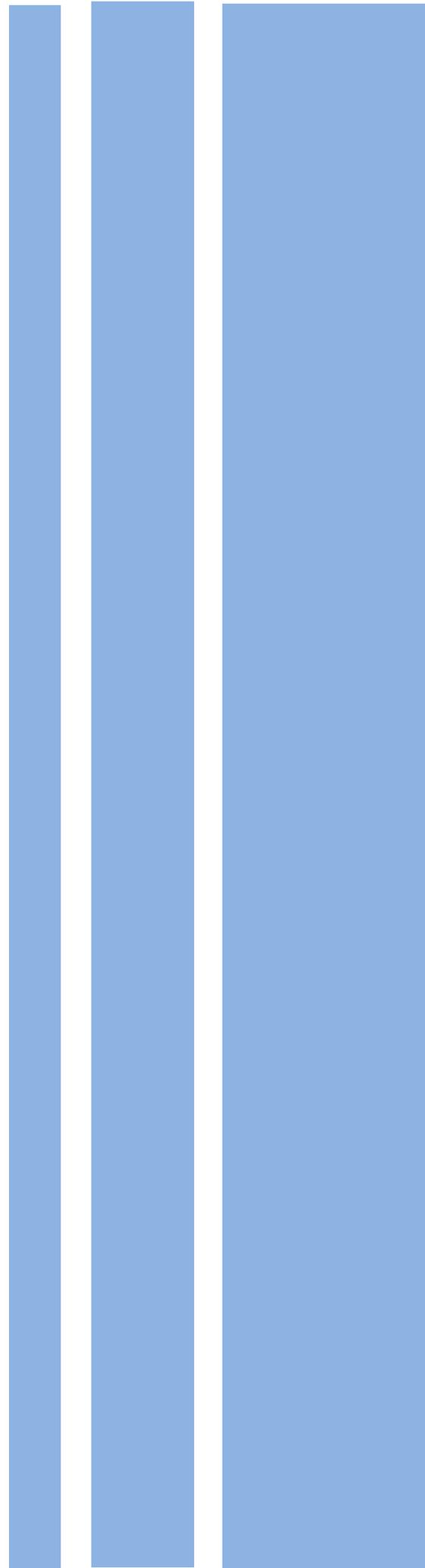


Economic Impact of Terrorism: Case of South Asia Post 9/11

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A year after 9/11, the Comptroller of the City of New York gave a report¹ on economic consequences of the most audacious terror attack ever. The attack on twin towers itself had been described as a direct attack on the heart of American capitalism. The report pegged the property losses at \$21.4 billion – though the figure appears a large one but seen in the context of the US national economy it was a minor red dot at just 0.2% of annual GDP. Around 2800 people died in the terrible tragedy – in a rather chilling accounting of the cost of a human (rather American) life², the report calculates the total cost of lives lost at \$8.7 billion and cost due to disability at \$0.9 billion. But then in the most significant part of the report, it observes that there was a large economic loss for the city in terms of diversion of business, which is difficult to quantify. It clearly makes the point why we need to study the economic consequences of terrorism in greater details – simply because what gets reported in next day's newspaper is just the direct cost of an attack. Direct cost of a terror attack – in terms of lives lost or damage to property at the site – is undoubtedly the most spectacular part of it but often proves to be the tip of the iceberg in terms of its economic consequences. Due to increased terror activity in any region, investment goes down and in the long run income and consumption also go down – thus terror, specially repeated terror activities have significant economic fallout.

Terrorism by definition is asymmetric warfare. An act of terror is different from an ordinary criminal or violent act only because of the intent behind it. An individual terrorist or a group tries to inflict maximum physical damage directly during an attack but the strategy of any

¹ Comptroller of the City of New York (2002), "One year later: the fiscal impact of 9/11 on New York City".

For a slightly different estimate, Gary Becker and Kevin Murphy in "Prosperity Will Rise Out of the Ashes," Wall Street Journal, October 29, 2001.

Peter Navarro and Aron Spencer, "September 11, 2001: Assessing the Costs of Terrorism," The Milken Institute Review, Fourth Quarter 2001,

² U.S. Department of Transportation (2005). Treatment of the Economic Value of a Statistical Life in Departmental Analyses.

<http://ostpxweb.dot.gov/policy/reports/080205.htm>.

terrorist group is to bleed its perceived opponent (state or society) through thousand cuts – therefore they try to maximize the long term or indirect cost through such attacks.

It was only after 9/11, the study of economic consequences of terrorism attracted scholarly attention in the West. Through recent research, three distinct components in terms of economic consequences of a terror attack have been identified – direct, indirect and frictional³. It is however important to remember the context of such analysis – apart from exactly three cases, the Basque region of Spain, Northern Ireland and Israel – Western world has so far witnessed only isolated cases of violence. Violence due to long term militancy with sustained attack on socio-economic infrastructure obviously produces a different set of pattern. South Asia is the only region in the world to have witnessed this kind of terrorism in the last two decades. In South Asia, the very context of post-9/11 world provides a definite break with the past terror-induced violence.

³ Paul Krugman, 2004: THE COSTS OF TERRORISM: WHAT DO WE KNOW? Briefing Note in a seminar at Princeton.

Most of the articles mentioned here have comprehensive bibliography on the topic.

James R. Barth, Tong Li, Don McCarthy, Triphon Phumiwasana, and Glenn Yago: Economic Impacts of Global Terrorism: From Munich to Bali. Milken Institute, 2006 – periodic reports of Milken Institute focus on different aspects of studies related to terrorism. This particular report gives details regarding various cost estimates of terror attacks.

Blomberg, S. Brock, Gregory D. Hess and Athanasios Orphanides 2004. “The Macroeconomic Consequences of Terrorism,” *Journal of Monetary Economics*, Vol. 51(5), pp. 1007-1032.

Blomberg, S. Brock, Gregory Hess and Akila Weerapana .2004. “An Economic Model of Terrorism,” *Conflict Management and Peace Science*, Vol. 21, pp. 17-28.

Walter Enders and Eric Olson: Measuring the Economic Costs of Terrorism, Department of Economics Finance and Legal Studies, Culverhouse College of Commerce & Business Administration University of Alabama

Though South Asia is one of the worst affected regions in terms of terrorist violence but to the best of our knowledge there has not been any comprehensive study on the subject. Purpose of the current paper is to present a preliminary analysis of the South Asian scenario and also to examine to what extent this scenario could be analyzed through the methodology established in the West. Though the economic impact of other types of violence like insurgency in some of the North-Eastern states and Ultra-Left Wing violence in some other Indian states may be fundamentally similar in nature, it is due to the specific context of post 9/11 world that we have restricted the scope of this present study⁴. Similarly, a comprehensive study of economic impact of terrorism in South Asia must also include left-wing violence in Nepal and ethnic violence in Sri Lanka⁵. Also, the aim of this paper is only to study the economic consequences of terrorism and not the whole economy that sustains such terrorism/terror infrastructure.

The Western Template

Basic economic impact of a single act of terrorism or a series of terror attacks is similar to that of a criminal act. First there is a direct cost in terms of lives lost and property damaged just like in case of arson or murder. Next, a series of attacks at a particular neighbourhood or increased possibility of such attacks puts pressure on law enforcement mechanism – they are forced to deploy more resources to secure the place. This is indirect cost, which very often is much higher than the actual material damage. Then comes a somewhat intractable category of cost - in terms of distorted decisions – even if a district had all the right potential still high rate of crime

⁴ The only paper we have come across, which sought to address the issue in the context of India is Mahendra P Lama, 2005 TERRORISM AND INSURGENCY IN INDIA: Economic Costs and Consequences. written for CPA's project Terrorism and the Rule of Law. Accessed online from ICSSR Journal of Abstracts and Reviews. Unfortunately, this article, though rich in data and anecdotes, does not really present a focused analysis of economic consequences of terrorism in India.

⁵ There are some works on economic cost of war in Sri Lanka, see for example, Nisha Arunatilake, Sisira Jayasuriya & Saman Kelegama, "The Economic Cost of the War in Sri Lanka", World Development, 29: 9, September 2001, pp 1483-1500

is more likely to depress property prices there. Productive people are likely to move out of the district and new investors would shy away from the crime-infested area – it is difficult to put an estimate for such lost opportunities and also once the image is maligned in such a way it takes a long while before attracting back the right crowd or investment there.

Direct Cost is the easiest part of the calculations. This is fundamentally similar to accidents or natural calamities. The key components for calculating the direct cost of a terror attack are number of human lives lost, extent of damage to property at the site of the attack and the cost of rescue, relief and immediate dislocation. Businesses like airlines, travel and tourism also bear the direct brunt of such attacks. A Congressional Report⁶ citing US Bureau of Labour Statistics mentioned that at least 1,25,000 workers across the USA were laid off for 30 or more days because of 9/11. A Milken Institute Study estimated potential job loss in 2002 in the metropolitan USA due to 9/11 to be around 1.6 million⁷. 9/11 also hit the headlines as the largest insured losses in history till then with an estimated loss between \$36 and \$54 billion⁸.

Indirect cost due to terrorist attacks has also been described as terror tax⁹. To prevent recurrence of such attacks, a state or society invests heavily in deterrent mechanisms. As the resources are limited, therefore the concerned state or society is compelled to divert necessary resources from other areas, more often from developmental expenditure or social sector like health and education. But first it is difficult to calculate the precise amount of loss and then it is even more difficult to draw the line. If we look at the post 9/11 scenario of businesses moving out of downtown New York, it could also be because of high property prices or broken infrastructure or high taxation or a combination of several such factors. 9/11 attacks or a sense of insecurity might have played a part in it but it is difficult to emphatically say that businesses

⁶ Jim Saxton (R-NJ), Chairman, Joint Economic Committee, United States Congress. May 2002, THE ECONOMIC COSTS OF TERRORISM

⁷ Ross Devol, Armen Bedroussian, Frank Fogelbach, Nathaniel Goetz, Ramon Gonzalez, and Perry Wong, The Impact of September 11 on U.S. Metropolitan Areas, Milken Institute Research Report, January 2002.

⁸ Jim Saxton, 2002

⁹ Jim Saxton, 2002

moved out solely due to the 9/11 attacks. Secondly, even if we assume businesses moved out post 9/11 then does it actually represent a net loss to the economy? Well, as long as they are within the USA, there is no such loss for the national economy (though it would still be a loss for the New York City economy), some might even argue that such movements away from New York would lead to more geographically balanced economic development.

9/11 definitely led to a huge increase in defence and internal security spending. Afghan war was a direct consequence of that. War in Iraq cannot be technically called a direct consequence but surely without 9/11 it would have been immensely difficult to justify invasion of Iraq. But the fact that even after 10 years, the US exchequer is still allocating so much resource for Afghanistan and Iraq – can it be counted solely as an indirect cost of 9/11? Narrow security-centric world view in last 10 years has led to dilution of US economic hegemony, but definitely it would be too far-fetched to count this solely as an indirect cost of 9/11.

But what exactly has been the quantum of increase in terms of defence and homeland security spending? Between 2001 and 2011, the USA spent a mind-numbing 7.2 trillion dollars for defence and homeland security – this includes the cost of Iraq and Afghan wars and that section of the budget of Department of Energy, which is related to Nuclear weapons. Pentagon base budget itself (i.e. excluding the cost of two wars) has gone up by 43% since 2001. Department of Homeland Security, which was created in the wake of 9/11 attacks, started off with a budget of \$16 billion, in next ten years it has gone up by more than 300%.

Table 1

	2001	2011	Increase
Pentagon Base budget	\$290.5 bn	\$526.1 bn	43%
Homeland security	\$16 bn	\$69.1 bn	301%

Total	7.2 trillion (2001-11)
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Source: Congressional Budget Office, CBO

As per the report of the City Comptroller, the direct and calculable cost of 9/11 was around \$30 billion but as the above table shows the real cost to American economy was many times more. Remember this was after all just one attack, in case of sustained terrorist attacks over a period of time any economy significantly loses momentum. In case of Israel, it is clearly shown through analysis of quarterly data that how due to terror, government expenditure on security increased and correspondingly private consumption declined (Eckstein & Tsiddon, 2004)¹⁰. Analyzing a three year period (2000-2003) during the Al Akza Intifada, the authors conclude that there is a fall of 3% annually in per capita output. During this period, per capita GDP and non-durable consumption also show a fall of around 3.5% each. Defence Expenditure on the other hand jumps from 9% of GDP to 12% during the same period¹¹. Similarly, in case of Spain, it has been shown that the Basque region is about 10% poorer than it would be in the absence of the terrorist group ETA¹².

Friction Economy: In a widely read cover story in 2002¹³, business magazine *Fortune* concluded that the real cost of 9/11 should be measured in terms of response to terrorism, how it has generated frictions all over the great American economic machine. *Fortune* estimated a loss of 1.5% of GDP per annum due to these frictional costs. First of these friction costs was in form of

¹⁰ Zvi Eckstein and Daniel Tsiddon (2004): MACROECONOMIC CONSEQUENCES OF TERROR: THEORY AND THE CASE OF ISRAEL, Working Paper No.7-2004. March, 2004
The Foerder Institute for Economic Research and The Sackler Institute of Economic Studies

¹¹ Two separate World Bank studies conclude that the cost of conflict on Israeli economy is about 4% of GDP and Palestinian economy on the other hand has suffered 50% decline from 1992 to 200 due to this conflict.

¹² Abadie, Alberto, and J. Gardeazabal, (2003), "The Economic Costs of Conflict: A Case-Control Study for the Basque Country", *American Economic Review*, vol. 93(1), 113-132.

¹³ *Fortune*, Feb. 18, 2002, "The friction economy."

massive hikes in insurance premium – in fact there was no template of terror insurance in most of the western economies and the current matrix of premium calculations came in vogue only as a consequence of 9/11. Since 9/11 significantly pushed up the cost of this type of insurance, many important structures – like Golden Gate Park, San Francisco – were unable to get terror insurance. This led the US Congress to pass the Terrorism Risk Insurance Act, TRIA to address any possible market failure due to such large scale risk. Under this act, the US government is mandated to pay the insurers up to 85% of their losses. It has now been extended up to 2014 as Terrorism Risk Insurance Programme Authorization Act, TRIPA¹⁴.

The second and the biggest chunk of increase as described by the magazine is a contestable one. *Fortune* claimed that the attacks have compelled businesses to review their supply chain management system and in place of just-in-time delivery they have been forced to stock up supplies to mitigate any unforeseen situation. The magazine argued that this raw material holding cost in turn had significantly slowed down US productivity. Most subsequent studies have rejected this contention though they have agreed on enhanced transaction cost due to heightened security. The magazine also showed that for a passenger, average waiting time at US airports went up by one hour, which straightaway shaves off 0.1% of US GDP per annum! No doubt extra security measures and distorted decision-making were responsible for significant loss of productivity in aggregate terms but the magazine seems to have overstated the case.

Terror in South Asia

South Asia is not only one of the worst affected regions in terms terrorism but statistics show that terrorism related incidents have gone up here sharply since mid-1990s. Four countries in this region – India, Pakistan, Sri Lanka and Nepal are among the worst affected countries in the world during this period.

¹⁴ Saxton, 2002

Smetters, Kent (2004) ""Insuring Against Terrorism: The Policy Challenge." *Brookings-Wharton Papers on Financial Services*. Robert E. Lilan and Richard Herring, eds. pp. 139-82.

Global Terrorism Database, being maintained by the University of Maryland¹⁵, shows that during 1970s and 1980s, the major victims were Central and Latin American states. But from mid-1990s South Asia along with Middle East occupy the two top slots. The chart also shows a sharp rise from 2007-8 due to increased militant attacks in North-West Pakistan and clashes of Sri Lankan army with the LTTE, eventually leading to a military defeat of LTTE. The two most important takeaways from all these statistics are – terrorism in South Asia is a long term issue and the region as a whole and India and Pakistan in particular have been facing unending series of attacks, resulting in significant loss of lives and damage to physical and socio-economic infrastructure.

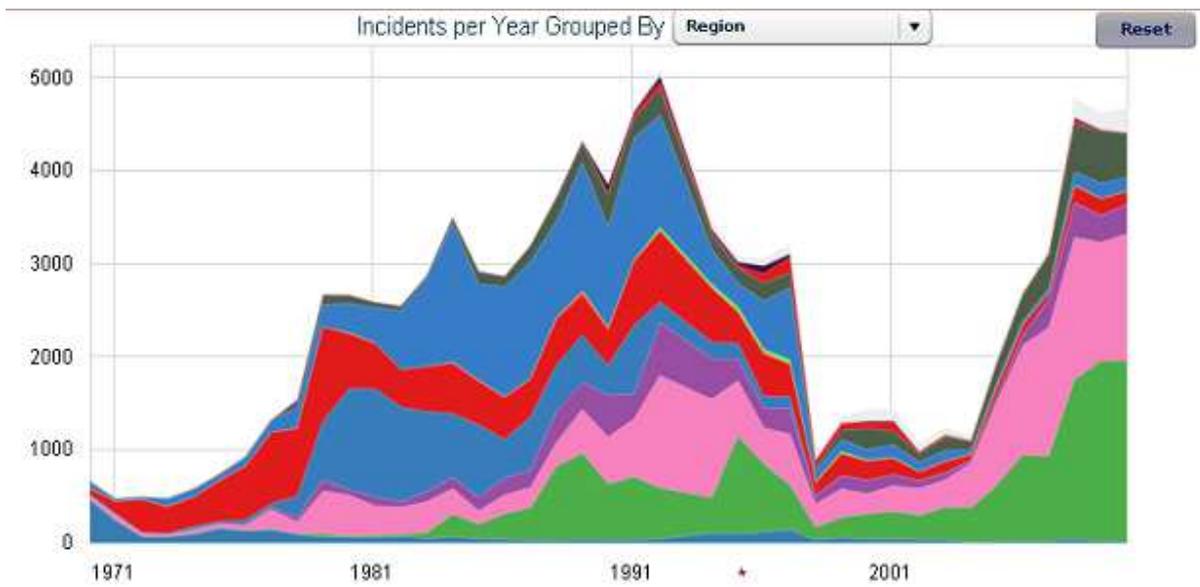
¹⁵ <http://www.start.umd.edu/gtd/>. This database, originally started by Pinkerton Global Intelligence Services, is now being maintained by the University of Maryland with support from the Department of Homeland Security. This open source database has information regarding terrorism-related events from the 1970s to 2010.

Table 2: Global Terrorism 1970-2007

Most Frequently Attacked		Most Fatalities	
Country	Frequency	Country	Fatality Count
Colombia	6767	Iraq	17754
Peru	6038	Sri Lanka	14272
El Salvador	5330	India	13434
India	4318	Colombia	13009
Northern Ireland	3762	Peru	12822
Spain	3165	El Salvador	12496
Iraq	3161	Nicaragua	11324
Turkey	2691	Algeria	8545
Sri Lanka	2611	Philippines	6304
Pakistan	2536	Pakistan	5540
Philippines	2490	Guatemala	5135
Chile	2287	Turkey	4674
Israel	2140	Burundi	4084
Guatemala	2023	Afghanistan	3764
Nicaragua	1986	United States	3339
South Africa	1921	Rwanda	3200
Lebanon	1913	Lebanon	3093
Algeria	1650	Russia	3057
Italy	1487	Angola	2861
United States	1362	Northern Ireland	2842

Source: Global Terrorism Database

(may be it would be better to re-type this table)



Name	Count
Middle East & North Africa	18638
South America	17563
South Asia	17357
Western Europe	14784
Central America & Caribbean	10548
Sub-Saharan Africa	6400
Southeast Asia	6004
North America	2849
Russia & the Newly Independent States (NIS)	1925
Central America & Caribbean	10548
Sub-Saharan Africa	6400
Southeast Asia	6004
North America	2849
Russia & the Newly Independent States (NIS)	1925
Eastern Europe	906
East Asia	687
Australasia & Oceania	232
Central Asia	219

Chart 1 – GTD data rivers: Global Terrorism database

Direct Cost in South Asia

As we have already mentioned direct cost implies lives lost in attacks, damage to property and damage to business due to such attacks. Apart from businesses, which are generally affected all over the world immediately after a terrorist attack – airlines, hotels and tourism – in South Asia, there has been a particular emphasis on transportation sector. Trains and railway networks in particular have been the repeated targets of terrorists across the subcontinent¹⁶.

It is important to analyze how these material losses actually impact the economy as a whole. There are two important parameters for doing so – we need to see the loss of human lives in terms of loss per million populations and the cost due to other material losses need to be measured in proportion to the country's GDP. These two indices help us to understand proportionate impact on the economy and society. Just to illustrate the point thirty billion loss may not make much difference to the US economy but it would inflict crippling blows to a small economy like Nepal.

Global terrorism database records that between 1968 and 2004, there were a total of 16730 terror-related incidents. 10.9% of these incidents took place in Israel, making it the most vulnerable country in terms of terror attacks. India with a share of 6.6% is the second most

¹⁶ Year wise no of attacks on rail network in India as per SATP database

1996 – 1

1997 - 2

1999 – 2

2000 – 1

2001 – 1

2002 – 1

2003 – 2

2004 - 2

2005 - 4

2006 – 5

2007 – 9

2008 – 7

2009 – 50

2010 – 36

2011 – 24

Most of these attacks have taken place in the North East and in Naxal-affected areas. It may also be mentioned that SATP has collected these data from limited number of newspapers.

vulnerable country. Out of a total recorded 94,628 fatalities and injuries, again Israel tops the list with 10.6% share. India is at the third place with a share of 8.2% of fatalities and injuries. But to actually understand the impact of these tragic statistics, one needs to look at the respective size of India's and Israel's population – for every million population, Israel recorded 258 terrorist attacks as against just one incident per million population in India. Israel suffered 1502 casualties per million population, in case of India it was just 7. In terms of economic impact, it is more important to look at incidents per billion dollars of GDP statistics – here tiny Lebanon tops the chart and in case of India – despite far higher casualties – it hardly makes an impact. Exactly for the same reasons, present cycle of violence as witnessed from 2006-7 onwards is proving to be far more debilitating for Pakistan.

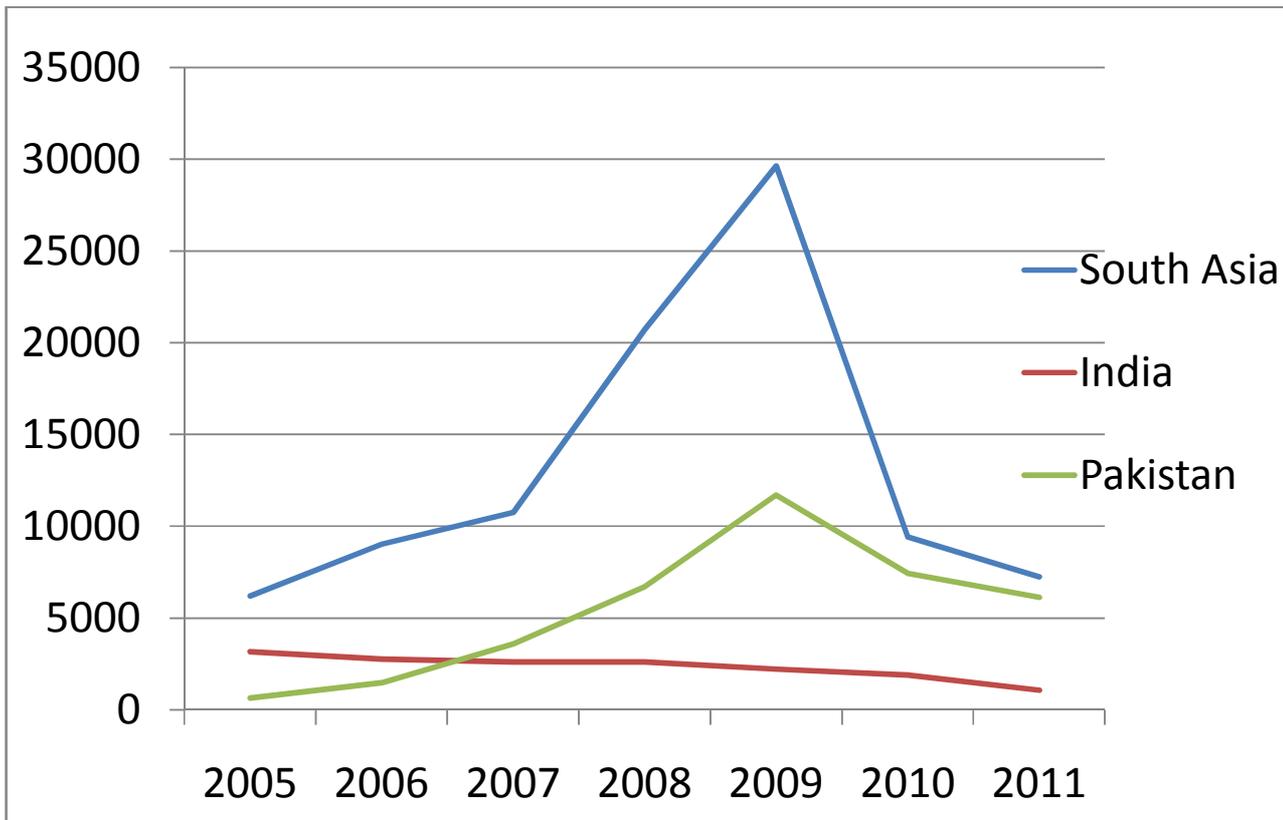
Table 3: Terror Statistics (1968-2004)

	Total No of terrorist incidents(1968-2004)/% of total 16,730 incidents	Total fatalities & injuries/% of total 94,628	No of terrorist incidents/ million population	Fatalities & injuries/ million population	No of terrorist incidents/ GDP 1 billion US\$
Top Country	Israel (10.9%)	Israel (10.6%)	Israel (258)	Israel (1502)	Lebanon (35)
India	6.6% (Rank 2)	8.2% (Rank 3)	1	7	2
Pakistan	2.85%	6.5% (Rank 5)	3	42	6

Source: Global Terrorism Database

The next chart, which tracks the same statistics for next 6 years (2005-2011) clearly brings out the gravity of the situation in Pakistan.

Chart 2: South Asia (2005-11)



Source: Global Terrorism Database

The sharp rise in 2008-9 is due to high casualty figures in anti-LTTE operations in Sri Lanka. But other than that terrorism-related incidents have gone up very sharply in Pakistan during this period. On the other hand, India has been witnessing a steady decline – in fact there have been considerably less violence in recent years in some of the long-standing trouble-spots like the North-East and Kashmir valley (though incidents outside these areas have gone up).

Though one can get a reasonably accurate picture in terms of human costs, it is difficult to arrive at a correct estimate of property losses. One of the main reasons for that is lack of insurance penetration in a poor region like South Asia. But it is possible to present some analysis of the actual economic impact of terrorism in South Asia. To have a closer look, we propose to look at three different levels – macro-level (that of a province or region), city level and at micro level like a particular industry segment. In our understanding, terrorism so far has not become a large enough problem for the Indian economy as a whole. On the other hand, the recent wave of terror in Pakistan has seriously dented the country's economy and this admission comes from

the Pakistan government itself. In 2010-11, Pakistan Economic Survey¹⁷ carried a special chapter on how the war on terror is bleeding the economy white. The cost for anti-militancy operations went up from US\$2.72 billion (2001-02) to US\$17.82 billion (2010-11). Thus a poor country like Pakistan was forced to spend a total of US\$68 billion between 2001 and 2011. Travel ban by most of the western countries along with general insecurity led to a precipitous fall in investment and trade. Terror and trade is always inversely correlated – textile export almost slumped in Pakistan as foreign buyers refused to travel to the country or open letter of credit facilities with Pakistani banks. Widespread violence directly led to a sharp rise in insurance premium, effectively shutting foreign capital and industry out of Pakistan¹⁸. In the North-West frontier (Khyber Pakhtunkhwa) and FATA, millions were displaced, physical infrastructure was destroyed and travel and tourism came to a virtual halt leading to massive job losses. In 2009, after the global credit crisis, Pakistan's growth rate plummeted to just 2% and as most observers have noticed threat of terrorism and anti-terror operations were equally or perhaps more responsible for the crisis than global turmoil. The result was best summarized in the Economic

¹⁷ http://www.finance.gov.pk/survey_1011.html

¹⁸ Both Abadie and Gardeazabal (2005) and Enders and Sandler (1996) have found negative correlations between increasing number of terror attacks and declining foreign direct investment. Nitsch and Schumacher (2004), show how countries affected by terrorism trade less with each other – India and Pakistan ideally fit into this category.

Abadie, Alberto and Javier Gardeazabal. 2005. "Terrorism and the World Economy," Working Paper, Harvard Kennedy School of Government, <http://ksghome.harvard.edu/~aabadie/twe.pdf>.

Enders, Walter and Todd Sandler, 1996. "Terrorism and Foreign Direct Investment in Spain and Greece," *Kyklos*, Vol. 49(3), pp. 331-52.

Nitsch, Volker and Dieter Schumacher .2004. "Terrorism and International Trade: An Empirical Investigation," *European Journal of Political Economy*, Vol. 20, pp. 423-433.

Also see, William E James, "Indonesia's External Trade and Competitiveness: Assessing the Economic Costs of terrorism", paper presented at the USAID-CSIS Seminar on Economic Cost of Terrorism : Indonesia's responses", May 2002, Jakarta.

Survey itself: “Pakistan has never witnessed such devastating social & economic upheaval in its industry, even after dismemberment of the country by direct war”¹⁹.

Impact at Provincial Level: One of the most distinguishing features of terrorism in South Asia is its duration – in a number of places, a large area is held hostage to terrorism for a considerable period. Kashmir Valley in India and in recent times NWFP-FATA in Pakistan are examples of how local economy is either destroyed or severely distorted due to long and intensive terrorism. The unique reality of Kashmir is that now for more than two decades it has been witnessing terrorist violence at a level, which is much more intensive than isolated attacks but at a level lower than an open civil war. Between 1989 (when terrorism broke out in the valley) and 2011, Kashmir has witnessed as many as 17 years of high density violence, resulting in more than 1000 fatalities a year²⁰. This high level of physical violence resulted in sharp increase in both direct (destruction of property, infrastructure and displacement of people) and indirect cost (policing cost, deployment of army and paramilitary, terror tax on business and individuals). This long phase of violence virtually destroyed Kashmir’s tourism business. There were specific attacks on Bengali tourists (largest domestic group of tourists in the valley) and a number of foreign tourists were kidnapped. Kashmir’s famed handicraft industries like hand-woven carpets, shawls, papier mache virtually collapsed. Growers of a number of fruits and cash crops like apples, saffron went out of business. Roads fell into disrepair and power supply all but broke down due to targeted attacks and difficulty in maintenance. The following two tables may be helpful in understanding the effect of such physical violence in the valley, home to an estimated 5.5 million people:

Table 4: Loss of Lives in Kashmir

¹⁹ Arshad Ali, ECONOMIC COST OF TERRORISM: A CASE STUDY OF PAKISTAN accessed online www.issi.org.pk/publication-files/1299569657_66503137.pdf

Pakistan Economic Survey 2010-11

²⁰ Since the beginning of the insurgency till 31.1.2011, 13846 civilians and 4807 security personnel have been killed in Kashmir, Home Ministry Annual Report 2011-12. Pl see the table below

<u>Year</u>	<u>Incidents</u>	<u>Security Forces Killed</u>	<u>Civilians Killed</u>	<u>Terrorists Killed</u>
2003	3401	314	795	1494
2004	2565	281	707	976
2005	1990	189	557	917
2006	1667	151	389	591
2007	1092	110	158	472
2008	708	75	91	339
2009	499	79	71	239
2010	488	69	47	232
2011	340	33	31	100

Source: Home Ministry Annual Report of different years. Before 2003, figures are mentioned according to financial year i. e 2002-03, therefore, difficult to compare with later figures. SATP gives a complete table from 1988 to till date but figures are quite different

Table 5: Destruction of Property by Militants in Jammu & Kashmir

Year	Total Incidents	Govt Buildings	Educational Buildings	Private House	Bridges	Shops	Hospitals
1990	646	501	129	1242	172	202	0
1991	391	45	24	819	24	83	0
1992	564	65	57	2312	28	200	0
1993	662	98	46	1110	34	400	0
1994	606	172	119	666	46	162	4
1995	688	127	133	1814	16	402	2
1996	482	52	68	602	2	161	3

1997	259	13	11	437	5	67	1
1998	177	13	15	273	1	66	0
1999	136	7	9	284	2	6	0
2000	129	14	6	330	1	107	0
2001	274	30	16	419	2	77	1
2002	255	14	10	421	4	20	0
Total	5268	1151	643	10729	337	1953	11

Source: Government of India, Ministry of Home Affairs, Annual Report 2002-03, p 13

Apart from outright destruction, a long period of violence actually introduces long term distortions in the economy. There was no dearth of fund flow into Kashmir during this period. During the decade of 1991-2000, Srinagar was one of the rare Indian cities to have witnessed sharp rise in property prices. A New York Times report in 2002 claimed that “... There are 21,000 cars in Srinagar alone — a fivefold increase from 1990. There were 560 private schools in the valley seven years ago; there are 1,360 now.... No one knows how much money for militants, carried in person or passed on through bank deposits, has come into the state. Some suspect that at least some of that money has been channeled through Jammu and Kashmir Bank, the most successful institution in the state and the most vivid emblem of Kashmir’s boom. Since militancy began, its deposits have grown from \$458 million to \$2.29 billion.”²¹ Central government poured in more funds than ever before²², there were aids from outside and then, there were clandestine supply from across the border through separatist elements. However, these funds could not be channelized through productive economic routes due to terrorism. Instead these funds helped to strengthen the distortion in the economy. Typically even after

²¹ Amy Waldman, “Border Tension a Growth Industry for Kashmir”, New York Times, October 18, 2002, http://www.arches.uga.edu/~sga/readings/kashmir_growth_industry.htm. – though this is available online, we actually chanced upon this article in Mahendra Lama, 2005

²² Details would be found in Annual Reports of the Union Home Ministry. For example in Nov, 2004 Prime Minister announced a special package of Rs 24000 crore for the state. It may not be out of place to mention that the state of J&K has one of the lowest poverty ratios in the country and one of the highest percentages of population in government employment.

militancy ends a state takes a long time to come back to economic mainstream – for example Punjab or Assam – due to prevalence of these distortions in the economic structures.

Two regions of Pakistan – North West Frontier Province (now Khyber Pakhtunkhwa) and Federally Administered Tribal Areas or FATA – have witnessed unprecedented violence since 2005-06. Our purpose is not to trace the root of this violence but this is directly connected with the so-called war on terror. Through suicide bombings, use of fatal explosives, militants in these two areas have inflicted massive casualties on security forces and common men. Retaliation by the Army has sparked off more violence and resulted in more fatalities. Militants here have deliberately targeted business and economic infrastructure. In addition, they have also launched a ruthless attack on educational institutions – as a part of their strategy to implement their ideology through theological seminaries rather than secular schools – destroying or damaging as many as 65% schools in Swat Valley alone. The economic cost of such attacks will have to be borne by future generations too. Swat, like Kashmir Valley, was a premier tourist destination. There were more than 800 hotels in Swat alone employing more than 40000 people in the hospitality sector – most of these hotels went out of business and people lost their livelihood as tourism economy of Swat almost collapsed²³. Similarly fruit economy of Malakand and Swat are on the verge of collapse. Violence has displaced more than 3 million people in these two areas – this has put a huge strain on the entire Pakistan economy. Even when the violence subsides, it will take many years to rebuild/repair these losses²⁴.

What we have been discussing so far is the economic consequences of a terror attack – that is from a victim's point of view. There is also a cost of harbouring terror - Benmelech, Berrebi and Klor in their paper on economic impact of suicide bombing have presented robust evidence for

²³ Arshad Ali

²⁴ It is an interesting coincidence how terrorism, in different time period, has destroyed tourism on both sides of the border – in two of the most picturesque destinations of India and Pakistan. A number of studies have looked at the comprehensive damage inflicted on tourism by terrorism. Some of the studies have also focused on how tourist inflow gets diverted due to one or a few incidents and then take years to come back to the original destination. Milken Institute Report, 2006 gives the details.

cost of harbouring terror²⁵. According to their calculations, a single successful suicide attack in Israel results in 5.3 per cent increase in unemployment and significantly set back the home district of the concerned Palestinian suicide bomber at least for next six months. Pakistan, like India and other countries is definitely a victim of terror but it is also paying an additional cost of harbouring terror.

A Tale of Two Cities: Terrorism is essentially an urban phenomenon. City as we all know, apart from being a societal melting pot, which is often volatile, also is the growth engine of economy. The connection therefore is quite obvious - as the basic intention of any terrorist organization is to inflict maximum damage so they are better off targeting congested urban areas where density of both population and productivity is maximum. Among all the major cities and capitals around the world three South Asian cities have been hit most number of times by terrorists – Kabul, Karachi and Mumbai. Since this article is more about India and Pakistan, we will limit ourselves to Mumbai and Karachi. There are many similarities between these two cities – right from pre-independence days they have been described as sister cities – both are port cities with mixed population and with huge hinterland. Since 1947, both have been commercial capitals of their respective nations.

Bombay or Mumbai is an intriguing city – from the early 1990s or more specifically since the Babri Masjid demolition in 1992, Mumbai and every sphere of Mumbai life from underworld to Bollywood has been under the shadow of terrorism. Various connections involving terror organizations and incidents are too well known to be repeated here but the table provided below captures the regularity of terror attacks in India's largest and the most important urban centre in last two decades:

Table 6: Terror Attacks in Mumbai

²⁵ Efraim Benmelech, Claude Berrebi and Esteban F. Klor: THE ECONOMIC COST OF HARBORING TERRORISM

Working Paper 15465. <http://www.nber.org/papers/w15465>
NATIONAL BUREAU OF ECONOMIC RESEARCH, October 2009

Sl.No.	Date	Place	Killed	Injured
1	March 12, 1993	13 blasts across the city	257	713
2	August 28, 1997	Near Jama Masjid	0	3
3	January 24, 1998	Malad	0	1
4	February 27, 1998	Virar	9	0
5	December 2, 2002	Ghatkopar	3	31
6	December 6, 2002	Mumbai Central railway station	0	25
7	January 27, 2003	Vile Parle	1	25
8	March 13, 2003	Mulund Railway Station	11	80
9	April 14, 2003	Bandra	1	0
10	July 29, 2003	Ghatkopar	3	34
11	August 25, 2003	Gateway of India and Zaveri Bazaar	52	160
12	July 11, 2006	7 blasts at 7 locations in local trains across the city	181	890
13	November 26, 2008	Multiple terrorist attacks across the city	166	300
14	July 13, 2011	Serial blasts in Mumbai	26	131

Total	710	2393
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Source: South Asia Terrorism Portal, <http://www.satp.org/>

Every time there was a serial blast or isolated blasts in Mumbai, regular targets included suburban railway, which is the lifeline of Mumbai, stock market and diamond trading centres. On 26 November 2008, when the most daring terror attack took place, two of the city's most important hotels were the prime targets, in addition to the main railway station. Bombay Stock Market came to a standstill when it was attacked in 1993 but since then stock trading has largely moved on to computer screens and thus has become largely location-neutral – today a blast or serial blasts in Mumbai affects the stock market the way any other disaster does but does not bring trading to a halt. Similarly major stock traders or companies have also fanned out across the city rather than staying around congested Dalal Street. The story of diamond industry is somewhat different – just like the Bombay stock Exchange, Bombay diamond hub, which is centered around Zaveri Bazaar-Opera House (target of attack even in 2011) has been the target of repeated attacks. A large number of diamond traders, who are predominantly Gujarati Jains and Hindus - have already shifted base to Gujarat (Surat, Ahmedabad), which they consider a safer option. Some of the traders have also shifted or are in the process of shifting to Bharat Diamond Bourse in Bandra-Kurla, leaving the South Mumbai diamond hub bereft of its former glory.

It is however important to strike the right balance while measuring the actual impact of terrorist attacks on the economy of Mumbai. Some of the businesses are shifting out of Mumbai due to many reasons, including very high cost of real estate (highest in the country and one of the costliest office spaces anywhere in the world); general lack of security in a congested, unplanned city is one of the factors there but not always the only factor. Similarly newspaper headlines in praise of so-called Mumbai spirit or resilience of the city the day after a blast appear to be overdone. In most cases people come out or board the same train, which was the target previous day, not as a conscious protest against terrorism but simply because they do not have an option. Mumbai in economic terms is no longer the sole growth engine of a resurgent

Indian economy. Mumbai city has largely missed the software bus – Pune, apart from its manufacturing focus, appears to have claimed the pole position in terms of new economy in the region. Pune, traditionally the gentle-paced small town and Marathi cultural capital, has emerged in the last two decades as a knowledge economy hub. As Pune emerged as a destination for many an IT company and ambitious youngsters, terror followed on close heels – German bakery blast on 13 February 2010 killed 17 people and injured at least 60, including foreigners.

Karachi similarly is Pakistan's most populous city and it is more important to Pak economy compared to what Mumbai is to Indian economy. Karachi city alone accounts for more than 50% of Pakistan's total revenue collection and it contributes more than 20% to the nation's GDP. Karachi port, the most important commercial channel for the Pakistani economy, accounts for more than 60% of trade (Karachi and Port Qasim together handle more than 90% of Pakistan's cargo traffic). In 2010, all four provincial capitals in Pakistan were among the worst affected cities in the country in terms of terror attacks. 44 people were killed in Lahore, 111 in Peshawar and 189 in Quetta. But the level of violence in Karachi was far more damaging than all these cities put together. In 2011, all the terror-related casualties in Sindh province were reported from Karachi city. As per SATP database, the total casualty in 2011 in Karachi was 1048²⁶. As per the other available source, CRSS²⁷, the figure stands at 1675. There are many shades of violence in Karachi – political, ethnic and routine criminal or hooligan violence. These have often resulted in huge number of targeted killings apart from regular suicide bombings and bomb blasts. Entire Pakistan appears to be paying a very high economic cost for terrorism but Karachi city seems to be worst affected simply because more business has traditionally been concentrated here and it has more potential than other places.

Impact at Micro Level: We have already discussed about the impact of terrorism at the provincial and city level. Targeted terror has also impacted certain industries and places at the grass root level as well, inflicting severe economic hardship on people associated with the

²⁶ All data used in this paragraph so far is from SATP, <http://www.satp.org/>

²⁷ Center for Research and Security Studies, <http://crss.pk/beta/>

place/trade. Most evidences in this category are, however, essentially anecdotal in nature. Before terrorism peaked, Kashmir was known for its cricket bats made from local Willow tree. This thriving industry all but collapsed due to security problem. The industry eventually over the years has shifted base to Punjab. Manufacturers in Punjab use the same wood but value addition is now done outside Kashmir. We have already mentioned how diamond business is moving away from its traditional hub in South Mumbai. Similarly certain areas in a metropolitan city have seen property prices dipping or business straying away as there is a general sense of insecurity. This again as discussed in case of New York may not be a net negative for the economy but for local economy and local people often it proves to be a crippling blow. Similarly for businessmen and companies and communities at individual level cost of an attack or destruction is often borne even years after the actual damage is done. Rebuilding Taj hotel or Oberoi in Mumbai is costly but may not pose a serious challenge for their owners. But rebuilding a monument or even individual business involves huge cost often almost impossible for their owners to bear – this assumes special significance in the context of absence of insurance.

Indirect Cost in South Asia

Indirect cost of terrorism in South Asia needs to be seen in two separate categories – one is the tax to the government and the second is in terms of terror tax to individuals and businesses. Forced resource diversion – mainly from development sectors to security – is the biggest drain on exchequer. Compared to a developed country like the USA this forced resource diversion hurts India and Pakistan much more. There has been a huge increase in India's internal security (Home Ministry) budget in the last few years. For a more detailed analysis perhaps a part of India's defence budget should also be taken into account. But more importantly as policing is a state subject so the hike in central government budget alone does not represent the full picture. We have no detailed study of how security expenditure has gone up in terrorism-affected states – Mahendra P. Lama, quoting from Paul Wallace, says that security budget in Punjab went up by 20 fold from Rs 150 million in early 1980s to more than 3 billion in 1992²⁸. In Kashmir, for

²⁸ Mahendra Lama, 2005

instance, apart from bearing the principal cost of peace keeping through the army and para-military forces, central government has been reimbursing all security-related expenditure (cost of raising reserve battalions, housing, transportation, medical expenses etc) – from 1989 to 31.3.2011, a Rs 3583.30 crore has been transferred to the state government on this account²⁹.

Table 7: Home Ministry Budget

Year	Budget (Rs Crore)
2002-03	13037
2003-04	13182
2004-05	15004
2005-06	17854
2006-07	19214
2007-08	22622
2008-09	32125
2009-10	40780
2010-11	37136
2011-12	48920

Source: Expenditure Budget of different years

In case of central government spending the key elements are: increased spending on Central Para-Military Forces (CPMF), cost of building new institutions like NATGRID, NIA, NCTC and expansion of existing units like regional NSG hubs, providing funds for capacity building of state police forces³⁰ and vastly enhanced cost of digital security.

In terms of Pakistan, it is far more difficult to investigate the actual amount of diversion. There has been little change in terms of Pakistan's internal security budget but its defence budget has

²⁹ Home Ministry Annual Report 2011-12

³⁰ Beginning with 2000-01, central government has been providing on an average Rs 1000 crore every year to the states for police modernization. Jammu & Kashmir and north-eastern states are eligible for 100% support under this scheme while other states get 75% reimbursement. Home Ministry Annual Report 2011-12

predictably gone up sharply during this period (post 2006) when the army launched its offensive against the militants in border areas (**Kingshuk: if you or anyone can help in terms of actual figures**).

Individuals and businesses in terror-affected areas are also made to pay the so-called terror tax (i.e increase in transactional cost) in different ways. In terms of individuals, the chief cost is due to displacement – we have already mentioned massive internal displacement in Pakistan due to this so-called War on Terror. In India also, Kashmiri Pandit community represents a case for systematic targeting by terrorists resulting in displacement of the entire community from their original homeland that is Kashmir Valley. According to Home Ministry statistics, a total of 58697 Kashmiri Pandit families were forced to migrate out of the valley during the early part of the militancy. Most of these – 38,119 families are living in the Jammu region, 19338 families are living in New Delhi and the rest in other states/union territories. Jammu & Kashmir government, Delhi government and other state governments have been providing cash support to eligible families and large-scale housing projects have been taken up in different parts of Jammu to provide accommodation to them³¹.

For any business, there is a sharp hike in insurance premium if the establishment is located in a state/locality where security is a serious concern. Almost every business/office establishment in metropolitan India today is forced to invest considerable resources in securing their premises. There are private security guards in every housing complex and every large religious place or other community centres. Smart entrepreneurs have cashed in this general sense of insecurity – private security business is one of the fastest growing businesses in India today. But it is important to underline that all these add to the cost of transacting business.

As business centres, tourist places, and citizens are becoming common targets, security today is a key concern to business, individuals, government. Indian security market was valued at around US \$ 1 billion for 2009 and is estimated to be US \$9.7 billion by 2016. Among the major spenders are airports, mass transport and maritime sectors. The Indian electronic security

³¹ Details from Home Ministry Annual Report 2011-12

market is growing at 23 percent CAGR with potential to grow at 40%. One third of the spend goes on Airport Security. There are as many as 5000 (includes unorganized and registered) companies in Indian security market today. While number of private guards stands at over 5 million. Corporate are estimated to have upped security budgets by 35-40% during the recent years³².

The present situation poses different challenges for both the government as well as the private sector. Important private offices like the campus of software major Infosys in Bengaluru are now being protected by a specially trained Central Paramilitary force, CISF. Similarly almost all the important temples around the country are being protected either by the central forces or an elite commando unit of the concerned state police. CISF is also deployed in Metro railways in Delhi and Calcutta just like airports. Important research institutions (following blast at Indian Institute of Science in Bengaluru) and even courts (after repeated targeting by terrorists) are being protected by gun-toting paramilitary forces. Elite NSG commandoes are deployed in every domestic flight. It is important at least for analytical purpose to see in detail how terrorism fuelled insecurity leads to massive cost burden on the economy at different levels.

It was mainly with the purpose of tracking terror financing that certain measures were introduced in Indian financial system. The foremost among those is the Know-Your-Customer, KYC norms in banking and financial institutions. Short-lived Cash Transaction Tax is also believed to have helped in this regard. One industry, which has suffered most due to security concerns, is telecom. A security transmutation is now taking place in Indian telecom sector after the telecom-terror nexus has been established. Indian government has just launched a nationwide voice and data monitoring project with an initial cost of Rs. 450 Crore. This is the most comprehensive live monitoring possible at the moment of telecom traffic via wireless, terrestrial cables, sea cables and satellites modes. A number of monitoring nodes are in operation and more are in pipeline. Terror –Mobile nexus has brought security at center stage of the telecom policies. Active use of mobiles in several terror blasts including infamous attack on Indian

³² These are industry estimates, there is no verifiable annual reporting on the issue

parliament in 2001 and attack on Mumbai have come up as a major security challenge for security forces. Open *Wi-Fi*, terror mails, unprotected cybercafés have forced authorities to look for a comprehensive framework on telecom security. A compulsory security identification of mobile subscriber has become a practice now. Government has also forced a ban on SMS service in J&K with a limited network at border areas.

India has barred import of mobile phones without identity code, followed by the ban/monitoring/ security clearance of Chinese equipment import. Terror threat has pushed authorities to broaden their horizon on telecom security and the office of National Security Adviser (under PMO) has become the center point for strategic coordination. MHA has dictated tough security stipulations for global push mail service providers like Blackberry (for putting a nodal server on Indian soil) and started ramping up decryption capacities at the level of security agencies. Cyber forensic institutions, top level intelligence agencies, telecom labs and experts have now been roped in to formulate a comprehensive Cyber security policy for India. This is the first time when manufacturing and import of telecom technologies / gears was also brought under the telecom security deliberations.

Real time monitoring of mobile calls is already in full swing. Companies have been ordered to keep call data records for the longer duration. Compulsory security certification for import of telecom gears and technologies and security led guidelines for management of telecom companies have already been implemented. A National Telecom Security Policy and a New Telecom Manufacturing Policy are ready. A nationwide telecom monitoring network, centralized cyber content monitoring system and a real time location via mobile phone are in the pipeline.

This serious concern for security has also aided certain long term changes in our economic behavior to some extent. After repeated terror attacks at crowded markets like Sarojini Nagar, people feel more secured in hanging out or shopping inside a mall, where there are entry barriers, metal detectors and pat-down searches. This is no way to suggest that this change is solely due to security concerns but to a certain extent security has played a role here. Similarly

the issue of segregated and community-centric housing is an unfortunate fall out of security concerns³³.

Bomb and the Bill

Terrorism is normally seen as a political and law and order problem and as such responses are always designed from that perspective. Most observers do notice the asymmetric nature of warfare unleashed by terrorists, but till recently there was not much effort to understand the actual nature of damage caused by terrorism. Impact or economic consequences of a terror attack is never limited to direct cost alone. Total cost of terror is an aggregate of individual and government responses. Terror forces an individual to modify his/her investment and consumption patterns. Terror also forces a government to change its priorities, very often that means increasing security expenditure and curtailing equal amount of funding for socio-economic development. This is the actual cost that an act of terrorism imposes on any society. Beyond government finances, terrorism also leads to a serious distortion in terms of capital formation and growth in general. Certain industries are immediately affected, other industries may or may not be affected following an act of terror; but over a period of time any economy living under constant threat of insecurity suffer sub-optimal resource allocation. Targeting private or commercial properties in particular leads to fall in capital formation and thereby affects overall economic growth.

The way economic consequences of terrorism have been analyzed in the West that may not be the right matrix for South Asia, which is a victim of long term high intensity terrorism. But construction of a new paradigm would require in-depth field studies and adequate data, both of which are absent here. In terms of policy response, there is an urgent need to appreciate how exactly terrorism affects different levels of economy and formulate policy accordingly rather

³³ Again there are only anecdotal evidence but increasingly it is becoming a norm in our metro cities, particularly in New Delhi and Mumbai to restrict access to housing. Despite being ready to pay the required price/rent, it is becoming difficult – and in certain pockets, impossible for Muslims to find accommodation. There are plenty of newspaper reports on the subject. See for instance a sensitive coverage in The Hindu, 8 July, 2012, “Closing the door on **Muslims** in our cities”.

than simply increasing annual budget allocation for the affected state for every possible category.

Immediately after 9/11, the USA launched three operations, ostensibly to make both the USA and world a safer place – Operation Enduring Freedom in Afghanistan, Operation Iraqi Freedom and Operation Noble Eagle to make US military bases and homeland more secure. Out of these three, Operation Noble Eagle is the least known and Washington has spent least amount on it (total allocation in fact came down from \$8 billion in 2003 to \$100 million per annum beginning 2008)³⁴, yet it has been the most successful so far in terms of making USA more secure. Contribution of two other high-profile campaigns in making American life more secure - despite much higher cost - remain highly questionable. So the basic policy challenge for governments – more so in developing countries like India and Pakistan is to avoid the traps of asymmetric war and allocate resources judiciously and effectively.

³⁴ Amy Belasco, The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11, Congressional Research Service, March, 2011