



PROGRAM ON U.S.-JAPAN RELATIONS
Weatherhead Center FOR INTERNATIONAL AFFAIRS
HARVARD UNIVERSITY



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HELPING SMEs REBUILD AFTER DISASTERS: A COMPARISON OF POLICIES IN THE UNITED STATES AND JAPAN

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**Harvard Program on U.S.-Japan Relations
Occasional Paper Series
22-KS**

TABLE OF CONTENTS

Introduction	1
Current situation: analysis and background.....	6
Significant damage suffered by SMEs as a result of disasters.....	6
The Importance of Preparing for Disasters	6
Insufficient preparedness for disasters.....	7
Getting insurance	9
How to support the damaged SMEs.....	11
Comparison of post-disaster support measures.....	11
Although U.S. SMEs also requested subsidies.....	12
The crowding-out effect of subsidies.....	14
Argument in the U.S. Congress that “Government support should be complementary.”	14
A look at the situation in Japan.....	15
Rebuilding damaged SMEs back to normal condtions	16
Whether the government will support the recovery of all SMEs.....	16
After a disaster: United States promotes startups, Japan attempts to restore the status quo.....	17
It is possible that government support would extend the life of SMEs excessively	18
Why SMEs do not prepare for disasters/How we can encourage them to do so.....	19
The U.S. government focuses on support to encourage advance preparation	19
Nevertheless, are U.S. SMEs adequately prepared?	21
Role of Supporters of SME Owners	23
Conclusion (How to deal with disasters: Lessons from the United States).....	25
Support for SMEs affected by a disaster.....	25

How to encourage SMEs to prepare	27
Importance of supporters who are closely involved in self-help efforts by SMEs	28
Bibliography	36

LIST OF TABLES AND FIGURES

Figure 1: Share of SMEs in the Economy and Types

Figure 2: Natural disasters have become more frequent

Figure 3: Comparison of post-disaster support measures

Figure 4: Approaches of the government that encourage self-help efforts (the United States)

Figure 5: Approaches of the government that encourage self-help efforts (JAPAN)

Figure 6: The crowding-out effect of subsidies

Figure 7: Reasons for Business Counseling

Figure 8: Comparison in Bankruptcy probability (inside and outside the affected areas)

LIST OF ABBREVIATIONS

BCP	Business continuity plan
FEMA	Federal Emergency Management Agency
FIA	Florida International University
IBHS	Institute for Business and Home Safety
RISE Act	Recovery Improvements for Small Entities Act of the SBA
SBA	U.S. Small Business Administration
SBDC	Small Business Development Center
SCORE	Service Corps of Retired Executives
SMEA	Small and Medium Enterprise Agency of Japan
SMEs	Small and medium-sized enterprises
UNDRR	United Nations Office for Disaster Risk Reduction

Introduction: The importance of small and medium-sized enterprises (SMEs) has not changed in any country, but the environment surrounding them has

SMEs are the economic backbone of virtually every country because they make important contributions to job creation and form the foundation of local communities. In the United States and Japan, for example, more than 99 percent of all companies are SMEs and, in terms of the number of employees, they account for 50 percent in the United States and 70 percent in Japan, which clearly shows that they play an important role. The term “SMEs” includes not only fast-growing high-tech companies, but also main street businesses, such as dry cleaners and restaurants. Karen Mills, a senior fellow at Harvard Business School, who served as the Administrator of the U.S. Small Business Administration (SBA) under former President Obama, classifies the approximately 30 million U.S. SMEs as (1) high-growth companies (1 percent), (2) supply chain companies (4 percent), (3) main street companies (14 percent), and (4) non-employer companies (82 percent).¹ Similarly, Japan’s 3.5 million SMEs are categorized by sales as medium-sized enterprises (3 percent), smaller companies (16.0 percent), and micro companies (80.9 percent)² (see Figure 1). While some SMEs are expanding, growing, and creating jobs and economic benefits, others are sustaining their businesses and supporting local economies and communities. Moreover, the diversity and composition of SMEs are common to all countries.

The environment surrounding SMEs, however, differ from one country to another. For example, there are some differences in policies designed to help SMEs rebuild after disasters. In

¹ Karen, Mills G. *“Fintech, small business & the American dream how technology is transforming lending and shaping a new era of small business opportunity.”* Palgrave Macmillan, 2018. pp. 26-32.

² The Financial Services Agency of Japan. *“Progress report on the performance of financial intermediary functions.”* 2021.
<https://www.fsa.go.jp/news/r2/ginkou/20210708/01.pdf>

the past, there have been numerous disasters such as hurricanes in the United States. Similarly, heavy rain disasters have occurred almost every year in Japan (see Figure 2). And without fail, they cause serious damage to the business continuity of SMEs. The latest report released by the Intergovernmental Panel on Climate Change mentions that “the frequency and intensity of heavy precipitation events have increased.”³ In Japan, when looking at the effect of natural disasters, the Great East Japan Earthquake of 2011 stands out as the most prominent example of the negative impact caused by such damage. In recent years, however, climate disasters such as the East Japan Typhoon (2019), the Boso Peninsula Typhoon (2019), and the West Japan Heavy Rains (2018), have caused the number of companies affected, the scale of damage, and the decrease in sales and value-added to exceed that of large-scale earthquakes such as the Hokkaido Iburi East Earthquake (2018) and the Kumamoto Earthquake (2016).⁴ Furthermore, the frequency of climate-related disasters, such as heavy rains, has increased. Natural disasters, that cause more damage than large-scale earthquakes have also become frequent. Preparing for such disasters is undoubtedly an important management issue for SMEs. Even though climate change will cause more serious problems in the future, more than 70 percent of SMEs in both Japan and the United States are unprepared for them. In this context, focusing on post-disaster, since the Great East Japan Earthquake, the Japanese government Small and Medium Enterprise Agency (SMEA) has started implementing a special subsidy program for SMEs (Subsidies for SME Groups, commonly known as “Group-Subsidy”; note that subsidies are not provided to a group of SMEs, but to individual SMEs that have committed to join the group). This program

³ The Intergovernmental Panel on Climate Change. “*Climate change 2021: The physical science basis.*” 2021. pp. 10.
<https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>

⁴ The Japan Finance Corporation, “*Actual damage and preparedness for natural disasters in small and medium-sized enterprises.*” 2021.
https://www.jfc.go.jp/n/findings/pdf/ronbun2105_01.pdf

helps SMEs rebuild after disasters by providing them with 75 percent of the costs required to rebuild damaged facilities and equipment. In comparison, the U.S. government's SBA also supports SMEs, but it primarily uses loans rather than subsidies⁵ (see Figure 3). As described below, some state governments and others also provide subsidies, but the scale is small compared with that of Japan (up to ¥1.5 billion: about \$13 million).

In this way, even if governments try to achieve the same goal, the measures they utilize vary from country to country. We need to consider, however, whether the measures are effective. For example, because loans require repayment from SMEs, there is a built-in incentive for companies to grow and be profitable. So, the U.S. policy may more likely encourage SMEs to be independent growth enterprises. It has been asserted that, since loans must be repaid, as opposed to subsidies in which the “crowding out” effect may occur, government spending does not reduce private investment and expenditure.⁶ While many believe that subsidies have accelerated the recovery process in Japan, the expectation that such subsidies will be provided may reduce the incentives for SME owners to undertake self-help efforts, such as purchasing insurance, before disasters. It has also been claimed that facilities and equipment rebuilt using subsidies cannot be easily transferred or disposed of under the Act on Regulation of Execution of Budget Pertaining to Subsidies (because the facilities and equipment are rebuilt using subsidies, their continued use is expected; if they are transferred or disposed of, then companies may be required to return a portion of the subsidies according to the period of use), which is a constraint for business closure or transfer. For example, on the occasion of the 10th anniversary of the Great East Japan

⁵ SOMPO Risk Management Co. *“Survey of small and medium-sized enterprises in fiscal year 2021 research project report on disaster recovery support system.”* 2021.
https://www.meti.go.jp/meti_lib/report/2021FY/000595.pdf

⁶ Carolyn Kousky, Erwann O. Michel-Kerjan, Paul A. Raschky. *“Does federal disaster assistance crowd out flood insurance?”* Journal of Environmental Economics and Management, 2018. pp.150-64.

Earthquake, an article in the *Nihon Keizai Shimbun* (commonly called *Nikkei*) analyzing the status of reconstruction notes that the Group-Subsidy has made a significant contribution to early reconstruction. The article also points out, though, that the rigidity of the system has become a problem.⁷ The reason for this is that, in some cases, the affected SMEs are required to return the subsidies when they use the facilities and equipment restored with the subsidies for another purpose (even though 10 years have passed since the disaster and it has become difficult for them to continue their businesses as they did before the disaster).

In addition, the focus of information-sharing differs from country to country, even when the goal is the same: to respond to disasters. For example, all government agencies use their websites to provide policy information. In its explanation of how it helps small businesses, the U.S. SBA has four policy components: 1) free business counseling; 2) SBA-guaranteed business loans; 3) home and business disaster loans; and 4) federal government contracting. The third component includes disaster response.⁸ It also emphasizes the importance of preparing for emergencies in advance (see Figure 4).⁹ Japan's SMEA also has five components of "SME policies" on its website: 1) management support; 2) financial support; 3) treasury support; 4) commercial and regional support; and 5) consultation and information provision. Which of these components includes disaster response remains unclear, however.¹⁰ Moreover, Japan's SMEA provides "disaster-related information" on its website, but it does not encourage people to

⁷ The Nihon Keizai Shimbun. "Earthquake reconstruction subsidies, a turning point, become a setback for changing business conditions after 10 years." June 29, 2021.
<https://www.nikkei.com/article/DGXZQOCC214RU0R20C21A6000000/>

⁸ U.S. Small Business Administration Web site
<https://www.sba.gov/>

⁹ U.S. Small Business Administration. "Disaster assistance."
<https://www.sba.gov/funding-programs/disaster-assistance>

¹⁰ Small and Medium-sized Enterprise Agency of Japan Web site
<https://www.chusho.meti.go.jp/>

prepare for disasters in advance. It rather provides information on support measures for SMEs affected by major disasters (see Figure 5).¹¹

Further, while U.S. policies focus on supporting highly productive and profitable companies, some argue that Japan's SME policies tend to emphasize social policies and safety net functions and generously support a wide range of companies to maintain the status quo. For example, the OECD SME and Entrepreneurship Outlook 2021¹² analyzes the impact of the COVID-19 crisis on SMEs and how governments have responded to this crisis through their policies. This report points out that, during the pandemic, lack of liquidity was a major problem for SMEs, and that those SMEs that were able to receive government support were more likely to maintain their business and not go out of business. In Japan, 62 percent of SMEs have access to government support, the highest percentage of any of the 38 OECD member countries. On the other hand, the U.S. rate is 30 percent, below the OECD average of 33.6 percent. In addition, the report notes that 56 percent of Japanese SMEs have access to non-repayable support such as subsidies, which is also the most widespread in the OECD. Therefore, this study focuses on SME policies in times of natural disasters, which is a common issue between Japan and the United States, and clarifies that, as opposed to the United States, Japan supports a wide range of SMEs while comparing how each government and each country's SMEs are coping with the common challenges of natural disasters.

¹¹ Small and Medium-sized Enterprise Agency of Japan. "Disaster related information." <https://www.chusho.meti.go.jp/saigai.html>

¹² OECD. "OECD SME and entrepreneurship outlook 2021." 2021
<https://www.oecd.org/publications/oecd-sme-and-entrepreneurship-outlook-2021-97a5bbfe-en.htm>

Current situation: analysis and background

Significant damage suffered by SMEs as a result of disasters

The fact remains that many SMEs have gone out of business as a result of disasters. Herbert Mitchell of the Office of Disaster Assistance of the U.S. SBA estimated that as many as 40 percent of small businesses hit directly by a natural disaster perish.¹³ In addition, according to research conducted by the Institute for Business and Home Safety (IBHS), a non-profit organization focused on disaster preparedness, it is estimated that 25 percent of SMEs do not reopen after a major disaster.¹⁴ A survey conducted by the University of Texas found that approximately 43 percent of businesses that experienced catastrophic damage would not reopen and 51 percent would close within two years.¹⁵

The Importance of Preparing for Disasters

It is difficult for SMEs to rebuild after disasters without government support. It is important, however, for them to take measures such as disaster prevention and mitigation beforehand to improve their business continuity, not only focusing on how to rebuild after disasters. Measures to prevent and mitigate disaster include self-reliance, such as the formulation of a business continuity plan (BCP) and mutual assistance, such as getting insurance or constructing networks between SMEs to help each other or share information.

¹³ Holly L. Schrank, Maria I. Marshall, Adrienne Hall-Phillips, Renee F. Wiatt, Nicole E. Jones. *“Small-business demise and recovery after Katrina: rate of survival and demise.”* Springer Science+Business Media, 2013.

¹⁴ U.S. Small Business Administration. *“Prepare for emergencies.”*
<https://www.sba.gov/business-guide/manage-your-business/prepare-emergencies>

¹⁵ Juan Pablo Sarmiento, Gabriela Hoberman, Meenakshi Jerath, Gustavo Ferreira Jordao. *“Disaster risk management and business education: the case of small and medium enterprises.”* AD-minister no. 28 Medellín Jan./June 2016, pp. 73–90.

Proper planning can help curb business interruptions and expedite the recovery process, thereby minimizing the impact of a disaster. According to a previous study conducted by Hewlett-Packard in conjunction with the SBA, 80 percent of businesses that fail to recover within one month following a disaster are likely to go out of business and 75 percent of businesses without a BCP will be bankrupt within three years after a disaster. Moreover, of those that reopen after suffering a disaster, only 29 percent are still open two years later.¹⁶ A study of Texas businesses affected by Hurricane Ike in 2008 revealed that planning substantially encouraged the adoption and implementation of disaster mitigation and preparedness actions, which significantly reduced the physical damage to businesses.¹⁷ In fact, 57.8 percent of the companies studied have plan-implemented disaster mitigation and preparedness actions, such as moving machinery and equipment to appropriate locations for safety. Only 15.3 percent have no plans to take such actions, a significant difference. The statistically significant results show that having a plan reduces overall damage by 8.4 percent, damage to buildings by 8.8 percent, damage to inventory by 14.0 percent, and damage to machinery and equipment by 16.7 percent, indicating that the rate of implementation of mitigation and proactive measures reduces damage.

Insufficient preparedness for disasters

Some studies, however, have found that many SME owners had done relatively little to prepare their businesses for a disaster.¹⁸ Alongside acquiring insurance, preparing plans in

¹⁶ HP & SCORE. *“Impact on U.S. small business of natural & man-made disasters.”* Compilation of public and private sector, 2008.

¹⁷ Yu Xiao, Walter Gills Peacock. *“Do hazard mitigation and preparedness reduce physical damage to businesses in disasters? Critical role of business disaster planning.”* Natural Hazards Review, 15(3), 2014, pp. 4014007-1-11.

¹⁸ Anna Josephson, Holly Schrank, Maria Marshall. *“Assessing preparedness of small businesses for hurricane disasters: Analysis of pre-disaster owner, business and location characteristics.”* International Journal of Disaster Risk Reduction, 23, 2017, pp. 25-35.

advance for emergencies, such as BCPs, is another typical example of mitigation measures. According to the extant literature, although business owners, especially owners of SMEs, invest large amounts of money, time, and resources to ensure successful businesses, many often fail to properly plan and prepare for disasters.¹⁹

Despite feeling vulnerable to natural disasters, approximately 75 percent of those surveyed reported that they did not have a disaster preparedness plan.²⁰ With regard to the results in this survey, Yvette Clarke, a Congressional representative from New York stated in a Senate committee hearing in 2018 that “nearly 75 percent of small businesses lack disaster relief plans, despite the fact that 70 percent of them feel vulnerable to natural disasters.” Furthermore, it appears that there is a correlation between preparedness and the size and number of employees of the SME, suggesting that smaller SMEs tend to be less proactive in disaster recovery planning due to limitations in human and financial resources.

The situation is the same in Japan, where small companies are less prepared for natural disasters. According to a survey conducted by the SMEA in 2019, only 45.9 percent of small companies and 21.9 percent of micro companies have implemented specific measures to prepare for natural disasters.²¹ In addition, when companies that have not yet taken action on preparedness were asked why, “I do not know where to start” was the most common answer, at 31.8 percent for small companies and 43.1 percent for micro companies. According to a report

¹⁹ Webb G. R., Tierney K., and Dahlhamer J. “*Predicting long term recovery from disasters; a comparison of the Loma Prieta Earthquake and Hurricane Andrew.*” *Environmental Hazards*, 4, pp. 45-58.

²⁰ Cynthia Scarinci. “*A post-superstorm sandy study of small business disaster preparedness and perspectives on planning for future incidents.*” *Journal of International & Interdisciplinary Business Research*, 3, 7, 2016.

²¹ Small and Medium-sized Enterprise Agency of Japan. “*2019 White Paper on small and medium-sized enterprises in Japan.*” 2019.
https://www.chusho.meti.go.jp/pamflet/hakusyo/2019/PDF/chusho/05Hakusyo_part3_chap2_web.pdf

released in 2021 by the Japan Finance Corporation, a questionnaire survey of companies that were affected by 11 natural disasters in the 2010s (including the Great East Japan Earthquake, the Kumamoto Earthquake, the East Japan Typhoon, the Boso Peninsula Typhoon, and the West Japan Heavy Rains) showed that 3.9 percent were “prepared” and 25.2 percent were “somewhat prepared,” a total of less than 30 percent.²² Therefore, more than 70 percent of the companies felt that they were unprepared; this is similar to the results of a survey in the United States. Specifically, in terms of the number of employees, 40.5 percent of companies with 20 or more employees were “somewhat prepared,” higher than companies with 1–4 employees (21.9 percent) and companies with 5–19 employees (24.1 percent); “not prepared” was higher for companies with small numbers of employees.

Getting insurance

Getting insurance is a prime example of a measure that SMEs can implement to prepare for disasters. Lloyd’s global underinsurance report, published in 2012 by the global insurance company Lloyd’s of London, has developed a method to measure non-life insurance coverage by country and provides an analysis of which countries are underinsured.²³ This analysis places the United States in the top tier of insurance penetration (ratio of insurance spending to gross domestic product), ranking fourth among 42 countries analyzed accounting for more than 90 percent of global non-life insurance coverage (2011). A report by the Federal Reserve Bank in

²² The Japan Finance Corporation. “*Actual damage and preparedness for natural disasters in small and medium-sized enterprises.*” 2021.
https://www.jfc.go.jp/n/findings/pdf/ronbun2105_01.pdf

²³ Lloyd’s. “*Lloyd’s global underinsurance report.*” 2012.
<https://assets.loyds.com/assets/pdf-global-underinsurance-report-global-underinsurance-report/1/pdf-global-underinsurance-report-global-underinsurance-report.pdf>

2017, however,²⁴ found that SMEs in the United States may not always have appropriate insurance coverage. Even though 38 percent experienced flood damage and 36 percent experienced wind damage, only 16 percent had flood insurance and 21 percent had wind damage insurance. Affected firms' insurance holdings appear mismatched to the sources of their damages, leaving uncovered losses. Higher-credit-risk firms affected by natural disasters were less likely to hold insurance at the time of disaster.

In Japan, according to a questionnaire survey conducted by the SMEA (July 2021) on SMEs that received Group-Subsidy, approximately 60 percent were covered by insurance (59.7 percent of the total of “covered by non-life insurance” and “covered by mutual aid”).²⁵ In terms of sales and number of employees, the larger the company, the higher the rate of insurance participation. Looking at the 60 percent rate alone, Japanese SMEs may seem more likely to have insurance than their U.S. counterparts. The respondents to this survey, however, were companies that had purchased insurance, but used Group-Subsidy because they had suffered more damage than they could cover. According to the above-mentioned Lloyd's analysis, Japan ranks 18th out of 42 countries (sixth out of seven major developed countries), which is low for an earthquake-prone country. In light of the above, Japanese SMEs may not have adequate insurance coverage.

²⁴ Federal Reserve Banks of Dallas, New York, Richmond, San Francisco. “2017 Small business credit survey report on disaster-affected firms.” 2017.
<https://www.newyorkfed.org/medialibrary/media/smallbusiness/2017/SBCS-Report-on-Disaster-Affected-Firms.pdf>

²⁵ SOMPO Risk Management Co. “Survey of small and medium-sized enterprises in fiscal year 2021 research project report on disaster recovery support system.” 2021.
<https://www.meti.go.jp/medi lib/report/2021FY/000595.pdf>

How to support the damaged SMEs

Comparison of post-disaster support measures

The first point concerns how to support damaged SMEs after disasters. As mentioned earlier, when the U.S. government supports the recovery of SMEs after serious disasters, they primarily use loans rather than subsidy programs. In comparison, since the Great East Japan Earthquake, the Japanese government has started implementing a special subsidy for SMEs to rebuild damaged facilities and equipment. Because loans require repayment from the SMEs, while subsidies do not, subsidies are more appreciated by SME owners.

In the United States, after major disasters such as Katrina in 2005, Sandy in 2012, and Harvey, Irma, and Maria in 2017, the SBA has restructured its disaster assistance.²⁶ For example, in 2015, the “Recovery Improvements for Small Entities After Disaster Act of the SBA” (RISE Act) was approved. It raises the limit for SBA disaster loans that can be provided without collateral from \$14,000 to \$25,000, increasing the number of small businesses that can receive such loans; moreover, the SBA has been able to approve them more quickly. In addition, the SBA introduced an electronic disaster portal, the Online Appropriation System; as of 2018, 97 percent of loan applicants have used it. This portal conveniently allows loan applicants to track their loan application process. Through this new portal and system, the loan approval process has reportedly been reduced to an average of 25 days from 70 days (2017).

Although the SBA has been expanding its loan programs in this way, it does not rely on subsidies as Japan does and there is no change in its stance to provide financial support mainly

²⁶ U.S. Congress. House. Committee on Small Business. “*Survey storms: a deeper dive into SBA’s disaster response: hearing before the Committee on Small Business, United States House of Representatives, one hundred fifteenth Congress, second session, hearing held September 5, 2018.*” Washington: U.S. Government Publishing Office, 2019.

through loans. Some state governments and others also provide subsidies,²⁷ but the scale is small compared with that of Japan (up to 1.5 billion yen: about \$13 million). For example, among support measures by state governments, New York State provides 1 percent interest loans up to \$25,000 and subsidies of up to \$10,000 (Recovery Fund). Also, the state subsidizes up to \$5,000 (Microgrant Fund) and up to \$20,000 for repairs to the exterior (Storefront Improvement Program). Furthermore, New York City is working with a consultancy firm to assess the risk of each SME. In addition, on the basis of the assessment results, the city provides the necessary funds (subsidies of up to \$3,000) for measures to implement such measures as digitizing records, purchasing a generator, etc.). And, as described above, U.S. local governments also provide partial financial support in the form of subsidies, but the scale of the amount is small compared to Japan.

Although U.S. SMEs also requested subsidies...

In the United States, however, literature on government assistance shows dissatisfaction with the process and implementation of the programs and indicates a potential mismatch between the needs of businesses and the current structure of the assistance.²⁸ For example, it has been pointed out that there was too much paperwork. the application process was too time-consuming, and that businesses could be reluctant to incur debt in an already unstable business environment.²⁹

²⁷ Federal Reserve Banks of Dallas, New York, Richmond, San Francisco. “2017 Small business credit survey report on disaster-affected firms.” 2017.
<https://www.newyorkfed.org/medialibrary/media/smallbusiness/2017/SBCS-Report-on-Disaster-Affected-Firms.pdf>

²⁸ Runyan R. C. “Small business in the face of crisis: identifying barriers to recovery from a natural disaster.” Journal of Contingencies & Crisis Management, 2006.

²⁹ Maria Watson. “The role of SBA loans in small business survival after disaster events.” Journal of Planning Education and Research, 2021.

Two points in particular should be noted. First, some SME owners who received an SBA loan thought that a portion of the loan should be forgiven or that they ought to get some other kind of break. Second, many owners are unhappy that the SBA only provides loans and not subsidies. In addition, rather than a subsidy for a normal business startup,³⁰ they would prefer support in the event of a disaster.

In research conducted in 1998, after the 1994 Northridge earthquake in California, it was noted that—from the SME owner’s perspective—more money, particularly in the form of subsidies rather than loans, should be made available.³¹ This study indicated that SME owners are entrepreneurial, individualistic, and desirous of avoiding government intervention in normal times; once a disaster strikes, however, their expectations of the government change. One interviewee’s comment is symbolic: “After all, I contributed taxes all these years. I ought to get something back for all that.” Another SME owner who received a loan from the SBA stated that he thinks he should either have part of his loan forgiven or receive some kind of preferential treatment. This research, however, also points out that this is unlikely without changes in policy regarding disasters or significant increases in the budget.

More than two decades have passed since this study, and while U.S. SMEs are still affected by floods every year, the U.S. government’s approach to assistance has been mainly through loans. Interestingly, one study suggests that there may be political motivations for the government to offer or not offer a loan program.³² Specifically, it requires a declaration by the

³⁰ S. R. Furlong and Scheberle, D. “*Earthquake recovery: gaps between norms of disaster agencies and expectations of small business.*” *American Review of Public Administration*, 1998.

³¹ Furlong and Scheberle.

³² Matthew Davis, Mary Eschelbach Hansen, and Thomas Husted. “*The impact of political influence on appointees: evidence from the small business administration disaster loan program.*” *Southern Economic Journal*, 84(3), 2018, pp. 771–85.

president or by the SBA as to whether a disaster loan program will be provided. Such a declaration is likely triggered if a disaster occurs during a presidential election year or if a state with a large electorate is affected. Even if there is a political motive, it is worth noting that the assistance has still been provided as loans, not subsidies.

The crowding-out effect of subsidies

Furthermore, another study argues that subsidies can cause crowding-out effects, as mentioned earlier, where government support can reduce private investment and expenditure.³³ It analyzes experimentally whether the two main support programs of the U.S. government for disasters – FEMA subsidies to households and SBA loans – discourage the purchase of disaster insurance. The results show that receiving a FEMA subsidy reduces the amount of insurance coverage in the following year by an average of \$4,000–\$5,000, and that this reduction is larger than the average subsidy of \$2,984 received. In contrast, it noted that SBA loans have little impact on demand for insurance (see Figure 6). Given this, this study predicts that, if business owners expect government support after a disaster, they will invest less in pre-disaster risk reduction. In addition, the study notes that business owners may regard government support as a (partial) substitute for insurance so they may not purchase insurance. In other words, post-disaster government support may crowd out the purchase of insurance.

Argument in the U.S. Congress that “Government support should be complementary.”

As noted, certain academic studies have indicated that a number of small business owners who received SBA disaster loans believe that the SBA should provide some preferential

³³ Carolyn Kousky, Erwann O. Michel-Kerjan, Paul A. Raschky. “Does federal disaster assistance crowd out flood insurance?” *Journal of Environmental Economics and Management*, 2018. pp. 150-64.

treatment, and they complain that the SBA only provides loans and not subsidies. Also, according to a report by the Congressional Research Service,³⁴ questions have been raised in Congress about why SMEs are not provided with subsidies. In recent Congressional sessions, legislation has been introduced to establish business disaster subsidy programs. These legislative attempts include the Small Business Owners Disaster Relief Act of 2008 (H.R. 6641) and the Hurricane Harvey Small Business Recovery Grants Act (H.R. 3930). This report introduces opposing opinions asserting that subsidies may encourage SMEs not to get insurance and they are costly for government budgets. In addition, the report describes the background and context in which loans rather than subsidies are still provided by the U.S. government, arguing that government support should be complementary and that access to private insurance and low-interest loans should remain the primary means of responding to disasters.

A look at the situation in Japan

Looking at the situation in Japan, it has been pointed out that subsidies not only reduce the incentives to prepare before a disaster, but also make it more difficult for SMEs to close or transfer their business because of their inflexibility. As mentioned at the beginning of this paper, SMEs that use subsidies may face certain restrictions if they choose to close down or change their business model (if they intend to dispose of or convert the facilities or equipment they rebuilt using subsidies, then they may be required under the Act on Regulation of Execution of Budget Pertaining to Subsidies) to return a portion of the subsidies according to the period of use. For example, in the House of Representatives Committee on Economy, Trade and Industry in 2019, one representative introduced the case of a woman who rebuilt her pharmacy using Group-

³⁴ Bruce R. Lindsay. “Considerations for implementing a small business disaster grant program.” EveryCRSReport.com, 2019.
<https://www.everycrsreport.com/reports/R45554.html>

Subsidy and considered closing down her business because she lost her husband and son. If she closed down her business, however, then she would have to return the subsidies; hence, she continued to run her business alone in a small way. The representative then raised questions such as why SME owners cannot be exempted from paying back subsidies in such cases. These SME owners, though, must consider the purpose of the Act on Regulation of Execution of Budget Pertaining to Subsidies and manage their facilities in a way that conforms to the purpose of subsidies, that is, to restore their businesses to their pre-disaster condition. Therefore, if a subsidized SME disposes of an asset, such as a store, by closing down its business, then the SME will be required to return the required amount of subsidy, even if it may receive certain mitigation measures. Thus, 10 years after the Great East Japan Earthquake, while many say that the subsidies have contributed to the recovery of SMEs and the reconstruction of the region, it is also important to note that the characteristics of the subsidies caused rigidity in the continuation of business for some SMEs.

Rebuilding damaged SMEs back to normal conditions

Whether the government will support the recovery of all SMEs

In this next section, I am going to focus on whether we should rebuild damaged SMEs back to normal conditions. It has been suggested that disaster assistance by the U.S. government is significant in determining the survival of small businesses.³⁵ There is a difference, however, in the form of support (subsidy or loan). The Japanese government will subsidize an applicant that meets the minimum requirements (Group-Subsidy requires a group of multiple SMEs to apply,

³⁵ George W. Haynes, Sharon M. Danes, Holly L. Schrank, Yoon Lee. "Survival and success of family-owned small businesses after hurricane Katrina: Impact of disaster assistance and adaptive capacity." J Contingencies and Crisis Management, 2018.

and some areas support the formation of such a group³⁶), whereas in the United States, not all applicants can receive assistance. Upon receiving an application, the SBA confirms the business condition of the applicant for the previous three years. After making sure that the applicant is profitable and can repay, a loan will be provided. Some studies have found that 55 percent of applicants did not receive assistance,³⁷ indicating that the United States does not financially support the recovery of all SMEs. This is a major difference from the Japanese government, which will subsidize even an applicant that meets the minimum requirements.

After a disaster: United States promotes startups, Japan attempts to restore the status quo

In the United States, it seems that both the government and other supporters, including the SMEs affected by disasters, are not obsessed with recovering to pre-disaster conditions, but rather with the entrepreneurial spirit of establishing new businesses post-disaster and the supporters' attitudes.

Senator Clarke has stated, “[w]hen natural disasters do hit, as was the case with Hurricanes Harvey, Irma, and Maria, which ravaged Houston, the U.S. Virgin Islands, and Puerto Rico, they can lead to damage that permanently shuts 40–60 percent of small businesses.”³⁸ A 2017 Federal Reserve report also indicated that “up to 40 percent of small

³⁶ The Soma Chamber of Commerce and Industry Web site
<http://www.somacci.com/>

³⁷ Anna Josephson, Maria I. Marshall. “*The demand for post-Katrina disaster aid: SBA disaster loans and small businesses in Mississippi.*” *Journal of Contingencies and Crisis Management*, 2016.

³⁸ U. S. Congress. House Committee on Small Business. “*Survey storms: a deeper dive into SBA’s disaster response: hearing before the Committee on small business, United States House of Representatives, one hundred fifteenth congress, second session, hearing held September 5, 2018.*” Washington: U.S. Government Publishing Office, 2019.

businesses never reopen after a major disaster.”³⁹ As shown above, natural disasters can put many SMEs out of business. According to one academic study, before Katrina, of those who reported why they sought SCORE (Service Corps of Retired Executives) business counseling, legal advice was the most common reason (24.2 percent), with startups coming in third (18.2 percent). After Katrina, however, there was an increase in people seeking advice on startups (57.9 percent).⁴⁰ Meanwhile, four months after the Kumamoto Earthquake (2016) in Japan, a total of 243 consultations were requested at the “Kumamoto Yorozu Support Center”; most consultations (115) were about “subsidies,” followed by “sales channel expansion and sales recovery” (34), “loans and borrowings” (27), and “business reconstruction plans” (24).⁴¹ Specifically, given that consultations on subsidies accounted for half of all cases in Kumamoto (115 out of a total of 243), many companies are possibly oriented toward or assume that they will restore their businesses to their pre-disaster state by utilizing subsidies (see Figure 7).

It is possible that government support would extend the life of SMEs excessively

Regardless of whether they are affected by natural disasters or not, Japanese SMEs are facing structural challenges, such as shrinking domestic demand and the rise of regional economies. Continuing their existing businesses is also not easy for them. In this context, the Research Institute of Economy, Trade and Industry, a think tank of the Japanese government, has

³⁹ Federal Reserve Banks of Dallas, New York, Richmond, San Francisco. “2017 Small business credit survey report on disaster-affected firms.” 2017.
<https://www.newyorkfed.org/medialibrary/media/smallbusiness/2017/SBCS-Report-on-Disaster-Affected-Firms.pdf>

⁴⁰ Susan M. L. Zee, Lillian Y. Fok, Sandra J. Hartman, Roger L. Burford. “An examination of changing needs for SCORE/SBA services in the post-Katrina NEW ORLEANS/BATON ROUGE environment.” Academy of Strategic Management Journal, Volume 7, Special Issue, 2008.

⁴¹ Kumamoto City, “2016 Kumamoto city earthquake record - towards recovery and reconstruction - one year after the disaster”
https://www.city.kumamoto.jp/hpkiji/pub/detail.aspx?c_id=5&id=18725

shown that, in the event of a disaster, a natural selection process is maintained inside and outside the affected areas, with efficient companies surviving and inefficient ones going bankrupt.⁴² The probability of bankruptcy of companies in affected areas is lower than that of companies outside the affected areas, suggesting that this is because of financial support from the government, including Group-Subsidy (see Figure 8). That is, government support may have prolonged the life of SMEs that had difficulty in continuing their businesses even before the disaster. For example, as 10 years have passed since the Great East Japan Earthquake, many companies, including those in the fishery processing industry, have found it difficult to return to their pre-disaster business scale due to changes in the economic environment. Therefore, while acknowledging the effect that subsidies have in promoting recovery, given the rigidity of the system, support that encourages firms to set up new businesses after a disaster is needed, rather than focusing on restoring them to their pre-disaster state.

Why SMEs do not prepare for disasters/How we can encourage them to do so

The U.S. government focuses on support to encourage advance preparation

In 2019, the OECD published a report, “Fiscal Resilience to Natural Disasters Lessons from country experiences,” based on case studies from several countries, including Japan. In the report, the OECD notes that “most governments have done little to encourage businesses to adopt preventative measures prior to a disaster” and that “there appear to be few or no systematic studies by governments designed to understand why businesses tend not to implement measures

⁴² The Research Institute of Economy, Trade and Industry (RIETI). “*Natural disaster and natural selection.*” 2014.

to reduce disaster risk, such as business continuity plans or physical asset protection measures.”⁴³

Nevertheless, according to James Rivera, Associate Administrator, Office of Disaster Assistance, the U.S. government is not only focusing on financial support through disaster loans in its disaster assistance.⁴⁴ For example, Douglas J. Kramer, Deputy Administrator, stated in a 2016 Senate committee hearing, “[w]e recognize the value of providing not only financing, but also high-quality business counsel and disaster mitigation strategies to help recovering small businesses.”⁴⁵ Rivera also stated in a 2018 House Committee hearing that

My experience has been we teach everybody to get a business plan: right? But we do not teach them what happens in a disaster. I mean, so from a social media perspective, when are you going to reopen? From a supply chain perspective, you know, where is your list of your vendors and what happens if your primary vendor is impacted, so forth and so on. So those are the kind of things that we are pushing out now.⁴⁶

This suggests that the SBA, in order to respond to frequent disasters, not only provides assistance in providing financial support to damaged businesses after a disaster, but also emphasizes, through its business counseling, that small businesses should understand the implications of a disaster and should make the necessary preparations.

⁴³ OECD, The World Bank. “*Fiscal resilience to natural disasters: Lessons from country experiences.*” 2019. <https://openknowledge.worldbank.org/handle/10986/32341>

⁴⁴ U.S. Congress. Senate Committee on Small Business and Entrepreneurship. “*Examining SBA’s office of disaster assistance and the response to recent catastrophic floods. Congressional hearing, June 19, 2019.*” Washington: U.S. Government Publishing Office, 2019.

⁴⁵ U.S. Congress. Senate Committee on Small Business and Entrepreneurship. “*Federal disaster response and SBA implementation of the RISE Act: hearing before the Committee on Small Business and Entrepreneurship, United States Senate, one hundred fourteenth Congress, second session, April 6, 2016.*” Washington: U.S. Government Publishing Office, 2017.

⁴⁶ U.S. Congress. House Committee on Small Business. “*Survey storms: a deeper dive into SBA’s disaster response: hearing before the Committee on Small Business, United States House of Representatives, one hundred fifteenth Congress, second session, hearing held September 5, 2018.*” Washington: U.S. Government Publishing Office, 2019.

Also, through financial support, the U.S. government appears to focus on supporting SMEs to prepare for natural disasters that may recur.⁴⁷ For example, the SBA provides loans of up to 20 percent of required costs to prepare for future disasters, and guarantees 85 percent of the total of the costs, of which 50 percent is the standard guarantee plus 35 percent to support long-term recovery for affected companies (Recovery Opportunity Loan Program). Also, the Federal Emergency Management Agency (FEMA) provides support for 15 to 20 percent of the cost of mitigation measures taken by affected communities after a disaster (Hazard Mitigation Grant Program). In addition, an analysis conducted by the National Institute of Building Sciences shows that a dollar spent for mitigations before disaster strikes saves approximately \$4 in the aftermath.⁴⁸ This analysis has often been cited in academic studies and introduced in Congress, suggesting that they are also focusing on mitigating disasters by preparing in advance.

Nevertheless, are U.S. SMEs adequately prepared?

As various surveys and studies have shown, many SME owners do not prepare for disasters. Therefore, the government and other SME supporters need to organize and clarify the knowledge gained from disaster experiences, while encouraging SMEs to prepare. The SBA is working with the Small Business Development Center (SBDC), SCORE, the Women's Business Center, and IBHS to develop a disaster preparedness campaign.⁴⁹ Also, as mentioned above,

⁴⁷ U.S. Congress Senate. Committee on Small Business and Entrepreneurship. *"Federal disaster response and SBA implementation of the RISE Act: hearing before the Committee on Small Business and Entrepreneurship, United States Senate, one hundred fourteenth Congress, second session, April 6, 2016."* Washington: U.S. Government Publishing Office, 2017

⁴⁸ National Institute of Building Sciences Multihazard Mitigation Council. *"Natural hazard mitigation saves: 2017 interim report."*
https://www.fema.gov/sites/default/files/2020-07/fema_ms2_interim_report_2017.pdf

⁴⁹ U.S. Congress. Senat. Committee on Small Business and Entrepreneurship. *"Examining SBA's office of disaster assistance and the response to recent catastrophic floods. Congressional hearing, June 19, 2019."* Washington: U.S. Government Publishing Office, 2019.

there is a trend to focus on financial support and assistance to encourage preparedness before disasters. At the moment, however, many SMEs are not adequately prepared or do not have appropriate insurance coverage. This situation is similar to that in Japan. In addition, many SMEs have limited ability to adapt to disasters and lack business-level learning processes after a disaster.⁵⁰ Moreover, it has been pointed out that experiences of disasters can help prepare for future such events in the future, but that the motivation to prepare may gradually decrease because of the uncertainty of when the next disaster will occur.⁵¹

For instance, a survey conducted after Superstorm Sandy revealed that the majority of damaged companies did not have any recovery plans before the event, and only a small percentage developed contingency and disaster recovery plans for future disasters after Sandy.⁵² In this survey, more than 70 percent of the participants who said they did not have plans stated that they should have done more preparation before the disaster. More than 70 percent of the same respondents, however, still have not created plans. Approximately, 60 percent said creating plans would not be useful, 30 percent claimed they did not know what to do, and some stated it would be too costly and time-consuming to create plans, indicating that they had learned a great deal during the disaster recovery process, though they were willing to develop at least an informal plan to promote recovery from future disasters.

Once recovery had begun and normalcy had returned, however, they indicated that they had no motivation to devote time or effort to developing or testing their plans. In Japan, the

⁵⁰ Meri Davlasheridze, Pinar C. Geylani. "Small Business vulnerability to floods and the effects of disaster loans." Small Bus Econ 49, 2017. pp. 865–88.

⁵¹ Jennifer Oetzel, Chang Hoon Oh. "A storm is brewing: Antecedents of disaster preparation in risk prone locations." Strat Mgmt J, 42. 2021. pp. 1545–70.

⁵² Cynthia Scarinci. "A post-superstorm sandy study of small business disaster preparedness and perspectives on planning for future incidents." Journal of International & Interdisciplinary Business Research, 3, 7, 2016.

results of the above-mentioned survey of SMEs that experienced a disaster reveal that most of the relatively large companies formulated BCPs and took disaster prevention and mitigation measures for their critical facilities after the disaster, whereas micro companies did not take any action.

These facts suggest that, even companies that have experienced a disaster once and fully understand the importance of preparation, still face significant difficulties in actually taking action to prepare. There are lessons to be learned from the experience of disasters, but the problem is acquiring what can be learned and implementing it into a plan of action. In Japan, according to the results of the above-mentioned questionnaire, when SMEs were asked why they were “not doing anything in particular” to prepare for natural disasters (despite having experienced a disaster), the most common answer was “we don’t know what to do.” The above-mentioned report by the Japan Finance Corporation also points out that few companies are actually prepared, citing the heavy burden and lack of perceived need as the reasons.

Role of Supporters of SME Owners

In the United States, supporters who encourage SME owners play an important role in designing these plans; SME owners are not left to prepare everything alone. Robin Barnes, Executive Vice President and Chief Operating Officer, Greater New Orleans, Inc., which supports various SMEs in their region, stated in a Senate committee hearing in 2019 that

Building business resilience means not only anticipating near-term disasters but also planning for the long term ... the future. Organizations and agencies that already have relationships with small businesses can help them prepare for the next disruptive event. For example, helping small business owners assess their

insurance needs and move their records online can minimize disruption to their operations when the next event occurs.⁵³

Also, at the same hearing, Jason Barnes, owner of All Time Toys, said that “because of the work and lessons learned from the previous flood, we had the skills, systems, internal resources and confidence to rebound smartly and quickly” to emphasize that, although he was hit twice, he received business counseling from SBDC consultants after the first disaster, allowing him to recover quickly after the second one. Thus, it is extremely important to have a supporter who accompanies the owner in carrying out the preparations, rather than leaving the preparations to the owner alone.

The importance of these supporters applies not only to planning, but also to purchasing the right insurance. Vero Insurance, Australia’s largest insurer, highlights the role that brokers (i.e., insurance agents) can play in helping SMEs acquire more knowledge about insurance, based on the results of a survey it conducted with its SME customers.⁵⁴ It found that customers who buy insurance through brokers are better informed than those who buy it directly from insurance companies. Many broker customers believe that brokers have a role to play in preparing for natural disasters, including advising them on the right coverage amount and type, conducting risk assessments, and keeping them updated. Moreover, it is worth noting that, according to the survey results, one in five broker customers feels uninformed, indicating that not all brokers discuss natural disasters with their customers. Many customers would like to discuss natural disasters with their brokers, but have not yet done so. Additionally, customers who

⁵³ U.S. Congress. Senate. Committee on Small Business and Entrepreneurship. “*Examining SBA’s office of disaster assistance and the response to recent catastrophic floods. Congressional hearing, June 19, 2019.*” Washington: U.S. Government Publishing Office, 2019.

⁵⁴ VERO Insurance. “*2021 SME insurance index: claims and natural disasters.*” VERO Insurance with insight, 2021.

bought insurance directly from insurers recognized the importance of brokers in preparing for natural disasters.

Thus, it can be concluded that supporters play an important role in helping SMEs when purchasing insurance, which is one of the most significant ways to prepare for disasters. In Japan, many companies cite “lack of knowledge about disaster insurance” and “relatively high insurance premiums” as reasons for not purchasing disaster insurance.⁵⁵ The results of the above-mentioned questionnaire for Japanese SMEs also indicate that the most common reason for deciding on insurance coverage was “an explanation from an insurance agent” at 47.1 percent, followed by “an explanation from an insurance company” at 42.2 percent. Insurance companies were the most frequent supporters, at 39.5 percent, followed by insurance agents, at 34.9 percent. These results suggest high expectations for the roles of insurance companies and insurance agents.

Conclusion (How to deal with disasters: Lessons from the United States)

Support for SMEs affected by a disaster

Providing subsidies to disaster-affected companies is expected to have an immediate effect, not only on the recovery of the companies, but also on accelerating the recovery of the local economy. On the other hand, providing subsidies repeatedly increases the government's financial burden. In addition, based on experience of past disasters, it is indubitably important to prepare for disasters beforehand; excessive financial support, however, such as subsidies, from

⁵⁵ Kunio SEKIGUCHI. “Improving the effectiveness of risk management in Japanese companies.” Shoko Kinyuu, 2020.
https://shokosoken.or.jp/shokokinyuu/2020/09/202009_2.pdf

the government may be a disincentive to prepare in advance, for example, by discouraging self-help efforts such as purchasing insurance.

The Japanese government has provided huge subsidies for many years since the Great East Japan Earthquake, not only for earthquakes but also for heavy rain disasters, and it is not easy to discontinue such policies in terms of equity (between SMEs affected by past disasters and those likely to be affected by future disasters). The Japanese government, however, should keep in mind that, in the United States, the disadvantages of subsidies have long been discussed not only in the academic arena, but also in Congress, and the U.S. government has placed certain restrictions on the role of government support. Therefore, it would be better to focus on how to mitigate such disadvantages when providing subsidies. For example, it is preferable to shift to a system designed to encourage corporate self-help efforts to ensure survival after natural disasters, such as requiring companies to purchase insurance and prepare BCPs in advance.

Governments trying to provide such disaster support should note the following. First, as a possible approach to provide incentives, the government could provide less post-disaster assistance to companies that did not act compared to those that did, but were damaged nonetheless. Moreover, it is important to inform SMEs in areas vulnerable to disasters that such support may be limited. This should be done in advance of any disaster to encourage them to take pre-emptive action. According to the previous study, there is the potential for government disaster assistance to create perverse incentive effects. Therefore, it is important to make loans the primary government response and set limits on subsidies in order to minimize these disincentive effects.⁵⁶ Furthermore, it needs to be understood that to efficiently manage perverse incentive effects, local residents should be educated about the limited nature of assistance before

⁵⁶ Carolyn Kousky, Erwann O. Michel-Kerjan, Paul A. Raschky. “Does federal disaster assistance crowd out flood insurance?” *Journal of Environmental Economics and Management*, 2018. pp. 150-64.

a disaster hits. This means that the government will provide subsidies in the event of a disaster, but it is necessary to fully inform and educate SMEs that these subsidies are limited to those SMEs that have prepared for the disaster in advance. Moreover, it is necessary for the government to focus not only on rebuilding the damaged companies to their pre-existing state, but also on establishing new businesses.

How to encourage SMEs to prepare

As mentioned above, most SMEs are not adequately prepared for disasters. Therefore, it is not realistic to expect SME owners to take independent action or self-help efforts in the future. According to a report by the United Nations Office for Disaster Risk Reduction (UNDRR),⁵⁷ less than 10 percent of all SMEs in Japan formulate a BCP, while whether or not their clients require them to do so has a significant impact. Among companies with 20 or more employees, 68 percent have a BCP if requested by the client, while only 8 percent have a BCP if not so requested. From this standpoint, it is also important for clients to strengthen their efforts to encourage their procurement partners' SMEs to formulate BCPs in order to build a resilient supply chain.

In addition, banks that provide loans should also be able to play a role in encouraging SMEs to prepare for disasters. According to an interview survey with local banks,⁵⁸ however, with regard to the current status of natural disaster preparedness among SMEs, they stated that, although they have opportunities to explain and propose insurance coverage when necessary,

⁵⁷ UNDRR. “Reducing risk & building resilience of SMEs to disaster.” 2020.
<https://www.undrr.org/publication/resilience-smes>

⁵⁸ SOMPO Risk Management Co. “Survey of small and medium-sized enterprises in fiscal year 2021 research project report on disaster recovery support system.” 2021
https://www.meti.go.jp/meti_lib/report/2021FY/000595.pdf

such as for building equipment funding, banks do not have any access to the insurance coverage status of SMEs. For banks, it must be a matter of life and death whether the SMEs they finance can continue their business and survive a disaster. For this reason, when providing loans in the future, banks should be expected to ensure that SMEs are adequately prepared for disasters. In addition, as noted in the 2021 OECD report,⁵⁹ the insurance sector also has an important role to consider in terms of promoting insurance pricing and tools that will motivate SMEs to undertake preventive activities and adopt sound measures to that end. In particular, as previous studies have shown, insurance coverage and risk prevention are complementary, not substitutes for one another.⁶⁰ As such, it is important to incentivize policyholders who have reduced their risk to become more prepared for disasters by offering them reduced premiums, thereby motivating them to both purchase insurance and take risk-reduction measures.

As mentioned above, to encourage SMEs to prepare for disasters, they need to be subjected to a certain amount of external pressure or incentives. For example, adding certain conditions to the SMEs that can utilize the subsidies mentioned earlier could be such a pressure or incentive.

Importance of supporters who are closely involved in self-help efforts by SMEs

A study focusing on New York and Miami noted that companies that choose their strategies entirely on their own may misjudge disaster risks. This is because effective disaster

⁵⁹ OECD. “Responding to the COVID-19 and pandemic protection gap in insurance.” 2021. https://read.oecd-ilibrary.org/view/?ref=133_133327-3tdsqdiu7y&title=Responding-to-the-COVID-19-and-pandemic-protection-gap-in-insurance

⁶⁰ W. J. Wouter Botzen, Howard Kunreuther, Erwann Michel-Kerjan. “Protecting against disaster risks: Why insurance and prevention may be complements.” *Journal of Risk and Uncertainty*, 59, 2019, pp. 151–69.

preparedness typically involves working with and learning from others.⁶¹ It is challenging for SMEs to address disaster preparedness and new business startups by themselves. The government needs to systematize and clarify the knowledge gained from the experience of disasters and encourage SME managers to take action on their own. Furthermore, it is important to have supporters who are close to and promote the self-help efforts of SMEs. Even if SMEs are encouraged to purchase insurance, the task of doing so is too onerous for insurance companies alone. In addition, SME managers need to be provided with information in a timely and easily understandable manner. Hence, it will be necessary to include not only insurance companies, but also insurance brokers, local banks, and even consultants to communicate with SME owners in the community.

With support from these parties, disaster preparedness has the potential to improve not only disaster resilience, but also the long-term management capabilities of SMEs. A study analyzing the damaging and destructive effects of Hurricane Katrina on the business conditions of SMEs in the aftermath of the disaster⁶² found that disaster damage could affect short-term business conditions, that is, damage was associated with immediate collapse, but had little impact on long-term recovery. Companies that reopened but later closed may have been affected by a series of shocks, both external and internal. In other words, the results indicate that at least some of the vulnerabilities are due to weaknesses within the business, which may be exacerbated by external shocks such as damage, loss, or delay due to natural disasters, but that the business could have been maintained if these weaknesses had been addressed before the disaster. In this

⁶¹ Jennifer Oetzel, Chang Hoon Oh. *"A storm is brewing: Antecedents of disaster preparation in risk-prone locations."* Strat Mgmt J, 42. 2021. pp. 1545–70.

⁶² Sandra Sydnor, Linda Niehm, Yoon Lee, Maria Marshall, Holly Schrank. *"Analysis of post-disaster damage and disruptive impacts on the operating status of small businesses after Hurricane Katrina."* Nat Hazards, 85, 2017, pp. 1637–63.

context, identifying and resolving the weaknesses of SMEs is also an important part of disaster preparedness, and supporters are expected to contribute to this process. For example, the Florida International University (FIU) College of Business and the local SBDC have cooperated to provide professional business consulting to area SME owners, training executives and providing them with the information they need to grow and succeed in a complex and competitive global environment. At the same time, they work to promote knowledge and best practices in disaster preparedness and business continuity management in an easy-to-understand manner.⁶³ Since 2016, they have provided a Disaster Recovery and Reconstruction Toolkit for SMEs. They are also helping local SMEs access funds and develop strategies to recover from the impact of COVID-19.⁶⁴ In summary, it is useful to focus on how local SMEs have improved their resilience and management capabilities through a series of such efforts by SBDCs and educational institutions such as the FIU.

In addition, it is important for supporters to ensure that SMEs are not completely dependent on them for help. A 2016 study revealed that 40 percent of SMEs with insurance did not know what kind of insurance they had and found that many companies relied heavily on their insurance agents to determine whether they had the appropriate coverage.⁶⁵ A number of such companies have said that they pay attention to their day-to-day costs, but they did not fully understand the insurance coverage they had purchased. As mentioned above, it is important for

⁶³ Juan Pablo Sarmiento, Gabriela Hoberman, Meenakshi Jerath, Gustavo Ferreira Jordao. *"Disaster risk management and business education: the case of small and medium enterprises."* AD-minister no. 28 Medellín Jan./June 2016, pp. 73–90.

⁶⁴ Florida International University. *"Florida SBDC at FIU Business posts record level of assistance for small businesses to recover and thrive."* FIU News, June 18, 2021.
<https://news.fiu.edu/2021/florida-sbdc-at-fiu-business-posts-record-level-of-assistance-for-small-businesses-to-recover-and-thrive>

⁶⁵ Cynthia Scarinci. *"A post-superstorm sandy study of small business disaster preparedness and perspectives on planning for future incidents."* Journal of International & Interdisciplinary Business Research, 3, 7, 2016.

brokers to help SMEs when they are purchasing insurance, but it has been seen that problems arise when SMEs rely onto their supporters for such assistance. Therefore, supporters need to play an accompanying role only to help SME owners run their own businesses.

FIGURES

Figure 1: Share of SMEs in the Economy and Types

	US (30 million SMEs)	Japan (3.5 million SMEs)
The share of SMEs in terms of number of businesses	99%	99%
The share of SMEs in terms of number of employees	50%	70%
Types of SMEs	High-growth firms (1%) Supply chain firms (4%) Main Street firms (14%) Non-employer firms (82%)	Medium-sized firms (3%) Smaller firms (16.0%) Micro firms (80.9%)

Figure 2: Natural disasters have become more frequent

Historic Disasters in the US	Major Disasters in Japan(2011~)
<ul style="list-style-type: none"> • 1994 California Northridge Earthquake • 2005 Katrina (LA/MS/AL) • 2012 Sandy(NY/NJ/CT) • 2017 Harvey(TX/LA) • Irma(FL/GA/SC/PR), and Maria(PR/VI) • 2017 California Wildfires 	<ul style="list-style-type: none"> • 2011 Great East Japan Earthquake (Fukushima, Miyagi, Iwate, etc.) • 2016 Kumamoto earthquake (Kumamoto, Japan) • 2018 Japan floods (Okayama, Hiroshima, Ehime) • 2019 Typhoon Hagibis (Fukushima, Miyagi, Nagano, Tochigi) • 2020 Kyushu floods (Kumamoto)

Note: Bold-type indicate heavy rain/flood disasters

Figure 3: Comparison of post-disaster support measures

	US Small Business Administration(SBA)	Japanese Small and Medium Enterprise Agency (SMEA)
Support measures	Provide low-interest loan	Provide subsidy (called " Group-Subsidy ")
Targets of support	<ul style="list-style-type: none"> Physical damage Economic Injury 	<ul style="list-style-type: none"> Facilities Equipment
Amount of support	<ul style="list-style-type: none"> up to \$2 million 	<ul style="list-style-type: none"> 75% of the costs required up to \$13 million

Note: Some state governments also provide subsidies in the United States, but the scale is small compared with that of Japan.

Figure 4: Approaches of the government that encourage self-help efforts (the United States)

How we help small businesses

SBA has 4 policy components



Free business counseling
Get business advice from our partnering organizations and experts. >
[Find counselors](#)



SBA-guaranteed business loans
Find an SBA lender near you to help fund your business. >
[Use Lender Match](#)



Home & business disaster loans
Apply for a low-interest disaster loan to help recover from declared disasters. >
[Apply for assistance](#)



Federal government contracting
Learn how to find and win small business government contracts. >

- One of the four policy elements of the SBA is **to respond to disasters**.
- "Prepare for emergencies" and "Learn how to prepare for emergencies" also **focus on disaster preparedness**.

Get help after disasters



Prepare for emergencies
[Learn how to prepare for emergencies](#)



COVID-19 EIDL
[Apply for COVID-19 assistance](#)



All other disaster assistance
[Apply for all other disaster assistance](#)

Source: U.S. Small Business Administration. "Disaster assistance."

<https://www.sba.gov/funding-programs/disaster-assistance>

Figure 5: Approaches of the government that encourage self-help efforts (JAPAN)



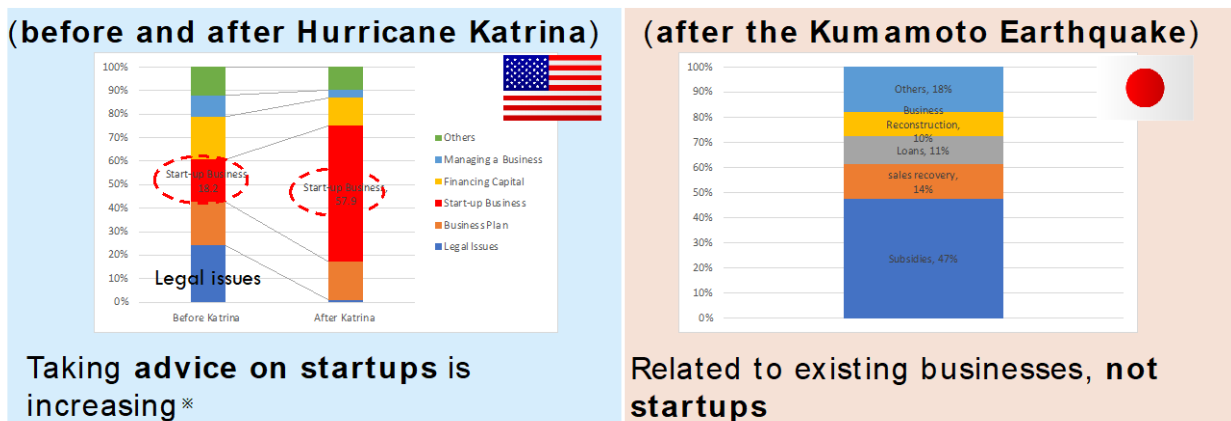
Source: Small and Medium-sized Enterprise Agency of Japan. “Disaster related information.”
<https://www.chusho.meti.go.jp/saigai.html>

Figure 6: The crowding-out effect of subsidies

SBA loans	FEMA※ ¹ subsidies (to households)
SBA loans have very little impact .	\$3,000 of subsidies reduce the amount of insurance coverage in the following year by \$4,000-\$5,000.

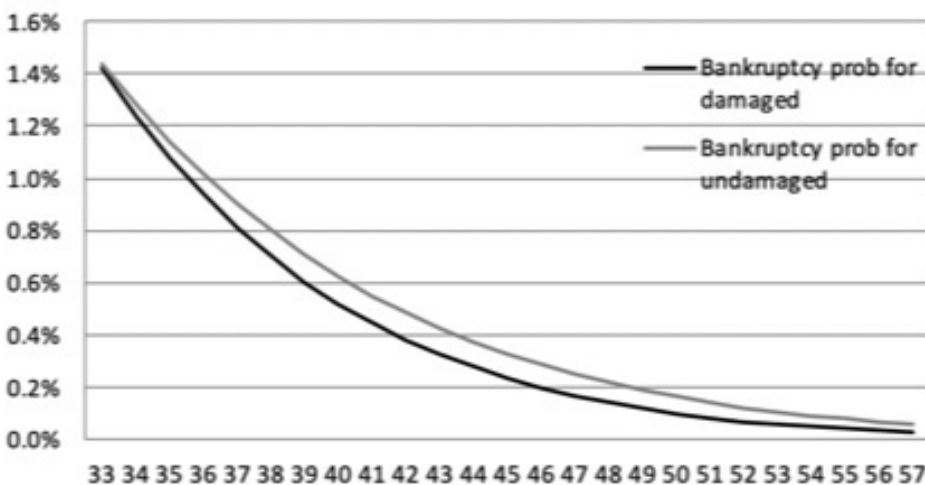
Source: The U.S. Federal Emergency Management Agency

Figure 7: Reasons for Business Counseling



Source: “An examination of changing needs for SCORE/SBA services in the post-Katrina NEW ORLEANS/BATON ROUGE environment” (2008)

Figure 8: Comparison in Bankruptcy probability (inside and outside the affected areas)



Source: RIETI Discussion Paper, “Natural disaster and natural selection.” (2014)
<https://www.rieti.go.jp/jp/publications/dp/14e055.pdf>

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