

Lessons from Japanese earthquake , tsunami and Nuclear disaster-3

By
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Is this a black swan event?

- Wikipedia says:
- The **Black Swan Theory** or **Theory of Black Swan Events** is a metaphor that encapsulates the concept that *The event is a surprise (to the observer) and has a major impact. After the fact, the event is rationalized by hindsight.*
- *The theory was developed by Nassim Nicholas Taleb to explain the disproportionate role of high-impact , hard to predict and rare events that are beyond the realm of normal expectations in history, science , finance and technology.*

May be not

- In 2007, Tokyo Electric Power, or Tepco, escaped a disaster at its huge Kashiwazaki-Kariwa nuclear power station, on the opposite side of Japan, when that plant was damaged by a 6.8-magnitude earthquake — three times as large as what the plant was designed to withstand.
- And there were Three Mile Island and Chernobyl.
- Were any lessons learnt from these?
- BOJ has pumped in 15 to 25 Trillion yen (\$150 to \$ 250 B) after the disaster into the financial system.
- Would a fraction of these amounts spent on preventing such a disaster have helped?

Lesson-13

- One important lesson seems to be that we do not learn lessons!

Resilience in supply chain

- The Problem:
 - In 1997, there was a fire at a plant of one of Toyota's main suppliers, Aisin Seiki, which made a brake valve used in all Toyota vehicles. Because of the carmaker's just-in-time system, the company had just two or three days of stock on hand. So the fire threatened to halt Toyota's production for weeks.
- The reaction and solution:
 - But Toyota and teams of suppliers in the company's supply-chain network worked round the clock for days to design and set up alternative production sites.
- Result:
 - Toyota's assembly plants reopened after being shut down for just two days.

Lesson-14

- Companies now buy from all over the world.
- Ipad 2 is said to have 5 parts coming from Japanese suppliers.
- So they have to be resilient to face troubled times and choked supply chains.

The unbelievable Japanese

- None other than the Japanese will have their patience and resilience.
- See this report of a Japanese driving home in Tokyo after the disaster struck:
 - “There was no pushing and shoving, Takeuchi reported, no honking of car horns, even in long waits for a tank of gas. On the highway, anxious drivers eager to get home to see if their families were safe, remained in their lanes.”
- In the 1923 Grand Kanto earthquake over 100,000 people lost their lives, and the patent office itself was destroyed; The patents registered in 1925 were 69% higher than they had been in 1922!
- I do not know how many other countries can claim this type of a resilience and grit.

The unbelievable Japanese-2

- In Sony
 - Employees with medical training had helped treat not only Sony workers but also local residents
 - Engineers at a flooded plant started to make home made boats using office furniture and salvaged tsunami debris using them to bring food to starved townspeople!
- On the Kobe quake of 1995, the disaster researchers Kathleen Tierney and James D. Goltz wrote: "Spontaneous volunteering and emergent group activity were very widespread throughout the emergency period; community residents provided a wide range of goods and services to their fellow earthquake victims, and large numbers of people traveled from other parts of the country to offer aid."

The unbelievable Japanese-3

- A statement by one of the 50 Fukushima Fifty- the Nuclear technicians, fire fighters and soldiers who have decided to remain in the nuclear plant to do whatever they can:
 - “To all the residents (around the plant) who have been alarmed and worried. I am truly deeply sorry. There are people working to protect all of you, even in exchange for their own lives.”
- This is the world’s most expensive natural disaster at \$309B-not including power shortage related losses. (Hurricane Katrina \$125B); Japan GDP growth will be affected by 0.5%. No other country could have survived this type of a disaster the way Japan has.

This country and its people are truly incredible!

The unbelievable Japanese-4

- If you want proof of how resilient Japanese can be, read this.
 - The Japanese road repaired SIX days after it was destroyed by quake
 - If you want to see the road as it was immediately after the earthquake and after 6 days goto:
- <http://www.dailymail.co.uk/news/article-1369307/Japan-tsunami-earthquake-Road-repaired-SIX-days-destroyed.html>
- There is also a view that the disaster may help improve Japan's GDP.
 - “In terms of GDP, it is fully possible that subsequent demand from reconstruction will exceed the drop in GDP caused by the initial declines in production,” a BOJ official says.

Lesson-15

- Many of us will do well to learn many good lessons from a country which is repeatedly battered and ravaged by nature and yet they show remarkable patience and resilience.

The chain of the supply chain

- The major manufacturers in Japan have stopped production because their suppliers and sub contractors are affected.
- Some examples of the global ripples:
 - Shin-Etsu Handotal produces 22% of the silicon wafers of the world and is in Fukushima which is ravaged by the natural disaster and is closed down.
 - 70% of anisotropic film , a key material used in manufacture of LCD displays comes from Japan.
 - This disaster has affected Chinese car makers as well

Lesson-16

- The chain of the global supply chain is very long and inter linked and any snapping in a corner is going to hit hard the entire world in some respects.

Demographics the new reality

- About one-in-three residents in the areas of Japan worst hit by the disaster are more than 65 years old, a significantly higher ratio than the national average of 22.7 percent.
- Japan is aging faster than any other country in the world. It has a birth rate of 1.37 children per woman. Schools are closing for lack of students.
- The demographics of many urban districts outside Tokyo and Osaka, and countless rural areas around Japan, are rapidly approaching those of the recently hit coastal areas.

Lesson -17

- India will be the youngest country in the world and Japan , the oldest.
- It is also stated many of the old in Japan are poor
- Some serious thinking has to be done by Governments on this huge demographic imbalance.

Lesson-18

- The internet is intact despite this mega disaster. How?
 - One: Undersea cables which carry most of the internet traffic were not affected that much. They suffered 'limited' damage
 - Two: Most landing stations are to the south of Tokyo.

Lesson:

Spread your facilities/suppliers geographically to reduce risk

Lesson-19

- How to survive a disaster like this?
- In such disaster prone areas:
 - Use reinforced concrete for buildings
 - Have buildings which are at least 3 stories tall
 - Earthquake expert Kit Miyamoto (lives in USA but has gone to Japan to help)

Lesson-20

- Rasesh Dhoshi mail on 10 things to learn from the Japanese:

1. THE CALM

Not a single visual of chest-beating or wild grief. Sorrow itself has been elevated.

2. THE DIGNITY

Disciplined queues for water and groceries. Not a rough word or a crude gesture.

3. THE ABILITY

The incredible architects, for instance. Buildings swayed but didn't fall.

Lesson-20 contd.

■ 4. THE GRACE

People bought only what they needed for the present, so everybody could get something.

5. THE ORDER

No looting in shops. No honking and no overtaking on the roads. Just understanding.

6. THE SACRIFICE

Fifty workers stayed back to pump sea water in the N-reactors. How will they ever be repaid?

7. THE TENDERNESS

Restaurants cut prices. An unguarded ATM is left alone. The strong cared for the weak.

Lesson 20 contd.

8. THE TRAINING

The old and the children, everyone knew exactly what to do. And they did just that.

9. THE MEDIA

They showed magnificent restraint in the bulletins. No silly reporters. Only calm reportage.

10. THE CONSCIENCE

When the power went off in a store, people put things back on the shelves and left quietly

Sources (for part 3)

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