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# An Earthquake is a Predictable Risk - The Unavoidable Istanbul Earthquake



For people who, like me, experienced the Marmara Earthquake of 1999 and were involved in search and rescue and reporting activities in the field, it literally was like a nightmare coming back to haunt us, causing us vivid recollections of the bad memories of 1999, which killed tens of thousands of people and destroyed 10% of the country's economy.

The magnitude of the 1999 earthquake was 7.4. This time, the country was hit by a 7.8, with more powerful intensity and impact.

As Topkapı University, we took immediate action to send water and food to the region in the south of Turkey, which was hit by a strong earthquake on Monday.

If you want to send aid to disaster victims, you should pay attention to the logistics and topography, such as side roads, blocked roads, locations where there is chance of heavy snowfall and ice, etc.

If you do not know such details, you would be contributing to the traffic jam despite your good intentions. In short, you would do more harm than good.

When you look at a map of Turkey, you see that there is quite a distance from the west to the east of the country, and as you travel to the east, the weather changes drastically.

Therefore, the aid sent to the region from the western provinces was delayed due to heavy snowfall that has blocked the roads in Central Anatolia.

So, we decided to send the aid from the East to the West of Turkey. We set out to send drinking water from Diyarbakır, the city at the far end of the earthquake-stricken areas.

## The vital importance of logistics and communications

Instead of sending aid from Istanbul to Gaziantep's İslahiye district, one of the areas worst hit by the earthquake, we have decided

to send aid from within the city, and to do that, we have contacted the flour producers in Diyarbakır for the shipment of bread flour to the area.

With the help of TMO (the state organisation responsible for purchasing and selling mainly grain), we have sent 25 tons of bread flour to İslahiye. Most of the people in the region can bake bread in wood ovens or tandoori plates without electricity.

Obviously, everyone is trying to help the victims, however sending aid from the west of the country leads to more problems. It is much easier to send aid from provinces close to the earthquake-hit areas.

People from all nations should get a map and learn as much as they can about the geography of their country.

It is difficult to estimate the magnitude of the damage based on the information we could gather.

However, considering that thousands of buildings have been destroyed so far, we could say that the death toll has been massive, which is tragic but also thought provoking.

The fact that two independent earthquakes of 7.8 and 7.4 magnitude occurred in the same area is a quite unusual phenomenon.

Never underestimate the vital importance of communication. Thanks to the information provided by our friends in the affected region, we managed to deliver aid to the victims.

Sadly, we see that such emergencies tend to bring severe information pollution and exploitation.

## Economic Impact of the Earthquake

As an economist, I made a statistical analysis of the economic activity in these ten provinces hit by the earthquake: The total export

revenue achieved by these provinces in 2022 was around 21.6 billion dollars.

Last year's export revenue in February and March was roughly 4 billion dollars.

If it takes too long to recover from the impacts of the earthquake, the affected cities will be likely to lose approximately \$10 billion export revenue. Given the fact that the sectors in the region mostly use domestically made inputs, it is certain that Turkey's current account balance will be seriously affected.

Also, in terms of their contribution to GDP, these provinces' value added account for 0.51% of Turkey's total gross domestic product. For instance, Gaziantep ranks first with 0.21%, followed by Adana with 0.11% and Hatay with 0.05%. Therefore, we could say that a nominal national income of \$5 to \$6 billion could be lost.

Out of the 24 million households in Turkey, 3.2 million reside in these areas affected by two recent powerful quakes, with an average of four persons per household.

Hence, we could say that the earthquake has affected around 12 to 15 million people. The total number of households in heavily damaged Kahramanmaraş and Hatay is respectively 303 thousand and 430 thousand.

I'm afraid the number of deaths from the earthquake will be the highest in these provinces.

## The Unavoidable Istanbul Earthquake

Sadly, we are soon to discover a destruction ten times worse than the one that had ravaged the cities and the people in 1999 Marmara Earthquake.

Today's Istanbul and its surroundings are much more populated and economically powerful than they were in 1999.

Also, as a hub of art, culture, sports and tourism, banking, finance, and real estate, Marmara Region of Turkey takes the lion's share in foreign currency earning activities and trade.

In the light of my past experiences, I could say that the job loss will reach 30% in the aftermath of this major earthquake and then slowly decrease to 10-15% in a ten-day period, not to mention an at least 2 percent decline in the country's GDP.

The overall loss would be at least 5%, perhaps 10%, of our total GDP. My heart is too heavy to even whisper the estimated number of invaluable human lives that we will have lost due to such a sweeping catastrophe.

**We might expect first the public banks to offer financial relief plans, including deferment of monthly loan repayments and forbearance, to borrowers affected by the earthquake**

Obviously, this earthquake will lead to collection problems for banks and financial institutions.

As it was experienced before, we might expect first the public banks to offer financial relief plans, including deferment of monthly loan repayments and forbearance, to borrowers affected by the earthquake.

In terms of public finance, the government would surely consider cancellation or deferral of tax liabilities and payment of social security premiums.

As for the disruption of both industrial activity and logistics, Turkey will have a little to worry about the current account deficit, because it will experience import problems as well.

However, since 90% of our imports consists of inputs required for production, functioning companies will inevitably be affected by business interruption that is not directly caused by the earthquake itself.

I should also mention the insurance damage. Although other insurers assume some portion of another insurance company's risk portfolio to balance the insurance market, there will definitely be problems with the rest, especially with increasing valuations.

If Istanbul gets hit by a massive earthquake in a time of struggling public finance and insufficient foreign currency reserves, the country may experience a sharp foreign exchange attack, followed by hyperinflation.

Frankly, I don't think that the government has enough precautions in place against the big Marmara earthquake which might come any time now.

The only thing we have is this ridiculous optimism assuming that buildings built after the 1999 earthquake might be more statically resilient.

In conclusion, Turkey will have to spend at least 15-20 billion dollars to recover from these recent earthquakes, and the unavoidable Istanbul earthquake will cost the country six or seven times as much.

Dr Emre Alkin is one of the most influential economists in the world. He is the President of Topkapi University in Istanbul, and well known author of the 4 best selling novels and 14 in total about socio-economics in Turkish and English. He held various positions in GSM and Telecommunication, International Financial Institutions, Payment Systems, Energy, Iron-Steel Industry and Insurance. Prof. Alkin participates in international projects about payment systems and financial management.