

THE EARTHQUAKE INSURANCE PROTECTION GAP: A TALE OF TWO COUNTRIES

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Journal of Insurance Regulation 2020

IMPORTANCE The insurance protection gap, the portion of total economic losses generated by a loss event that is not covered by insurance, is an issue that concerns regulators, insurers, taxpayers and many others worldwide.

Globally, this gap came in at 161 billion USD in 2019 for all perils. For the earthquake peril alone, over the past decade (2010-2019) only 102 billion USD of 535 billion USD in losses were covered by insurance, not quite one-fifth of all losses. The literature is clear that countries where market penetration (or take up) of insurance is high are more resilient and bounce back considerably faster after a catastrophic loss than places where take up of insurance is low.

OBJECTIVES Our study provides an analysis into why market penetration of earthquake insurance for personal properties is considerably higher in the Lower Mainland of British Columbia (B.C.) as compared to western Washington state (WA) (~60 percent versus ~14 percent) even though both places are subject to similar and significant earthquake risk. We look at several potential influencers into earthquake insurance purchasing decisions, including socioeconomic factors (such as age, education, income), perceptions of seismic risk and expectation of government bailout, and issues pertaining to the earthquake insurance product itself (such as cost, product design and availability). We conclude with recommendations for policymakers regarding barriers and considerations for improving market penetration of earthquake insurance in WA that may also be relevant in other locations in the U.S. that also face natural catastrophe risk.

FINDINGS Several theories exist as to why take up of earthquake insurance in earthquake prone countries tends to be low considering the significant risk. These range from unattractiveness of the policy cost and design, household income constraints, limited overall awareness of earthquake risk, lack of understanding of insurance coverage, the expectation that the government will compensate losses, and lack of availability of coverage. Our analysis finds all but one minor difference in these factors and these do not explain the significant difference in earthquake insurance take-up rates in B.C. over WA. The only significant difference found between the two locales is the broader availability of disaster assistance in WA over B.C.. The B.C. government has publicly stated that it will not pay assistance for earthquake damage due to the availability of private insurance.

We conjecture that this and issues centering around national culture (i.e. Americans are fundamentally different than Canadians in that they do not respond well to being told what to do by authorities) are the two main reasons why earthquake insurance take up rates are so low in WA. We do caution, however, that primary survey data related to all noted factors be collected and analyzed in more depth.

CONCLUSION & RELEVANCE Given the increase in economic losses due to natural catastrophes, it is essential to decrease the insurance protection gap. When losses are insured, individuals, businesses and other institutions do not need to fund repairs, replace damaged/destroyed assets and replace lost income ex post. Reducing the protection gap reduces the burden on taxpayers and promotes societal resiliency.

While the protection gap exists for many reasons, potential solutions have been explored worldwide to reduce the gap. For example, mortgage lenders could require or governments could mandate the purchase of insurance. Changes in product design, by bundling all perils into the basic insurance policy or by changing policy duration, or providing "insurance stamps" to high risk but low income households could also incent more homeowners to purchase earthquake insurance. There may be a role for governments to act as insurers, provide a liquidity or solvency backstop to insurers or offer coverage through property taxes.

Our findings go beyond the issue of seismic risk and are relevant when considering the impact of climate change, as the phenomenon will increase weather-related risks in many geographic locations in the United States and elsewhere. This increased risk will require both insurers and governments to take steps to ensure that adequate protection against catastrophic losses is present.