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**Faculty of Economics and Management**

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**Extended Abstract of Bachelor Thesis**

**Impacts of Tohoku Earthquake on Japanese Economy**

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## **Summary**

This thesis focuses on the impacts of Tohoku earthquake and following tsunami on Japanese domestic and international economy. The consequences it had and the consequences that are still ongoing upon Japanese economy are discussed. Descriptive account of natural disasters impacts on economies, dealing with such threats and prevention of these is offered by the literature review. The work includes the analysis of Japanese economy, general familiarization with Japanese market and natural disasters and suggestions of dealing with regional economy restoration based on data evaluation and own ideas.

**Keywords:** Tohoku earthquake, economy, Japan, restoration of economy in the Tohoku area, impacts on Japanese domestic and international market

## **Objectives and Methodology**

### **Objectives**

The main purpose of the thesis is to investigate several impacts the Tohoku Earthquake in 2011 had and still has upon Japanese economy, domestic and international trade. Analysis of the Japanese economy, comparison to other natural disasters and their impacts on each state economies and examples and suggestions of dealing with regional economy restoration will be provided.

### **Methodology**

The thesis methodology is based on the analysis of information resources using methods of extraction, synthesis, induction, deduction. Data analysis will include, e.g. time series analysis methods depending upon data availability. Also some methods of comparative analysis will be utilized.

### **Theoretical part**

The losses caused by disasters are interconnected and all-together influences the economy – the growth of GDP or the level of state debt. The primary economic consequences right after the disaster may count the unavailability of clean water, collapses of infrastructure or disruption of energy supplies. Each of those then affect the prices of goods. For example, the damages to the infrastructure cause a distortion of trade – prices of food or crude oil rises.

Companies have to limit its production, thus leading to high unemployment. All those factors significantly reduce consumer demand. (Benson, Clay, 2003)

The drop in GDP continued on the whole year. As the main reason for this we recognize the mentioned decline in private consumption and relatively slow incentives for renewal made right after the disaster by government. For the strong Yen, the foreign investment and demand stagnated and also private investments made by Japanese almost stopped. The regional supply chain was disrupted which certainly affected the whole country's supply and exports as well which fell by 5.5% in the second quarter. (Soumu.co.jp, 2012)

As the key ports were closed due to tsunami and Fukushima airport destroyed and near-by one closed, the global supply chain has been interrupted. The main problem was in unavailability of semiconductor equipment in which Japan manufactures around 20% (for example NAND flash or sub-components for aircrafts and automotive industries). Many production factories have been shut down – such as those of Honda, Toyota or Mitsubishi. (Amadeo, 2016)

## **Practical Part**

Practical part consists of SWOT Analysis, Questionnaire and Comparison of Exports/Imports before and after the disaster.

### **Questionnaire**

The question on whether the living expenses rose after the disaster shows that 57% recognized a small rise in the expenses, other 32% a higher changes in the expenses and 11% almost no change. Following the closure of nuclear power plants all around Japan, the electricity prices went up. Japan already was among top importers of gas and crude oil in the world and those imports only got higher with the need to get more thermal power plant produced energy/electricity. The implementation of tax hikes is amongst other factors that cause the living expenses go high.

## **Conclusion**

The economic analysis carried out in the thesis has shown that even though the damages were extensive, casualties on life unbelievably high and psychological consequences long-lasting, the consequences on Japanese economy itself were not as high in the long-run point of view compared to for example Kobe earthquake in 1995. This is credited mainly to

the fact that Tohoku area had its share in the national GDP only 7% while in Kobe case it was over some 12% and the city was highly industrialized.

The aftermath of the disaster was so terrifying that it was necessary for the government to immediately inject around ¥15 trillion to assure financial stability and market liquidity. The government speedy reaction is to praise whether for fast acting on financial acts but also for mobilizing Self-Defense units and managing rescue works. In comparison to Kobe quake, the government was also quick and unhesitant in receiving foreign financial or material aid which helped the survivalist from the place of disaster to find at least some comfort, water and food.

Among the primary problems to be faced there was the huge problem with infrastructure damage which decelerated rescue plans, delivery of various supplies and later on inclusion back to into the business operations. The supply chains of water and electricity were disrupted and highly insufficient. Other urgent problem was the water scarce which was so significant that the small makeshift showers built in the shelters were guarded and everyone was only allowed to shower at a certain rate.

The harmed Fukushima Daiichi Nuclear Power Plant caused leakage of radioactive materials that contaminated the water and soil. Low levels of radioactivity were measured in the air at Fukushima Power Plant. This made it furthermore difficult for the agricultural articles to go back on the market as people feared the radioactivity. The leaking in Fukushima Power Plant caused extensive protests against nuclear power and led government to close all nuclear power plants around Japan for it to undergo various safety tests and innovations. This resulted in high mineral fuels and crude oil imports as Japan had to substitute up to 30% of nuclear plant produced energy with thermal plant produced energy. However, it seems very unlikely that Japan would desist from nuclear power despite the protests as that would be too costly and thermal power plants daily produce much more pollution.

Despite the rough downfall of Japanese yen it was able to appreciate relatively quickly thanks to repatriation efforts and through huge foreign exchange reserves held by Bank of Japan. The expansionary monetary policy was established aiming to secure and improve market liquidity. Short-run consequences were mainly lower export levels, higher import level (mainly for the mineral fuels/crude oil and food) and lower consumption. As was witnessed after the disaster, the insurance market is not sufficient. New programmes are expected to emerge and more people are expected to insure their properties.

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