

Analysis of impact estimation methodologies

Although the welfare of society has increased, many natural disasters and major industrial accidents that have recently happened claim that still our mitigation and preparation measures are not enough for preventing a crisis occurring or at least reducing the negative effects. Thus, allocated resources of organizations and governments to crisis management are increasing. Nevertheless, due to the scarcity of resources, managers are not able to implement all the ideal measures. Moreover, they would like to see how the money allocated in pre-crisis phase reduces the impacts of a crisis. Therefore, it is essential first to measure the impacts from a crisis in the most effective way and afterwards to evaluate if the mitigation and preparedness measures were efficient or not.

However, it is a very challenging task to evaluate the impacts from a crisis. Many researchers have developed different models in order to estimate the impacts of crises. There are some methodologies that are used to create those models such as Computable General Equilibrium models, Input/output models, etc.

There are also many developed software to estimate the amount of impacts arisen from a crisis such as Hazus.

The aims of this project are:

- To study which are the main methodologies that can be used for impact estimation
- Explain in an aggregated way each methodology
- Develop a little manual about the Hazus software
- Simulate two real cases using Hazus software