpret and explain the collected data</td>
</tr>
<tr>
<td>Dimensional propositions</td>
<td>Interpreting the followed by structuration theory dimensions</td>
<td>Provides detailed justifications for each proposition</td>
</tr>
<tr>
<td>of structuration theory</td>
<td></td>
<td>of the dimensions</td>
</tr>
<tr>
<td>Enfold the literature</td>
<td>Comparison within the framework</td>
<td>Comparing interpreted data with the strategic</td>
</tr>
<tr>
<td>Reach closure</td>
<td>Findings</td>
<td>framework</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meeting the research objectives</td>
</tr>
</tbody>
</table>

Table 4-2: Steps for Theoretical Framework (Eisenhardt 1989, p. 534)

Based on this review of literature, a modified structuration theory model for political disruptions was designed for this study. Figure 4.3 presents the structuration theory model to investigate the impact of political agents on supply chain performance.

**4.8 KEY PROPOSITIONS**

The relationship between political disruptions and supply chain performance is explored through the three concepts of structuration theory, which interact with three dimensions of structuration, resulting in nine elements (propositions) of structuration (see figure 4.3). This section describes the operationalization of nine elements, referred as propositions, which will frame the basis of this investigation. The following paragraphs explain the nature of these elements (propositions) of structuration theory.
Qualitative Assessment of the Impact of Political Disruptions on Textile Supply Chain Performance in Pakistan

Chapter 4 – Theoretical Framework

DOMINATION
Use of power by agents to allocate and utilise object resource

SIGNIFICATION
Exchange of meaning through communication

LEGITIMATION
Responsible of bringing social order and has its basis in the value standards for acceptable social behaviour

<table>
<thead>
<tr>
<th>STRUCTURE</th>
<th>DOMINATION STRUCTURES (resources)</th>
<th>SIGNIFICATION STRUCTURES (codes)</th>
<th>LEGITIMATION STRUCTURES (rules)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Human agents exercise their power of transformative capabilities such as raw material, finance, quality, delivery and inventory</td>
<td>Codes or modes of coding agents used to communicate meaning such as quality standards etc.</td>
<td>Consist of codes or rules for proper conduct and implications such as judiciary, parliament and authorities to control law situation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>MACHINERY (facility)</th>
<th>INTERPRETIVE SCHEMES</th>
<th>PROCEDURAL ROUTINES (norms)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transform material into shape Monument machines for more production</td>
<td>Elements of stock of knowledge that social actors apply to understand the interaction such as coordination or cooperation</td>
<td>Regularly reproduce flow of interactions in social encounters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>EMPOWERMENT (power)</th>
<th>REPORTING (communication)</th>
<th>SANCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capability to bring change in resources, operations and social system</td>
<td>Human agents exchange their understanding of the social phenomenon with other social actors</td>
<td>Actions to discourage the wrong actions in social setup. Reward or punishments</td>
</tr>
</tbody>
</table>

Table 4-3: Structuration Theory for Political Disruptions Impact Model
4.8.1 Textile Operations (Domination)

The domination explores aspects of resources, facility, and empowerment. The machinery (facility) is the means of transforming raw materials into finished or semi-finished goods; whilst empowerment denotes the capability to bring change in resource utilisation, operations and systems.

4.8.1.1 Resources: Domination structures refer to resources over which agents use their power to control and manage the production and distribution functions. Domination structures facilitate the use of power by the textile production managers to allocate and utilise resources (e.g. finance, raw material and inventory) to maintain supply and demand across the supply chain network. Raw material quality was continually monitored during the production operations to identify the defects in the final product. Textile raw material management helps manufacturers to improve their operations because poor-quality raw material prevents manufacturers from producing quality products. The primary goal of the textile production is to convert raw materials into finished goods. The raw materials for the textile industry in Pakistan are from natural resources: cotton, jute, wool, raw silk and synthetic fibres. The management of raw material is slightly more important in the textile industry than it is in other industries due to its sensitivity: The small change in the production condition may have significant effect on the quality of the final product. The movement of raw materials from farm to industry, industry to industry and even machine to machine require requires proper material handling, storage and transportation. The textile production process is one of the longest of its kinds. Due to this, the finished product of one department is mostly used as an input for another department or machine. Resource-handling in the textile industry thus requires proper skills, training and planning because mishandling could lead to operational challenges across the supply chain.

4.8.1.2 Facility: Facilities are used by agents to harness resource; that is to use transformative capabilities to produce textile products by using machines and equipment. In the textile industry, machinery or production units are used as a “facility” through which manufacturers exercise their transformative capabilities over resources. Facilities are used to produce textile products. Machines are an important part of production system, which can create major disruptions in supply chain. For example,
machine breakdowns, poor maintenance or human-made mistakes can cause supply chain performance issues. Textile machines work in a horizontal way to feed one to the next in the continuous manufacturing process. An interruption to any of the processes will impact on the whole supply chain operations. Textile facilities are the entities which help manufacturers to complete their transformative operations. From raw material handling to starting the manufacturing operations, all the initial operations are susceptible to disruption due to human involvement. Textile managers are responsible for managing the textile facilities such as buildings, materials, machines and even labour to ensure completion of the production cycle.

4.8.1.3 Empowerment: In structuration theory, Giddens (1991) uses the term “power” to represent the capability of agents to bring about transformative changes in resources. Through the use of power utilised by the agents, resources are allocated to achieve strategic outcomes through interactions in modalities (Giddens 1991). The manufacturers in the textile industry use power to resources into creating usable things or to produce goods. There are several agents (e.g. labour, management and even customers) involved in bringing about change in textile materials/resources. In the context of allocation and the use of inventories, the organisational agents use their power by applying appropriate operational strategies for inventory management. Textile operations follow the strategy of “Just-in-Time” manufacturing of textile goods.

4.8.2 Information Disruptions (Signification)

The signification dimension can be identified with information disruptions (both political and supply chain) which are basically concerned with communication and the exchange of meanings. It reflects the nature of exchange of meanings of different reported events or incidents and their role in supply chain operations. In the context of identifying the disruptions in the supply chain, three aspects were identified to operationalize the signification dimension. These include signification structures, interpretive schemes and reporting.

4.8.2.1 Codes: Signification structures are described as codes or modes used by agents to communicate meanings or reflect power (Giddens 1979). In the textile industry, there are several codes used to communicate meanings in relation to resources and their use.
Quality standards, cotton grading codes and product specifications are the written codes which are used in the textile industry to communicate meanings to regular practices. Customers’ orders are always based on specific codes such as the quality and designs, which is usually dictated by the agents. Failure to follow the codes might lead to disruptions in the supply chain operations.

4.8.2.2 Interpretive Schemes: Interpretative schemes are the core of mutual knowledge used by the agents to gain understanding in disruptive behaviour (Giddens 1979). Interpretive schemes in the signification dimension are utilised to change or communicate the meaning. Interpretive schemes help to transform messages from management to labour or from labour to management during the production operations. These schemes basically provide the information of manufacturing operations, raw materials, supply chain and customers in a particular environment. The information of textile production as well as the activities related to textile supply chain operations needs to be communicated among all the agents. Communication gaps between manufacturers and suppliers may impact on supply chain performance. Different agents use interpretive schemes to transform their messages to the management regarding their issues. Interpretive schemes are also used by the agents to create disruptions in the supply chain operation.

4.8.2.3 Communication: According to structuration theory, regular reproduction of structural properties takes place across time and space through communication (Giddens 1979). Agents use production schemes to derive meanings of different codes and they communicate these meanings across time and space boundaries (Giddens 1979). Disruption information in structuration theory can be sustained only when the structural properties of disruption are regularly reported by the agents through communicating shared information. Reporting or communication in textile manufacturing requires supply chain agents to share their experience of the types of disruptions that occur and how often they occur.

4.8.3 Disruption Management (Legitimation)

The legitimation dimension of structuration theory enables the identification of disruptions, which is responsible for bringing and managing change and social order. In the context of legitimation, the three identified elements are structures, procedural
routines, and sanctions, which will be used as anchors to explore the interactions between political disruptions and supply chain performance.

4.8.3.1 Legitimation Structures: Legitimation structures are codes or modes of behaviour (Giddens 1979). In an organisational context, the organisational set-up is mapped onto the underlying legitimation structures (Catherine 2004). Organisations are divided into responsibility centres to ensure that codes and policies are managed according to defined procedures (Catherine 2004). Legitimation structures are codes or rules which are introduced or enforced by the government, judiciary or parliament for specific order. For example, Pakistan cotton producers are not allowed to export their cotton due to the government policies to help protect the local textile industry. In the textile industry, these codes intend to maintain quality and productivity.

4.8.3.2 Norms: Held and Thompson (1989, p. 252) describe norms as “rules of behaviour which represent values, either prescribing a given type of behaviour or forbidding it”. In the context of supply chain disruptions, norms are routines through which system get disturb due to supply chain bottlenecks or uncoordinated supply chain network. In this study, the element of “norms” is operationalized by examining the way political systems affect textile supply chain performance. Procedural routines however are required to identify the normative impact leading to holding the traditional manufacturing plants. Traditionally managed production plants with informal procedures instead of documented procedures tend to have less efficient which may cause delays to production and distribution functions.

4.8.3.3 Sanctions: Giddens (1979, p. 176) describes “sanctions as a mode of reward or punishment that reinforces expected forms of behaviour”. The operation of sanctions, or “sanctioning”, is a chronic feature of all social encounters (Giddens 1979). Sanctions are rewards but mostly punishments administered by economically strong countries due to political or other reasons. Sanctions-affected countries may be prevented from forming business or trade deals with other countries. In this study, sanctions are the government rules designed to protect local business as well as society.
4.9 SUMMARY

This chapter presented the basic propositions of structuration theory and described a range of different theoretical perspectives to explore the relationship between political disruptions and supply chain performance. Structuration theory provides a well-grounded theoretical foundation for identifying the causes of political disruptions and supply chain disruption. It also highlighted the importance of examining the role and functions of agents in stabilising or de-stabilising the political system. Agents are the key drivers of social and economic change, responsible for changing (for positive and negative) the production systems. Social or political disruptions can occur as a result of an agent’s method of communication in the social or political system. The key conclusions of this chapter are as follows:

- Structuration theory is adopted to explore the interactions between political disruptions and supply chain disruptions and the relationship with supply chain performance.
- Domination, signification and legitimation are the dimensions of structuration theory which provide the framework to establish the use of power by agents on resources or impact of social and production rules of supply chain performance.
- Nine propositions are developed to help understanding the complexity of production and distribution systems in the textile supply chain. These propositions will be deployed to narrate the interactions between agents and their role in exercising power to efficiently transform resources into finish goods.

The following chapter will provide a discussion of the research methodology used in this thesis to investigate the impact of political disruptions on supply chain performance.
CHAPTER 5: RESEARCH METHODOLOGY
5.1 INTRODUCTION

This chapter presents the research methodology used in this study to investigate the impact of political disruptions on supply chain performance. The research methodology is introduced, the different approaches are compared, the data collection and interpretation are explained, and the approach chosen for this study is justified. This chapter also provides the ethical considerations of the research, in relation to the data collection and the interpretation of data. The key objectives of this chapter are to:

- to compare qualitative and quantitative research methodologies and justify the reason for choosing the qualitative in this research;
- to explain the data collection process, sample size, interview style and reason for choosing the semi-structured interviews; and
- to study data analysis techniques and justify why NVivo and Structuration Theory are more appropriate for this research.

5.2 RESEARCH PARADIGM

A paradigm is a set of beliefs and practices that serves as the foundation or guide for an inquiry; it also determines the criteria by which anyone can judge that inquiry (Packer 2011). A research paradigm is a “set of assumptions about the social world; it also provides a perspective of how science should be carried out in relation to elements of epistemology, theory and philosophy, along with method” (Punch 2006, p. 88). Literature on research paradigms, for example, Denzin and Lincoln (2005), Punch (2006) and Blaikie (2010), includes critical theory, post-modernism, positivism, hermeneutics, interpretivism, ethnography and feminism.

The interpretive paradigm was chosen for this study because this helps to understand the phenomena through assigned meanings by people. This also help where information through system influencing the context (Denzin & Lincoln 2005). An emphasis on the understanding of human behaviour and actions is central to the Interpretivist approach, which assumes that knowledge of reality is gained only through social constructions such as language, consciousness, shared meanings, documents, tools and other artefacts (Klein & Myers 1999). These social constructions extend to the culturally derived and historically situated interpretations of the world of social life (Crotty 1998).
Primarily, the interpretive paradigm is consistent with the constructed reality of everyday life in which individuals are mainly interested in interpreting reality from various theoretical perspectives (Berger, Gerstenfeld & Zeng 2004). From the perspective of Blaikie (2010), interpretivism is a mode of social enquiry in which social actors/agents negotiate the meaning of actions and situations by emphasising the individual beliefs and values of these actors. Blaikie (2010) describes the social reality of the actors as pre-interpreted. Interpretive research, then, is not a priori; nor does it predefine dependent and independent variables; instead, the focus is on the complexity of human sense making as the situation emerges (Denzin & Lincoln 2005). From Giddens (1991) the researcher generates descriptions of social conduct that depend upon the frames of meaning created by the actors/agents to construct their social world. This centrality of the researcher’s focus on the ways that actors construct their world is also emphasised by Williamson (2006), who claims that the central principle of the interpretive paradigm is how people constantly interpret their ever-changing world, and how the investigators who are interpreting believe that the social world is constructed by people. In the present study, the researcher refers to interview responses to interpret the perceptions of participants and political groups regarding the impact of political disruptions on supply chain performance. Table 5.1 outlines a comparison on qualitative and quantitative research.
Table 5-1: Qualitative and Quantitative research (Rapport et al. 2015, p. 2)

5.3 RESEARCH METHODOLOGY

Research is a way to solve research problem systematically (Jonker & Pennink 2010). Kothari (2004, p. 7) defined research methodology as “a science of studying how research will be performed scientifically”. Research methodology helps to follow the various steps that are adopted by other researchers logically to solve the research problem (Dhawan 2010). Research methodology explains why a particular method or technique will be used and answer the question why other method is not used so that results of the study are capable of being evaluated by the researcher (Kothari 2004). Table 5.2 elaborate the review of different methodologies.
Qualitative Assessment of the Impact of Political Disruptions on Textile Supply Chain Performance in Pakistan

Table 5-2: Review of Different Methodologies

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Feature</th>
<th>Implications</th>
</tr>
</thead>
</table>
| Narrative Analysis| The narrative approach weaves together a sequence of events, usually from just one or two individuals to form a cohesive story. Researcher conduct in-depth interviews, read documents, and look for themes; in other words, how does an individual story illustrate the larger life influences that created it (Hansen et al. 2016, p. 1101). | • Need extensive information about the participants;  
• Need clear understanding of individuals life; and  
• Active collaboration is required. |
| Phenomenology     | Phenomenology is the direct investigation and description of phenomena as consciously experienced without theories about their causal explanations or their objective reality (Tebbet & Kennedy 2012, p. 763). | • Required philosophical understandings; and  
• Bracketing personal experience may difficult. |
| Ethnography       | Ethnography is a qualitative design in which the researcher describes and interprets the shared and learned patterns of values, behaviours, beliefs, and language of a culture-sharing group (Packer 2011, p. 102). | • Need grounding in cultural anthropology; and  
• Time to data collection is extensive. |
| Inductive Thematic Analysis | The process consists of reading through textual data, identifying themes in the data, coding those themes, and then interpreting the structure and content of the themes (Alhojailan 2012, p. 40). | • Required free flowing data; and  
• Notes from the participants required. |
| Grounded Theory   | Grounded theory involves the progressive identification and integration of categories of meaning from data. It is both the process of category identification and integration (as method) and its product (as theory). Grounded theory as method provides with guidelines on how to identify categories, how to make links between categories and how to establish relationships between them (Urquhart & Fernandez 2013, p. 227). | • Faces difficulty of determining when categories are determined or theory sufficiently detailed;  
• The primary outcome is theory; and  
• Flexibility issues desired by the qualitative researchers. |

Quantitative methodology emphasises hypothesis testing and the examination of relationships between sets of variables (Blaikie 2010), to establish when there is a circumstance an end result or conclusion (Creswell, J, W 2003). This methodology is often used to provide answers to research questions that request numerical information.
such as “to what degree” or “which amount” (Nagy 2010). As Klier (2009, p. 103) argues, a quantitative methodology is “especially helpful in cases where only limited literature is available, and the researcher wants to add to the body of knowledge”. Whereas quantitative methodology focuses on information about numbers, quantitative research is concerned with implications (Dey 2005). Qualitative research is usually conducted through a researcher’s interactions with people’s actions, words, and ideas. In fact, qualitative research explains the interrelationships between people, issues and the world (Mariampolski 2001). As McKee (2003, p. 20) outlines, qualitative research provides a “way for researchers to collect information about how human beings perceive and construct the world”. This type of methodology is constructivist and based on the idea of agents/actors being highly subjective. Therefore, it is a methodology suited to research that investigates how people in various cultures and sub-cultures make sense of who they are and what their position is in the world (Rapport et al. 2015).

A criticism of qualitative research methodology is that while qualitative exploration can answer and illustrate clear inquiries and produce theories, it cannot test hypotheses (Packer (2011). Thus, the relationships drawn are merely speculative. As Bowling and Shah (2005, p. 190) state, “a qualitative examination cannot test speculations because it is an inductive exploration. Conversely, as Silverman (2001) notes, quantitative information is hard, targeted, value-free, and helpful for speculation testing and forming overviews. Hence, the qualitative methodology enables a deeper, more complex response to be elicited from respondents: qualitative methodology can be used to answer questions which regularly start with, and are planned according to, "why”, "how” and "what” queries that focus on text-based information (Hesse-Biber 2011).

Qualitative and quantitative methodologies share commonalities as well as differences and, as Dey (2005, p. 10) contends, “these methodologies can be combined, since numbers rely on implications, and implications rely on numbers”. However, given the current study’s primary focus with processes rather than outcomes or products (Creswell, J 2007), and the study’s exploration of processes by which people construct opinions when a limited number of participants are involved. A quantitative research approach is considered as the most appropriate approach for the current study. Its exploratory, inductive and subjective underpinnings potentially offer a better
understanding of the key constructs that inform the relationship between supply chain performance and political disruptions.

There are two types of research strategy, which are qualitative and quantitative (Bryman 2008). John (2009) identified three types of research strategies: qualitative, quantitative and mixed methods. Qualitative approaches are used to understand and explore concepts in depth, and they focus on individuals or small groups (Hesse-Biber 2011). Quantitative approaches are used to test objective theories by examining the relationships among variables (John 2009). Data is generated from relatively large numbers of participants or data sources and used to perform a statistical analysis. Mixed methods approaches combine qualitative and quantitative methods (John 2009; Tashakkori & Teddlie 2010). Table 5.3 presents the comparison between qualitative and quantitative research strategies.

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>General framework</td>
<td>Confirming the hypotheses about Phenomena</td>
<td>Exploring the phenomena</td>
</tr>
<tr>
<td></td>
<td>Using more stiff instruments and sorting responses to questions</td>
<td>Instruments use more flexible, iterative style of causing and categorizing responses to problem</td>
</tr>
<tr>
<td></td>
<td>Use extremely structured methods such as questionnaires, surveys, and structured observation</td>
<td>Use semi-structured methods such as in-depth interviews, focus groups, and participant observation</td>
</tr>
<tr>
<td>Analytical objectives</td>
<td>To quantify variation</td>
<td>To describe variation</td>
</tr>
<tr>
<td></td>
<td>To predict causal relationships</td>
<td>To describe and explain relationships</td>
</tr>
<tr>
<td></td>
<td>To describe characteristics of a population</td>
<td>To describe individual experiences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To describe group norms</td>
</tr>
<tr>
<td>Question format</td>
<td>Closed-ended</td>
<td>Open-ended</td>
</tr>
<tr>
<td>Data format</td>
<td>Numerical (i.e., which is gathered by assigning numerical values to responses)</td>
<td>Textual (i.e., which is obtained from the various sources such as audiotapes, videotapes, and field notes)</td>
</tr>
<tr>
<td>Flexibility in study design</td>
<td>Study design is based on statistical moulds and conditions</td>
<td>Responses from the participant affect how and which questions researchers may ask next</td>
</tr>
<tr>
<td></td>
<td>Responses of the participants do not influence how and which questions researchers may ask next</td>
<td>Some features of the study are elastic (for example, the addition, barring, or worrying of particular interview questions)</td>
</tr>
</tbody>
</table>
Design of the study is stable from start to end  

Design of the study design is iterative which is data collection and research questions are adjusted according to the strategy

Table 5-3: Research Strategy and Research Design (Mack et al. 2005, p. 3)

In this study, the qualitative research methodology was chosen to explore the impact of political disruptions on textile supply chain performance. This section provides the detailed information about the research approach, case study, data collection, sample and participant’s selection, semi-structured interviews and note-taking technique adopted in this study.

**5.3.1 Approach and Research Strategy**

To determine the appropriate approach for this study, it was important to evaluate the advantages and disadvantages of each approach which were discussed in the previous section. Reasons and justification of why qualitative rather than quantitative research methodology was chosen for investigating the relationship between political disruptions and supply chain performance are provided below:

- The sensitivity of the research topic necessitates a more in-depth understanding of relationship between political disruptions and supply chain performance that could not be examined by quantitative methodology;
- Qualitative methodology is used because it concentrates on the qualities of entities and the meanings that are not examined experimentally or through quantitative methodology;
- Qualitative methodology assists to construct social nature of reality. This helps to establish the relationships between different social and political agents in examining their influence on the supply chain operations;
- Qualitative methodology provides stronger relationship between researchers and researched which is trust dependent allowing building of diabolical understanding of the study;
- Qualitative methodology enhanced the consistency of research through the trustworthiness of data such as transferability, credibility and dependability;
• Assessment in qualitative methodology is primarily done through subjective interpretation of social worlds; and
• Qualitative methodology is used in this research to reveal the agent’s perspective, dialogue, and multiple truths. It also examines the relationships between different agents and their activities in social and political system. This relationship between different social and political agents cannot be presented statistically.

The theoretical framework presented in Chapter 4 was establish how structuration theory was used to design answer the research questions. Giddens’ (1984) structuration was chosen to investigate and interpret the qualitative data in this study for a number of reasons. Unlike social theories such as structuralism, structuration is not mechanistic in form; also, it does not depict society as a single entity, or overlook the agency of individuals (Manjunath & Andrew 2013). It also has an advantage over action theory and symbolic interactionism, which tend to minimise the influence of social structure on individual behaviour (Broger 2011; Manjunath & Andrew 2013). Structuration manages to explore the individual agent’s role by interpreting this social structure and individual behaviour separately.

Structuration theory also provides the desired combination of approaches for understanding the process of technology-driven organisations and their operational changes and its interaction with the existing structures of organisations (Ahrens & Chapman 2002). In this study, structuration theory offers a means to explore the fundamental difference within Pakistan’s social and political systems which, in turn, directly informs the impact on the operational and supply chain performance of the country’s textile industry. In this study, the three dimensions of structuration theory – domination, signification and legitimation have been employed to explore the role of the agents, the role the agents played in the supply chain, and the impact the agents had on supply chain performance. These dimensions provide a means to observe the political actions that cause disruptions in the political system. To recapitulate, the use of structuration theory provides the researcher with an opportunity to show how political disruptions impact on supply chain performance, directly and indirectly, through supply chain disruptions. Examining the political and social actions of government bodies in
combination with power and sanctions also offers an opportunity for understanding a government’s interest toward uncertainty.

The research strategy is a methodology used to investigate research issues. As Saunders, Lewis and Thornhill (2009, p. 11) maintain, “A systematic way to answer the research questions in a general research plan called research strategy”. The purpose of the research strategy is to contain clear objectives, research questions, and data collection resources, and to show how these can affect the data collection or data access process during the research process (Packer 2011). The actual research strategy is effective if it helps the investigator explain the purpose of using a particular strategy for investigating and conducting a study effectively (Saunders, Lewis & Thornhill 2009). The research strategy also helps the researcher to navigate the study, as it is used to identify data collection techniques, data analysis methods and what needs to be put in place to support the argument of the study (Hammersley 2013). Figure 5.1 presents the research strategy with which this research was carried out:

![Research Framework Diagram]

Figure 5-1: Research Framework

### 5.3.2 Case Study Area

A case study approach involved the study of an issue explored through the cases (maybe one or more) within a bound system (Creswell, J 2007). Stake (2006, p. 13) states that “case study research is not a methodology but a choice of what is to be studied (i.e., a case within a bounded system)”. Other researchers (Denzin & Lincoln 2005; John 2009; Stake 2006; Yin 2003) consider it as a strategy of inquiry, comprehensive research strategy or a methodology. Case study research basically a
qualitative approach that allow researcher to explore a bound system (case), systems (cases) over the rime through detailed in-depth data collection which involve different source of information such as interviews, observations, audio or video material and documents and reports (Creswell, J 2007).

Pakistan, in the context of textile supply chain, has been used as a case study in this research. After the establishment of Pakistan in 1947, the government had placed greater importance on agro-based industries (Shah, Warraich & Kabeer 2012). Out of all of these industries, the cotton industry was considered to be the most prosperous because of its high profit margin in the local and international market (Siddique et al. 2012). Pakistan produces all range of textile products for domestic and industrial use (Figueiredo et al. 2012). Before the Industrial Revolution, Pakistan exported most of its cotton, but during the last few decades Pakistan has started doing value addition that help Pakistani manufacturers to increase their profit margin (Memon 2015; Siddique et al. 2012). Pakistan’s textile industry is mainly based on exports of its final goods like garments, hosiery and apparel products. These products contribute 55 per cent to the total export of Pakistan during 2013-14 (see table 5.4) (Memon 2015).

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Exports</th>
<th>Textile Exports</th>
<th>Share of Textile</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>19.1</td>
<td>10.6</td>
<td>55%</td>
</tr>
<tr>
<td>2008-09</td>
<td>17.7</td>
<td>9.6</td>
<td>54%</td>
</tr>
<tr>
<td>2009-10</td>
<td>19.3</td>
<td>10.2</td>
<td>53%</td>
</tr>
<tr>
<td>2010-11</td>
<td>24.8</td>
<td>13.8</td>
<td>56%</td>
</tr>
<tr>
<td>2011-12</td>
<td>23.6</td>
<td>12.4</td>
<td>52%</td>
</tr>
<tr>
<td>2012-13</td>
<td>24.5</td>
<td>13.2</td>
<td>54%</td>
</tr>
<tr>
<td>2013-14</td>
<td>25.1</td>
<td>13.8</td>
<td>55%</td>
</tr>
</tbody>
</table>

Table 5-4: Share of Pakistan Textile Industry Exports (Trade Development Authority of Pakistan 2015)

Shipment statistics of the international textile machinery show that, China imported 6.21 million spindles in 2013, India imported 2.19 million and Pakistan added 546,000 to their spinning industry (ITMF 2013). According to textile industry experts, Pakistan has the optimum capacity to produce a vast quantity of yarn for export because local weavers lack the capacity to use that yarn (Aftab & Mehreen 2010; Memon 2015).
The export of yarn increased from 555 million kg to 633 million kg during 2013-14, which is equivalent to 2.0 billion US dollars (see table 5.5) (Memon 2015). Within the international market, the average unit price of Pakistani yarn is lower in comparison to other countries (Memon 2015).

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity (000 Kgs)</th>
<th>Value (US$ 000)</th>
<th>Unit Value ($/Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>544217</td>
<td>942359</td>
<td>1.73</td>
</tr>
<tr>
<td>2002-03</td>
<td>519329</td>
<td>928358</td>
<td>1.79</td>
</tr>
<tr>
<td>2003-04</td>
<td>499071</td>
<td>1126878</td>
<td>2.26</td>
</tr>
<tr>
<td>2004-05</td>
<td>504722</td>
<td>1056535</td>
<td>2.09</td>
</tr>
<tr>
<td>2005-06</td>
<td>671697</td>
<td>1382874</td>
<td>2.06</td>
</tr>
<tr>
<td>2006-07</td>
<td>665525</td>
<td>1428041</td>
<td>2.15</td>
</tr>
<tr>
<td>2006-08</td>
<td>554817</td>
<td>1300968</td>
<td>2.34</td>
</tr>
<tr>
<td>2008-09</td>
<td>523733</td>
<td>1114821</td>
<td>2.11</td>
</tr>
<tr>
<td>2009-10</td>
<td>625418</td>
<td>1433094</td>
<td>2.29</td>
</tr>
<tr>
<td>2010-11</td>
<td>536126</td>
<td>2201405</td>
<td>4.10</td>
</tr>
<tr>
<td>2011-12</td>
<td>572047</td>
<td>1809798</td>
<td>3.16</td>
</tr>
<tr>
<td>2012-13</td>
<td>737586</td>
<td>2252952</td>
<td>3.05</td>
</tr>
<tr>
<td>2013-14</td>
<td>663354</td>
<td>1997338</td>
<td>3.01</td>
</tr>
</tbody>
</table>

Table 5-5: Export of Cotton Yarn (Trade Development Authority of Pakistan 2015)

However, in spite of the strengths of the country’s textile industry discussed above, Pakistan has been unable to provide its textile manufacturers and exporters with the proper infrastructure to compete in the market (Ahmed 2010). Local manufacturers face a series of problems. These range from power shortages to regulation changes that make it difficult for textile exporters to compete in the international market (Alter & Syed 2011). Also, textile industry of Pakistan has become vulnerable to energy crises. According to a report initially published by the National Bureau of Asian Research, energy shortages have cost Pakistan up to 4 per cent of the GDP over the past few years (Kashif 2013). As energy crises have worsened, they have caused the closure of more than five hundred factories in Faisalabad alone (Faisalabad is the hub of textile manufacturing in Pakistan) (Aftab & Mehreen 2010). As Pakistan’s population has grown, and as urbanisation has increased, energy production has remained either the same or worsened due to global oil production problems (Kugelman 2013).
The complexity of the textile supply chain in Pakistan and the challenges that it faces today provides a unique research context. The embedded political instability and weak infrastructure further accentuate the vulnerability of the textile industry in Pakistan. There is no comprehensive research currently in place that investigates the interactions between political disruptions and supply chain performance in Pakistan. The evidence gathers through this study will inform strategies to improve supply chain performance and help ameliorate the well-being of the labour engaged in the textile industry.

5.3.3 Data Collection

There are two major types of data which are primary and secondary. Primary data is new data gathered to solve the research problem, and it can be collected through different methods including questionnaires, interviews, in-depth discussions, focus groups, and personal observations (Engle & Quagrainie 2006). Secondary data is defined as already existing data or information that was previously collected by others, possibly for other purposes (Myers 2009). Such data can include published data from sources such as archives, official government publications, reports, newspapers and research journals (Engle & Quagrainie 2006; Myers 2009; Packer 2011).

The methods, processes and procedures whereby data can be collected enable the required information to be obtained and analysed. The key aim of this data collection is to enable the key research questions to be answered (Crotty 1998; Gravetter & Forzano 2011). The research method describes how the investigator can conduct his/her study and how he/she can get the required information in order to address the research question. According to Weinhardt, Luckner and Jochen (2008, p. 17) “there are fundamentally five different methods, namely survey, experiment, archival analysis, historical study and case study”. Boswell and Cannon (2011, p. 266) identify seven data collection methods: “questionnaire, interviews, observation, focus groups, biophysiological data, existing or secondary winding data, and experimental tests”.

5.3.4 Sample and Participant Selection

Sample design enables the selection of a sample whose responses typically represent the responses of the whole population (Paschke 2009). The choice of a representative sample depends on three interrelated aspects: the sample frame, the selection criteria
and the size of the population (Blaikie 2010). The choice of sampling method is one of the most critical steps in research design (Paschke 2009). In the qualitative research, purposeful sampling used to focuses on collecting the rich information required to fulfil research objectives (Patton 2002). Typically, it focuses on relatively small sample size even single case could be selected for the research purposes.

In relation to the present study, an important task in the sample design was to identify the most suitable category of respondents from the target textile producers and textile supply chains. In order to investigate the impact of political disruptions on textile supply chain performance, textile manufacturing industry, and textile supply chain, influence, political and community groups were required to answer the questionnaire. Regardless, a number of criteria were employed to select the sample, including the respondent’s position, knowledge and the length of service within the industry. This was on account of participant’s strong organisational capabilities and their knowledge about textile industry, supply chain and political issues associated with supply chain performance.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile manufacturers</td>
<td>10</td>
</tr>
<tr>
<td>Third Part Logistic Providers</td>
<td>5</td>
</tr>
<tr>
<td>Political groups</td>
<td>5</td>
</tr>
<tr>
<td>Influence group</td>
<td>3</td>
</tr>
<tr>
<td>Community groups</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

Table 5-6: Textile Manufacturing Industry Sample Size

Various textile manufacturing organisations were contacted with the aim to attain sufficient sample to gather the in-depth understanding of the issues. 25 respondents were interviewed. Each participant was selected from his/her particular industry experience and position. Table 5.6 presents the sample size that was selected for data collection. There are 10 participants have been chosen from various textile manufacturing industry, five from third party logistics providers, five from political group, three from influence group and two from community group. The reason for choosing political, influence and community groups is to attain information regarding
research problem. All of the agents (i.e. participants) were equally important for this research to explore the impact of the political disruption on textile supply chain performance.

<table>
<thead>
<tr>
<th>Initials</th>
<th>Designation of interviewee</th>
<th>Industry Experience</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAH</td>
<td>Production manager</td>
<td>11 years</td>
<td>Ginning</td>
</tr>
<tr>
<td>FBA</td>
<td>Supply chain manager</td>
<td>9 years</td>
<td>Spinning</td>
</tr>
<tr>
<td>HM</td>
<td>Quality manager</td>
<td>9 years</td>
<td>Spinning</td>
</tr>
<tr>
<td>MM</td>
<td>Mill manager</td>
<td>10 years</td>
<td>Spinning</td>
</tr>
<tr>
<td>JN</td>
<td>Production manager</td>
<td>7 years</td>
<td>Weaving</td>
</tr>
<tr>
<td>MA</td>
<td>Supply chain manager</td>
<td>8 years</td>
<td>Weaving</td>
</tr>
<tr>
<td>US</td>
<td>Mill manager</td>
<td>6 years</td>
<td>Dyeing</td>
</tr>
<tr>
<td>MK</td>
<td>Supply chain manager</td>
<td>9 years</td>
<td>Apparel</td>
</tr>
<tr>
<td>MH</td>
<td>Production manager</td>
<td>14 years</td>
<td>Garment</td>
</tr>
<tr>
<td>UA</td>
<td>Mill manager</td>
<td>10 years</td>
<td>Hosiery</td>
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<tr>
<th>Industry</th>
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<tr>
<th>Initials</th>
<th>Designation of interviewee</th>
<th>Industry Experience</th>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT</td>
<td>CEO</td>
<td>12 years</td>
<td>Operations</td>
</tr>
<tr>
<td>MUA</td>
<td>Area Manager</td>
<td>7 years</td>
<td>Operations</td>
</tr>
<tr>
<td>MZ</td>
<td>Senior Manager</td>
<td>15 years</td>
<td>Operations</td>
</tr>
<tr>
<td>NA</td>
<td>CEO</td>
<td>13 years</td>
<td>Operations</td>
</tr>
<tr>
<td>RM</td>
<td>Area manager</td>
<td>9 years</td>
<td>Operations</td>
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<table>
<thead>
<tr>
<th>Political Group</th>
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<tr>
<td>Initials</td>
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<td>----------</td>
</tr>
<tr>
<td>MH</td>
</tr>
<tr>
<td>SI</td>
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<td>MR</td>
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<td>SAA</td>
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<td>NN</td>
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<tr>
<th>Influence Group</th>
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<tr>
<td>Initials</td>
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<td>----------</td>
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<td>KH</td>
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<tr>
<td>AN</td>
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<tr>
<td>RMFK</td>
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<table>
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<tr>
<th>Community Groups</th>
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<tbody>
<tr>
<td>Initials</td>
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<td>----------</td>
</tr>
<tr>
<td>ASA</td>
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<tr>
<td>MY</td>
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</tbody>
</table>

Table 5-7: List of Interviewees
A comprehensive list of participants, their designations, and departments are presented in table 5.7. All of the participants were asked semi-structured questions because that allow to the researcher to ask multiple questions following the discussion. This method used to gain the in-depth understandings about political disruptions impact on textile supply chain performance.

### 5.3.5 Semi-structured Interviews

Face-to-face semi-structured interviews were utilised in this study to collect data. Face-to-face interviews are in-person interviews and, arguably, the most common and oldest form of qualitative data collection (Grinnell & Unrau 2008). This method allows for minimal non-response and maximum quality of collected data. Face-to-face interviews are useful in sensitive situations and where the interviewee would, in another scenario, be unable to offer information easily (Mack et al. 2005). This method also gives the respondent an opportunity to seek clarification about aspects of the questionnaire (Brace 2008). One of the major disadvantages of this method is that it is expensive and time consuming. Semi-structured interview is a data collection method in which the researcher asks about a set of research questions (Crowther & Lancaster 2005). The semi-structured interviews allow researcher to skip some questions and ask additional as suitable for the research (Saunders & Lewis 2011). This also allows to the interviewee to give their own opinions in certain cases (Corbin & Strauss 2008). Semi-structured interviews allowed changing the question order according to the type of participants such as; political groups may need to understand supply chain issues first and supply chain managers may not (Saunders & Lewis 2011).

Face-to-face interviews were organised to collect data from major textile organisations, supply chain providers, political groups, influence groups and community groups. Data collection was undertaken in Pakistan by personally meeting each participant at an allocated time. The participants were requested to share their opinion on a set of broad interview questions. The participants were asked semi-structured questions to elicit their views about the research problem. The semi-structured format allows participants to convey their opinion more precisely than structured interviews (Creswell, J 2007) and enables more open and detailed questions about the research problem. Questions were designed as open-endedly as possible so that participants could understand and
respond accordingly. It was permissible to interview in the local language (URDU) because most of the participants were not using English as a first language. The reason for allowing participants to use their local language was to capture their maximum response. All interviews were planned, and the participants asked to read through the questions before the interview commenced. Each interview was recorded, and all participants were briefed about the style and requirements of the interviews.

Accurate data collection is imperative to maintaining the integrity of research, irrespective of the type of study or the approach employed to collect data (Byrne 2010). All the participants were briefed before the start of the interview and multiple questions asked to gain the accurate and more precise information about the research problem. Mistakes in sampling, inappropriate administration, inconsistencies between the research objectives and errors in data processing can compromise the findings (Byrne 2010). The likelihood of mistakes can be minimised by selecting appropriate data collection instruments and clearly stating how they will be used (Oppenheim 1992). Engle and Quagrainie (2006) argued that the targeted information should be related to the research questions, objectives and research problem.

### 5.3.6 Note-Taking

Qualitative data consist of several different forms like photographs, diagrams, videotapes, tape recordings, taking notes and typed transcripts of tape recordings (Bryman 2008). These data record everything that the researcher has observed during the qualitative data collection process (Rapport et al. 2015). Note taking is the essence of data collection process especially during face-to-face interviews (Denzin & Lincoln 2005). It is important that the researcher makes written notes while conducting the interviews or soon as interview completed. The researcher should not rely on his/her memory because information recalled from memory is imprecise and may likely to be incorrect (Sekaran 2003). The interviews can also be recorded on tape with respondents permission but taped interviews might influence the respondent’ answers because they know their responses are recorded and their secrecy is not secure in full (Emerson, Fretz & Shaw 2001; Mack et al. 2005).
Note taking was utilised in this study to preserved respondents anonymity and increased their confidence. Most of the participants were afraid to share their information during vice recording because that could misuse in the future. This technique helps to note all the relevant information during the interviews which were used in the interpretation process.

5.4 INTERPRETATION FRAMEWORK

In qualitative research, data analysis often occurs simultaneously with data collection, data interpretation, and narrative report writing. According to Denzin and Lincoln (2005, p. 9), in qualitative analysis, “several simultaneous activities engage the attention of the researcher: collecting information from the field; sorting information into categories; formatting the information into a meaningful story or model of the event and actually writing the qualitative narrative report”. The qualitative researcher takes a large amount of information and reduces it into meaningful categories, patterns or themes and then interprets the information (Rapport et al. 2015). Flexible rules govern how the researcher goes about sorting through interview transcripts, observational notes, documents and visual material (Creswell, J, W 2003). According to Mason (1996, p. 17), “the intent of qualitative research is not to generalise findings, but rather to form a unique interpretation of events for a given group of individuals or institutions, within a given context, at a particular point in time”.

After collecting data from a representative sample, the next step is to analyse the data so that the research questions can be evaluated and tested (Mason 1996). However, according to Sekaran (2003), before this can be done, few important steps need to be executed. These steps helps to ensure that gathered data fairly good and that the results can be meaningfully interpreted. Figure 5.2 shows these steps and identifies four steps in data analysis:

- getting data ready for analysis;
- coding and query processing;
- exploring the agents’ role; and
- applying the data to answering the research questions.

The analysis portion of the diagram covers the entire qualitative data analysis approach.
As previously mentioned, data analysis is an on-going activity that takes place during and after data collection. This analysis requires a continuous comparison of the data collected in order to refine the theory and answer the research questions (Eisenhardt 1989). The process involves converting raw data into information called the data analysis (Miles 1999). In this study, data interpretation was completed using structuration theory, which helped the researcher to interpret the answers to all the research questions. The interpretation process was divided into three sections: domination, signification, and legitimation. Each research question was interpreted according to its appropriate dimension of the structuration theory.

5.4.1 NVivo

Systematic data analysis was undertaken to increase the likelihood of producing an accurate account of the research (Pettigrew 1990). The computer was regularly used to analyse qualitative data, and NVivo was used to manage the data (Bazeley 2007; Morse & Richards 2007). NVivo, which was used in this study as the coding software, provided unique features to this study; these included the accuracy of coding, the possibility of having version control, and an easy adjustment and modification of the
codes and categories (Wiltshier 2011). The use of NVivo is particularly useful during the data analysis process as it drastically improved the pace of coding. It also facilitated the linking of annotations and memos to a particular code or sections of codes (Bazeley & Jackson 2013). Perhaps the most interesting and helpful feature of NVivo was the way it enabled the researcher to see the bigger picture of the analysis process (Gibbs 2002). The hierarchical design of the software gave the researcher access to different levels of a data set while representing the whole data corpus of the project in one single view (Eisele 2011). This was helpful, as having access to all data facilitated the process of constant comparison and made the use of theoretical memos more efficient. It was particularly useful to see and understand the whole process of coding and to gain a better sense of its directions.

Total numbers of 35 nodes were identified through NVivo analysis. Through the analysis, the researcher identified, coded and categorised the patterns that emerged from the data (Patton 2002). Statements made by participants, which were essential to their experience and perceptions and considered relevant for the study were tracked and compared through a process of coding and analysis (Packer 2011).

The common statements were used to generate themes that represented the perceptions with the group. The coded statements were grouped, or clustered, into thematic categories (Richards 1999). These thematic categories were presented as part of the findings to support theme generation and a deep understanding of the participants’ experiences. Textual data in the form of precise quotes from the interview discussions were included to highlight the key common responses. Relevant data were coded throughout the document following an inductive process, which allowed for emergent categories. NVivo software provided a means of conducting the classification and sorting of data and the tracking of the frequency of occurrences across the data sources (Wiltshier 2011). Finally, a comprehensive review and interpretation of the data, once it had been analysed, provided conclusions that were revealed in the form of several overarching statements representing the perceptions of the participants as a whole (Moustakas 1994).

The main purpose of the theoretical coding was to identify the relationship between the emergent constructs. There was a number of coding family and a number of options to
adopt for theoretical coding, including the ones suggested by Corbin and Strauss (2008) and Glaser (2005). However, as Urquhart and Fernandez (2013) explain, there is nothing to stop the researcher from developing his/her own coding family to identify the relationships between the emergent concepts. As Urquhart and Fernandez (2013) point out, when taking this approach to theoretical coding, it is important to use the theoretical memos that were already taken during the data collection and analysis. In addition to the research problem, memos play a crucial role in identifying strong analytical directions within the data, as well as finding the relationships between the emergent constructs. As Charmaz (2006, p. 72) explains, “Memos catch the analyst’s thoughts, capture the possible comparisons and connections, and crystallise the directions to pursue”. One of the important strengths of memos, according to Charmaz (2006), is that certain key analytical codes that are invisible within the rich qualitative data can stand out and take form as key theoretical categories.

NVivo coding is the practice of allocating a label to a section of qualitative data by choosing a short phrase or word from that part of the data (Bazeley 2007; Wiltshier 2011). The significance of NVivo codes is important in incorporating participants’ views in the interpretation of the collected data (Gibbs 2002). As Urquhart and Fernandez (2013) explain, NVivo codes are among the most significant qualitative codes because they refer analytically to the significant issues. As Given (2008) points out, it is important to ensure that the code stays as close as possible to the research participants’ own words or terms because these are their key source of the data.

In this study, the researcher tried to use NVivo codes wherever possible to interpret the qualitative data. Theoretical coding was also done in this study during interpretation. Matrix coding query was utilised in this study to presents the results into to graphical form. Matrix coding is kind of a layer that provides a way to summarise source materials including nodes, sets or other data by case and theme (Bazeley & Jackson 2013). Matrix query helps to generate the relationship between two nodes or particular issues such as case, institution or even person (Oldfield 2014). It is useful for presentation of qualitative data into graphical form (Gibbs 2002). In this study, matrix query used to generate the relationship between political disruptions, supply chain disruptions and their associations with supply chain performance. This help to compare the impacts of different political disruption on supply chain performance.
5.5 RELIABILITY AND VALIDITY IN THE QUALITATIVE APPROACH

Reliability and validity are tools of an essentially positivist epistemology (Winter 2000, p. 7). Reliability is referred to as “relative absence of haphazard errors of measurement“ (Kleven 2008, p. 13). Validity measures the extent to which the set of indicators accurately represents a construct (Hair et al. 2009). Following is the detailed discussion of the measures taken to ensure the reliability and validity of the results from the qualitative approach. To ensure reliability, this study has followed to Kleven (2008) consistency checks for assuring the consistency of measurements. This means attaining the same answer irrespective of

- the time of data collection;
- the time of interpretation of the gathered information;
- the environment or ‘other phenomenon’ observed during the data collection process; and
- the disposition of the researcher interpreting the gathered information.

The first consistency check deals with the control of interviewee answers irrespective of the time of the interview (Dhawan 2010). To ensure the answers are stable, interviews have been conducted at a suitable time for the interviewee, such as during breaks and non-working hours when agents have the least job pressure. In order to handle the second check and to avoid errors arising from interpretation, recorded interviews have been repeatedly reviewed before transcribing the perceptions of interviewees (Jonker & Pennink 2010). The third check requires the parallel-form reliability, which requires the development of many items to measure the same construct. The fourth check deals with a consistent interpretation of the interview results by researchers from similar backgrounds. In order to arrive at a consistent interpretation, the answers have been clarified with the interviewee wherever there is any uncertainty. From these checks, it can safely be assumed that the reliability of data has been accomplished in this study.

5.6 MANAGING ETHICAL ISSUES

This research program has been approved by RMIT University Human Research Ethics Committee (approval number B-2000894-05-13). Research ethics are concerned with the acquisition, analysis and distribution of information without causing harm to research participants (Bryman 2008). In general terms, there are three parties involved in this research: the researcher, the participants or user of research products and
respondents or subjects. All participants in this research have rights and obligations (Zikmund et al. 2013). As no research sponsor or client was involved in this research other than the researcher himself, the only participants were the industry people who were interviewed.

Respondents have the right to privacy and confidentiality and to be informed of the study’s aims and objectives. They have free choice and must be treated honestly and fairly (Sreejesh, Mohapatra & Anusree 2014). In the case of this particular research, this right applies to the respondents as people and to the organisation for which they work. Respondents, who agreed to participate, have an obligation to be truthful. The researcher must be objective, unbiased, competent, thorough and honest, and not misrepresent the purpose or nature of the research (Bryman 2008). The researcher must ensure that the research is original, and acknowledge the ideas of others, and not misrepresent or overstate results in order to prove a point. Finally, the researcher must respect the privacy, confidentiality and secrecy of the subjects and protect the confidentiality of any sensitive information (Dhawan 2010). The ethical question is not based on absolute right or wrong question: as Zikmund et al. (2013, p. 74) points out, “ethical questions are philosophical questions. However, common sense and common decency will guide most people, with codes of practice and the law filling in the gaps”.

In this study, the application of ethical principles has shaped the following:

- Potential subjects were provided with a letter explaining the purpose of the study and what was being asked of them; the opportunity to participate or not; an assurance of confidentiality and privacy; and an explanation that each participant would have the same access to research results;
- Materials such as hard and soft copies are kept in a safe and secure environment;
- Digital records were kept in a safe and secure environment;
- Approval was requested from (and granted by) RMIT’s Human Ethics Research Committee; and
- A letter by RMIT University was provided which indicated the University’s code of ethics, research rules and procedures (see Appendix 1).

The following checklist was used in shaping this research (Table 5.8).
<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will any harm come to direct or indirect participants, from this research?</td>
<td>No. Anonymity, confidentiality, and privacy are assured by following the procedures above.</td>
</tr>
<tr>
<td>Will any harm come to non-participants, from this research?</td>
<td>No. The topic and nature of this research are not likely to cause any harm or flow-on effects.</td>
</tr>
<tr>
<td>Will the research violate accepted research practice?</td>
<td>No. The research has been approved by RMIT’s ethics committee and followed their guidelines.</td>
</tr>
<tr>
<td>Will the research violate accepted community standards?</td>
<td>No. Common sense and common decency have been applied to this research at all times.</td>
</tr>
</tbody>
</table>

Table 5-8: Ethics Checklist (Collis & Hussey 2014, p. 33)

5.7 SUMMARY

This chapter explained the research design and methodology to explore the relationship between political disruptions that impact on the supply chain performance. The textile industry in Pakistan was chosen as a case study. Semi-structured interviews were conducted. Senior textile manufacturers holding high-level positions, third party logistic providers, influence group, political group and community group were interviewed to gather their views and opinions regarding the challenges associated with political disruptions. Participants were contacted by email and phone, and some by personal meeting, to discuss the research topic, research questions and the interview schedule. Structuration theory provided the significant edge to the study to elicit the desired outcomes.

This chapter concludes with the following statements:

- Interpretative paradigm was adopted to explore the complex relationships between political disruptions and supply chain performance. Considering the sensitivity of the issues associated with political disruptions in Pakistan, an in-depth analysis of the interwoven issues underpinning the views and opinion of subjects would be necessary which otherwise would be hard to achieve through other approaches;
- The data collection and interpretation steps were outlined which would guide the interpretation of the qualitative data. Semi-structured interviews were
conducted to subjects which represented different agents involved disrupting the political system in Pakistan;

- NVivo, also discussed in this chapter, was used to obtain queries and create that required to interpret the data and particularly to understand the agent’s role and actions;

- Interpretation of each agent’s role and actions that impacted on the social and political system was conducted using the framework of structuration theory. The three dimensions of structuration theory: domination, signification and legitimation have been employed to investigate the role played by agents in political system and the way agents exercise power to influence the operation of production and distribution; and

- Domination dimension of structuration theory relates to the power utilised by agents. The signification dimension relates to how human agents interact in political system and exchange meaning through communication. Legitimation dimension describes the communication methods used by the agents to convey or deliver their messages.

The following chapter includes the interpretation of the qualitative data; in which the complexity of political disruptions is discussed with particular emphasis on the nature of interaction with supply chain disruptions.
CHAPTER 6: EXPLORING THE LINKAGES BETWEEN
POLITICAL DISRUPTIONS AND SUPPLY CHAIN
PERFORMANCE
6.1 INTRODUCTION
Through the lens of structuration, Chapter 6 explores different forms of political disruptions and how they impact on supply chain performance. The role played by agents in political disruption and the way agents exercise power to influence the operation of production and distribution systems will also be investigated. The interactions between political disruptions and supply chain systems are also presented. In this chapter, the results from the interview data are interpreted to enable
- identifying the main agents involved in the disruption of textile supply chain;
- capturing the reflection of political disruptions as a process; and
- exploring how different types of disruptions impact on supply chain performance of the textile industry in Pakistan.

6.2 KEY AGENTS OF CHANGE
Structuration theory emphasises the key responsibility of the agents in the production and reproduction of the supply chain structures that in turn enable and restrain actions. Agents tend to create and enforce “rules” and hold “resources” to control supply chain. Rules provide normative legitimacy and meaning whilst resources include both human and material assets (Lewis & Suchan 2003). A number of agents are involved who have the interest or/and power to influence the performance of textile supply chain. These agents hold decision-making power (Jochoms & Ruthers 2006), which can affect different parts of supply chain. This power ranges from allocating resources for the operation of the production to transforming materials into goods through to distributing of these goods in an open market. The key agents of change are political groups, manufacturers, the labour force, labour unions, supply chain operators (such as transportation providers), social institutions and customers. Each of these agents has a particular method/strategy for influencing, controlling and regulating supply chain operations (Jochoms & Ruthers 2006). For instance, the union can influence supply chain performance by restricting the labour supply, the manufacturer can control production operations, and the government has the power to regulate the trade and labour laws (Walker 2013).

Structuration theory is concerned with the way that patterns in a social system can be harnessed to meet analytical challenges (Catherine 2004). The challenge in this context
is to identify the agents and the roles they play in a political and textile supply chain. The methods of communication or meaning exchange used by the agent in a supply chain operation are based on the type of agents. Broadly, there are two major types of agents in the textile supply chain: one is political and the other non-political. Political agents are politicians, political workers, the government, and governmental institutions (e.g. military and judiciary). Non-political agents, who also influence textile supply operations, include manufacturers, distributors, transporters, workers and customers (Manjunath & Andrew 2013).

In Pakistan’s textile industry, politically motivated violence and political strikes have been the most commonly used methods adopted by political agents to communicate their message (de Mesquita et al. 2014). These agents have used their authoritative powers to create disruptions in political and supply chain systems. For example, this can be seen political strikes in which political workers try to relay their messages to the government authorities. Political strikes in Pakistan are most likely to be in protest against the political actions of the ruling party (Kronstadt & Kumar 2014). Political instability has a greater impact on the textile supply chain operations than on other industries in Pakistan. The textile sector exports most of its products. To gain customers’ trust, it is essential that these products are delivered with maximum speed and efficiency (Arslan 2006).

Textile manufacturers are one of the key agents who directly control the production and distribution systems in terms of possessing both allocative and authoritative power to reflect domination. They exercise power and control over a significant number of people and materials. Textile manufacturers are responsible for transforming raw material into finished goods by utilizing all available resources. Textile mill managers (i.e. managers from different departments) also have the power to exercise and influence particularly on structure of signification. They are both trusted by customers and more involved in the production process. Their attitude, behaviour and sincerity are important factors that influence the manufacturing operations and distribution systems. Textile production involves scheduling, manufacturing, maintenance, and the distribution of finished goods to customers. Managers of each department must have strong coordination skills so that they can distribute and use their allocative or allocated resources properly to produce products up to customer standards. Miscommunication
between different manufacturing departments may lead to serious quality or productivity issues for the manufacturers. All machines have specific schedules designed or prepared by maintenance managers to maintain production process, and it is the role of the labourers to follow the schedule and maintain the machines. Even small wear and tear issues in the machine settings will affect the quality of the final product. One spinning Supply Chain manager reported:

“The textile production process consists of three elements: these are machines, workers and materials. All are important for maintaining production operations. Among these, workers are more responsible for disruptions in textile production due to the fact that all other processes rely on their performance. The main problem is that the workers are mainly uneducated, and that increases the chances of mistakes in the textile industry.” (FBA)

In the textile industry, every agent’s allocated job is to maximize the production and minimise the chance of disruptions. The majority of disruptions in the textile industry however are linked to an agent’s failure (i.e. intentionally or unintentionally) to perform his or her allocated jobs. The method used by agents to exchange the meanings depends on the type of agent and the purpose of the message. For instance, a labour strike represents the union’s attitude, which could be opposed to management actions or policies. Its action may have a direct or indirect effect on production or distribution channels. Likewise, a quality manager is responsible for all quality checks; these include testing, conditioning, moisturizing, inspecting, and ensuring to meet final product quality standards defined by the customers. Failure to follow customers’ defined quality standards will influence the whole supply chain operation. One textile weaving production manager emphasised:

“The textile production process involves different people, each responsible for their assigned jobs. Each worker, as well as the manager, has to fulfil his job, which is important for the completion of production process. The failure to accomplish their allocated jobs will impact on the production process. The combined effort of managers and workers is
Political groups are particularly vital in terms of their influence over the structure of legitimation and signification in voicing opposition to changes for or against trade policies such as export and import licencing or tariff barriers. For example, while some countries have focused on partnering with other country’s textile manufacturers to enhance their productivity, Pakistani policy-makers are less likely to support this policy, focusing instead on the promotion of the local textile business. The policy makers have allocative power to affect the legal structure of the decision-making board (Shah, Warraich & Kabeer 2012). Political party in power is the key agent responsible for introducing new or amended industrial policies for the betterment of the economy. These agents are also accountable for creating social and political stability by introducing and enforcing laws that crack down on disruptions within the political system. The textile manufacturing industry depends on such laws and policies designed by the politicians. The policies help them improve their exports and business value (Shah, Warraich & Kabeer 2012). Unfortunately, most of the problems facing the textile industry are caused by the government who introduced industrial policies for the textile industry but less successful in implementing them due to the constant threat of political disruptions. Political protests, corruptions, terrorist attacks, conflicts with neighbouring countries, and religious issues are more likely to be linked to unstable political system.

This research shows that in Pakistan, textile supply chain disruptions reflect the method used by agents to communicate and exchange their messages, e.g. political strikes, labour union strikes and even terrorism. Active in the social or political system, each or these agents or groups of agents in the social system act in a certain way to exploit to the government authorities. For example, although strikes from political and religious groups may share the same method of protest, the message that is sent to the government authorities can be different. For example, a strike might be the method of protest used by a political group to try and influence the government to change a policy. A religious group’s choice of strike as a method of protest, though, might be an attempt

considered to be the key success factor in the textile industry because workers follow the manager’s guidelines to pursue production operations.” (JN)
to force the government to practice Sharia Law. As one textile apparel Supply Chain Manager clarified:

“Political and religious protests are common these days, which are causing the supply chain disruption issues. Protestors are interrupting transportation operations by closing roads as a way of showing their presence. These incidences reduce or terminate raw material supply, and this has a direct influence on the production performance.” (MK)

Respondents highlighted several examples of politically motivated disruptions and civil disobedience. For example, after the 2013 elections protests commenced suddenly in Pakistan when the opposition party claimed that the election was rigged (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). This led to a long protest march, which resulted in major disruptions in businesses. Protests such as these have heavily damaged the economy, especially in light of the European Union allowing Pakistani textile products to access to its markets. This would necessitate highly agile and reliable supply chains which are resilient to deal with the political uncertainty and dilapidated infrastructure in Pakistan. The government had hoped to generate revenue and increase its credit rating (Sayeed 2014). The Pakistan government claims that these protests adversely affected business, the economy, foreign trade, national development and the lifestyle of the people (Malik, A 2014). As expressed in a Nation News article written by Iftikhar Ahmad (2014):

“The economic cost of protest after 2013 elections exceeded to 1300 billion Pakistan Rupees. The political cost in the context of Pakistan's relations with other countries and international institutions is tremendous.”

Both parties (i.e. ruling and opposition) were involved in this issue because the ruling party had not agreed to investigate the opposition party’s allegations of election rigging. Protest from the opposition parties grew, as several thousand people became tens of thousands of people. It became almost impossible for government officials to reach their offices and perform their duties. Sit-ins and civil disobedience ensued (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). During this time, the Pakistan textile industry faced
grave problems in their inventory management, supply chain cost, distribution, and customer satisfaction ratings. The protests impacted on the causal relationships between manufacturers and international customers due to long delivery lead time (Aneeqa 2015). Countries that are politically stable can spend more resources on training their citizens to resist external disruptions or changes, and this can be enforced by non-state or non-political agents (de Mesquita et al. 2014). Because of its unstable political system, Pakistan struggles and allows non-political agents such as the military to control the power. As one participant from political group emphasised:

“Pakistan is partnering with the US against terrorism in which the US military is allowed to attack in tribal areas, which causes civilian causalities. Many local NGOs and social workers are protesting against US drone attacks and blaming the local government for allowing the US to killing its own people. This situation motivates many Pakistanis to protest and show their anger, which leads to attacks on foreign companies (especially from the US and EU countries). Pakistan faced a huge deficient in its textile production and supply chain performance during these protests.” (MR)

Some active non-state agents, like terrorist groups, are the cause of political and supply chain disruptions. These terrorist groups are trying to change the legal structure of the country. They are also more likely to contribute to the country’s political and economic instability, with the government spending more of its budget on security matters rather than education, social and business activities. Most of the agents involved in these terrorist groups are from rural areas or are less educated, rendering them more vulnerable to the agendas of the extremists. Cordesman, Burke and Vira (2011, p. 3) commented on the implications of political disruptions for Pakistan in a larger context:

“Pakistan is passing through one of the most dangerous periods of political disruptions in its history. This goes far beyond the Taliban and the war in Afghanistan. A net assessment of the patterns of violence and stability indicate that Pakistan is approaching a perfect storm of threats,
including rising extremism, a failing economy, chronic underdevelopment, and an intensifying war, resulting in unprecedented political, economic and social turmoil. Patterns of violence in Pakistan have serious implications for Pakistan’s future. Pakistan remains a central node in global terrorism. Osama Bin Laden was killed deep inside Pakistan in an area that raises deep suspicion about what Pakistani intelligence officials, senior military officers and government officials did and did not know about his presence”.

This failure of the political system indicates the growing threat to Pakistan’s economy and its investors. This is particularly important as Pakistan has a long history of violence, ethnic conflicts and extremism. Therefore, a better understanding of agents in the supply chain would help improve the performance of the textile industry and to sustain economic growth.

6.3 MATRIX CODING QUERY RESULTS

Matrix queries produced for the presentation of coded references, sources or the percentage of each node cell (O’Neill 2013). Different queries run in this study to find the reference counts of various political and supply chain disruptions against supply chain performance. For the presentation and interpretation, all the three-dimensional charts exported from NVivo and converted them into two-dimensional Excel charts. The benefit of using the Matrix query is to indicate the numbers of reference for any particular object or issue from the source, material or data (Bazeley & Jackson 2013). Sources are interview transcripts and references refer to the number of coding references (Kohar 2013). The number of references count is high that indicates the intensity of the impact or consider as more valuable.

Figure 6.6 presents the matrix query results, all of these results were generated against the supply chain performance. These results show the intensity of each form of political disruptions and their impact on the supply chain performance. Higher the reference count greater the impact on the supply chain performance (Bazeley & Jackson 2013; Oldfield 2014). The NVivo results of the interview data strengthen the interdependency and interlocking system whereby political disruptions are inherently embedded in the
performance of supply chain systems. This is captured through the number of counts that these two concepts (i.e. supply chain performance and political disruptions) are connected. It is to be noted that this is not a causal relationship, but an association which shows in figure 6.1 where the x-axis is coding reference count of political disruptions and the y-axis is supply chain performance. The interview data indicates that political protest, political violence and terrorism have the highest reference count. These political events/disruptions create different levels of supply chain disruptions from upstream to downstream stages. Political disruptions, in its nature, trigger other types of supply chain disruption that interrupt material flows in the supply chain that in turn affect supply chain performance.

Figure 6-1: Excel Two-Dimensional Chart Showing Political Disruptions

Similarly, the reference count of different supply chain disruptions against supply chain performance presented in figure 6.2. Transportation delay, production delay, machine breakdown and labour strikes have the highest reference count, which shows the higher level of association between these disruptions and supply chain performance.
Figure 6-2: Excel Two-Dimensional Chart Showing Supply Chain Disruptions

Results (see Figure 6.3) indicates that, more manufacturers were worried about their long manufacturing and delivery lead time because of political disruptions. Textile supply chains are more vulnerable to disruptions when the lead time is long. Delivery lead time starts with customer’s order placement and end at delivery of particular product to customer. In textile industry, delivery lead time is important because product manufacturing process is quite longer than any other industry and chances of delay in production, raw material delivery and machine shutdown are higher.

Figure 6-3: Excel Two-Dimensional Chart Showing Delivery Lead Time
The interpretation of the interview data indicates that political disruptions have the greater impact on supply chain operations associating with supply chain disruptions. Political protest and political violence are linked with transportation delays and machine breakdown (see Figure 6.4). These disruptions are linked and causing the intensive supply chain interruptions. For example, political protest causing the transportation delays that effect on the production operations of the textile industry.

6.4 POLITICAL DISRUPTIONS AS A PROCESS IN A SUPPLY CHAIN SYSTEM

Political disruptions are not isolated events. They are part of the political processes and institutional structures within which they germinate and grow. The production and reproduction of supply chain structure thus heavily rely on the process of creating political disruptions. The process of developing structures such as rules and resources to manage supply chain performance is a product of and a constraint on political actions. Political disruptions however are linked to supply chain processes and are inseparable part of the production and distribution systems. In-depth interpretation of interview data shows that political disruptions are intertwined with supply chain disruptions which are “unplanned events that may occur in the supply chain which might affect the normal or expected flow of materials and components” (Svensson 2002, p. 23). A political disruption that could take place at one point in the chain can adversely affect the performance of one or more elements located elsewhere in the supply chain. It can affect the normal flow of goods and materials within a supply chain (Craighead, Blackhurst & Johnny 2007; Melnyk, Rodrigues & Ragatz 2009).

Today’s textile supply chain has become more complex than ever before due to globalisation, outsourcing and the spatial fragmentation of production or consumption systems. As a result, the global supply chain has become increasingly susceptible to disruptions (Koprulu & Albayrakoglu 2007). The exposure of a supply chain to the potential impact of disruptions is usually predicted according to the possibility of disruption and the impact of the disruption, should it take place (Zsidisin, Ragatz & Melnyk 2005). Given that a supply chain is a network, a disruption can occur in any node or link of the chain. The source of the disruption may be located inside or outside the chain. For instance, an interruption to the expected flow of material from a supplier
to its destination could occur because of market failure involving the supplier inability to procure or deliver goods on time. Alternatively, it could occur because of a natural disaster like an earthquake or flooding in the hinterland that supplies raw materials to the plant. The performance of a supply chain is generally analysed in terms of the customer service level (e.g. unpunctuality, number of late orders), financial aspects (e.g. profit or operational cost) or a combination of both (Beamon 1999).

Interview data indicate that political disruptions are part of the process and are interwoven with supply chain disruptions. Political disruptions either their own or in combination with supply chain disruptions are manifested as a series of vicious cycles, linking them to supply chain performance. The vicious cycle presents the “repeating situation or condition in which one problem causes another that makes the first problem worse” (Baladi 2011, p. 75). Opinions and views gathered from the respondents have clearly indicated that political disruptions are cyclical, repetitive and process-driven disruptions which affect the entire production and distribution systems. The interpretation of the data suggests four major types of disruptions in textile supply chain operations. These political disruptions comprise those which originated from:

- external disruptions impacting on internal operations;
- external disruptions impacting on external operations;
- internal disruptions impacting on external operations; and
- internal disruptions impacting on internal operations.

The typology of political disruptions within the framework of textile supply chain is discreet to make the interpretation simpler, but the impacts of political disruption on textile production systems are rather compounded and cascading. The political disruptions are not just linked to political systems but also the way textile management organise work within an organisation. This political organisation within the production systems and the division of management has significant impact on supply chain performance. Rules that govern the systems are continually re-produced and resources redistributed. External disruptions have a direct effect on the internal operations in that they cause an interruption, as demonstrated in the following example of a political protest. A political protest causes transportation delays, due to the road blockages created by large numbers of protestors. The transportation delays that ensue affect the
supply chain operations, which are forced to slow down the production process. The slower production process compromises the supply chain performance. The supply chain performance threatens to reduce the customer satisfaction that is essential to sustain business growth. Such types of external disruptions are influencing on distribution channels and result in inventory disruptions and customer satisfaction. As one spinning mill manager explained:

“The impact of external supply chain disruptions on the internal environment is high, and such disruptions can totally stop the internal operations. The textile production process require raw material, labour, electricity, gas and spare parts for machines which are part of the external-based operations. If any of these are disturbed, that will affect the whole internal operation.” (MM)

Nowadays, it is more appropriate to follow the strategy of “make to order” that helps manufacturers reduce inventory costs and improve their profit margin (McKay & Wiers 2015). Most textile manufacturers in Pakistan follow this strategy (Memon 2015). This kind of manufacturing style requires a continuous supply of the necessary elements to complete the production process. External disruptions may completely stop the external supply chain operations, which will impact on the internal textile manufacturing process. External supply chain disruptions that impact on internal manufacturing operations are known as the most aggressive or destructive type of supply chain disruptions (Droge, Jayaram & Vickery 2004). The external supply chain faces both human-made and environmental factors that can directly or indirectly influence supply chain performance. One Supply Chain manager from an apparel mill argued:

“The external supply chain operation has a great impact on textile production processes. There are many risks in the external environment that are beyond the manufacturer’s control, such as transporters’ strikes. The government is also responsible for disruptions. They use shipping containers full of finished goods to block roads so that protesters cannot enter into the city or reach the protesting points. These kinds
Government activities make it difficult for manufacturers to deliver products to customers by the promised date.” (MK)

In recent years, the political atmosphere has changed, and opposition parties are protesting against the ruling party in power in Pakistan. Some actions of the opposition parties as a part of the democratic process might be associated with political uncertainties. The economy is on the decline, and security risks are increasing, which provides a perfect context for political protest and civil unrest. The past governments were less successful in tackling the undesirable political disruptions which are impacting on supply chain activities (Aneeqa 2015). An external political disruption that is also responsible for supply chain performance issues is terrorism. A specific aim of terrorism is to disrupt the economy by spreading fear in the country. One reason why the government needs to control internal and external terrorism is to mitigate the potential effect on supply chain activities (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). A stable political system can provide a mechanism of governance that has the power to offer a safer environment to investors and manufacturers. However, a disruptive political system is vulnerable to external agents interfering in local security matters.

Due to political disruptions, external supply chain operations can easily be disturbed, which in turn can impact on supply chain performance. Farmers, spare-part providers, and agents from different groups, as well as those working in transportation and warehousing, all have an influence on supply chain activities (Kauppi et al. 2016). Most external disruptions occur because of an agent’s mismanagement or misuse of their powers, which can then disturb the supply chain operations, as in the case of transporters’ strikes. Transporters are an important part of the supply chain network and their strikes can stop the entire supply chain operations (Brenner 2015). Countries that are unstable adopt sufficient systems to predict and plan strategies for managing all possible disruptions to their supply chain networks face more supply chain network disruptions (Mizgier, Wagner & Arnez 2014).

The reorganisation of views and opinions of respondents reflect hidden patterns that capture the interactions between political disruptions and supply chain disruptions. Among them are those disruptions which emanate from external environment, but exert
minimum effect on external operations while having maximum impact on internal operations. The vicious cycle of external disruptions that impact on the internal supply chain performance is presented in Figure 6.4. According to this vicious cycle, protests have a repetitive effect on supply chain performance and are responsible for creating more disruptions. Most of the supply chain disruptions are reflective of other disruptions in the same network. For example, transportation disruptions occur because of political protests, and raw material supply interruptions occur because of transportation delay. These interconnected disruptions increase the chance of further political disruptions in Pakistan. The impact of these disruptions is similar to those of ‘bull-whip effect’ whereby a small change in a system tends to have big impact on large supply scale on a national or global scale.

Figure 6-4: Impact of External Disruptions on Internal Supply Chain Operations

The production systems in the textile industry are not entirely dependent on the efficiency of internal production operations. Pakistan mainly produces blended yarns with a specific ratio of cotton and polyester fibres. These yarns are also used to manufacture quality fabrics or hosiery products. Transportation of cotton fibres from field to spinning mills requires sensitive handling, given that the fibres can absorb a variety of impurities, from dust and moisture to other contaminations. Given the sensitivity of the textiles, it is imperative that the conditioning of the raw materials is maintained, because during the transportation and production process, the textile
materials can change their characteristics due to changing conditions (Bruce, Daly & Towers 2004). If a transportation disruption was to occur as the textiles were being transported from one mill to another, this would jeopardize the necessary maintenance of the textile’s raw material conditioning. Consequently, the supplier would be held accountable.

External supply chain disruptions have an impact on external as well as internal operations. Not only do these types of disruptions completely thwart the external operations which are related to wider supply chain; they also tend to have flow-on effects on internal production operations. One textile hosiery mill manager expressed the view:

> “Textile production operations rely on external supply chain activities. Raw material supply, labour movement and the transportation of finished goods may be disturbed because of external supply chain disruptions. These disruptions affect production operations for a long time after the delay in the supply of raw materials and the delivery of finished goods has been resolved.” (UA)

External disruptions, then, are a reflection of the power exercised by external agents to express their feelings or attitudes. They are also a result of structural changes in the supply chain system (Vallaster & de Chernatony 2006). The possibilities of external disruptions impacting on internal operations are higher during political protests.

The impact of internal disruptions (from inside the production unit) on external supply chain operations is not as high as in the reverse scenario (Chiang, Canan & Nallan 2012). That is, if one production facility is disturbed, the buyer has the opportunity to move on to the next production facility to maintain supply operations. Textile manufacturing operations are complex. There is a high possibility that interruptions may occur during the production process, taking into account the material handling by the workers. Material handling requires certain skills to upload and install materials from one machine to next. Mishandling or mismanagement will affect the production process. Textile product manufacturing involves several machines e.g. the spinning
process alone involves blow room processing, carding, drafting, warping, the use of spinning frames, winding, and packaging. Politically motivated disruption in one of these departments or manufacturing processes will have an effect on the whole production cycle. As one textile spinning mill manager noted:

“Disruptions are unexpected events in textile industries. Because of these, production performance is reduced and there are more likely to be defects in the final product. Internal textile operations are complicated because every process relies on the previous one. These processes are all part of a chain. A stoppage or delay in one process will affect the whole chain.” (MM)

Textile and apparel production is time-consuming, though with a high-profit margin (Thompson & Martin 2014). Pakistan is among the cheapest textile production countries and has the capacity to provide all kind of textile goods from house wear to industrial clothing. The issues it faces in its supply chain network, however, make it difficult for the country to continue providing cheap textile products. Compared to regional competitors (e.g. China, India and Bangladesh, Pakistan), Pakistan faces different, and more serious problems like terrorism and political disruptions (Afridi 2014). Respondents raised concern over the country spending more resources on the war against terrorism rather than on economic reconstruction and employment generation. It requires massive improvements to supply chain networks to reduce the chances of disruptions (Yusuf 2014). One participant from Community Group commented on this situation:

"Pakistan is among the cheapest textile producing countries due to its own raw material and cheap labour force. Regional countries like India, China and Bangladesh are the main competitors and these countries also have the same facilities. Compared to other countries, Pakistan’s political system is more unstable. Terrorism, corruption and the country’s lack of interest in foreign policy make the situation worse for Pakistan’s textile producers.” (ASA)
Textile production disruptions have an impact on export orders because all products must meet specific quality standards as advised by the customers. Garment manufacturers mostly face internal problems related to operational issues. They are working in labour-intensive industries; the processes are complex and require hand stitching, which increases the chances of disruptions. In garment manufacturing, important quality standards exist in relation to design, colour, and yarn count and moisture absorbent properties. Textile production disruptions may increase the chances that the garment manufacturers will not meet customers’ requirements. One garment production manager raised concern over the issue when he states:

“Internal operations are complex and interconnected in garment production mill/unit. Disruptions in one process will disturb the whole production operations that lead to the impact on supply chain operations. Garment manufacturing is a complex, long and time consuming process that has a higher chance of disruption. We are manufacturing for an export order that has specific product characteristics. Disruptions in our production operation will reasoning to increase the delivery lead time.” (MH)

Unexpected disruptions in production operations create serious difficulties for manufacturers. Machine break-down, industrial fire, and labour strikes are the most common internal disruptions which can delay or stop the internal production operations. Some of these are politically motivated or are related to industrial disputes. Textile production disruptions that impact directly on the internal supply chain also impact indirectly on external supply chain performance. Figure 6.5 illustrates the intricacy of these interactions to represent the interconnectivity of internal disruptions on internal supply chain performance. Production disruption leads to several other internal productions problems; these include long-delivery lead time and risks to the retailer’s business on account of the retailer failing to predict the disruption.
Internal textile production operations are more vulnerable to disruptions due to their complicated production operations and interdependencies. Defects in relation to machine settings, machine maintenance, raw material conditioning and raw material delivery from one machine to another create common disruptions causing the production delays. These functions are labour intensive and are highly vulnerable to disruptions emerge from industrial disputes or labour politics. Textile supply chain managers are not only responsible for managing supply chain but also the disruptions related to the deployment of labour. With reference to the effects of internal disruptions on external supply chain operations, one dyeing and processing mill manager commented:

“The textile internal environment is extremely vulnerable to disruptions due to its complicated production operations. These operations are linked to each other, and disruption in one part of the production process will impact on the total operations. Internal disruptions are more costly for the textile dyeing due to the use of extensive quality chemicals.” (US)
Internal textile production operations are important for gaining customers’ trust and attracting new customers. Timely delivery is critical to this trust and to the reliability of supply chain. Disruptions will increase the delivery lead-time that will, in turn, affect the economic performance of the textile organisation.

The interpretation of the interview data indicates that external political disruptions have a much wider impact on external supply chain operations than they do on internal processes within the textile organisation. These disruptions can slow down or in some cases stop external supply chain operations such as procurement of materials and distribution of finished goods to markets. The most common forms of external supply chain disruptions are political strikes, political violence, extremist activities and social disorder. Political disorder increases the chance of security risks for both manufacturers and supply chain operators. Such risks further increase the chances of supply chain disruptions, leading to financial losses for manufacturers and reduced supply chain performance.

Figure 6.6 presents the repetitive or the circular flow on effects of political violence on external supply chain performance. These include causalities, a drop in exports, increasing corruption and cascading effects on wider economic and social systems.

![Figure 6-6: External Disruptions Impact on External Supply Chain Operations](image)
External disruptions tend to have more intense impact on both internal and external supply chain operations, but their impact on external operations is greater as stated by respondents. For example, the reliable and secured supplies of raw materials are essential to carry out manufacturing operations, but the manufacturers when out of supplies are unable to continue production. Political disruptions increase the chances of external supply chain disruption and loss of consumer confidence.

There is some evidence that suggest internal textile operational disruptions are the result of mishandling of operational issues by the management. For example, production scheduling defects cause ineffective production planning, poor production performance, an increased risk that machines will break down, and a long delivery lead-time. Internal operational disruptions might not necessarily stop external supply chain operations, but they can certainly make it less efficient. Customers in the globalised marketplace have the choice to procure goods from other providers or manufacturers to fulfil their requirements to operate production systems. As one textile spinning quality manager stated:

“Internal textile supply chain operations are more complicated, but easy to manage. All these operations involve workers and managers responsible for their allocated roles or jobs. The impact of internal disruptions on the internal environment is greater than the impact of internal disruptions on external supply chain operations. Internally, production operations can become disturbed due to technological failure, human-made mistakes, or raw material moisture issues. All of these problems can reduce our production efficiency.” (HM)

Furthermore, internal operational disruptions have a direct and significant impact on the external environment when customers rely on one supplier and unwilling to source a different supplier or provider. In the globalised economy, textile customers require products that are tailored to customer demand; this takes into account characteristics such as the specific raw materials, designs, and colour combination. Within the external environment of the textile industry, it is difficult to satisfy a customer’s demand once a (primary) supplier failure or disturbance has occurred. Consequently, the management
of internal production operations is important for reducing the likelihood of disruptions. Interviewees also highlighted that the majority of textile manufacturing industries have established hard and soft systems to manage unexpected internal disruptions; these include proper machine overhauling, production scheduling adjustment and labour training. Such systems help mitigate the impact of disruptions in their production operations and distribution networks. These views are conceptualised in Fig 6.7.

![Image: Internal-to-internal interactions in a supply chain system](image)

Figure 6-7: Internal-to-internal interactions in a supply chain system

External textile supply chain operations rely on agents who are outside the textile manufacturer’s direct influence. These agents are independent third parties who provide services to manufacturers as well as to retailers. They are responsible for all kinds of external supply chain operations, from supplying raw materials to delivering finished goods. Interviewees recognised that there are only a few textile organisations which have their own supply chain service providers in Pakistan. Most of them are small to medium sized organisations which are relatively more vulnerable to the political disruptions. All of these are at a greater risk of experiencing disruptions because of a labour strike, a change in the political regime, terrorism, natural disasters, conflicts between different ethnic groups, system failure such as planned and unplanned load shedding, fire incidents (arsons and accidents), malfunctions of information technology, and oil crises (Kleindorfer & Saad 2005).
Internal supply chain disruptions occur despite the controlled production environment. These disruptions are the causes and consequences as they are intertwined with internal and external forces such as machine breakdown, import or export restrictions (sanctions), delivery delays, transport failure, increasing customs duties and tariffs, an abrupt change in customer demand, market failure (increasing raw material prices, labour shortages), and inventory disruptions (Richard, Schau & Michael 2003). However, both types of disruptions have a combined and an individual impact on supply chain operations. In many cases, as argued by respondents, it is difficult to detect the source of a disruption, which may be located inside or outside the supply chain systems. The interpretation of interview data shows that textile supply chain operations are becoming more complex and vulnerable to disruptions; this is on account of short textile product fashion cycles. Textile production consists of interconnected processes which involve different practices to complete production operation.

To summarise the complexity, political disruptions are interconnected and interlocked within the internal and external environment. As shown Figure 6.8, political disruptions are not isolated events; they are fundamentally embedded in supply chain disruptions and directly or indirectly linked to supply chain performance. It is concluded that the political disruptions impact on supply chain performance through supply chain disruptions. These disruptions interact or interrelate with each other to influence the performance of production or supply chain operations. Productions delays are the result of all types of disruptions including political and supply chain. These internal and external disruptions directly or indirectly through other disruptions causes production delays that leads to the supply chain disruptions. Financial loses another consequence of disruptions in textile industry in which most of disruptions causing significant impact on financial performance of textile organisations or manufacturers. Political disruptions impact on supply chain performance through supply chain disruptions which causing customers’ retentions, financial loses; longer delivery lead times and that increased the chances of manufacturer failure.
The Impact of Political Disruptions on Textile Supply Chain Performance in Pakistan

Chapter 6 – Exploring the Linkages Between PD and SCP

Figure 6-8: Interlocking of Vicious Cycles
This complexity of interlocked vicious cycles reveals that disruptions have continuous, cascading and reverse effects, depends on their type, on supply chain performance. Most of these disruptions leading to other types of disruptions such as, transportation delays which is also causing long delivery lead time, order cancelation and resultant into the business opportunity loss. In another example (see Figure 6.8), a political protest (i.e. political disruptions) could have an indirect impact through transportation delays and production delays which leads to the order cancelation and resultant into the financial loss to the textile organisation.

6.5 SUMMARY

This chapter has identified the key agents of change, types of resources, methods to deploy the powers by the agents and their impact on the political system. The key agents of change are political groups, manufacturers, the labour force, labour unions, supply chain operators (such as transportation providers), social institutions and customers. Each of these agents has a particular method/strategy for influencing, controlling and regulating the supply chain operations. Politically motivated violence and political strikes have been the most commonly used methods adopted by political agents to communicate their message. Textile manufacturers are one of the key agents who directly control the production and distribution systems regarding possessing both allocative and authoritative power to reflect domination. Political groups are particularly vital concerning their influence over the structure of legitimation and signification. This chapter also identify that,

- Textile supply chain disruptions are the reflections of methods used by agents to communicate or exchange their messages,
- Political disruptions are not isolated events. They are part of the political processes and institutional structures within which they germinate and grow,
- The process of developing structures such as rules and resources to manage supply chain performance is a product of constraint on political actions,
- Political disruptions are linked to supply chain processes and are inseparable part of the production and distribution systems,
- There are four major types of disruptions which are external disruptions impacting on internal operations, external disruptions impacting on external
operations, internal disruptions impacting on external operations, and internal disruptions impacting on internal operations,

- Most of the external disruptions are the reflection of power exercised by external agents to express their feelings,
- Internal textile production operations are more vulnerable to disruptions due to the complicated textile production operations and interdependencies,
- Internal operational disruptions have a direct and significant impact on the external environment when customers rely on one supplier and unwilling to source a different supplier or provider; and
- Results show that external disruptions have a severe impact on internal and external textile supply chain operations.

The next chapter will discuss the key findings of this research using structuration theory dimensions. Resource allocation mechanism, a reflection of power, reproduction of structures, means of communications and link between different political disruptions and supply chain performance will also be examined.
CHAPTER 7: DISCUSSIONS
7.1 INTRODUCTION

Using structuration theory as a base, Chapter 7 provides a deeper understanding of the relationship and interaction between political disruptions and supply chain performance. Focusing on agents, this chapter establishes the role of the different agents, the methods and means of communication they adopt, and their use of power and resources to influence the performance of the textile supply chain. With reference to the theory’s three dimensions, namely domination, signification, and legitimation. This chapter interprets the views and opinions of interviewees to reflect the mechanism through which political disruptions are created and the context within which they emerge.

Domination demonstrates the way power is used to allocate resources to either stabilise or destabilise textile supply chain operations. Signification captures how meanings and messages are formally or informally communicated within and outside the production environment to achieve social and economic goals and objectives. Legitimation investigates the rules, standards and procedures which are practiced by agents within the institutional system to change or to manage the production system. The key objectives of this chapter are:

- explore the way power is used by agents to allocate resources to either stabilise or destabilise textile supply chain operations;
- identify the methods of communications used by agents that are causing the supply chain disruptions; and
- investigate the rules and regulations those are important for stabilizing the production system.

7.2 DOMINATION- POWER AND RESOURCE ALLOCATION

Political disruptions and supply chain performance are interdependent, interactive and structured systems (Bashir et al. 2013). Political disruptions, as discussed in the previous chapter, interact with and impact on the supply chain through supply chain disruptions. Political disruptions within or outside the production system affect the efficiency of textile supply chains which link the processes of ginning, spinning, weaving, processing, and the creation of apparel and garments. Not only does the efficiency of the supply chain rely heavily on internal political processes within the firm, but it is also dependent on the external political environment (Rose & Hackney 2002). The structuration that underpins the interactions between political disruptions
and supply chain performance is the interplay of domination, signification and legitimization by the participating agents.

The role that the key agents play, and the transformative capabilities of the agents to allocate resources, is clearly defined by the domination dimension (Broger 2011). This enactment can also be interpreted within the context of textile supply chain disruptions. In this study, actors/agents including manufacturers/suppliers, political groups, and union workers were interviewed. The specific aim of the interviews was to explore the role of domination within the textile industry so as to improve current understandings of the mechanism of resource allocation and its impacts on supply chain performance. The behaviour of agents in terms of decision making processes was also explored as a way of better understanding how agents perceive political disruptions and link these to the supply chain performance.

Domination plays a critical role in textile supply chain in Pakistan as it influences and controls the allocation of resources. The transformative capabilities of agents enable them to utilise resources to achieve certain objectives. These objectives, however, vary according to the agent’s ability to exploit a particular situation. Domination has been seen by agents to have the potential to disrupt supply chains if resources are not optimally utilised to meet the management’s objectives or goals. For example, the management objective to reduce lead time may not be achieved if resources such as the raw material are not available when the workers decide to go on strike to demand a pay rise. This situation might be part of the domination process whereby the collective power of the labour union is harnessed to optimise the results for labour by maximising disruption in the production systems. Here, labour unionists are agents of change, who show resistance to the existing establishment and exhibit transformative capabilities, or domination, over the resources (Catherine 2004). This reflects the ability of agents to deploy the power of collectivism to influence the production of goods and thus on the efficiency of supply chain.

Agents such as manufacturers, service providers, and political groups or associations exercise their transformative capabilities to bring about desirable changes in the use of resources (raw material) through production planning, scheduling and execution. An agent’s role in the Pakistan’s textile industry commences with the picking of cotton in
the field and continues until the goods are completed and delivered to the end customers. As discussed in Chapter 3, ginning is the first processing stage in the textile production line. Ginners are responsible for separating cotton fibres from seeds (Doraiswamy 2009). Ginning mill management has the responsibility of maintaining the required quality standards of cotton fibre. Raw materials for ginning (cotton) come from the rural areas of Pakistan. Highlighting the efficiency achieved by transporting cotton fibre from farms to ginning mills, the supply chain manager from a ginning mill emphasised the disruption at a farm level when he stated:

“The supply of raw material being delivered from the fields to the mill is often disturbed, due to farmers’ strikes. Sometimes this is because the government did not pay the farmers the price they were promised for their crops. Farmers rely on cotton crops to keep their financial cycle running, and failure to receive the expected prices can force them to take extreme actions. They start protesting that reasoning the supply chain disruptions. During protests, various farmers prefer to block roads and interrupt transportation operations. This leads to a shortage of raw material for the ginning mills.” (AAH)

Given the time sensitivity at the upstream end of textile supply chain, any disruptions can have adverse effects at the downstream end. For example, a protest that takes place because of a conflict between farmers and the government can cause significant supply chain bottlenecks such as production delays and longer lead time, given the geographic separation between farms and factories in Pakistan. Some interviewees expressed concern over the transportation delays prolonging the procurement of cotton fibres for ginning that in turn reduces the minimum standards required producing high quality cotton. They recognised that these types of disruption are difficult to manage by manufacturers in production planning as they relate to the external environment. While acknowledging the choice of farmers to protest against the government policy or the price mechanism regulated by the market, they express serious concerns on the impact of the performance of supply chain. One Supply Chain manager from a spinning mill reiterated this point in his statement:
“Different political parties and religious groups are active in the rural areas, especially in the cotton-growing districts. The actions of these groups can affect the delivery of the supply of cotton from the fields to the ginning mills. This can then lead to supply chain disruptions. Ginning is the first process. If the supply is disturbed from this section, it will impact on the performance of the whole textile supply chain. It’s important for ginning mill owners to keep cotton quality up to the spinning standards during their processing” (FBA)

Political disruption forms in Pakistan such as political strikes, political violence, assassination, riots, revolutions and corruption create not only internal organisational issues such as labour dispute, production delays and maintenance defects but also derive from external political issues and they have a significant impacts on the entire supply chain performance. These impacts specifically shown in this research are linking with supply chain disruptions. This research also showed that different political agents including political groups and non-political agents including labour force, labour unions, and ethnic groups are operating in response to disruptions in the political system. The specific effects of these agents were to disturb the supply of raw materials or to influence the distributions of finished or semi-finished goods. Politics however is not the only disruptor to the textile supply chain in Pakistan. There are also many other factors influencing supply chain performance including human errors, natural disasters and machine failure.

7.2.1 Resource Allocation Mechanism

The findings from the interview data also show that resource allocation mechanisms tend to disrupt supply chain operations in the supply chains in the Pakistan textile industry. Resource allocation can be seen as both a political process and as decision making which often influences how and where resources are allocated (Coates & McDermott 2002; Lipset 1960). It is, therefore, considered to be the key to effective planning and scheduling of production orders and fulfilment processes in the supply chain. Domination regulates the transformative power of management to change the system to allocate the type of resources required to optimise production systems (Catherine 2004). Textile managers are responsible for allocating resources within their
production units/mills (Unsar 2014). This enables the transformation of raw materials into finished or semi-finished goods through the use of infrastructures such as machines, systems and technologies (Vallaster & de Chernatony 2006). There are two types of resources that can be allocated to production units: allocative and authoritative resources (Broger 2011). Allocative resources in the textile industry refer to goods, technology and financial resources which management uses its power to manage production and distribution functions. For example, planning managers plan the required resources; these include raw materials, labour, machines, chemicals, and the production time schedules that are developed to complete a production order (Qi & Xiaoxu 2008). Textile apparel Supply Chain manager recognized the negative impact of political disruption on the execution of production plans:

“Planning managers are responsible for assigning the jobs or duties in the production departments. This manager is also taking care of resources which are used to accomplish the customers’ orders. Such resources are machines, raw materials and inventory. They also define the machines allocations, settings, stoppage time, maintenance schedules and amount of labour required to operate each machine. Resources are the key element of textile manufacturing process and failure to maintain will increase the chances of production disruptions. There are great chances that political events in the area may effect on the resources allocation process by interrupting into the delivery of raw materials or labour movement” (MK)

The allocation of resources is critical to managing the textile industry, making it possible to attain optimum production without any disruptions to the production or distribution systems. The management staff interviewed stated that they have to ensure that the supply of raw materials is regular, less volatile, and unperturbed. The labour force is then deployed to help specialise the production systems, and the inventory is managed in an optimal way to minimise inventory holding costs. Management argued that the exercise of resource allocation provides management with an opportunity to be in command of the resources and avoid disruptions in its supply chain operations.
Disruptions in the Pakistan textile industry, however, can emanate from internal or external environment, especially when agents are intentionally or unintentionally enabled to allocate resources. For example, if a worker, politically motivated, decides to disrupt a production process by deliberately failing to follow the planned activities, this would then lead to further disruption in supply chain operations. One production manager from the weaving mill elaborated the cascading effect of a minor disruption on a wider supply chain:

“Most of the internal supply chain disruptions are the result of the labour force failing to follow the schedules or planned activities during the production of customer orders. It is important that the workers reflect on their attitude towards the rules, and in relation to workload or safety issues which they are faced in their work inside the textile mill. These small disruptions create disruptions at larger scale for the textile manufacturers” (JN)

Authoritative resource allocation is the mechanism that enables management to control or command the labour force to transform resources into finished goods (Cheru 2012). The research showed that while resource utilization aims to complete the production process on time, failure to maintain the resources may lead to supply chain disruption, for example, when internal labour deployment, such as labour union politics, hinders production when labour issues are involved. This calls for authoritative resources to be utilised so that the situation is kept under control. It also calls for those in middle-to-upper management positions to control production systems and minimise production disruptions. In the event of a labour strike, production and supply chain efficiency will be reduced. As one member from the political group argued that:

“Politics among the labour groups also cause supply chain disruptions, especially when those in the labour force band together and refuse to undertake their duties. A lack of safety equipment is one of the reasons that these workers are forced to strike. There are many safety risks involved during textile production, and most Pakistani textile mills are not capable of providing basic health and safety equipment to their
workers and the accidents in the mill encourage the workers to strike in protest against the unavailability of basic health equipment.” (SAA)

In general, it can be argued that the access that the agent has to command and control resources such as the labour force, machines, and raw materials reflects the agent’s authoritarian or allocative power (Carspecken 2003). The power utilised by the internal agents provides a means of stabilising industrial production and supply chain operations (Edwards 2011). However, this research shows that there are other external agents such as political agents (e.g. political groups) that often destabilise supply chain operations in order to achieve certain purposes. Political strikes are common in Pakistan, and these render large-scale disruptions in cities or regions. Political parties also exhibit their power to control resources by protesting against the actions of the ruling party or government. The key purpose of political strikes is to create resistance through chaos, social disorder, and interruption in routine economic activities. Often this has significant cascading impacts on the performance of the textile supply chains in Pakistan. One third party logistic services provider commented on the adverse effects of political strikes on businesses:

“Currently, opposition parties are protesting against government policies that affect the performance of the textile supply chain. They are interrupting supply chain activities. Manufacturers are unable to receive their raw materials on time or deliver their finished goods by the promised dates. Political unstable conditions create situation in which all of the partners in textile products manufacturing are hesitate to invest more in textile industry. This situation also badly hurting the local business community and that’s why most of them are moving their investments overseas.” (MUA)

Proper resource allocation and utilization of resources thus is necessary for maintaining supply chain performance. Management’s failure to properly allocate the resources can leads to production disruptions. There are several resources utilised in textile industry, and all of them need to be managed properly during the event of disruption. However these disruptions are also affected by power realtors.
7.2.2 Reflection of Power and Control

Sometimes agents intentionally use their power to reproduce the rules, norms, and guidelines that control production systems through regulating existing practices (Giddens 1981). Rules, procedures and norms in the Pakistan textile industry’s production systems are constantly reviewed, revised, and reproduced to adapt to improve working conditions and production systems. Some of these changes are shown to be slow and evolutionary whilst others are more radical, often mandated by industrial or commercial laws. The action to achieve these changes, positive or negative, is reflected in industrial or political strikes, which halt routine operations and economic engagement. The stories told by some of the interviewees consider public protests against the ruling party in Pakistan, in response to an allegation of election rigging or systemic corruption (Jalal 2014), is a reflection of power. In that sense, these political disruptions represent a mechanism to resist the policy and practices of the existing authority. Domination therefore exerts direct or indirect pressure on the government or industry to adjust or adapt to constantly changing markets (Ahrens & Chapman 2002). Another example of domination can be seen in the demand for improved working conditions or increased wages for workers. The agents’ intention towards controlling the production system is usually made through the use of their authoritative power. One textile weaving Supply Chain manager articulated the implications of such political strikes on the textile manufacturing industry in Pakistan:

“Political parties have the right to protest against government policies, but some of the opposition parties continue to protest, and they interrupt the transportation operations. This means that supplies are getting delayed and it becomes difficult for the labour force to complete their duties on time. Political disruptions have negative impact on textile productions, and it results in bad supply chain performance. During the political disruptions, political parties with less power started protesting to show their presence, and their action caused supply chain disruption issues.” (MA)
Political disruptions are also shown in this research to be interrupting the supply of raw materials to facilities and the distribution of finished goods to end customers. These disruptions included acts of terrorism, institutionalised corruption, target killings, assassinations and, sometimes, military coups. Each of these forms of disruption has the ability to partially or completely disrupt textile supply chain networks. For example, terrorism is one of the forms of political disruption in which terrorists (agents) intentionally use their power, for their own benefit, to create fear and social disorder. These were shown in this research to affect the operational activities of production units in the Pakistan textile supply chains.

Political disruptions are also linked to territoriality, regionalism and spatial conflicts. Historically, Pakistan has been geographically divided into social spaces which are ethnically fragmented. The textile industry is geographically concentrated in two key provinces of Pakistan: the Punjab and the Sindh (Doghri 2007). The cultivation of cotton crops and textile production largely occur in these provinces. Other provinces tend to import textile products from these two provinces. The movement of raw materials and finished goods between provinces is often disrupted by the constant threat of terrorist attacks on transport corridors and railway infrastructure (Baqai 2012). These types of disruptions create significant bottlenecks and delays in delivery of goods, which in turn, adversely impact on supply chain performance. One hosiery manufacturing mill manager recognised the scale of this problem by highlighting:

“Terrorist incidents over the years have badly impacted on supply chain performance in Pakistan. The terrorist incidences have increased the delivery lead time because manufacturers are forced to use other resources to transport their export products from facility to sea port. Previously we were using rail transport that badly effected by terrorists incidents. The Government is unable to provide a secure transportation system. So it can’t help manufacturers and exporters maintain their supply chain’s efficiency and effectiveness to meet the customers’ requirements.” (UA)

Political disruptions, as argued in this study, are merely a reflection of the power wielded by the different agents in the textile supply chain. These agents, it was
discovered in this research, tend to use their allocative powers for their personal deeds or to show the affiliation and solidarity to a particular ethnic group. The use of allocative power to protest against government policies, though disruptive, might be a way to reproduce rules and regulations to help govern production systems.

7.2.3 Reproduction of Rules and Resources

Structures are organised sets of rules and resources (Manjunath & Andrew 2013). The rules are techniques applied to enhance or reproduce social or political structures (Catherine 2004). As discussed above, the domination structure can be produced or reproduced by individuals (politicians) or groups (government) who have the power to control and regulate the social or political system (Bourdieu 1990). The government mostly uses its power in the form of legislation to stabilise the economic and political systems; on the other hand, purport to destabilise the economic and political systems in a short or long term plan to achieve their goals (Broger 2011). If the symbiotic relationship between actions and power of both the government and the agents fails to be maintained, this can lead to political disruptions. For example, the Federally Administered Tribal Areas of Pakistan (FATA) has been a key focus politically since the US attack on Afghanistan in 2001 (Afriadi 2014). The safe housing for non-state militant groups in this area has resulted in one of the biggest internal displacements of people in the history of Pakistan (Yusuf 2014). Non-state agents such as militants have easy access to their targets all over the country which can directly impact on supply chain operations. Such an impact actually did take effect because the Government has been less successful in establishing new rules and regulations which impart the tribal people the same rights as to those given to the rest of the country (DAWN 2013). In reference to these impacts on the Pakistan Textile industry supply chains, a participant from influence group emphasised:

“The Government’s intention towards providing a stable social and political system is clear, and non-government agents got the chance to manipulate the system, which is causing supply chain disruption issues for the textile industry. Many terrorists groups are active in Pakistan and pursuing their activities all over the country. Government it’s self-failed to provide safe environment that help to stable the
textile supply chain operations. Terrorist’s activities are impacting textile manufacturers directly. Currently, the Government itself is not following the rules. That’s why the percentage of corruption is increasing, that facilitate terrorists to achieve their targets easily. Due to the absence of proper implementation of government rules in most part of the country, textile manufacturers are unable to maintain their supply chain performance.” (RMFK)

Government formulates trade policies and laws (e.g., changing taxes and duties) to regulate trade, which both directly and indirectly influence supply chain performance. It was found that local textile manufacturers were working under pressure due to the rapid fall of efficiency levels in textile supply chains. Lower productivity was shown to be attributed to the constant threat of political disruptions that were affecting supply chain performance. The lower efficiency levels might be attributed to the lack of effective implementation of government policies and programs to support textile trade. Government institutions, as suggested by some interviewees, should establish a system to support the textile industry to promote trade and reduce political disruptions to enhance supply chain performance. The agents in the textile industry were shown to be knowledgeable and to have the ability to change the resources needed to achieve their goals and social objectives.

7.3 SIGNIFICATION – COMMUNICATION AND EXCHANGE

The signification dimension of structuration theory (Giddens 1977, 1981) is interpreted within the context of the textile industry. This dimension relates to human agents interacting in social and political systems; the agents exchange meaning through communication, using interpretive schemes. Agents, communication, interpretive schemes, resources and purposes of communication are the key elements of the signification dimension which are used here to explore the impact of agents’ behavioural activities (e.g. strikes and extremism) on supply chain performance. With reference to the signification, agents can have the most impact on supply chain performance through their interpretive schemes. These impacts include production management, the labour force, political groups, ethnic groups, terrorists, and customers, and each have their own methods of communication to transmit their messages to
targeted audiences. An example is a strike staged by agents, in this case the labour force in a spinning mill. The agents’ aim was to convey their message to the mill management about their objectives through denying joining their duties. This act could force the management to consider labour demands.

Interview data indicated that agents in the textile supply chain use multiple methods to transform their messages to make changes in the system. Agents are knowledgeable, and their knowledgeability allows them to bring changes to the system, according to their type and the consequences (Jochoms & Ruthers 2006). For example, in one case in this research mill management planned and scheduled to bring constructive changes to the system with the aim of completing production operations. In this context, the strike staged by the labour force threatened to impact the supply chain performance in a negative way. As one mill manager from the dying mill commented:

“The textile supply chain consists of several internal and external people (agents), and they are responsible for the supply chain’s operational efficiency (negative or positive). Management at different stages of the textile supply chain network aims to communicate its messages in a way that will prevent disruptions or difficulties during the production operations. Management is aware that if one person or group from the chain stops performing his assigned job or refusing to work, then the whole supply chain operation will be affected and this will impact on the supply chain performance. It’s important for all the member of supply chain must perform their jobs to maintain supply chain operations” (US)

The link between the signification dimension and the agent’s power offers a means of exploring how key agents’ behaviour and methods of communication can be identified.

In the textile industry, for example, signification structures are employed by supply chain management to manage the supply chain operations in the Pakistan textile industry. The textile supply chain management established plans to accomplish supply chain operations and to avoid possible interruptions to any planned activities that might cause supply chain disruptions. The typical textile supply chain starts from the supply
of raw material and includes production, delivery, cash and flow of information (Wang et al. 2012). Supply chain disruptions were shown here to be the resultant factor of a misuse of information or interruptions in the flow of information during the supply chain operations. As one garment production manager explained:

“Information flow is important for maintaining the supply chain network. An interruption in the information from the internal or external side of the chain will interrupt operations. The supply chain operations may also be disrupted through an interruption that is carried out on purpose, or where wrong information is passed across the supply chain networks. For instance, raw material testing results may be altered by the testing department, and fake results may be provided to the customers. This threatens to disturb the relationship with customers. It is an act that will impact on the whole garment supply chain performance.” (MH)

The methods of communication, whether subtle or aggressive, could cause supply chain disruptions. Typical textile supply chain disruptions are a result of agents’ mismanagement or intentional use of their allocative powers and the methods that they used to communicate the message.

7.3.1 Reproduction of Signification Structures

The signification structure reproduces across time and space through the agent’s communication strategies in social and political systems (Busco 2009). Textile supply chain agents were shown to have the capability to intervene in on-going activities of supply chain operations. This interference, which caused operational disruptions, was both or either internal or external. For example, transportation delays, labour or political strikes and natural disasters are external disruptions and machine breakdown and labour union strikes are internal disruptions. The labour force is one of the main agents in the Pakistan textile industry that was employed to transform materials into finished goods. It was also the key player to communicate its message through supply chain disruptions. A labour strike is one of the methods in which the labour force is deployed to transmit
its messages/views to the management (Ahrens & Chapman 2002). In this scenario, workers can stop work, in some cases harm machines, and refuse to undertake their duties. They can also find extreme methods to deliver their message to their concerned managers. This act aims to stop supply chain operations, which impacts on supply chain by adversely affecting the performance of the supply chain. This was shown to also be the case in the Pakistan textile industry. As one supply chain manager at a textile spinning mill explained:

“The labour force has different methods for interrupting into the textile supply chain operations. These workers are mostly refuse join their duties because of the conflict with management. This always impacts on the supply chain performance because all the production operations are forced to stop, and the manufacturer is unable to meet customers' deadlines. The labour force use strikes as a method to force management to listen to and meet its demands.” (FBA)

Interpretive schemes are the shared stock of knowledge that agents in the textile industry draw from (Vallaster & de Chernatony 2006). These schemes enabled agents to interpret their own, or others’, behaviours in order to achieve effective communication. For example, textile management used its knowledge to perform supply chain operations by communicating with other supply chain partners to maintain a delivery lead time. All the agents communicate their feelings, views, thoughts or messages according to their type and situation (Bourdieu 1990). Political parties are also active and their activities have a severe impact on supply chain performance. In the last couple of years (2013-1016), political strikes, sit-ins, and activities like road blockage from different political groups have impacted on supply chain efficiency (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). Political strikes threatened the safe and efficient delivery of raw materials and finished goods and can also create labour transportation issues in Pakistan. A supply chain operator from the apparel area of the textile industry reported:

“Many opposition political parties like to organise protest against government policies, and they go on strikes or long
marches to convey their message to the government authorities. During the event of the strike, the labour force is unable to carry out its duties on time, the raw material and finished goods supply is delayed, and customers fail to receive the deliveries of their products on time. This kind of situation creates a serious impact on the supply chain performance.” (MUA)

Political strikes were used in Pakistan to change the political structure. The opposition parties protest as a means to demand change in the rules or regulations. Their actions caused supply chain performance issues for textile manufacturers.

7.3.2 Means of Communication

Communication refers to the formal or informal sharing of meaningful and timely information between agents (suppliers and producers) to maintain supply chain efficiency (Lewis & Suchan 2003). The means of communication depends on the agent’s situation and will impact accordingly. For example, a production manager used communication to coordinate and collaborate different production departments (i.e. in the case of spinning, there are separate departments devoted to blow room processing, carding, drawing, ring frame and winding) to manage production and distribution operations. The interpretive schemes and the communication worked together: the interpretive schemes provided a tool for the agents to communicate their message. Agents used a range of methods to transmit their messages to improve supply chain coordination or at times supply chain disruptions. One Supply Chain manager from a weaving mill articulated how this played out:

“It depends what protestors ask of the management during the strikes, because there are several methods that can be employed by the labour force, or sometimes management, to interrupt supply chain operations. Intentionally changing the machine settings or leaving more moisture in the raw materials before processing are common ways that the labour force are disruptive that could leads to poor product quality. Their actions represent the behavioural situations or
Strikes are the main communication source used by several of the politically-oriented agencies in Pakistan. Labour force, political parties, farming communities, religious groups, and other members of society, like lawyers, used various methods as a way to deliver their message to government authorities. After the 2013 elections, political groups were actively involved in strikes, long marches and sit-ins (Tuba 2016). The Pakistan Tehreek Insaf (i.e. political party) spent most of its time protesting against the rigging in the 2013 election (Jalal 2014). Their protests created major transportation bottlenecks, delivery delays and labour issues which have had significant implications on supply chain performance. Interviewees expressed their views stating that the lack of stable government in Pakistan has an adverse impact on industry which often thrives with stable government with clear vision, strategy and policies to implement the goals/objectives. One member of community group explained:

“Opposition parties use protest as source of communication with the Government to oppose government policies. Burning tyres, blocking roads, refusing to pay utility bills, and interrupting government or security matters are ultimately impacting on supply chain operations for all kind of manufacturing industries. Cotton delivery from fields to mills, and from mills to mills, has been totally disturbed, and this has created a massive impact on supply chain efficiency for textile manufacturers. The Government has failed to introduce policies to help people so that they do not feel the need to protest. Corruption, terrorism and electricity shortages are just some of the issues that need to be solved if the Government is serious about stopping protests.” (MY)

Terrorism is considered one of the major issues in Pakistan that impacts on businesses and the supply chain network. Terrorism is one form of political disruption in which different militant groups or agents, in pursuit of their particular objectives, create fear in society (Abadie 2006). Militant groups use more extreme methods such as terrorist acts as a tool to communicate their messages to the targeted audience (Bravo & Dias 2006).
For example, the terrorist act on the Jinnah International Airport (Karachi) that had occurred resulted in 28 fatalities (BBC News 2014). The event has significant impact on airport operations, resulting in the cancellation of passengers and cargo flights. In another attack on Army Public School which killed 141 people including 132 children (ABC News 2014). Both of these attacks were intended to express the resentment against government policies. Most of the militants are looking for easy targets as a means of creating fear in society. They attack places of worship, educational institutions, critical infrastructure and government properties. For example February 16, 2013 attack on the Shia Hazaras in the busiest market in Quetta (Pakistan) that cost 84 lives and 200 were injured including children and women (Syed 2013). This is so that they can take revenge and warn government authorities that they are in the line of fire because they do not support the militants’ cause or \textit{raison d’être}. They target logistics networks, production facilities, and causing a reduced international investment in the textile industry. Several terrorists attacks were platted to destroy the rail infrastructure including Jaffar Express that leaves 16 dead and 44 injured (Shezad 2014) and Bolan Express attack cost 7 dead and 31 injured (Zafar 2016). One participant from influence group explained:

“\textit{Different \ militant groups are involved in the attack on public properties, including religious places, in which they aim to achieve their targets. Their aim is to weaken the social and moral values in society and to destroy the economy of the country. Their continuous attacks force business owners and investors to minimise their business activities. Terrorists attacks created the fear in the business community so they are willing to stop investing in local market that create huge financial and social frustration in the country”}. (KH)

The textile supply chain disruptions were shown as methods of communication that agencies adopt to transmit resistance to the existing structure in terms of rules and control over resources. Political agents use different communication methods to transform their messages to concerned government authorities. Most political agents use protests as a means to deliver or exchange their messages in the political system which, in turn, creates political and supply chain disruptions such as transportation
delays which is caused by the political strikes in Pakistan (Iftikhar Ahmad 2014). According to the Pakistan Bureau of Statistics (2015, p. 61), “exports fell to $3.84 billion in July-August 2014 due to political protest led by opposition alliance”. In textile industry, it’s difficult to get back the customers after losing due to long delivery lead time (Malik, A 2014).

7.3.3 Self-interest and Personal Benefits

Every human agent has a responsibility to perform certain function according to the role that they chose to elect or is some case allocated by the government, workplace or society (Jochoms & Ruthers 2006). If one agent fails to perform the allocated duties or if that agent uses resources for personal benefits, the system will be less optimal in performing certain objectives. There are a variety of agents involved in the textile supply chain, all of whom communicate according to their type and situation. Supply chain disruptions occur when a particular agent or group of agents gain personal benefits using unethical practices like corruption, personal favour, strikes and attacks or misinformation. These agents intentionally or unintentionally interrupt the normal flow of goods and information, which cause longer production lead time that impacts on supply chain performance. A series of strikes (political and religious) and terrorist attacks are disruptions in which agents transmit, or deliver their messages to specific person or institutes through their activities. According to the BBC News report (2015), “Taliban killed 29 people during attack on an air force base in Peshawar in revenge of military operation in North Waziristan”. Their method of communication causes supplies chain disruptions. This leads to an impact on supply chain performance and affects its legitimation structure.

7.4 LEGITIMATION- RULES, NORMS AND GUIDELINES

The legitimation relates to structuration theory’s legitimation structure (Giddens 1977, 1981). This refers to a set of rules, guidelines and procedures that governs a system (Busco 2009). The interview data indicated that legitimation also underpins production systems and their performance, formulating rules, policies and guidelines for textile industry practices in Pakistan. These rules are of particular importance as they impact on supply chain performance. Agents establish the structures to control and regulate the systems. For example, whilst manufacturers develop guidelines for production planning
and execution, the government is primarily responsible for setting the rules, compliance procedures and codes of conduct. These regulate the external and internal production of goods and maintain the legitimacy of supply chain operations.

Government is responsible for establishing the new rules and regulations to facilitate trade and to improve distribution systems. These rules and regulations allow textile manufacturers to introduce new products, attract new customers, search new markets and reduce their product cost (Thompson & Martin 2014).

Governments introduce rules and regulations for the labour and production industry to control and manage the performance of the overall system (Siverson & Emmons 1991). The most important laws are health and safety law, labour law, environment protection law, and education law (Durkheim 1982). The purpose of the legislation in society is to establish standards (e.g. it is a crime to cause injury to someone without justification), maintain the law and order (i.e. the enforced law will provide consistency in society), resolve disputes (i.e. through the federal and provincial court system), and protect civil liberty and rights (e.g. apply sanctions that are enforced to prohibit the freedom of speech) (Broger 2011; Busco 2009; Catherine 2004). These laws, rules and procedures are designed to control and regulate the social system. This is to ensure ethical and responsible management of the production system, prevent malpractices and black-marketing, and reduce potential disruptions in the political system (Vallaster & de Chernatony 2006). Such disruptions impact supply chain operations.

For textile manufacturers, these rules, guidelines and procedures are developed and deployed in Pakistan to maintain product quality standards, e.g. quality control measures, operational health standards, productivity control standards, and performance standards (Siddique et al. 2012). They also measure and monitor the performance of production systems through the use of global benchmarking frameworks such as ISO. Whilst it is relatively easy to control and regulate the internal production environment, it is difficult to create rules and guidelines to increase the efficiency and effectiveness of supply chains. Some interactions are regulated by government policies which need to comply with transportation safety, custom and quarantine requirements, and labour laws. These interactions regulate and maintain the product quality standards. Some of the challenges faced by agents, the manufacturers in particular are discussed below.
7.4.1 Power/Authority to Regulate the System

In line with the legitimation (Giddens 1977, 1981), government authorities in Pakistan are responsible to regulate the production and transportation systems. Government departments such as judiciary, security agencies, tax departments and public utility authorities (e.g. WAPDA), at times, can be less successful in developing or implementing more effective policies, rules and regulations, which can create social and political unrest (Hameed 2014). These political disruptions often lead to severe disruptions in supply chain operations. One member of community group argued that:

“There is a communication and trust gap between provincial and federal governments in Pakistan because of their policies and interests toward national issues. Federal government did not introduce new rules and regulations to help control or minimise the impact of terrorism on society. Terrorists have easy access to the Pak-Afghan border and can cross this to attack public properties. Because of the weak regulations against terrorists, they can leave safely, even after they have been caught. This behaviour of the Government shows that it has little interest in solving major issues in the country, which then causes massive problems for all kind of businesses. Government should introduce new rules which are to take serious actions against all the militants groups causing issues for Pakistan” (ASA)

Pakistan’s political system has been affected as a result of conflicts from both inside and outside of the country. These conflicts have included wars with neighbouring countries, a lack of political leadership, internal political conflicts, and interference from non-political agents such as the military and different groups (Aneeqa 2015). Both non-state and non-political agents have made changes to Pakistan’s political system over time. For example, military interference has weakened the political system, preventing it from being able to introduce the new rules and regulations that would stabilise the political and production system (Haqqani 2005). For the most part, military interference has occurred because of the failure of different political parties and their policies to create functioning democracy. A third party logistic provider explained:
“The political system is not as well-grounded as it should be which reflects the changes that the country is facing in its political system. Political parties are immature and unable to reflect the changes to the political system from external environment which results in creating political disruptions. These external changes are from the non-political groups which aims to enforce their own mentality or strategy on the country. Political parties are got more responsibilities to reflect all the external changes in the political system.” (MZ)

Interview data indicated that, political disruptions in Pakistan are the reflection or result of power used by the agents in the social and political system. These agents use power to change a system, e.g. politicians are responsible for making rules and regulations, but when they use their allocative power against the political system they create political disruptions. Politically disrupted system is reasoning to increase the social and political instability in Pakistan that encourage people to stand against the government authorities. This creates the situation that influence on the supply chain activities in Pakistan (Shah, Warraich & Kabeer 2012). Social and political agents are most likely responsible for using their authoritative powers to alter the system that create difficulties for textile manufacturers and in their supply chain operations.

7.4.2 Change in the Political System

One of the key responsibilities of an effective government is to formulate appropriate laws to promote global trade through improving infrastructure, reducing trade barriers and incentivising innovation (Lewis & Suchan 2003). These changes are particularly critical for industries which have competitive and comparative advantages. The political instability and uncertainty in Pakistan as shown in this research has however created difficulties for textile manufacturers to be competitive in the global marketplace. New taxes and duties often increase production prices. According to Tahir et al. (2014, p. 21), “there are different types of taxes being imposed by the Government in shapes of regulatory tax, corporate tax, value added tax, GST and tariff tax”. All of these taxes have created the financial burden and increased the production cost for textile manufacturers. This affects the perception of overseas customers about the cost-
effectiveness of textile products and producers about Pakistan (Memon 2015), despite cheap raw materials and low-cost labour. Issues that force changes to the political system are staged by non-state and non-political agents. A stable political system with institutionalised structures and democratic governance is capable to absorb all internal and external shocks or disruptions. Agents have specific role to regulate or manage the production system. Some of these agents have direct influence on supply chain such as labour force, labour unions and production managers but other have indirect influence through using their authoritative powers such as influential groups. A stable government and political certainty provides legitimacy and regulatory environment to support agencies to sustain businesses and minimise potential disruptions in supply chain.

There are five leading political parties in Pakistan (i.e. Pakistan Muslim League (N), Pakistan People Party Parliamentarian, Pakistan Tehreek-e-Insaf, Muttahida Quami Movement and Jamat-e-Islami), all of which are responsible for managing political system (Tabassam, Hashmi & Faiz-Ur-Rehman 2016). Most of these parties have stronger base in different provinces. Consequently, they are more interested in representing provinces with their government in the centre (e.g. Pakistan People Party is largely the Sindh-based party that mainly to represent the people of Sindh). According to the TRIBUNE News report by Azam (2013), “PPPP won 69 seats in Sindh, 6 in Punjab, 0 in Baluchistan, 3 in KPK, 0 in FATA and 0 in Capital Territory during 2013 national elections”. This expresses that PPPP more based and popular in Sindh compare to other provinces. The province-based political system has a greater impact on the overall supply chain performance as they tend to favour one industry over others based on the local industrial base. As one third party logistic provider reported:

“Pakistan has a province-based political system in which every party prefer to particular providence during their government period. These parties stop taking interest in the issues of other provinces and that create huge problems for Pakistan. The Pakistan Muslim League, for example, spends more of the federal budget on Punjab compared to what it must use on other provinces. This situation creates a huge trust gap between the provinces and the people living in
Pakistan’s political system is changing over the time due to internal political issues such opposition alliances actions against ruling party or others including no-political interventions (Hameed 2014). Additionally, various ethnic groups in Pakistan are complaining that increasing the chances of religious conflicts that cut across ethnic and socio-political lines (Abbas 2016). Changing political environment create trust gab between different segments of the society in which they feel unsecure to express themselves. For example, Shia community is facing serious ethnic problems in Pakistan. According to the TRIBUNE News (2016), “there were 1200 Shia followers killed in the last three years”. Politically unstable conditions increase fear in the society that leads to the serious social, political and economic problems for the country.

7.4.3 The Link between Corruption and Political Violence

Corruption is one of the major challenges in Pakistan. According to the Corruption Perceptions Index (2015, p. 7), Pakistan was ranked 117 out of 175, which highlights the scale of corruption and the resultant consequences for society and the economy. According to the report published in Pakistan Today (2011) by Zuhaib Odho, “The major reasons of corruption is political uncertainty, poverty, unequal structure of society, unemployment, lack of accountability, weak political institutions and absence of rule of law. Resultantly they are affecting political stability, equal distribution of resources and power, confidence of local and foreign investors and political institutions”. Corruption in Pakistan exists in various forms including widespread financial, political, corporate, nepotism and misuse of powers (Muhammad et al. 2012). According to the report published by Anti-Corruption Resource Centre (2008, p. 4), “people commonly face demands for bribes in their dealings with government institutions to access basic public services”. This practice of systemic corruption creates mistrust between the government and industry (Muhammad et al. 2012). As a result, some local textile manufacturers or overseas investors are reluctant to invest in Pakistan.
due to political uncertainty and social unrest. As one participant from hosiery manufacturing articulated this issue:

“Corruption is becoming part of the society and people are happily involved because it’s the easiest way for them to solve their problems especially those related to government departments. Government employees are mostly involved in corruption due to the culture that allows them to perform this kind of jobs. Corruption in the system not only bad for the society but also for the matters related to security because extremists can access to their targets using bribe or money.”

(UA)

Interview data indicated that corruption in the government departments has serious implications for local businesses that in turn adversely affect the whole supply chain. This has occurred in Pakistan as a consequence of government policies enabling corrupt persons to be selected for important roles/jobs (Maqbool Malik 2016; Tuba 2016). Corruption has a massive impact on the textile business in Pakistan, and manufacturers, in some cases, have been forced to move their business to other countries. The report published in DAWN News (2016), stated that “corruption is greater threat to the business sector because Pakistan bears a loss of $133 million daily due to corruption”. The extent to which corruption operates in Pakistan has led to social and economic challenges. There are various forms of corruptions that are deeply embedded in the social system: there is corruption in the political system, corruption in organisations and corruption in the judiciary system (Maqbool Malik 2016; Muhammad et al. 2012). Corruption in Pakistan leads to many other issues such as load shedding and insufficient road infrastructure (Shahbaz Rana 2016).

Load shedding is one of the significant problems that occurred due to the disability of government department to supply regular electricity to industries or households (Kugelman 2013). This could be attributed to insufficient energy supply at the upstream end of the supply chain or could be due to demand exceeding the supply, resulting into a state of market failure. Textile industry is the major victim of this load shedding problem in Pakistan and it’s not being provided required level of electricity (Siddiqui 2011). Shortages of electricity and high tariff for textile industry has reduced around 30
per cent production efficiency of textile industry (Nakao 2014). Production cost also increased this has forced investors to withdraw their investments or move to other countries with more stable conditions (Imran 2011).

Extortion is the form of violence that creates the most serious situation for textile manufacturers. Various political and non-state agents are demanding extortion money for their safety, and failure to comply can result in life threats (Kabraji 2015). This situation makes people fearful about the consequences of not meeting extortionists; demands, and the impact of this issue affect the performance of manufacturers. As one participant from influence group explained:

“Extortion money is the source of income or finance for many terrorists groups in Pakistan and if they fail to pay they will have to face serious consequences from the militants. This act creates fear in the business society and forces them to withdraw their investment to move to other countries.”

(KH)

Recently, 250 workers lives were lost in the Baldia Town Factory because owners failed to pay the extortion money; all the workers along with the factory were burnt (Faraz 2012). According to the Ishaq Tanoli 6 March 2016 from DAWN News:

“The police report recently presented in the court has informed that the MQM leader Anis Kaimkhani was involved in asking for extortion money to the factory owner, and they fired up the whole factory after failing to get a response from the owner. The factory owner leaves the country to save his life due to a strong reaction from the local government. The police report said that the factory fire was the planned terrorist activity in which MQM did this after failing to recover the demand extortion money from the owner.”

Corruption also threatens to increase terrorism in Pakistan. Both terrorists and extremists are decreasing the economic value of Karachi (Ilyas 2012), which is the hub of Pakistan’s business and export activities (Muhammad et al. 2012). These groups are
responsible for the breakdown of law and order, and they weaken security measures. Political groups are involved in point scoring instead of resolving the corruption issue that allows extremists to get through the security measures. Maqbool Malik reported in The Nation (7 September 2016):

“The nexus between terrorism and corruptions should be breakdown in ordered to fight against terrorism in Pakistan. Terrorist has their sources in the system those are supporting them morally and financially. These resources have motive to facilitate terrorists due to their personal deeds.”

Military have direct and indirect influence on the economy of Pakistan. According to Khurram (2013), “in the first era of military rule, GDB growth rate jumped from an average of 2.5% in the 1950 to 6.8% in the 1960”. Pakistan economy normally grow faster during the military rules (Rizvi 2000). Istiaq Ahmad (2003) explained that, Pakistan GDP grown faster in military governments which indicates that investors has more trust on the military compared to politicians. Military has also been blamed for immature political system. Military interference also known as the political disruptions form has serious influence on the textile supply chain performance (Ayesha 2007). Pakistan’s political system has faced several military interventions that have created a large trust gap between military leadership and the political parties. Given that the military is the major reason for political change in Pakistan and has direct and indirect influences on the political system, this influence often leads to political disruptions (Haqqani 2005; Rizvi 2000).

Pakistan has a long history of military interventions interfering directly (by imposing martial law) and indirectly (by using military resources such as agencies to change or hold the government) (Haqqani 2005). This act of military coup might have attributed to lack of maturity in the democratic system in Pakistan. Pakistan’s weak political institutions are one of the major reasons for the military intervention into the political system (Rizvi 2000). Pakistan’s weak political institutions are unable to produce laws, rules and regulations to strengthen political systems to minimise disruptions orchestrated by non-political agents. According to Ayesha (2007, p. 78):
“A strong political system or political control will force the military or all other non-state or non-political agents to take a subservient role which will be defined by the political leadership and to limited for the internal security because military have the responsibility to control external security issues and not to interfere with the political system. The leadership role in political system can stop the penetration of military into the political system. The military affected political system will not help to the manufacturers and their supply chain activities to reflect any disruption in their system.”

One of the fundamental functions of an effective government is to formulate laws, rules and regulations to help the business community to promote trade for the long term (de Mesquita et al. 2014; Jalal 2014; Nakao 2014). Disruptions in the political system are also a result of unlawful actions from agents who use the system for personal benefits. Furthermore, politically instable systems are less likely to facilitate and provide stability, business continuity and proper security to the manufacturers.

Figure 7.1 presents the structuration model to illustrate the level of influence that agents exert in the management of production systems (Robey & Orlikowski 1991, p. 15). This model recognises six key linkages, which show the interactions within the production environment. Agents produce and reproduce rules to control and command resources. These rules give agents the power through which they allocate resources. Rules, regulations and routines are created internally within the production systems as well as extremely by the government agencies to regulate trade and transactions. Political disruptions are created when this interlocking systems are disrupted which challenges the existing and established system. A change in the form of a new law or amendment in a law or a change in daily routine means the process of reproduction which might produce disruptions and temporal uncertainly. Some of these are positive whilst others have negative implications. Some effects are short terms while others are long-term. Agents are actively engaged in this dynamic system where they interact with each other, either as a part of collaboration or resistance. The power to control resources plays a key role in initiating, promoting or suppressing certain political disruptions on the basis
of ideological-alignment. The performance of textile supply chain therefore is heavily dependent of power struggle, resource sharing and control, and the production of rules and guidelines that dictate the efficiency of production networks.

Figure 7-1: Structuration model of interactions and influences; adapted from (Robey & Orlikowski 1991, p. 15)

<table>
<thead>
<tr>
<th>Type of Influence</th>
<th>Nature of Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human action</td>
<td>Power is an outcome of human actions that exercise by different agents to change or manage the system.</td>
</tr>
<tr>
<td>Power as a medium of agents actions</td>
<td>Power facilitates agent’s action to change resources into finished or semi-finished goods. This indicates the power influences on agents’ behaviour.</td>
</tr>
<tr>
<td>Consequences of power interaction with resources</td>
<td>Interaction with resources influences the transformation process of resources into products.</td>
</tr>
<tr>
<td>Resources interaction with agents</td>
<td>Resources influences agents’ in their interactions with power, such as, intentions, design standards, material knowledge and available resources (i.e. time, money and skills)</td>
</tr>
</tbody>
</table>

Table 7-1: Key influences of structuration model

Agents are influenced by the rules which are designed or introduced by the particular industry or Government during their interaction with resources through power (Broger 2011). These rules and regulations are continuously created and recreated as a result of the interactions between agents (DeSanctis & Poole 1994). In textile industry, agents
are using their existing knowledge, experience followed by the industry norms and rules to maintain industry standards, improve efficiency of supply chains and business continuity. This facilitate them to utilise their allocative powers to act within the institutional structure of the organisation either by sustain it or by changing it (Durkheim 1982). These dimensions (see Figure 7.1) present the interrelationship between agents and their powers that used to transform resources in textile industry into finished goods. This relationship must work continuously and stimulatingly to maintain supply chain operations (DeSanctis & Poole 1994). Most of the textile supply chain disruptions are however the result of misuse of powers or simply not following the rules by the agents established by the organisation or government.

7.5 SUMMARY

This chapter discussed the key dimensions of structuration theory to explore the interactions of political disruptions and supply chain performance. The role of different agents and their methods of communication in Pakistan are examined. Political and supply chain disruptions were shown to be interdependent with structured systems that interact and impact on textile supply chain performance. Largely, political disruptions are direct or indirect reflection of power and control, resistance against the establishment or for change, and means to communicate messages. The key conclusions of this chapter include:

- The role that agents played, and the transformative capabilities they hold to allocate resources enable the formation of domination structure to possess power and control resources, which sometimes tends to adversly affect the performance of textile supply chain.
- Agents as a continuous process of change create and recreate sets of rules, guidelines, and procedures governing the production and distribution system to enable an efficient transformation of raw materials to finished or semi-finished products according to industry standards with the aim of meeting customer demands.
- Agents use power to change a system, but when they use their allocative power against the political system, they create political disruptions. Politically disrupted system is a reason for the increase in the social and political instability.
in Pakistan. These encourage people to stand against the government authorities and creates situation that has effect on the supply chain activities in Pakistan.

- Corruption, political violence and terrorism are methods used by several agents to halt the political or social system in which they can change the system.

The next chapter will conclude the key findings of this research. It will revisit whether the research objectives and research questions were answered or not. Strategic framework will also be established to integrate the key findings to help mitigate political disruptions to help enhance supply chain performance.
CHAPTER 8: CONCLUSION
8.1 INTRODUCTION

This chapter summarises the key findings of this study along with a detailed clarification of how the proposed research objectives were met. To show that the findings of this research had practical implication to the textile industry, this chapter builds a strategic framework that outlines strategies to mitigate the impact of political disruptions on supply chain performance. In addition, this chapter also addressed the key limitations of this research and concluded with a description of future research to be carried out and potential opportunities will discussed for investigating the impact of political disruptions to other industry supply chains. Following were the proposed key objectives of this chapter:

- To present key findings, limitations and future research in this area;
- To develop a strategic framework to enable supply chain managers to mitigate the potential impact of political disruptions on supply chain performance; and
- To provide a detailed justification for meeting the research objectives.

8.2 SUMMARY OF KEY FINDINGS

The overarching aim of this research was to investigate the effects of political disruptions on supply chain performance in Pakistan. Structuration theory was used as means of allowing the researcher to identify the main agents and the role of each agent in political system and to demonstrate how the agents adopt disruptive methods to disturbed seamless flow of goods and services in a textile supply chain. In an organisation, agents play a key role in bringing changes to the work system by using their assigned power to transform raw resources into finished or semi-finished products. Semi-structured interviews with different agents were conducted and their views and opinions were explored to narrate key messages that explain the complexity of interactions between political disruptions and supply chain performance. The major findings of this study are summarised as followings:

8.2.1 The role and power of Key Agents

There are several agents who are typically involved in textile supply chains. Each of them has a particular role and certain functions to perform. Some are directly involved in the production and distribution functions while others are indirectly engaged. Some hold power to make decisions whilst others have indirect effects on textile supply chain
via supply chain disruptions. The key agents of change are politicians, textile manufacturers, the labour force, unions, supply chain operators (such as transportation providers), social institutions, and customers.

Manufacturers exercise their powers both by allocating resources or assigning tasks to workforce to transform materials into finished or semi-finished goods. Politically motivated agents have a significant influence on supply chain activities. Through their disruptive activities, these agents interrupt the normal flow of goods and raw materials from or to the industry. These activities include political strikes and religious conflicts or more extreme forms of terrorism. Most textile supply chain disruptions are the result of political strikes in which protesters block roads and stop the transportation of raw cotton from cotton fields to factories. These actions have a considerable influence on the textile supply chain performance. The results revealed that most of the agents in the textile industry either enable to perform their allocated jobs or are involved in other activities that are causing supply chain disruptions.

**8.2.2 Resource Allocation**

There are two type of resources used in the textile industry: allocative and authoritative resources. Allocative resources in the textile industry are used by management. Management uses its powers to manage physical and financial resources; it also uses its powers to manage authoritative resources: it controls the labour force and generates its command over the labour force to transform raw materials into finished goods. The allocation of resources is important for attaining optimum production efficiency and maintaining supply chain operations. The management is responsible for using its powers to allocate and transform all its resources into finished or semi-finished goods. Disruptions such as machine breakdowns, raw material quality defects, and labour strikes are the result of resource allocation defects in which management have failed to manage all these resources. This concludes with the following statements:

- Resource allocation regulates the transformative powers of textile production management to manage and optimise the resources;
- Resource allocation enables the transformation of raw materials (i.e. cotton or polyester) into finished or semi-finished goods using infrastructure such as textile machines, labour, system and technologies; and
• Textile management and labour are the internal agents involved using their powers to alter resources that interrupt production and supply chain operations;

8.2.3 Misuse of Power

The results of the interview data show that part of supply chain disruptions is a reflection of an agent’s authoritative powers that are used to exert command over the government or other concerned authorities. This kind of power utilisation highlights social and cultural changes including resistance to exploitative regimes or an adherence to an ideology. These changes force the agents to act in a way that affects supply chain operations. For example, political parties exhibit their power to control resources by protesting the actions of the ruling party or government. The key purpose of the political strike is to create chaos, social disorder, and interruption in routine supply chain activities. Agents intentionally use their powers to reproduce the rules, norms, and guidelines governing a political system through political resistance to existing practices. This situation indicates the agent’s intentions of controlling the political system by using their authoritative powers. Findings indicate that agents with allocative powers e.g., bureaucrats, military personnel, law enforcement agencies, organisational managers, and labour force are those who have the most reason to disturb the political and social system that influence on the textile supply chain operations. These agents were using their allocative powers to protect their interests rather than doing their actual job which is to stabilise the political and social system. The participants’ responses have indicated that political groups use their powers for political purposes alone. A misuse of power is responsible for causing social and political unrest, which leads to operational and supply chain disruptions. This summarises with the following statements:

• Labour force/union and political groups involves using their allocative powers to alter the resources which create disruptions;
• Political disruptions found in this study are the misuse of the powers by the agents in textile supply chain; and
• The agents discovered in this study tend to use their allocative power for their own deeds or to show the affiliation and solidarity to an ethnic, social or political group.
8.2.4 Communication to Change Meanings

The analysis of interview data reveals that disruption in the textile supply chain reflects the methods used by agents in the social and political system. Socially or politically active agents act in a certain way to show or communicate their messages to the concerned authorities. For example, political strikes send a message to the government; labour union strikes send a message to industry; and terrorist activities, including bombing, send a message to security enforcement agencies. Political violence including target killing, assassinations and terrorism is an important and the most commonly used method of communication used by agents to show their state of mind to their concerned persons. For example, the textile industry is geographically concentrated into two key provinces of Pakistan, Punjab and Sindh. The cultivation of cotton crops and textile production largely occurs in these provinces. Other provinces mostly import textile products from these two provinces. The movement of raw material and finished goods between provinces is often disrupted by the constant threat of the terrorist attacks on roads and railway infrastructures. Political, social, community and ethnic groups consider protest as mechanism or method of communication to resist the government policies that halt the movement of textile products between provinces. This concludes with the following statements:

- Strikes are the main source of communication used by the agents (e.g., labour, political, ethnic and social groups) to interrupt the supply chain activities;
- Terrorists are involved using extreme methods such as terrorists acts or bombing as a tool to communicate their messages to the government authorities; and
- Textile management and labour shows their anger by changing raw material conditions, machine settings or refusing to join duties without any prior notes that create serious productions disruptions.

8.2.5 Interwoven Interaction between Political Disruption and supply Chain Performance

In the political system, agents have a responsibility to perform according to their roles allocated by the government or political party leadership. If one agent, or group of agents, fails to perform as per law, this would create political instability. Such act could create political disruptions and resultants to collapse the political or government system.
Political disruptions have a direct and indirect influence on supply chain performance through supply chain disruptions. In this thesis, political disruptions have been divided into four types according to their impact on supply chain: internal to internal, internal to external, external to internal, and external to external. This study reveals that external political disruptions have much wider impact on external as well as internal operations than internal disruptions have on external operations. These disruptions can slow down or in some cases stop the external and internal supply chain operations.

The vicious cycles were used to present various forms of political disruptions and their impact on the supply chain operations. Results indicate that political disruptions are interconnected and interlocked within the internal and external environments. They are fundamentally embedded in supply chain disruptions and directly or indirectly linked to supply chain performance. All the political disruptions interact or interrelate with supply chain disruptions to influence on the supply chain performance. Political disruptions are causing the customer retentions; financial loses, longer manufacturing time, longer delivery lead time that increased the chances of supply chain disruptions.

8.3 STRATEGIC IMPLICATIONS

This section highlights strategic implications of the findings to demonstrate that how do the managers can mitigate the supply chain risks. A strategic framework was developed (see Figure 8.1) using the established interrelationship between each form of political disruption and its impact on supply chain performance. As the nature and forms of political disruptions vary, so it was essential to develop different strategies to reduce their impacts on supply chain. The relationship in this framework can be represented through four quadrants, each reflecting different types of political and supply chain disruptions. These quadrants are: external disruptions impacting on internal operations, external disruptions impacting on external operations, internal disruptions impacting on external operations and internal disruptions impacting on internal operations.
Krause, Pagell and Curkovic (2001, p. 498) consider strategy as a link between firms and their supply chain operations that helps aligning their supply chain strategic goals. Supply chain strategies generally define the basis of supplier selection criteria or integration mechanisms that the supply chain operators follow (Michael 2003). Supply chain strategies followed by improving the customer satisfactions through reducing delivery lead time. Reducing delivery lead time is one of the core aspects utilised to gain customer trust during the events of political disruptions. According to Bertolinia et al. (2007, p. 199) “the supply chain lead time is the time spent by the supply chain to process the raw materials to obtain the final products and deliver them to the customer.” It includes supplier, manufacturer, distribution, and logistics lead time for raw materials and finished/semi-finished goods (Thompson & Martin 2014). In textile industry, textile supply chain performance based on the performance of logistics providers, manufacturers, machines and delivery lead time. Supply chain strategies followed in
this study to improve supply chain performance by reducing production cost, improving delivery lead time and increasing customer’s satisfaction.

8.3.1 Internal Disruptions Impacting on Internal Operations

Quadrant 1 in Figure 8.1 shows lower-intensity internal disruptions that have an impact on the internal supply chain performance. These disruptions are associated with internal production processes or potential political disruptions within the textile organisation. These could emanate from a labour strike or management conflicts, leading to the breakdown of production activities such as raw-material quality defects, machine-maintenance defects and production scheduling problems. These disruptions could reflect less effective methods of communication, where the coordination of production processes such as order taking, preparation, storage, and fulfilment could be better communicated through information sharing and tasks synchronisation.

The impact of these disruptions (i.e., raw material quality defect, machine maintenance defect and production scheduling problem) on supply chain performance can be reduced by using multiple strategies. For example, a raw material quality problem associated with the textile quality managers in which they fail (intentionally or unintentionally) to manage raw material quality during the time of storage. The interpretation of interview data shows that machine maintenance defects are linking with the internal agents (e.g. labour and management) likeness of sharing the information. For example, most of the textile machines work continuously until they stop for maintenance or overhauling. Any defect or damage on the machine will be informed to the management of the labour and failure to do that will increase the chances of the machine breakdown. Textile production process required scheduling to estimate the production time and cost. Interpretation data reveals that most of the scheduling problems are the result of conflicts among different groups with exclusive goals. For example, ordering of unauthorised quality chemicals for the processing of fabric in which fabric could damage during the process.

Internal sources but impacting on the internal operations are the result of miscommunication or lack of information sharing between different agents inside the textile industry. It was evident in the findings from the interview data. The impact of
these disruptions on supply chain performance can be reduced by adopting an advanced scheduling system, strengthening the information sharing among all the members and respecting the mutual goals. These disruptions are the result of poor methods of communication used by the agents where the coordination of production processes such as order taking, preparation, storage and order fulfilment is not clearly communicated as indicated by the interview data. Information sharing strategy can be used to reduce the impact of internal disruptions on internal operations.

Information sharing refers to critical and important information that is communicated among supply chain members who are partnering each other (Nada & Premus 2005). Shared information which includes “the availability of resources (capacity, inventory, funds and capability), the status of performance (time, quality, costs and flexibility), the status of process (forecasting, ordering, delivering, replenishing and servicing), and the status of contract” (Simatupang & Sridharan 2002, p. 24). Information sharing has the potential to benefits the textile businesses at several levels (Khurana, Mishra & Singh 2011). For example, it can improve coordination among all the members of internal production operations that helps to reduce production cost. That can also benefit to reduce the uncertainties at different levels of production by increasing the efficiency and effectiveness of internal textile manufacturing operations (Zhao 2002). Textile manufacturing firms can take advantage of information sharing and gain access to accurate information about all of their production operations to avoid uncertainties. Exchange of information will remove barriers at managerial levels in the textile industry; especially those are opposed to sharing and communicate effectively. This will increase trust level between labour and management, and that leads to the better production scheduling, reduce raw material quality defects and improve machine health checking the schedule.

8.3.2 Internal Disruptions Impacting on External Operations

Quadrant 2 shows high-intensity internal disruptions have a lower impact on external supply chain operations. These disruptions, which include union politics, machine breakdowns, and labour strikes, reflect the politics within the organisation. They could cause the discontinuation of shared information and experience among different agents and impede the agents’ progress in carrying out their allocated jobs. This happens when
an internal system is affected by politics within the organisation and starts to influence production activities such as labour union politics. These disruptions are the reflection of power as found in domination, whereby managers use power to bring changes in the production procedures, guidelines or production schedules to improve supply chain efficiency. Through the use of powers, different agents achieve their strategic goals (Catherine 2004). For example, union politics in which union uses their allocative power to halt internal production operations.

Interpretation of interview data reveals that, machine breakdown in textile industry is the reflection of internal labour, union or management’s actions. For example, labour strike in textile industry in which labour overlook regular maintenance of machines or intentionally break the machine to show their resistance to a viewpoint. This action creates disruptions in the production operations. All of these disruptions has high impact on the internal operations but lesser on the external. A Production Process Integrations Strategy, therefore, can be of use to reduce the deleterious effects of these disruptions on internal as well as external supply chain operations. Through process integration “a continuous restructuring effort to connect processes smoothly, and to simplify supply chain operations by eliminating unnecessary activities within and across organisations” Stank, Keller and Daugherty (2001, p. 32) can be achieved. Process integration is required to restructure supply chain activities, including manufacturing, information sharing, and cross-organisational logistics so that the sequence of daily business operations can continue (Fugate, Mentzer & Stank 2010; Ray, Barney & Muhanna 2004).

Process integration in textile manufacturing can be utilised by information sharing among all collaborating members such as managers, labour and logistic service providers. This serves to mitigate the impact of internal disruptions on internal as well as external supply chain operations (Kim 2009). Within the textile production unit, there are several departments or units. Each of them has a different job or role to perform, and each is responsible for manufacturing a specific part of the products. For example, textile spinning is a long process that comprises several departments or units including blow room, carding etc. All of these departments have separate managers, different types of skilled labour, and quality control labs. A lack of information sharing will create a substantial trust gap, leading to a disruption of the process. For example,
labour strike that halts the internal production operations in textile industry can manage by increasing trust among management and labour by increasing the flow of information. Due to which labour, can trust on management policies and will not effect on production operations. So, increased flow of information by sharing cross-organizational activities will enhance productivity and increase financial values for the textile manufacturers (Wadhwa & Chan 2004).

8.3.3 External Disruptions Impacting on External Operations

Quadrant shows—lower intensity external disruptions with greater impact on the external as well as internal supply chain operations. These disruptions are the results of political, government or regulatory changes. For example, military is a non-political agent that intervenes into the political system and makes forceful changes through legislation (e.g. trade laws). These political disruptions are related to the changes in political regime. There are several strategies that can be applied by managers to reduce the impact of political disruptions on supply chain. Assemble-to-order could implement to tackle trade sanctions related disruptions. In assemble-to-order, most of the parts are already manufactured before the customer order is received (Kolisch 2001). By adopting this strategy, textile manufacturers could produce most of the parts before the customer’s order received. For example, garment manufacturers are mostly affected by the sanction in which they can produce all their products until the cutting and processing. So, they can resume their operations after the removal of sanctions. Sanctions are related to the government policies (Friman 2015) and manufacturers could only hold their processes to avoid production time after sanction removals.

Military intervention, corruption and industrial policy changes are governance-related disruptions. Textile manufacturers can only plan to reduce the impact of these disruptions on their supply chain operations but cannot avoid them. For example, industrial policy changes, this is government disruption in which government may introduce new taxes or increase fuel prices, are hard to object by the industry within the political system. These policies have direct effects on production as well as business performance. Incentive alignment is one such strategy that could help to reduce the effects of government policies for longer terms. According to Simatupang and Sridharan (2005, p. 258) “incentive alignment is the process of sharing costs, risks, and
benefits among supply chain partners”. Incentive alignment helps to motivate all the textile supply chain members for sufficient level of collaboration and commitment to minimise the disruption impact on their operations (Simatupang & Sridharan 2005). Textile collaborative partners could advantage their operations by real-time information sharing, increasing investment, setting shared targets, improving trust among all the supply chain partners (Barratt & Oliveira 2001).

8.3.4 External Disruptions Impacting on Internal Operations

Quadrant 4 presents the high-intensity political disruptions that have a significant impact on supply chain performance through supply chain disruptions. Most of these disruptions in this quadrant can interrupt supply chain operations for a long period of time. Political strikes, social conflicts, terrorist acts, street demonstrations, transportation delays, political violence, erratic customer demands, and load shedding are important disruptions that have an adverse impact on supply chain performance. Most of these disruptions are the reflections of the agents’ actions in Pakistan. For example, political strikes, social conflict and street demonstrations are result of the actions or reflections of powers utilised by the agents in textile industry. These disruptions could be the methods to use powers (i.e. domination) adopted by the textile agents to transform their messages or exchange meanings (i.e. signification) to change or manage the social and political system (i.e. legitimation). Most of these disruptions requires multiple supply chain strategies to reduce their impact on the internal production operations. Supply chain partnership, information sharing, process integration, and collaborative synchronisation are more suitable strategies to reduce the impact of these disruptions.

It’s critical for textile management to enhance the efficiency of supply chain operations during the periods of uncertainty. According to Eliashberg and Michie (1984, p. 77), “supply chain alignment is the ability to which firms perceive the possibility of realising compatible objectives that are mutually beneficial”. Supply chain partnering is beneficial when all the supply chain partners are collaborating each other (Dyer & Hatch 2004). This can only be achieved when participants have common goals, benefits, values, and expectations (Jap 1999). Ellram and Hendrick (1995, p. 41) explain that “partnership is an on-going relationship between two manufacturing firms
which involves a commitment over an extended period of time, and the mutual sharing of information, as well as the risks and rewards of the relationships”. Disruptions such as transportation delay, load shedding and erratic customers’ demands can be tackled or handled using supply chain partnership strategy. Interview data reveals that, most of the textile manufacturers hesitate to share their resources and information with other textile manufacturers. Partnership in textile supply chain will enhance information sharing that enables manufacturers to build strong relationships with other manufacturers that produce the same types of products. It also enables them to gain an advantage during events of uncertainty (Garling et al. 2002).

Textile manufacturers can use shared resources during political disruptions to continue their production operations. For example, load shedding because of electricity shortfall is the issue in which textile manufacturer have no alternatives except producing their own. Textile manufacturing partners can establish their own electricity production units in which they can resolve load shedding problem. In the event of transportation delay, partnership will help to use shared resources to avoid the raw material shortage problems. Erratic customers’ demands are also the form of disruption in which customer’s unusual demands create internal operations issues. In textile industry, erratic customers’ demands could handle sharing production process with other collaborating partners. For example, if customer add 30/1’s yarn (means 30 yarns of 840 yards to make its one pound weight) (Sarkar 2013) in their previous order that may handle using shared resources or collaborating with their partners.

Political protests, social conflicts and street demonstrations are kind of disruptions in which social or political agents intentionally interrupt the normal flow of materials and goods. For example, political strikes reasoning to stop or delaying the transportation operations. The collaborative synchronisation could help to mitigate the impact of these disruptions. Collaborative synchronisation plays an important role in benefiting all members who provide partnership to each other in supply chain collaboration (Lee, H, Padmanabhan & Whang 1997). Simatupang and Sridharan (2005, p. 259) define collaborative synchronisation as “the collective actions taken by supply chain members to align critical decisions at planning and execution levels, for optimising overall supply chain performance and profitability”. The consistent flow of information sharing can impact positively on supply chain members especially when they all are relating to the
manufacturing firms (Ramanathan & Gunasekaran 2014). Textile manufacturers could synchronise their operations by sharing information among all the supply chain members or participants during the events of political strikes or other political disruptions to reduce the impact of disruptions. This will reduce the stoppage time, increase production efficiency and improve delivery lead time.

The last two disruptions in quadrant 4 in figure 8.1 are political violence and terrorist acts. These are extreme forms of political disruptions in which agents use their authoritative powers to destabilise production and distribution systems to achieve certain objectives. For example, terrorism in Pakistan creates severe impacts on textile supply chain operations by damaging rail and road infrastructures to transmit their resistance to the establishment. Supply chain postponement strategy can be used to reduce the impact of these disruptions. Postponement strategy is use for holding or delaying the production process during the period of uncertainty, and once the uncertainty is resolved, production resumes (Choi, Narasimhan & Kim 2012). The benefit of using the postponement strategy in the textile industry is that it increases the efficiency of the supply chain by moving product differentiation (at the decoupling point) when the product is ready for the end customer (Kiperska-Moron & Swierczek 2011). Textile manufacturers could delay their operations during the events of political violence or terrorism and resume after the uncertainty. For example, using the postponement strategy in the textile production is by delaying the dying process for particular textile products. The manufacturers are aware that the dying process is the point at which the textile products are differentiated, and they knew that they could resume this process after the period of uncertainty had passed (Bechtel & Jayaram 1997).

Supply chain strategies adopted to mitigate the impact of political and supply chain disruptions on textile supply chain performance. As discussed before, textile production is complex and time-consuming process that required proper management and scheduling to minimise the chances of internal and external disruptions. All the above strategies are alone or together can utilise to reduce the likely impact of disruptions on textile supply chain performance.
8.4 LIMITATIONS

This research was conducted using a qualitative approach by employing semi-structured interviews. Though the subject and sensitivity of the topic required in-depth interpretation of narratives, there is however a number of limitations that needs to be noted.

Firstly, the qualitative methodology was adopted in this thesis to explore the complex relationship and interactions between political disruptions, supply chain disruptions and supply chain performance. Qualitative research methodology can answer and illustrate clear inquiries and produce theories, it however cannot test hypotheses and speculations because it is an inductive exploration. This investigation can therefore be supplemented by quantitative research which is hard, targeted, value-free, and helpful for hypothesis testing.

Secondly, this study, which has used semi-structured interviews to collect data, has a limited number of participants (25 in total). Although, the number of participants is sufficient for this study as the depth of information and knowledge gathered were sufficient to form the basis for a discussion on key issues. Nonetheless, a broader understanding of the issues that might emerge in interviewing people directly representing political groups might shed new insights on the issue of political disruption. Current sample is more biased towards the manufacturers who have expressed viewpoints which can be deemed a bit more skewed towards a particular world view. There is a risk that, given the small population size, the conclusions developed from the qualitative data are idiosyncratic, with limited generalizability to other organisational contexts (Eisenhardt 1989).

Thirdly, because this study was limited to the Pakistan textile industry, it is unknown whether all the factors identified in this study would have the same impact on other manufacturing industries. Most of the findings are unique to the textile supply chain operations. For example, political strikes and trade sanctions specifically impact textile supply chain performance. Textile is labour intensive industry and political disruptions such as strikes; violence etc. will reduce the movement of labour as well as materials. Many other industries like sports product manufacturers, medical equipment
manufacturers are less labour industries and could store their raw material for longer period of time and may face political disruptions impact differently.

*Lastly*, this study mainly discusses the impact of political disruptions on supply chain performance through supply chain disruptions. All the results were interpreted using structuration theory. If other theories, like institutional theory or political economy theory, were used for a future study, the results may vary. Structuration used because it allow exploring in-depth understandings of agents, their behaviours and how they interact with social and political system.

**8.5 MEETING THE RESEARCH OBJECTIVES**

The overarching aim of this thesis was to explore the impact of political disruptions on supply chain performance. To achieve this broader aim, three key interrelated research questions, driven by structuration theory, were developed to link the issues with political structures and processes of domination, signification and legitimisation. These questions were framed in Chapter 2 and 4 and were answered in Chapters 6 and 7.

Chapter 6 has specifically addressed the first research question: ‘*What are the key agents of change and how do they use power to allocate resources to disrupt supply chain?’* This question is answered through the lens of structuration theory. Structuration theory emphasises the key responsibility of the production and reproduction of supply chain structures. Data was collected using face-to-face semi-structured interviews from major textile manufacturers, supply chain providers, political groups, influence groups, social and community groups. Total 25 respondents were interviewed and each participant was selected from their particular industry experience. Data was interpreted following structuration theory dimensions and presented by using vicious cycles and NVivo matrix coding query results.

Chapter 6 first identified the key agents of change and then investigated the methods whereby the agents use power to allocate resources. The key agents of change consist of politicians, manufacturers, the labour force, labour unions, supply chain operators (e.g. transporter providers), social institutions, non-political actors (e.g. the military), and customers. Most of the agents have a major role and some have a minor role. The
agents use their powers (allocative or authoritative), depending on the consequences. The labour union uses authoritative power to assert command over the mill management about its concerns, and political workers use their authoritative powers to assert command over the government or ruling party about current policies or other issues with the regime. These agents have allocative powers that they can use to transform resources into finished goods or semi-finished goods. All the agents of change that were identified in this thesis had an impact on supply chain performance by disrupting the supply chain operations.

The second research question was tackled in Chapter 7: *How do agents interact, and how do they exchange information, meanings and messages of change or disruptions in the textile supply chain?* This research question has been answered using the dimension of *signification*. Signification dimension is interpreted within the context of textile industry. Agents, communication, interpretive schemes, resources and purposes of communication are the key elements of the signification dimension which are used to explore methods of communications used by the agent in textile industry. The results indicated that all social, political and supply chain agents have their own method to interact and exchange information. The results validated that supply chain and political disruptions result from an agent’s method of communication, the meanings that are exchanged or the information that is exchanged. Political workers use protest to express their messages to the government, labour union use strikes to exchange their message to the mill managements, and terrorist’s groups use bombs to communicate their messages and create fear in the society. Supply chain disruptions are the result of agents’ methods of communication in which interruptions are created in supply chain operations. Most of the textile supply chain operations are disrupted by political strikes, religious conflicts, incidences of terrorism, and labour union strikes. All of these agents actively use methods that cause supply chain disruptions issues.

The third and final research question “*How do agents of change maintain or manage order and establish value standards for acceptable social behaviour*” was addressed using *legitimation*, the third dimension of structuration theory. Government institutions (e.g. courts, tax departments, the police and the military) are the main agents of change for maintaining or managing the law and order situation and establishing standards of value. In Pakistan, these institutions have major issues in their systems that lead to
political disruptions. Military intervention in the political system is the result of government failure to protect the system. Most of the time, people support the military for the unlawful acts that the military carry out. Results show that Pakistan’s economy has grown faster during military eras than during the times that political governments have been in power. Pakistan governments have also failed to establish strong foreign policy aimed at improving local businesses. The textile industry mostly exports their products and this requires good relations with the importing countries to avoid hurdles in trade.

The primary objective of this thesis was to investigate the direct and indirect impact of political disruptions through supply chain disruptions on supply chain performance. This objective has been fully achieved.

8.6 FUTURE RESEARCH

There are four critical areas which would form the basis for future research on the impact of political disruptions on supply chain performance. These are as follows:

Firstly, this study focussed on textile industry of Pakistan but the results and implications might be valid in other regions and industries. The data for this research was collected from Pakistan’s textile industry. Pakistan is an agricultural country with great potential in its textile-related business. Therefore, other geographical regions could create new data on the impact of political disruptions on supply chain performance. Furthermore, while this study was conducted in the context of manufacturing activities, a potential research topic could extend to other industry sectors such as the service industry.

Secondly, the research framework presented in this study (i.e. structuration theory) could serve as the groundwork for further studies to explore how robust supply chain performance could be enhanced. The key advantage of structuration theory is its ability to incorporate the interlinked nature of content, context and processed helps to understand the complex interactions within the production systems and the disruptive forces that shape the supply chain operations. Further study can be conducted using
structuration theory framework to investigate the interlinked relationships between various manufacturing industries and their supply chain operations.

_Thirdly_, the relationship between internal and external disruptions and supply chain performance can be further investigated by means of quantitative methods. The quantitative methodology will allow using survey-based data collection approach to get maximum response including labour and customers.

_Finally_, the strategic framework presented in this study could be used for further research following a mix of mitigation and recovery strategies as to expose a practical approach for firms/organisations facing political disruptions.

**8.7 SUMMARY**

This thesis explored the relationship between political disruptions and supply chain performance through supply chain disruptions in Pakistan. The findings suggest that political disruptions often do not have a direct impact on supply chain performance, except in the case where major transportation and logistics infrastructure is damaged and disrupted. More significant impact of political disruptions is often mediated through supply chain disruptions as these disruptions are inter-related and interdependent. In other words, political disruptions tend to indirectly impact on supply chain performance via supply chain disruptions. The impacts, however, are complex and convoluted as they form interlocking vicious circles which are hard to break. Political disruptions, regardless of their size and scale, tend to cause large-scale supply chain disruptions with long-term impacts. This might suggest an impact similar to ‘bull-whip effect’, which cascades down from an initial ginning stage though to the final-stage garments/apparel manufacturing and distribution of textiles to the end customers. The complexity of this relationship is illustrated through a vicious circle of supply chain disruptions. This indicates that political disruption has serious effects on supply chain performance linking it to other supply chain disruptions in Pakistan.

The findings reveal that political disruptions within or outside the textile production system affect the efficiency of textile supply chain which links the processes of ginning, spinning, weaving, processing and the creation of apparel and garments. Efficiency of
textile supply chain rely on the internal as well as external political environment. This thesis found that forms of political disruptions (e.g. political violence, political strikes, and regime changes) create significant disruptions in the textile supply chain and have a greater impact on supply chain performance. Other forms of political disruption (e.g. corruption) have a lesser impact on supply chain performance as they are part of the organisational or government system. The impact of political disruptions on textile supply chain performance was found to be much higher than in other industries, due to the complex and uncoordinated production operations of the textile industry.

This thesis explored the relationships and interactions between political disruptions and supply chain performance through dimensions of Giddens structuration theory. This enabled to explore and categorise the different types of agents, the methods and means of communication they adopt and their use of power and resources to influence the performance of the textile industry. It is anticipated that, through understanding the complex relationships between agents and their various methods of communications can enhance the performance of supply chain.
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