

RESEARCH ARTICLE

## Terrorism and Uncertainty among Investors: the case of Peshawar School Massacre

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### Abstract

This paper focuses on the effect of terrorism on stock returns in Pakistan by taking into account major incidents, mainly the Peshawar School Massacre. Structured approach of Grounded Theory by (Corbin and Strauss 1990) and (Strauss and Corbin 1998) has been used as Grounded Theory is based on data and its constructs do not face the problem of accuracy that plagued the other Qualitative Data Analysis methods. Data have been collected primarily through interviews. The theory developed around the central category or the central phenomenon: feelings of insecurity among investors. The strategies developed for coping with the overarching phenomena are past experience, financial soundness of organizations, previous worth of the company, asset holding for a longer period and togetherness among nation. Overall, there was stability in stock prices, improved confidence of investors and outperforming of shares. This study is distinctive in examining the coping strategies from the perspective of investors who experienced the impact on stock prices of the occurrence of terrorist attacks.

**Keywords:** Uncertainty; Terrorism; Volatility; Grounded Theory

### Introduction

A systematized stock exchange channelizes investment schemes and mobilizes savings, thereby promoting economic development of a country. Stock markets function primarily as mediators between investors and borrowers by activating savings from large pool of small savers and mobilizing these deposits into prolific investments. The choices of the borrowers and lenders are coordinated through operation of stock market. Re-allotment of funds is also supported by stock market among corporations. Liquidity needed for domestic proliferation and credit expansion provided by stock market in turn benefit several sectors of economy, such as agriculture, commerce and industry (Iqbal, 2012).

Stock markets show extreme sensitivity in case of any advancement internally and externally. Stock exchanges are considered as barometers for measuring favourable and unfavourable situations for firms' trades, the information arrival causes an immediate effect on business activities. Studying the impact of important incidents on equity markets has been a major area in financial econometrics. This type of research tries to observe the degree to which the regular routine of equity market is affected, around the time period, the incident occurred. Economic theory suggests that stock prices are reflective of expected income of companies and as corporate profits have a significant

contribution in calculating Gross Domestic Product (GDP) therefore exhibit an important link to constituents of GDP, such as consumption and investment. The far-seeing properties of equity prices are indicative of their role as a major gauge of economic events.

Terrorist attacks are momentous events which can bring about broad violence, perturb daily lives of people, adversely impact the economy and eventually create volatility in stock prices. Contemporary terrorists are devoted on causing harm to an economy that targeted countries agree to their wishes. This damage may be in the form of human or capital losses. Both types of losses reveal inability of government to secure its assets, thereby losing people confidence and its legitimacy. The intent of terrorist group is to create an atmosphere of dread and terrors making virtually citizens feel at threat. If a beleaguered government takes the expected costs of future attacks as more than the price of agreeing to the demands of terrorists, then the authorities will manage some adjustment. A determined group may get its demands fulfilled by increasing the harm to the society. Terrorist attacks increase uncertainty which reduce investments and deflect Foreign Direct Investment (FDI). In developing countries, public funds in the shape of overhead capital such as highways, bridges and canals are especially significant to enhance growth. Terrorism also obstructs economic growth by increasing the price of conducting business in the form of

higher salaries, greater insurance premiums and larger security costs. The greater costs eventually led to smaller profits and thus reduced return on investment. Terrorism destroys infrastructure, damages key industries such as airline business, export sector and tourism and causes business disruptions, reducing Gross Domestic Product (GDP) and economic growth (DeCook & Kelly, 2022).

In this research any activity which had huge impact on stock prices is considered as major incident like the assassination of former Prime Minister Benazir Bhutto in Liaquat National Bagh Rawalpindi on 27 December, 2007 at a political rally.

### **Need for Capital Market**

The maturity period for the deposits of most commercial banks is less than one year, therefore they can only involve in limited lending of long-term finances. In the past, such loans were generated by DFI's in public sector. DFI's played a significant role in the development of industries in Pakistan from sixties to eighties, but poor governance led to losses which eventually resulted in the closure of these institutions. It was expected that establishing new investment companies in collaboration with other countries would fill this gap. Unfortunately, joint venture companies like Pak Kuwait, Pak Iran, Pak Oman didn't show significant performance in financing long term projects. During the last three decades, arranging finance for long-term plans and building infrastructure has been shifted from public organizations to capital markets on international level. The limited availability of resources in Pakistan for both government and private institutions indicate the absence of a liquid debt market. Despite of these hurdles, the Pakistan Stock Exchange has played its role in providing long-term finance to government and private organizations.

### **Pakistan Stock Exchange**

Pakistan Stock Exchange (PSX), formerly known as Karachi Stock Exchange, the largest and most liquid market of Pakistan was established in 1947. It was labeled as the best performing stock exchange of the world in recent years. A total of 531 companies are listed on PSX with a market capitalization of Rs.7.68 trillion. According to the report of Economic Survey of Pakistan (2018-2019), around 90% of the trade activities of our country, take place at Pakistan Stock Exchange. After 9/11 incident, Pakistan has been in a state of war against terrorist activities for the last twenty years, which has changed the economic structure of the country drastically. Terrorism creates ambiguous environment in stock markets as it increases risk on investments. Pakistan has already paid more than seventy billion dollars as a cost of terrorism directly or indirectly, which is almost half of Pakistan's total debts, as reported by the Pakistan Economic Survey (2012-2013). There is no

doubt that the performance of stock market as well as the whole economy is affected by terrorism.

Since 1990, the structural changes like the building of the KSE-100 price index, market capitalization and alterations in settlement periods has increased the noteworthiness of Pakistan Stock Exchange. These changes were the outcomes of financial liberalization. To play the obligatory role in mobilizing capital, many deregulation policies were adopted to provide openness to foreign investors and attract local investors. The institutional progress and reforms led to more divulgence of information through regular publications of reports, notification of dividends, official meetings and announcement of daily quotation. Many measures have been taken by Pakistan stock market in protecting buyer's interest from high volatility in stock prices. These are initiation of Karachi Automated Transaction System (KATS), advancement in handling excessive trade volume; Central Depository System (CDS), to help deal with more than 1 million shares daily and National Clearing System, which manages the clearing and bargain of the stock market of the country at one place. The chances of facsimile frauds and detentions in transfer are eliminated by these measures and have driven a reduction in the volatility of stock prices. The exchange supplies information through the internet to investors on real time basis. The Security and Exchange Commission of Pakistan (SECP) supplies guidelines to substantiate good governance with the objective of improving investor assurance by augmenting transparency in the trading activities of listed corporations. The government officials have privatized many institutions with a view to minimize organizational problems and to enhance financial soundness. These institutions generated the capital from stock market that eventually enhanced the progress of stock market. Furthermore, they also assisted in providing knowledge about the unstable political and economic conditions and guided investors to link all supplied information to the business activities of the stock market in a profitable manner. This has also reduced the chance for buyers to earn abnormal profits.

According to the economic survey of Pakistan 2018-19, the stock market of Pakistan exhibited a distinguished performance in the period from July 2018 to March 2019. This period has evidenced a tremendous growth as a result of numerous favorable events that took place at political and economic level. The various factors which contributed in propelling the index growth are implementation of Capital Gain Tax Rules, demutualization of the stock, substantiate decrease in the rate of discount by The State Bank of Pakistan which was reduced to 10% on 3 December 2018, notable foreign investment in stock, declining rates of inflation etc. Furthermore, political stability in the country also helped in achieving a thriving capital market.

## **Terrorism in Pakistan**

For the last two decades, terrorism has become a substantial and extremely destructive phenomenon. In 2003, the annual death rate from terrorist killings was 164, which rose in 2009 to 3318. The total number of Pakistanis killed during the period 2001 to 2011 is 35,000. According to official records, the government paid \$68 billion from 2000 to 2010 as a cost of terrorism directly and indirectly. The two former presidents, Asif Ali Zardari and ex-Army Chief Pervaiz Musharaf admitted that terrorist activities were created and promoted purposely by past leadership with a planning to achieve some tactical objectives on short term basis. This trend started with the controversial policies of Islamization by Ziaul Haq in the eighties, under which there was dissonance against Soviet interference in Afghanistan. In Zia's period, Pakistan got involved in the war between Soviet Union and Afghanistan, which drove a higher influx of Mujahideens to the close tribal areas and expanded supply structure of arms and ammunition. The Mujahideens were encouraged by the state and its intelligence services, in collaboration with CIA to act as a proxy in war against Soviet presence in Afghanistan. These Mujahideens later were activated as Lashkare Tayba, Harkatul Mujahideen and Tehreek-e-Taliban on the behest of the country. These groups are now a threat to the state and its citizens by involving in the politically motivated target killings of civilians and government officials (Abiden, Zhilong & Mubeen, 2019).

### **Major Terrorist Incidents in Pakistan**

The war on terrorism had an important effect on Pakistan, as the terrorism inside the country increased twofold. The government was already arrested with sectarian fervidness, but after the 9/11 attacks in New York, it had to battle the threat from Al Qaeda and other groups, who retreated from Afghanistan and mostly targeted political leaders. In 2006, more than 657 terror incidents took place with 907 dead and 1,542 people injured as per the security report of Pak Institute for Peace Studies (PIPS).

In 2007, according to the security report of PIPS, 1,503 terrorist incidents, including suicide blasts and target killings left 3,448 dead and 5,353 injured. The report says that most of the suicide attacks were targeted at police officials in 2007 with more than 770 casualties and 1,574 injuries. According to PIPS report, operation at Lal Masjid increased suicide attacks.

In 2008, the state witnessed 2,148 terrorist incidents, resulting in 2,267 casualties and 4,558 serious injuries. The annual report of Human Rights Commission of Pakistan (HRCP) declared that there were more than 67 suicide blasts across the country with 973 people killed and 2,318 injured. A source from the investigation bureaus revealed that since 2002 the number of suicide attacks in Pakistan surged to 140 till the end of 2008 while in 2007, there were 56 suicide blasts.

2009 was the worst year as 2,586 terrorist and other incidents related to sectarian took place killing 3,021 and injuring 7,334 people, according to the security report printed by PIPS. The fatalities calculate 48 percent greater in comparison to 2008. The number of suicide blasts rose to 87 by one third, killing 1,300 and injuring 3,600 people. In Pakistan, terrorist incidents have killed more than 35,000 people, of which 5,000 are security personnel and caused damage of US\$67 billion to the economy.

### **Terrorist Attack on Peshawar School, 16 December, 2014**

The armed forces of Pakistan conducted a combined military offensive in June 2014 against numerous groups in a violent area of the state, called Waziristan. This military offensive named Zarbe Azab operation was started in response to the attack on Jinnah airport Karachi on 8 June, for which the Tehreek-e-Taliban owned responsibility. As a reaction to Zarbe Azab, 9 gunmen allied to Tehreek-e-Taliban administered a terrorist strike on an army school in Peshawar. The terrorists, all of whom belonged to foreign countries comprised of 1 Chechin, 3 Arabs and 2 Afghans. They started firing on school officials and children as soon as they entered the school, depriving 145 people of life, including 132 children all boys, between the ages of 8 and 18 years. The Special Services Group of Pakistan army launched a rescue drive, killing all the 7 terrorists and saved 960 people. Major General Bajwa, the chief military spokesman said that there had been more than 130 injuries in the attack. This attack is marked as the deadliest attack in the history of Pakistan, transcending the Karachi bombing in 2007.

Against literature which depicts a negative impact of terrorist activities on stock prices, the capital market of Pakistan showed outstanding performance throughout the year hitting historic levels regarding volume and value. In 2014, for the 3<sup>rd</sup> consecutive year, Pakistan was able to maintain its place in the top 10 best performing stock markets of the world.

Terrorist incidents instil the feeling of insecurity and perturb the regular business routine leading to distressed economic conditions. Foreign investors are not willing to make investments in countries with threatening law and order environment. They are concerned about the security of their investment as well as their personal security while meeting their business partners. As (Alam 2013) quotes, all those incidents, whether it is a terrorist event or unstable law and order situation that create the feeling of uncertainty about the expected profits, deflect investment in equity exchanges. Terrorism causes disturbance in regular life of masses, drives violence broadly, impacts the market adversely which finally results in stock market volatility.

The major research questions are:

1. What is the theory that explains the change process related to stock returns in case of Peshawar School Massacre?
2. What were the major events or benchmarks in the process?
3. How did the stake holders participate in the process?

The objectives of the Study are:

The purpose of this grounded theory study is to understand the uncertainty among investors at the event of major terrorist attacks. At this stage in the research, the uncertainty among investors will be generally defined as, "Increased perceptions of risk, eventually affecting the pricing mechanism of risky stocks."

1. To examine the impact of major terrorist attacks like the incident of Peshawar (16 December, 2014) on stock prices.
2. To find out any deviation regarding normal stock returns as a consequence of terrorist attacks.
3. To analyze the reaction of the investors pre event, at the time of event and post event.
4. To understand, why some terrorist events affect the returns on stock positively?

Though the term terrorism was not unheard of, the 9/11 episode brings about new frontiers in terrorist activities by spreading geopolitical hazard, impacting the world economic conditions and global financial markets. Understanding the pattern of terrorist incidents and their effects on trading activities clearly, is useful in formulating strategies for dealing with ceaseless terrorist incidents, for decreasing their cost and for enhancing the investor sentiments in equity market. Thus, the purpose of this study is to understand the feelings of uncertainty in investors that impact the stock returns in the emerging market of Pakistan by taking into account a major incident i.e., the Peshawar School Massacre.

The investors have less opportunity to business profitably in inefficient markets because these markets use monopoly to get internal information. The test to check how efficient the market is can be performed by recording the time period, market takes for recovery after the impacts of unexpected events. As terrorist events have no imprecise timings, are confounding incidents and lack favorable information that complex most checks of market effectiveness, observing their impact on investors' feelings may provide better insights to formulate policies in enhancing market efficiency.

This study may help investors in forming better evaluation of equity market volatility while worse kind of terrorism strikes. It may advise investors to plan their investments in equity market of an emerging economy. It may assist regulatory bodies in taking suitable measures for

minimizing the impacts of terrorist incidents for protecting investor's confidence at Pakistan Stock Exchange (PSX).

This research will help investors, brokers and also businessmen to take right decision at the time of any major crisis. It may help financial analysts to predict future forecasting for debentures and shares. This study will be helpful to boost the confidence of foreign investors.

The organization of the remaining paper is as follows. Section 2 discusses the existing literature, Section 3 presents the data and methodology, Section 4 deals with data analysis and findings and Section 5 concludes the study.

## **Literature Review**

As regional security has surfaced as a huge concern for the leaders and members, public is willing to support the rollback of unspecified civil liberties. (Napoleoni 2003) asserts that the new-fangled terrorism cannot be considered as a mere philosophical term or a political idea. The economy of terror is supportive in terms of funding needed for the cause. It was estimated to have a yearly value of half trillion dollars during last decade and continual growth was predicted.

The assessment of the impact of terrorist incidents on equity markets is limited in existing literature, especially within the context of behavioral finance (Karolyi 2006). Terrorism influences the investors' confidence directly leading to market downturns (Barth, Li et al. 2006, Gul, Hussain et al. 2010). Some find no impact of terrorist events on equity markets (Chen and Siems 2007, Eldor and Melnick 2007) and others (Johnston and Nedelescu 2006) argue that efficient stock markets are able to absorb such concussion strikes due to timely action by regulatory bodies. (Gunaratna and Nielsen 2008) assert that the shift of Al Qaida headquarters to northern areas from Afghanistan is a major cause of terrorism in Pakistan. However, (Khokhar 2007) blames madrasas and Shia foundations for planning the terrorist attacks. While (Asal, Fair et al. 2008) denies this charge while asserting the family role to join or decline jihad bands.

The increasing interest related to economic price of terrorism has spawned innovatory lines of scholarly research. (Eldor and Melnick 2007) estimated the response of stock prices of Israel's market to terrorism by taking daily observations for 3,515 days. They examine the impact of six hundred and thirty-nine terrorist events on financial markets from the period 1990 to 2003. They discovered that suicide blasts had a persistent impact, while the event location had no impact on stock markets. According to them, financial markets show efficiency and there is no proof to state that the stock market grows desensitized over the period of time to terrorism. They assert that liberalization policies of market contributed to deal with the impacts of terrorist activities. (Buesa, Valiño et al. 2007) estimate the cost of damage caused by terrorism on 11 March, 2004 in Madrid, Spain. They find 291 fatalities and

1600 major injuries due to this incident along with infrastructure damages.

Literature shows that terrorist events impact negatively. Terrorist attacks have a negative effect on GNP, economic gains and stock markets in the whole world, however the intensity of the impact varies from region to region. (Abadie and Gardeazabal 2003) examined the price of strife in terms of growth in economic sector and market assets of government firms in the city of Basque. They found that GDP per capita of Basque on average decreased by ten percent as compared to a country without terrorism. In peace days, stocks of Basque outperform the stocks of non-Basque, while reverse performance results when the cease fire comes to an end. Barth et al. studied the impact of terrorist events on economic gains and capital formation and found that terrorist attacks have significant negative impact on economic growth. They also discovered that the aim of the strike is important in making a difference (Abiden, Zhilong & Mubeen, 2019).

When the target of attack is private institutions, it has a disastrous association with economic growth and capital formation (Zakaria, Jun et al. 2019). (Drakos 2010) observes the effects of terrorist attempts on equity exchanges of twenty two countries and reports negative impact of terrorism on the performance of financial markets. In the same vein, (Arin, Ciferri et al. 2008) inspect the adverse impact of terrorism on the equity exchanges of six countries in increasing volatility. They also concluded that, the shocks of terror vary from country to country and emerging markets suffered the most. (Karolyi and Martell 2010) investigate the devastated after effects of 75 incidents targeting public firms in the US across eight years and find the varying effects for different states. They discovered greater negative stock price volatility in more affluent and republican states. The authors discovered that human capital destruction in the form of kidnappings especially of company executives resulted in larger negative effect on stock prices than physical damage.

The study of (Nguyen and Enomoto 2009) estimates the economic price of seven global terrorist strikes in the equity exchanges of Pakistan and Iran and finds unfavourable volatility episodes especially in the incidence of 9/11. (Gul, Hussain et al. 2010) observe the terrorism effect in Pakistan and suggested investment in security related institutions by the government.

According to Abbas and Syed (2021), terrorism has generated a new type of risk faced by business, which may be named as security risk or terrorism risk. This risk directly or sometimes indirectly impacts the functions of multinational organizations or their franchise partners, resulting in loss of income or trade opportunities (Warnick 2006). Conventionally, scholars of international business categorize any country related effect on trade under political risk. The security risk is consequentially different. Political risks take place within the regional territory of a nation. As (Weidenbaum 2003) notes security risk has consequences,

in the shape of terrorism cross nationally. (Spich and Grosse 2005) observed that, whereas risks of political type like strikes, extortion and arrogations impact a business directly, the security risk affects both directly and indirectly. Moreover, (Moran 1998) noted that political risk appear gradually through the nation's political system and can be predicted to some extent. Security risk on the other hand takes place randomly and without any previous information or warning.

Behavioral finance has gained stirring pace in elaborating the behavioral facets of investment making decisions. Behavioural finance determines selection under uncertainty. Three main components of behavioral finance are Prospect Theory, remorse revulsion and control on oneself. Each component draws behavioural features of private investor. To divide investors, we apply patterns in attitudes and views introduced in the literature of behavioral finance. According to (Barber and Odean 2001), increased level of trading may be one reason for creating overconfidence among investors. In addition, the individual investors commit ordered mistakes during the process of getting information. Investors' risk revulsion is largely an outcome of visceral reflection as against rational deliberation (LeBaron, Farrelly et al. 1989). Age, gender, earning and schooling affect individual preferences for gains on capital, dividends and aggregate returns (Lewellen, Lease et al. 1977). Overall behavior of individual investor can be forecasted by attributes of lifestyles, risk revulsion, manage orientation and profession (Barnewell 1988). Demographic characteristics and lifestyle determine the selection of investment by individuals (Warren, Stevens et al. 1990).

(Griffin and Tversky 1992) note that, confidence is highest for arduous affairs, for low predicted forecasts and for affairs with insufficient, instant and unambiguous feedback. Investing in stock market is an arduous task with low forecasting power and poor information. The knowledge illusion can take place when individuals are given abundant information to build their prediction or assessment. (Oskamp 1965) investigated that as compared to investor confidence, accuracy of forecast improves more slowly; which means investors feel that data particularly available at internet sources bestows knowledge and the accuracy of the data may be overestimated by them.

One of the major problem investors encounter in the initial period of the twenty first century is, how do stock markets react to immediate, large, rises in uncertainty derived by the possibility of terrorism on international level? This type of uncertainty is hard to quantify as compared to other quantifiable types of uncertainty, individuals usually face, for example risk of shortfalls in corporate earnings, rising rates of inflation or a downturn of economic cycle. (Knight 1921) was the first to note that uncertainty can be distinguished from risk as it is randomness which cannot be quantified with unknowable probabilities, while risk is randomness which can be quantified with knowable probabilities. This is a significant distinction as rise in the

level of investor's uncertainty can be translated into increased perceptions of risk, eventually affecting the pricing mechanism of risky stocks. (Caballero and Krishnamurthy 2008) tried to model the financial crises on uncertainty as described by (Knight 1921) and illustrated that uncertainty shock is one reason resulting in agents, who behave as they would amidst a flight to episode of quality. (Basil and Herr 2006) elucidate through numerous theoretical analyses, the effect of uncertainty as defined by (Knight 1921) on stock markets. According to him, an agent's behavior regarding ambiguity has a critical role in determining asset price and choice of portfolio. (Easley and O'Hara 2010) demonstrate the significant role of ambiguity and uncertainty in finding the distinct structure of stock markets.

Even though it is possible to quantify most of the probabilities regarding possible future forms of the economy, the impact of uncertainty on stock prices and structure of the market exist. The rising possibility of international terrorist activity in the early stages of the twenty first century can be viewed as a worldwide rise in uncertainty presented by (Knight 1921). It is important to note that how higher uncertainty impact systematic and non-systematic risks which in turn can affect prices of assets and the relationship between risk and return. The recent change of terrorism from initially a national phenomenon to a global difficulty makes it problematic for investors in diversifying some of the risks on an international level. In addition, the capacity of investors to assess the financial effect of future incident is harshly tested under this circumstance. However, the investors should still strive to manage the exposure of portfolio to systematic risk by judicious allocation of asset or using hedging instruments.

Additional research that focused on specific businesses have been administered. Some research observed the effect of terrorist activities on banking business and financial sector firms. (Ito and Lee 2005) studied terrorism impact on airlines industry. Tourism has been the subject of (Dimanche (2004).) study. (Kunreuther, Michel-Kerjan et al. 2003) and (Kleindorfer 2004) explored the impact of terrorism on international supply chain. Several studies for example, (Chopra and Sodhi 2004), (Fabbri 2005) and (Sheffi and Rice Jr 2005) have recommended for achieving competitive advantage by alleviating risks and improving resilience despite terrorism. (Kotabe 2005) states that terrorism is a typical phenomenon in geopolitical life and a worthwhile issue, for international business academics to conduct scholarly inquiry. All these studies highlight how terrorist activities have affected firms across regional borders. (Suder 2004) explored the association between terrorist activities and the global business environment. The effect of terrorism on flows of foreign direct investment has been the topic of research by (Abadie and Gardeazabal 2008). (Czinkota, Knight et al. 2004) and (Li, Tallman et al. 2005) studied how companies operations and progress are impacted by terrorism. (Czinkota, Knight et al. 2005) work

on international marketing implications of terrorism. (Spich and Grosse 2005) looked at the effect of risks and regulations related to security on global competitiveness.

### **Research Methodology**

This paper studies the impact of Peshawar incident and other major terrorist attacks on Stock prices. This study uses structured approach of grounded theory by (Corbin and Strauss 1990) and (Strauss and Corbin 1998). The classic Grounded Theory comprises of an amalgamated set of conceptual hypotheses comprehensively developed to create an inductive theory about a substantial field. As Grounded Theory is based on data, its constructs do not face the problem of accuracy that plagued the other Qualitative Data Analysis methods. Data has been collected primarily through interviews. First categories of information are formed and then the data is reassembled through systematically relating the categories in the form of a visual model. The theory developed around the central category or the central phenomenon: feelings of insecurity among investors. Factors causing this phenomenon are past experiences of the consequences of major attacks. The article relates the theoretical model back to the literature on this topic.

This research places value on (Fitzgibbons 2002) ideas regarding investor behaviour. Athol Fitzgibbons argues that Keynes's epistemology, formally laid out in *A Treatise on Probability*, is put to work with adaptations in *The General Theory*.

Whereas *A Treatise on Probability* expounded the possibility of rational decisions, *The General Theory* argued that the instability of capitalism arose from irrational decision in the capital markets. Once again irrational meant a 'failure to think systematically' and not a 'failure to maximize'; in fact investors were irrational when they maximized in the absence of full information. Investors often relied on 'conventions' to paper the gaps in their knowledge, and in particular they typically adopted the convention that the present situation would continue into the future.

(Fitzgibbons 2002) notes that, Keynes later emphasized on the arbitrariness of investment decisions in stock markets, the shakiness of market customs and the role of animal spirits. (Fitzgibbons 2002) acknowledges the link between Keynes's epistemology and his political philosophy and calls it 'the Third Way'.

### **Participants**

Interviews are conducted from eight male participants, who are investors and experts closely involved in trading activities of stock market. Three are active investors of stock market, one runs a private institute in Zamzama, one is a head of brokerage firm and three are involved in different businesses. All the interviewees are engaged in the

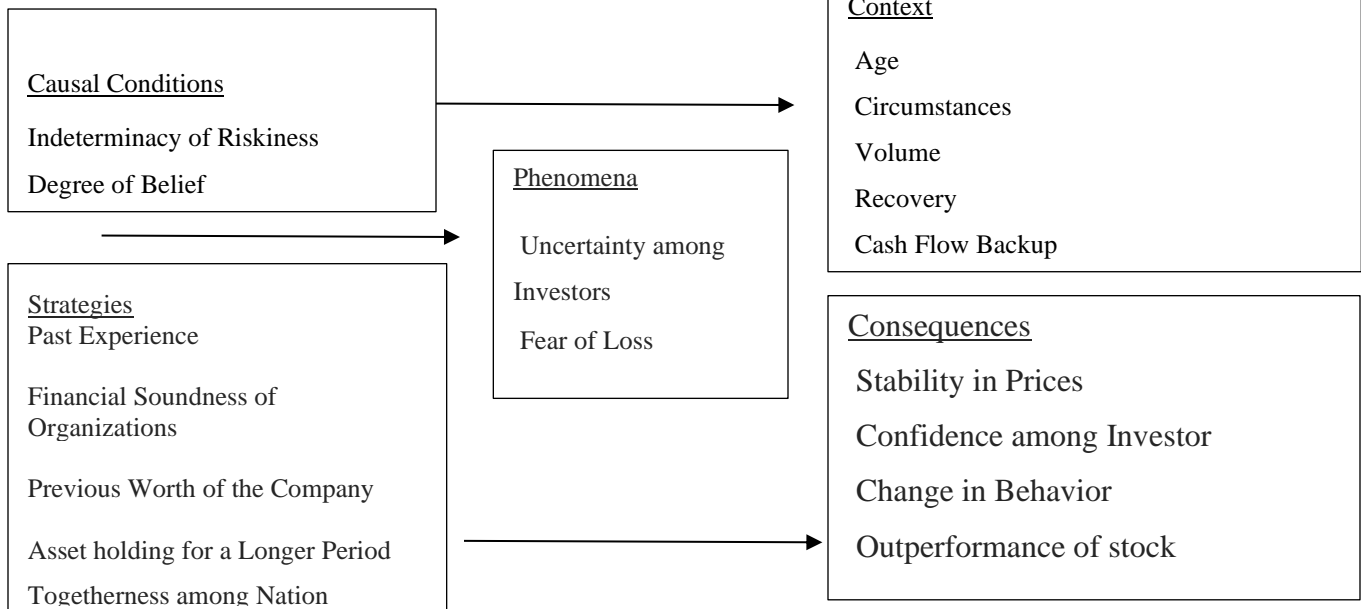
trading of shares for more than ten years in Stock Exchanges. The research questions focus on understanding how individuals experience the process and identifying the steps in the process. After initially exploring these issues, more detailed questions were asked from the participants, which assisted in shaping the axial codes, questions like what was the main reason of their reaction to the terrorist attack news? What contributed to this phenomenon to happen? What strategies were adopted during the process? What were the consequences?

**Procedure**

Four of the participants were contacted, one backed out later. Two of the respondents were acquainted through a friend who further provided the details of all the other participants. Interview protocol was mailed to all the participants and with the exclusion of one, appointment was made for an interview with all of them. The purpose of the study was discussed in detail with the interested participants and their valued suggestions were taken into account regarding interview questions.

Each of the eight investors participated in a fifteen to twenty minutes in depth, open ended interview, during which two major questions were asked: “What were your feelings, when you heard about the news of major terrorist incidents,” and “What has been the impact on stock prices of these incidents.” All the interviews were audio recorded and listened to three or four times while transcribing process. The websites of Dawn Newspaper and Pakistan Stock Exchange were used as secondary sources of data and valuable information was extracted from these resources. All of the audiotapes were transcribed verbatim and the data output was sent to the participants for verification.

**Data Analysis**



In the open coding, text is examined for prominent categories of information. (Corbin and Strauss 1990) described open coding as that which “fractures the data and allows one to identify some categories, their properties and dimensional locations” (p. 97). Then these categories are saturated using constant comparison approach until new information does not provide further insight. In the next stage central phenomenon is recognized by exploring the interrelationship of categories, called axial coding. A conditional matrix is created at this stage. The final step, then, is selective coding, in which the model is selected and propositions (or hypotheses) are developed. Writing down ideas throughout the process of open, axial and selective coding called memoing helped to evolve a theory.

**Data Analysis and Results**

The emerging model for change in the behaviour of investors at the happening of Peshawar School Massacre evolved from present research is presented in the flow chart below.

**Contribute Conditions of Phenomena**

Two kinds of contribute conditions emerged from the data, which eventually headed to certain phenomenological experiences associated with uncertainty among investors when a major terrorist event strikes leading to decline in stock prices. These are indeterminacy of riskiness and degree of belief. Degree of belief varies with age, information, past experiences and traditional concept of volatility in stock market.

Fig. 1

Usman (all names used are pseudonyms) shared his feelings regarding indeterminacy of riskiness, “There are no specific guidelines for subscription related to my investment in riskier assets or safe assets but due to lack of availability of stock information I prefer to invest in less riskier ventures.” He further asserted that, “Every major terrorist incident affects economy and it also affects stock market and other financial markets. As stock market is very volatile so I feel that such incidents can create huge amounts of loss for me so I always try to hold stocks for shorter time period.”

One aged investor, Mr. Shaukat incurred tremendous loss when General Pervaiz Musharraf released his position and thought that he was too old to bear any major losses and shift his investments to long term shares. On the other hand one young investor Faraz Soomro has seen many elderly investors investing in risky shares because they are experienced and have personal attitude towards investing in risky stock. So, degree of belief varies from investor to investor.

### **Phenomena Resulting from Indeterminacy of Riskiness and Degree of Belief**

Contributive conditions resulted in two core categories of subjective phenomena described by the respondents, uncertainty among the investors and fear of loss. Most, but not all, of the participants experienced uncertainty about the future returns and fear of loss when a major terrorist incident stroke. Higher idiosyncratic uncertainty or larger dissension on the market wide signal insinuate a greater association of beliefs, a firmer co-occurrence of stock returns and a significant correlation risk premium produced by the satisfactory risk sharing endogeneity among investors.

As Mustafa quotes when he heard the news of assassination of former Prime Minister Benazir Bhutto and was certain that the stock market would definitely crash because the event had a power to inspire helplessness and fear, “The uncertainty prevailed at macro level and every new piece of information changed the variance of our own belief over the time.” Throughout the data others echoed his words. Usman provided an exemplar of the core categories by describing his reaction to major terrorist events.

Those were really sad news and as an investor it greatly affect my investment decision because it create uncertainty in the economy and that is one reason I always investment in less riskier assets and if I ever invest in stock I always look for financially stable organizations as I feel financially strong organization will be able to bear the shocks of economy to a certain extent.

Not only did Usman experience uncertainty, but her fear of loss shaped all his forthcoming decisions.

### **Context in Which Recovery and Coping Strategies Developed**

Strategies for recovery and coping were developed in response to uncertainty among investors regarding future events and fear of loss. These strategies were influenced by certain contextual markers linked to the causal conditions especially the degree of belief and the resultant phenomena. These contextual markers included, age, circumstances, volume, recovery and cash flow backup.

As Yousuf Farooq commented, “Diversification in my portfolio can increase with my age. Now I’ve very carefully selected four or five stocks in my portfolio. Dividend yield related things can add to my portfolio with age.” Almost all the participants’ investments are indexed by circumstances keeping in view the uncertain economic conditions of Pakistan. Trading volume varies with the level of uncertainty and from investor to investor. Hope to recovery engages trader in the same firm for long time periods as Mr. Shaukat reported that individuals who incurred losses in General Pervaiz Musharraf’s regime have been holding their stocks in the hope of recovery. Investors’ confidence develops readily with cash flow back ups and morale to invest declines with diminishing backups.

### **Intervening Conditions Affecting Recovery and Coping Strategies**

There were also intervening conditions in addition to context that helped in changing investor behavior towards major terrorist incidents. Intervening conditions included the role of specialized people, brokers, fund managers and government regulations. Mustafa stated that he gained good profit by keeping in touch with the specialized people and listening to their advice for taking investment decisions. “In touch with Initial Public Offering IPO’s and banks has really given me good profit because they know the market and they know which company gives good profits.”

Fayaz and Shaukat reported that government has set lower and upper cap after the last crash of Pakistan Stock Exchange, which sets a limit of five percent that is, the stock prices can rise or fall by five percent at a time and not more or less than that.

### **Strategies for Recovery and Coping with Impact of Terrorist Attack on Stock Prices**

The strategies developed for coping with the overarching phenomena are past experience, financial soundness of organizations, previous worth of the company, asset holding for a longer period and togetherness among nation. The first strategy used by participants to reduce uncertainty was to revive past experiences. At the time of Peshawar School Massacre the anxiety was lower as compared to other major



incidents because the people who panicked at the time of other major terrorist events incurred losses. Yousuf Farooq explained, "Since 1991, Benazir Bhutto government dismissed twice; Nawaz Shareef government faced dismissal two times; history witnessed, event of nuclear blast; there was Kargal attack and all major terrorist attacks. Despite all these major instances, stock market is growing pretty steadily and the market has grown from 1000 points to 31,000 points."

Financial soundness and previous worth of the company matter a lot when major terrorist incidents strike, as these firms can absorb the shocks easily. The economic condition is risky in Pakistan, especially in Karachi, the behavior of all the participants of this study gradually changed towards risk aversion to cope with the feelings of uncertainty and fear of loss. Mustafa elaborated,

To avoid risk I go for the long term investment and wait for increase in the prices of my shares. When the prices increase, I sell the stock. I do not invest in daily stocks and the impact of terrorism is not on the long term investments for a long time. These kind of terrorist attacks only affect for a few days and after a few days the market stables and the stock start rising up.

Mr. Shaukat said, "We didn't panic at the time of Peshawar incident because the nation was united against terrorism on this occasion. So many young children got killed. Everyone with kind heart was crying. That incident was really hurting."

### **Consequences of Strategies for Recovery and Coping**

There were consequences of strategies adopted by investors helping them to change their behavior in face of major terrorist events. Except one investor Usman, all the others didn't panic on this occasion. His account of feelings at Peshawar school event is, "My feelings changed as it was a really big incident of Pakistan's economy. For example as finance student and investor of stock market I quickly sold my shares as I thought that stock exchange might crash and I invested my funds in term deposit bank account." Overall there was stability in stock prices, improved confidence of investors and outperforming of shares.

Asim Cheema lives in Karachi, but has his investments in Lahore and Islamabad Stock market. He stated that little and mix trends on money markets were observed as a consequence of Peshawar attack. According to other investors, as the attack was in Peshawar and they thought it would not affect regular business activities in Karachi so they didn't fear any major loss.

### **Conclusion**

Terrorist attacks increase uncertainty which reduce investments and deflect Foreign Direct Investment (FDI). This type of uncertainty is hard to quantify as compared to other quantifiable types of uncertainty, individuals usually

face, for example risk of shortfalls in corporate earnings, rising rates of inflation or a downturn of economic cycle. Two kinds of contributive conditions emerged from the data, which eventually headed to certain phenomenological experiences associated with uncertainty among investors when a major terrorist event strikes leading to decline in stock prices. These are indeterminacy of riskiness and degree of belief. There were also intervening conditions in addition to context that helped in changing investor behavior towards major terrorist incidents. Intervening conditions included the role of specialized people, brokers, fund managers and government regulations. The study further identifies the theory that explains the change process related to stock returns in case of Peshawar School Massacre. (Bryman 2002) have criticized the use of grounded theory as "an approving bumper sticker" invoked to confer academic respectability rather than as a helpful description of the strategy used in analysis. (Melia 1999) claims that most researchers use a pragmatic variant, whereby they can achieve added value by identifying new themes from the data alongside those that could have been anticipated from the outset. All too often, however, the tension between these two different sorts of insight and its potential to illuminate the topic being studied is not explored in the presentation of findings. Uncertainty is interpreted as personal belief degree. Uncertain logic is a methodology for calculating the truth values of uncertain propositions via uncertain set theory.

Although the guiding literature is filled with descriptions of the outcomes of the impact of terrorist attacks on stock prices, most research focused on quantifying the resultant uncertainty among investors, instead of finding the causes and consequences of the phenomena. This study is distinctive in examining the coping strategies from the perspective of investors who experienced the impact on stock prices of the occurrence of terrorist attacks. A theoretical model of the coping strategies of eight participants has been developed through qualitative data analysis by engaging the participants to ensure that the model reflects their personal constructs. As is frequently the case in qualitative study, the outcomes of this analysis are peculiar to the specific investigator, participants and context of this study. This research studies investor behaviour only but it points to the need for a theory of terrorist behaviour that can be taken with available data and used to further the understanding of terrorism risk.

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