Chapter 10
The Role of Disaster Regulations and Insurance Regulations on the Development of Disaster Insurance Markets:
Regulatory Models in G-7 Countries

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ABSTRACT

Recently, the climate regulations and stop-loss regulations have become a central policy parameter globally. In market-oriented economies, insurers as the biggest stakeholder-industry of natural disaster risk are facing the issue related to industry sustainability. Thus, the policy implications of natural disasters regulation on the insurance industry are enormous. Therefore, this chapter has made an effort to analyze the disaster management in the integrated framework. This integrated framework is based upon the analysis of the role of regulatory actions taken by three actors, namely, disaster regulation, insurance regulations, and firms' actions across the three stages of disaster management, namely, pre-disaster, underwriting, and post-disaster stages in G-7 economies. Based on the outcomes of the current analysis, the chapter found that there are two polar opposite integrated models (i.e., isolated best policy model in the case of Japan and spiral policy model in the case of Italy). Five models fall in between the two.

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INTRODUCTION

Theoretically, regulations are in general essential for well-functioning of insurance markets. However, the role of regulations is vital for insurance of higher intensity risks. These risks prove costly if appropriate regulatory tools are not employed for aligning objectives of policymakers with that of the insurance firms. Within this class of risks, natural disasters have grabbed significant attention in recent insurance literature. The National Aeronautics and Space Administration/ Goddard Institute for Space Studies NASA/GISS, (2016) reported that the average temperature of the earth has risen by 1.1 degrees Celsius since 1950. As per Cat Perils and Swiss Re (2016), economic losses due to catastrophes have grown to 85% during2015-2016. Other than these, simulation-based studies have highlighted that a mean increase of 2.2 degrees Celsius in temperature increases 5-10% in hurricane wind speed, and doubling of wind speed increases four-fold damage. A 25% increase in 30 min precipitation reduces average flooding period from 100 years to 17 years, and a rise of 1 degree Celsius in temperature will increase 17-28% increase in wildfires (Mills, 2005; Mills 2009). Thus, the insurance industry alone cannot afford the future consequences of insured losses. Therefore, the active and careful efforts by policymakers are vital for managing future consequences of severe nature risks (Herweijer, Ranger & Ward, 2009).

Previously available literature has covered the three stages for the development of disaster insurance. However, in the absence of optimal bridging regulation, the applicability of these regulations for sustainable market development remains questionable. This gap in the academic domain has produced many issues related to nonalignment of policy-and firm objectives (Gutmann, 2011, p. 231). Thus, policy design is critical for the development of disaster insurance market. Therefore, for fulfilling such a policy gap, an integrated analysis of policy regulations is necessary. The current study argues that the risk of natural disaster needs integrated and aligned views with a due focus on positive outcomes. Therefore, the present study has analyzed the interaction of all the three stakeholders in the existing literature across the three stages with the objective of the development of private disaster insurance markets. Therefore, this article is first of its kind which provides a critical assessment of these interactions at all the three stages interdependently. Hence, the outcomes of the current study have implications for the domain as well as for policy formulation.

This study has been carried out in seven parts. Section second surveyed the literature and the gap in the literature. The third section explains the theoretical framework used for hypothesis development. Section fourth discusses data source and collection method. Section five talks about the methodology used for analysis. Section six provides the results of the analysis, and section seven presents conclusion limitation and future research directions.

LITERATURE REVIEW

The context covered in the present chapter is one of the most popular topics in the insurance literature. Therefore numerous studies are available on almost every small aspects of this topic. For example (Andjelkovic, 2001) focused on socio-economic surveys to map the vulnerability of communities against any disaster. Whereas some studies have focused on occupational dependence and vulnerability of people living in high-risk zones (Wang et al., 2013).Out of which some may have an adverse impact on underwriting, risk modeling, and risk transfer techniques (Wang et al., 2013).For example, one common dilemma between policymakers and insurers is post-disaster funding formats. The inappropriate formats