

March 19, 2015

The Effect of the Great East Japan Earthquake on Business Startups
- Facts of Startups Triggered by the Earthquake -

Lead Economist Hikaru Fukanuma*

Economist Ichiro Fujita

Japan Finance Corporation Research Institute

-Abstract-

The Great East Japan Earthquake that occurred on March 11, 2011, seriously impaired economic activity across Japan. A number of companies went bankrupt or downsized operations because of the earthquake, especially in the Pacific coastal areas of the Tohoku district.

The earthquake affected entrepreneurial activities. According to data on startups in 2011 after the earthquake in the “Panel Survey on Business Startups in Japan” conducted by the Japan Finance Corporation Research Institute, 17.0% of respondents answered that their regular operations were delayed by the disaster. On the other hand, there were startups that went into business because of the earthquake. Focusing on the “startups triggered by the earthquake”, the authors uncovered the start-ups’ attributes by analyzing the survey and directly interviewing entrepreneurs.

The results are as follow: 1) 6.0% of the startups among those in 2011 after the earthquake were “startups triggered by the earthquake”. The percentage was high along the Pacific coast of the Tohoku district where tsunami damage was severe, 2) more than a small number of entrepreneurs lost their jobs due to the circumstances of their employers, 3) the average term of preparation for a start-up was 5.3 months, which was considerably shorter than for other types of startups because they received various kinds of support to launch within a short period, and 4) the average number of staff members consisting of an entrepreneur and employees was 2.7 persons, which is fewer than in other types of startups; however, this figure rose to 3.4 persons by the year-end, an increase of 0.7 persons. They hired people who had lost their jobs due to the earthquake and thereby contributed to the recovery and reconstruction from the earthquake.

Much government support for recovery and reconstruction is provided in the disaster areas. Of course, support for damaged businesses is needed, but in addition to this, it is also quite important to promote the smooth startup of businesses launched by the entrepreneurs who decide to start businesses themselves.

* Corresponding author: Hikaru Fukanuma (Mr.), Lead Economist, Japan Finance Corporation Research Institute,
Otemachi Financial City North Tower, 1-9-4 Otemachi, Chiyoda-ku, Tokyo 100-0004 JAPAN
e-mail: jfcri011@nippon-kouko.jp

1 Problem Awareness and Previous Literature

The Great East Japan Earthquake that occurred on March 11, 2011, seriously impaired economic activity across Japan.

Teikoku Data Bank (2013) noted that 1,139 companies went bankrupt because of direct or indirect damage from the earthquake within two years after the disaster (Figure 1). Their debt was 1.3 trillion yen in total, and 18,000 employees lost their jobs.

Moreover, many businesses were obliged to stop their operations. Teikoku Data Bank (2012) stated that the number of business closures in the Tohoku district, where damage from the earthquake was massive, was 1,928 in FY2011 (Apr. 2011 – Mar. 2012), and increase of 11.0% compared to the previous fiscal year. More than a small number of enterprises appear to have abandoned their businesses because of sales decreases or despair over the future recovery of sales.

The earthquake affected not only existing businesses but also entrepreneurial activities. According to Tokyo Shoko Research (2013), the number of newly established companies in Japan during March through October 2011 was about 68,000, which was 0.2% less than the same period in the previous year. In contrast, in Iwate, Miyagi, and Fukushima prefectures, where damage due to the earthquake and tsunami was huge, the number of newly established companies increased by 12.3 %.

Shinada (2013) examined the reasons why the level of entrepreneurial activity

changed in the disaster area by interviewing ten entrepreneurs in Sendai City, Miyagi Prefecture, who started businesses after the earthquake. Through the interviews, he discovered the existence of push and pull factors that increased the number of entrepreneurs, an increase in prosocial behaviors given the special situation of the disaster, and a change in entrepreneurs' network jointly led to the increase of entrepreneurial activities in the large city of Sendai after the disaster.²

Such changes were also seen after the Great Hanshin-Awaji Earthquake which occurred on January 17, 1995. Otake et al. (2012) analyzed the average business startup ratio in the disaster area using the Establishment and Enterprise Census data. They showed that the business startup ratio between 1996 and 2006 in the disaster area of the great earthquake was 5.5% per annum, which was a much larger number than the national average of 4.3%.

The above surveys showed that a large natural disaster such as a great earthquake affects the entrepreneurial activity in the disaster area. However, the level of damage, geographical situation, and economic situation of the various regions were different. Higuchi et al. (2012) insisted that in order to formulate recovery policies for the disaster areas, we need

² According to Honjo (2010), the push factor is occurring when “people tend to choose to start their own businesses because job opportunities decrease when the economic situation is bad”, and the pull factor is occurring “people tend to choose to start their own businesses because the business opportunities increase when the economy is booming”.

to consider the attributes of the industries and the entrepreneurial activities in each area. Also, they recommended that recovery policies should be combined with industrial policies. In addition, for policy evaluation, Fukanuma et al. (2013) estimated the effects of the disaster recovery loans made by the Japan Finance Corporation.³

On the other hand, the authors could not locate any detailed surveys on the facts of the business startups after the Great East Japan Earthquake using a micro database. Hence, in this paper, we investigate the realities of the startups after the earthquake using the “Panel Survey on Business Startups in Japan” conducted by the Japan Finance Corporation Research Institute in December 2011.

This paper consists of the following components. First, we examine the effects of the earthquake on entrepreneurial activities. Second, we focus on the startups triggered by the earthquake and analyze their attributes using the survey data and interviews with entrepreneurs. Then, we examine the roles of the business startups in the disaster areas and the problems which they face.

The outline of the “Panel Survey on Business Startups in Japan” is shown in Table 1. The survey sample consisted of business startups in Japan to which the Japan Finance Corporation made loans, excluding Okinawa Prefecture. The survey asked about the attributes of entrepreneurs and businesses at the point when the startup was initially

launched and at the end of December 2011. This paper used data on 2,213 startups that started business operations after March 11, 2011, the date the earthquake occurred.⁴

2 Effects of the Earthquake on Entrepreneurial Activities

First, we examine the effects of the earthquake on entrepreneurial activities. Of the startups, 75.4% answered that the startup date was “on schedule” (Figure 2). On the other hand, 17.0% of the startups answered that it was “behind schedule”, and 1.6% answered that it was “earlier than scheduled”. The data showed that the earthquake affected the startup schedule of a portion of the startups.

Dividing the data by prefecture, there were 63.6 “startups behind schedule” in Akita Prefecture, 47.8% in Fukushima Prefecture, and 47.1% in Iwate Prefecture (Figure 3). Most of the top 10 prefectures (the dark shadowed areas in Figure 3) were on the Pacific Coast of the Tohoku district and Northern Kanto district, although some exceptions existed. Also, there was at least one “startup behind schedule” in the sample that replied in every prefecture except for two. As these data show, the effect of the earthquake on the startup schedule reverberated all over Japan.

As for the length of the delay, 42.2% of “startups behind schedule” answered that the delay was “1 month or less”, which was not so long term. However, 23.0% answered “2 months”, 13.1% answered “3 months”, and

³ This paper revealed that 107,349 jobs were retained due to the loans in the five most damaged prefectures.

⁴ The survey is the first questionnaire of consecutive five-year panel surveys.

21.7% answered “4 months or more”. There were startups that suffered a considerably longer delay than their original schedules because of the earthquake. The average length of the delay was 2.5 months.⁵ In the free description field of the questionnaire, there were cases in which the direct damage from the disaster was such that “a shop was severely damaged and needed to be repaired”, causing a delay. Also, there were indirect effects such as the following: “delivery of the equipment was delayed and the shop construction didn’t finish on time” or entrepreneurs “could not open the shop given the mood of self-restraint after the earthquake”. Such reasons seemed to be a part of explanation why delays occurred all over Japan.

On the other hand, 6.0% of the sample that replied were “startups triggered by the earthquake”, which were started because the earthquake occurred. Dividing the data by prefecture, 44.9% in Miyagi, 30.0% in Aomori, and 25.0% in Iwate answered that they started their business “triggered by the earthquake” (Figure 4). The percentage was high on the Pacific coast of the Tohoku district where the tsunami damage was particularly severe. Such startups also were spread all over Japan, though not as much as “startups behind schedule”.

The Great East Japan Earthquake caused enormous damage to the economy of Japan. Why did such a situation create new

⁵ The startups scheduled to open in 2011 that eventually started in 2012 or after and those that abandoned starting a business were excluded from the sample.

business startups that seem to have delivered a positive impact on economic activity? In the next chapter and thereafter, we focus on these “startups triggered by the earthquake”. In order to identify their attributes more clearly, we compared the data of “startups on schedule” and “startups behind schedule”.⁶ In addition, information from direct interviews with the entrepreneurs of “startups triggered by the earthquake” was analyzed so as to better understand their situations before and after their startups.⁷

3 Attributes of Startups Triggered by the Earthquake

3.1 Entrepreneurs

First, we examined the profiles of the entrepreneurs. The average age of those involved in “startups triggered by the earthquake” was 42.2 years old, which was almost as same age as those of “startups on schedule” and “startups behind schedule”, which were both 41.0 years old on average. As for gender, 78.8% of entrepreneurs involved in “startups triggered by the earthquake” were male. Of “startups on schedule” and “startups behind schedule” 81.1% were male in both cases, and so there was no difference. On the other

⁶ We excluded 36 startups (1.6% of all respondents) that answered that they opened their businesses “earlier than scheduled” because of the earthquake from the analysis because of their small number in the overall sample.

⁷ Case studies were conducted by direct interviews by the authors in August 2013 and revised in January 2014 through telephone interviews.

hand, 47.7% of entrepreneurs of “startups triggered by the earthquake” were a “company executive or manager” just before they started their businesses. Of them, 39.4% were among the “startups on schedule” and 35.5% were among the “startups behind schedule” (Table 2). Also, the average years of work experience in the case of those whose former jobs were related to their current business was 15.7 years among “startups triggered by the earthquake”. This was also longer than 13.7 years each of the latter ones.

There were clearer differences in their reasons for leaving their former jobs (Table 3). Of entrepreneurs of “startups triggered by the earthquake”, 9.4% left their jobs “because of bankruptcy or business closure of the employer”, and 17.9% lefts their jobs “because of downsizing or closure of the business unit”. In total, 27.4% lost their former jobs because of the circumstances of their employers. This number was quite high compared with the 12.7% figure for “startups on schedule” and the 9.1% figure for “startups behind schedule”.

Furthermore, some interviewees who answered that they left their jobs “by my own decision” on the questionnaire confessed to us that they finally quit their former companies because their employers ordered them to stand by at home because of the temporary stoppage of operation, but it was quite uncertain just after the earthquake when the companies could restart.

As described above, we found that many entrepreneurs of “startups triggered by the earthquake” started businesses because of joblessness or fear of joblessness. According to

the interviews, they tended to start the same kinds of businesses in which they worked at their former jobs. This meant that they contributed to the recovery of the supply of goods and services that was temporarily or permanently lost at their former employers due to earthquake damage.

Case 1

Name	Marukane L.L.C.
Entrepreneur	Mr. Kaneo Akiyama
Place	Hachinohe City, Aomori Prefecture
Startup Date	July 2011
Business	Seafood Processing
Employees	18 persons

Mr. Akiyama, born in Hachinohe City, was a sales manager at the Tokyo sales office of a company that processes seafood such as mackerel and scallops from Hachinohe Port. Due to the earthquake and tsunami, the company’s main factory in Hachinohe was seriously damaged and stopped operation. Prospects for rebuilding the factory were unclear, and so the headquarters decided to abolish its Tokyo office in May. So, Mr. Akiyama made up his mind to leave the company of his own volition.

When Mr. Akiyama returned to his hometown, Hachinohe City, to search for a new job, he met a former customer who said that he was looking for a factory that produced vinegared mackerel. Hachinohe Port is famous for mackerel, and there was still a large demand for fish from Hachinohe, although the port and fishery industries were heavily

destroyed by the earthquake. Thereupon, Mr. Akiyama decided to build his own factory.

The problem was that he was a sales manager and had no experience in factories, so he asked a factory manager from his former employer who had been laid off after the earthquake and who willingly joined the new company as the head of the processing division. Consulting with a judicial scrivener, he decided to establish an LLC since the paperwork for an LLC was simpler than for other types of companies. He temporarily rented a room in the factory building of an old friend and prepared the processing facilities with his partner. Finally, they started production of mackerel fillets and vinegared mackerel in August 2011.

The customers welcomed his new company because it began providing mackerels from Hachinohe Port once again within only a half year after the disaster. Moreover, Mr. Akiyama developed new types of processed seafood in addition to the traditional ones, which attracted many customers. The company has moved from the temporary factory and is now operating at its own location.

Because of damage to businesses caused by the earthquake, supplies of many kinds of goods and services stopped. The impact was felt by companies all over Japan through trade channels. The startup of Mr. Akiyama's company, Makukane LLC, was economically very important because it began to resupply products whose production had been stopped by the earthquake, and the establishment of the new company aided production recovery of other companies.

3.2 Industry Sectors

Offices were not the only places that contributed to the recovery of the supply of goods and services lost due to the earthquake.

Among "startups triggered by the earthquake", 27.3%, the largest group, was "Services" (Table 4). "Restaurants" (22.0%) and "Retail Shops" (11.4%) followed. Comparing "startups on schedule" and "startups behind schedule", the portion in "construction" was larger. The data suggest that many of the "startups triggered by the earthquake" provided commodities and services necessary for local people.

Case 2

Name	Dairen
Entrepreneur	Mr. Mistuo Kanno
Place	Kamaishi City, Iwate
Prefecture	
Startup Date	December 2011
Business	Chinese Restaurant
Employees	3 person

Dairen (Dalian) was an old Chinese restaurant established in 1953. It was loved by local people and famous for Rugger Ramen Noodles, a specialty with a rugby ball-shaped boiled egg on the top for big eaters like rugby players. The dish was thus named because rugby was so popular in the city. Mr. Kanno had worked at the restaurant for over 40 years as a cook until the day of the disaster.

The tsunami triggered by the earthquake washed away the restaurant with

its owner. Mr. Kanno lost not only his job but also his old friend and employer.

He searched for a new job as a cook; however, most restaurants were destroyed or had stopped operating in the city, and he could not find a place to work. Then, he started to work as a taxi driver, but he was unable to become accustomed to this job in which he had no experience.

In such a situation, he met several customers of Dairen at shelters who all said they wanted to enjoy the dishes of Dairen once again. “I am the only man who knows the recipes of the restaurant”, Mr. Kanno thought and made up his mind to open a new restaurant.

However, although he was a talented cook, he had no experience as a business owner or a manager. So, he visited the city office, tax office, and other related experts, and learned how to set up the new restaurant. On December 2011, he finally opened his restaurant at a temporary shop building built in a park on a small hill.

Of course, he named it Dairen, and the relatives of the former owner also celebrated the restart of the restaurant. At that time, there were few restaurants in the city center, and the opening of Dairen became big news as customers rushed to the new Dairen. With the assistance of the city office, the restaurant was scheduled to move to a new shopping mall in a redevelopment area of the city in December 2014.⁸

⁸ According to the shopping mall’s website, Dairen has moved into the mall as planned.

Mr. Kanno had once found a new job as a taxi driver; however, the yearnings of local people made him return to being a cook. Many restaurants that cities and towns depend on were lost due to the earthquake and tsunami. Mr. Kanno’s new restaurant fulfilled local demand and contributed to the recovery of the urban economy as well.

3.3 Preparation Time

As the sample of this paper started business operation in 2011, the preparation time for “startups triggered by the earthquake” was very short. Of the businesses, 21.7% prepared “within one month”, and 31.0% of them needed “2 to 3 months” (Figure 5). The average preparation time of “startups triggered by the earthquake” was 5.3 months, which was considerably shorter than the 8.4 months of “startups on schedule” and the 11.7 months of “startups behind schedule”.

In the case of Mr. Kanno (Case 2), the information from the city office and other agencies made up for his lack of managerial experience. Some entrepreneurs also received beneficial assistance from the clients of their former employers.

Case 3

Name	Anne Corporation		
Entrepreneur	Mr. Akira Suzuki		
Place	Sendai	City,	Miyagi
Prefecture			
Startup Date	May 2011		
Business	Barber		
Employees	2 persons		

Mr. Suzuki was the manager of a barber shop in Sendai City. The earthquake destroyed the shop completely, and the owner decided to abandon the business. However, because many neighborhood clients appealed to Mr. Suzuki to continue the shop, he decided to set up his own barbershop.

However, he could not locate a new shop to rent in the nearby area because most of buildings were damaged there. The person who assisted him was one of his former clients who was a real estate broker. Hearing that Mr. Suzuki was looking for a shop, he searched for available space for a barber shop for him. Another supporter was a salesperson from a barber equipment manufacturer from whom he had bought some equipment as a manager with his former employer. The equipment company had previously manufactured shampoo tables and expected an early recovery of barber services in the disaster areas. A young colleague at the former shop also agreed to join the new barbershop.

With these various kinds of support, Mr. Suzuki set up the new business only two months after the earthquake. The new shop is near the former shop, and many old clients come to have their hair cut at his barbershop. Mr. Suzuki is very appreciative of his supporters and hopes to continue his barbershop at the same location.

4 Roles of the Startups Triggered by the Earthquake

Here, we focus on the employees who

work for “startups triggered by the earthquake”. The average number of staff was 2.7 persons (Figure 6). This means that one entrepreneur and 1.7 employees worked for the startups on average. The number was smaller than the 3.7 persons of the “startups on schedule” and the 3.4 persons of the “startups behind the schedule”. However, at the end of December 2011, the number became 3.4 persons, increasing by 0.7 persons.

After the earthquake, unemployment increased especially in the disaster areas. Although the number was small, it is likely that those startups contributed to the provision of job opportunities in such areas.⁹

In addition, as already described, many entrepreneurs of “startups triggered by the earthquake” were forced to quit their former jobs. From case studies as well, we find that people who lost their jobs due to the earthquake created jobs for themselves by setting up their own businesses. For example, Mr. Kanno of Dairen (Case 2) quit his new job as a taxi driver to which he was not suited and chose to become an owner-chef. The startup was valuable because it enabled him to continue his former job where he could utilize his experience.

Among the employees of such startups, there also existed people who could continue in

⁹ Japan Finance Corporation provided 7.7 billion yen in loans for 12,767 startups all over Japan from April to December in 2011. Assuming 6.0% of them were “startups triggered by the earthquake” as shown in the questionnaire, there are estimated to be 766 “startups triggered by the earthquake”. As the average number of staff (the sum of an entrepreneur and employees) at the end of December 2011 was 3.4 persons, it is assumed that they created jobs for 2,604 persons.

their same jobs. Both Marukane LLC (Case 1) and Anne Corporation (Case 3) hired employees who worked for the former employers with the entrepreneurs.

Furthermore, as an introduction to the next case study, some startups hired jobless people who had worked for other companies in the same industry but lost their jobs due to the earthquake.

Case 4

Name	FIA Co. Ltd.
CEO	Mr. Takashi Furuyama
Place	Sendai City, Miyagi Prefecture
Startup Date	May 2011
Business	Production and Repair of Switchboards for Building and Equipment
Employees	7 persons

Mr. Furuyama worked for a vending machine switchboard maker as a sales engineer for many years. He had an ambition to move to some other company to study large switchboards for buildings and factories, and he had consulted with his friends about changing his job.

The earthquake took away the jobs of these two friends who knew much about design and production of large switchboards. Mr. Furuyama thought that he could create a managerial team for a large switchboard factory with them and persuaded them to join his project. As they had no jobs at the time, they willingly agreed. They promised to participate in the new company as executive

engineers. Mr. Furuyama resigned from his former job on March 20, just 9 days after the earthquake, and started preparation for establishing a corporation.

He received advice from the Miyagi Organization for Industry Promotion, which was established by Miyagi Prefecture, on how to establish his company and started operation in the home garage of one of the executives.

Mr. Furuyama took responsibility for sales, and the other two executives concentrated on design and production. This meant that the team members continued jobs in which each of them had extensive experience. This proper role sharing elicited quick responses from various clients, and they succeeded in securing more orders than expected.

However, the growth in orders brought another managerial problem. They began to need more staff members to assemble parts and build up boards. Then, Mr. Furuyama visited the Public Job Placement Office. The company hired one electrical expert every year starting in 2011. In addition to them, in August 2013, a young newcomer with no experience in this industry joined the company, and they now are training him.

5 Managerial Problems

What managerial problems did “startups triggered by the earthquake” face when starting their businesses? According to the questionnaire, 66.4% of them answered “Funding” and 41.2% answered “Legal and Accounting Knowledge” (Figure 7). The

percentages were larger than those of “startups on schedule” and “startups behind schedule”.

In contrast, the respondents who answered “Finding Clients”, “Planning Goods and Services”, and “Knowledge and Skill to Provide Goods and Services” were fewer than those of the other two categories. These results were occurred because, as already explained, many of the “startups triggered by the earthquake” utilized the job experience they had before launching the startups.

In addition, many interviewees said that they had considerable difficulty finding offices, shops, or factories, especially in the area where damage to buildings was great. In the area where Mr. Suzuki of Anne Corporation (Case 3) worked before the earthquake, many buildings were fully or half collapsed. Moreover, even if a building survived, it had to be checked by the city officials in order to use it as a shop or residence. The inspection required a long time to finish, and he could not find a new shop during that time.

Around the old Dairen (Case 2), every building was washed away by the tsunami. However, people could not rebuild for a long time because the long discussions were needed to decide the new city planning. Hence, Mr. Kanno chose a temporally shop building slightly distant from the former restaurant. Such problems were common not only for “startups triggered by the earthquake” but also for other kinds of startups and other existing businesses damaged by the earthquake.

Case 5

Name Athlete Home Co., Ltd.

CEO	Mr. Masahiro Shitara
Place	Tagajo City, Miyagi Prefecture
Startup Date	September 2011
Business	Real Estate Brokerage
Employees	1 person

Mr. Shitara was a sales person at a construction company in Sendai City. The company halted operations because of the earthquake. Mr. Shitara thought that the number of real estate transactions would increase after the earthquake, and fortunately, he already had a Registered Real Estate Broker Trade License so decided to become an independent brokerage. The CEO of the company where he was employed welcomed his decision since the company’s restart schedule was quite uncertain at that time.

He chose his hometown Tagajo City, next to Sendai, as the place to startup because he knew the city well and he also wanted to contribute to the recovery of his hometown. He tried to find an office nearby the station first, but he could not as the most of buildings were destroyed or damaged by the earthquake and tsunami. He asked his uncle to rent one room of his house on a hilltop in the city, and he started his brokerage business there in September.

However, even several months after the startup, he was unable to complete many brokerage trades. There definitely was a huge demand for rental housing from people who had lost their houses, and housing was needed also by construction workers who gathered from all over Japan to reconstruct infrastructure and buildings. However, the supply of residential

houses was low because rental houses had been severely damaged by the earthquake. The situation was same for offices and shops. Moreover, new building construction was delayed because of the shortage of workers and the inflated prices of materials for buildings.

Given this situation, Mr. Shitara widened his business to include house remodeling and house cleaning. His former employer restarted its operation and placed some orders with his company. The sales were then gradually increasing.

In the five case studies introduced before, business sites were found in neighboring areas, albeit with some difficulty. However, in heavily damaged areas, it was difficult not only to find business sites but also to find houses to live. Because of this situation, some entrepreneurs abandoned the idea of reconstructing their business in their former areas and moved to new cities far from their previous location.

Case 6

Name	Beef Tongue Barbeque Tagajo
Entrepreneur	Mr. Toshio Akiba
Place	Kiryu City, Gunma Prefecture
Startup Date	October 2011
Business	Beef Tongue Barbeque Restaurant
Employees	3 persons

Mr. Akiba operated a restaurant bar in the downtown of Tagajo City for 30 years with his wife. However, the tsunami brought seawater into both his restaurant and

apartment, destroying them. He attempted to renovate the restaurant to reopen, but building contractors had very long waiting lists. The building owner suggested demolishing the heavily damaged building. Furthermore, his apartment owner decided to demolish the apartment as the city government inspector found that it might not be able to withstand to aftershocks. Because the downtown of Tagajo City had been deeply submerged under the tsunami, it seemed it would be difficult to find new space for the restaurant and a new apartment as well.

In any case, Mr. Akiba needed a new job, so he started to look for new restaurant space in his wife's hometown far from Tagajo City. He visited real estate brokerages, city offices, and chambers of commerce and industry near his wife's hometown. Fortunately, he saw a shop for rent sign along the road in a suburb called Kiryu City and decided to open a new restaurant there.

He shortened the menu because he did not have enough money to hire another cook besides himself. The main menu item at the new restaurant was beef tongue barbeque, a famous local dish in Miyagi. The wholesalers from whom he had bought food for the former restaurant in Tagajo City agreed to sell meat and fish to the new restaurant.

After the opening, the local mass media came to feature the restaurant since he had moved from a city damaged by the tsunami. New customers also came because they could eat the authentic beef tongue barbeque of Miyagi without going to that district.

He is now considering hiring more

staff and adding new dishes to the menu. Of course, he and his wife are sorry that they could not restart the restaurant in Tagajo City; however, they do not regret opening the business in the new city.

There still remained managerial problems after the startups were launched. According to the responses to the questionnaire, 49.2% of “startups triggered by the earthquake” answered that “Finding Clients” was a problem at the end of December 2011 (Figure 8). It is supposed that recovery of the local economy was still delayed, although businesses were opening.¹⁰ Other common responses concerned finance. Of the respondents, 41.2% cited “High Cost (salary payment, rent, interest payment, etc.)”, and 20.8% cited “Lack of Working Capital”. Many kinds of support including for financing seemed to be needed by them to promote startups as well as the local economy.

On the other hand, the percentage of respondents who answered “Hiring Skilled Employees”, “Lack of Workers”, and “Training Employees” were slightly fewer than those of “startups on schedule” and “startups behind schedule”. This might be because they utilized their previous experience as entrepreneurs and employees as described before.

6 Business Performance after Startup

¹⁰ Although the sample consisted of startups all over Japan except Okinawa Prefecture, 32.6% of startups triggered by the earthquake” were in the five prefectures (Aomori, Iwate, Miyagi, Fukushima, and Ibaraki) that suffered major damage. Hence, the economic and social situations of such areas are assumed to affect the results of the questionnaire.

Lastly, we will analyze performance indexes of startups. Of “startups triggered by the earthquake”, 42.4% replied that their business were “Profitable” (Figure 9). Although the number was slightly larger than that of “startups behind schedule”, it was smaller than that of “startups on schedule”. As for satisfaction level with income, only 6.1% of “startups triggered by the earthquake” answered “Fully Satisfied” and 11.5% of them answered “Slightly Satisfied” (Figure 10(1)).

On the other hand, as for the satisfaction for worthwhileness of the job, 47.7% answered “Fully Satisfied” and 40.9% answered “Slightly Satisfied” (Figure 10(2)). In total, almost 90% of entrepreneurs thought their jobs were fulfilling.

In addition, 25.8% answered “Fully Satisfied” and 45.5% answered “Slightly Satisfied” for total satisfaction level with the startups (Figure 10(3)). The sum of these answers was 71.3%, which is larger than the 69.4% of “startups on schedule” and 64.2% of “startups behind schedule”. As found through the interviews, it is assumed that the total satisfaction level was boosted by many factors, such as meeting the expectations of customers and local people, hiring former colleagues, and continuing jobs that they wanted to do.

7 Conclusion

The Great East Japan Earthquake certainly affected entrepreneurial activities. We observed startups not only in the severely affected area but all over Japan whose scheduled launch dates were delayed because of

the earthquake. Also, many businesses were opened as a result of the earthquake. Under the economic and social confusion after the disaster, many entrepreneurs dared to try to establish new businesses, deciding to startup within very short periods. Many of them chose to start their own businesses because they lost their former jobs due to the earthquake. Hence, they tended to have some problems with funding or lack of managerial skill and knowledge. Especially in the severely damaged areas, it was very difficult for them to find places to start businesses.

Overcoming such difficulties, the entrepreneurs succeeded in launching their business operations in a rather short period, with a variety of support from government offices, experts, friends, local people, and other supporters.

Many of these newborn businesses restarted the supply of goods and services whose production has been halted by the earthquake and assisted in the recovery of other companies' production and local infrastructure. They created jobs as well. They provided workplaces for entrepreneurs and employees where they could continue jobs similar to those they had before the earthquake.

Although their financial performance was not particularly good, satisfaction levels were high. In total, we can say that "startups triggered by the earthquake" made a large contribution to the economy and society.

To conduct direct interviews, the authors visited offices, factories, shops and restaurants. There still remained damaged

buildings, wreckage, and vacant land washed by the tsunami. For the recovery and reconstruction of such areas, support for the businesses damaged by the disaster is of course needed. However, in addition to that, we would like to stress as a conclusion that it is also quite important to promote the smooth startup of businesses launched by entrepreneurs who decide to start businesses themselves.

-Acknowledgements-

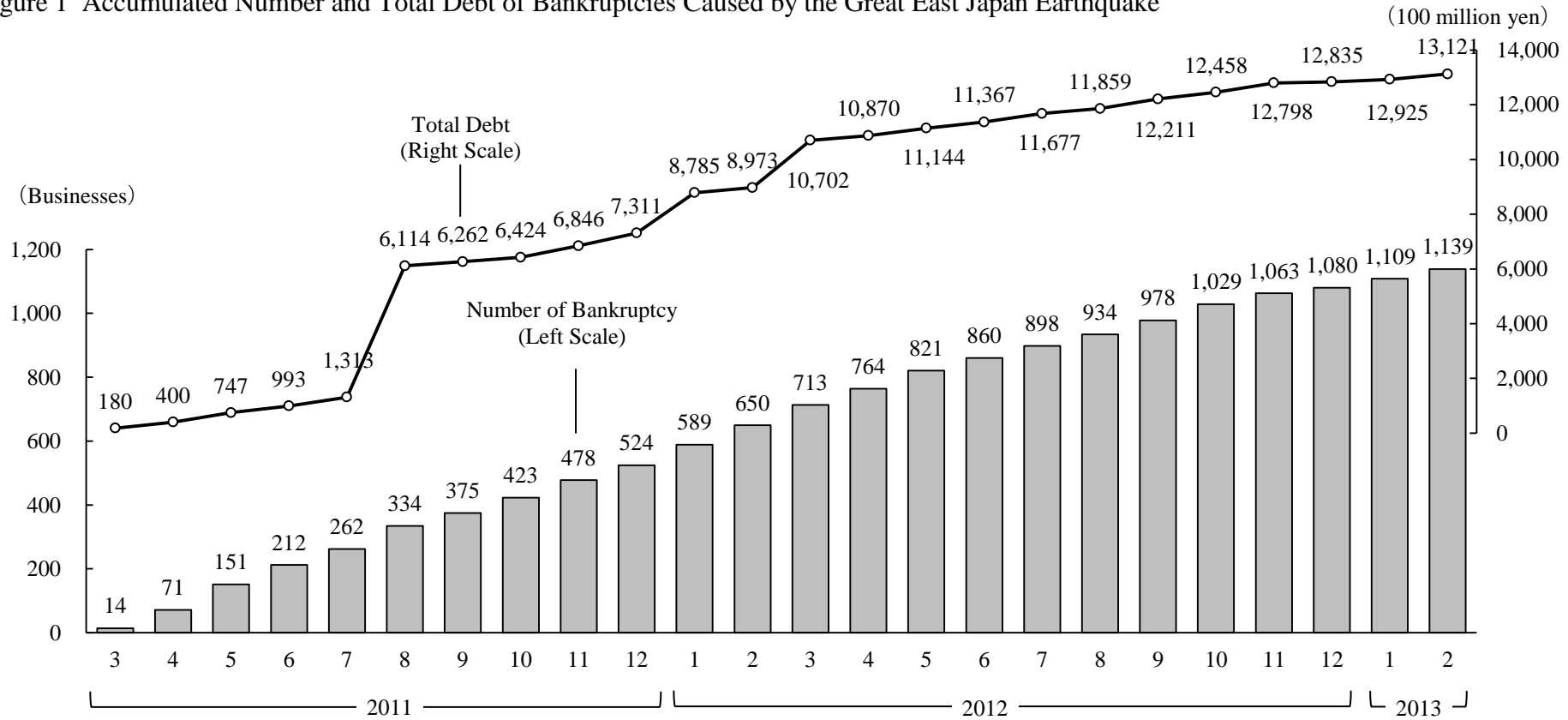
The authors would like to thank the many startups that responded to the "Panel Survey on Business Startups in Japan" in December 2012. Also, we would like to express our special thanks to the entrepreneurs who willingly told us the stories of their startups and the officials of Kamaishi City who were very busy executing recovering policies.

【References】

Note: Materials denoted with titles in Japanese are written in Japanese. Official English titles are also given if they exist; for materials with no official English title, the author provides a tentative translation.

- Fukanuma, Hikaru, Hiroshi Ishihara, Yuji Matsui, and Tomoyuki Ota. [Measuring the Effect of Earthquake Recovery Loans for SMEs from Japan Finance Corporation] 日本政策金融公庫による中小企業向け震災関連融資の経済効果測定に関する一考察. [Quarterly Research Report] 日本政策金融公庫論集 20 (Aug. 2013): 1-13. Japan Finance Corporation Research Institute.
- Higuchi, Yoshio, Tomohiro Inui, Shigeru Sugiyama, Kouji Wakabayashi, Nobunori Kuga, Toshiaki Hosoi, Kengo Ikemoto, Isao Takabe, Yoshikazu Uematsu, and Takeyoshi Arimitsu. 2012. [Aftermath of the 3.11 Disaster: An Analytical Evaluation Using Official Statistics] 統計からみた震災からの復興 *ESRI Discussion Paper Series: 286*. Economic and Social Research Institute, Cabinet Office.
- Honjo, Yuji. 2010 [Economy of entrepreneurship] アントレプレナーシップの経済学. Doyukan.
- Otake, Fumio, Naoko Okuyama, Masaru Sasaki, and Kengo Yasui. 2012. [Estimating Both the Short- and Long-term Effects of the 1995 Hanshin-Awaji Earthquake on the Afflicted Labor Market] 阪神・淡路大震災による被災地域の労働市場へのインパクト. [The Japanese Journal of Labor Studies] 日本労働研究雑誌 622: 17-30. The Japan Institute of Labor Policy and Training.
- Shinada, Seiji. 2013. [Business startups after a disaster - why does a large disaster increase entrepreneurs?] 災害後の起業家活動 -なぜ、大災害の発生が起業家の増加を引き起こすのか?- . [Venture Review] ベンチャーレビュー22: 43-57. The Japan Academic Society for Ventures and Entrepreneurs.
- Teikoku Data Bank. 2012. [Special report on temporary and permanent business closures] 特別企画: 休廃業・解散動向調査.
- Teikoku Data Bank. 2013. [Special report on bankruptcies caused by the Great East Japan Earthquake] 特別企画: 東日本大震災関連倒産(発生から2年)の内訳と今後の見通し.
- Tokyo Shoko Research. 2012. [1,883 New companies registered within one year after the earthquake in three heavily damaged prefectures: Iwate Miyagi, and Fukushima] 震災から1年「新しく設立された法人」(新設法人) 岩手、宮城、福島の前被災3県で1,883社.

Figure 1 Accumulated Number and Total Debt of Bankruptcies Caused by the Great East Japan Earthquake



Source: Teikoku Data Bank "Special Report on Bankruptcies Caused by the Great East Japan Earthquake" (2013)

Table 1 Methodology of "the Panel Survey on the Business Startups in Japan"

Date	December 2011 (Asked situation at the end of December 2011, sending the questionnaire on February 2012.)
Sample	Business Startups in Japan (except for Okinawa Prefecture) in 2011 that procured loans from Japan Finance Corporation
Method	Questionnaires were sent and returned by mail
Main Target to Analyze	2,213 startups that started businesses after March 2011 among respondents.

Source: Japan Finance Corporation Research Institute "the Panel Survey on the Business Startups in Japan" (December 2011)

Note: Sources of every figures and tables hereafter are this survey.

Figure 2 Effect on Startup Timing of the Earthquake

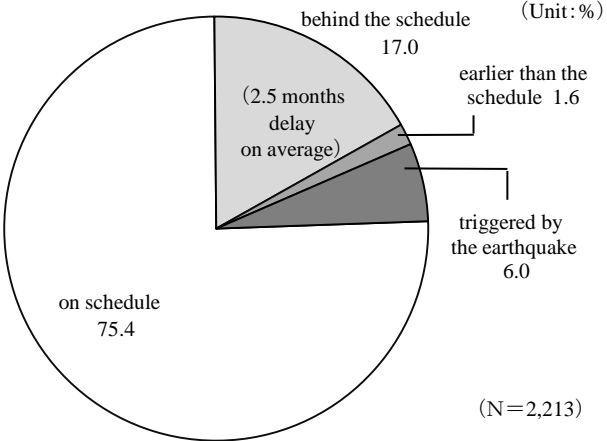
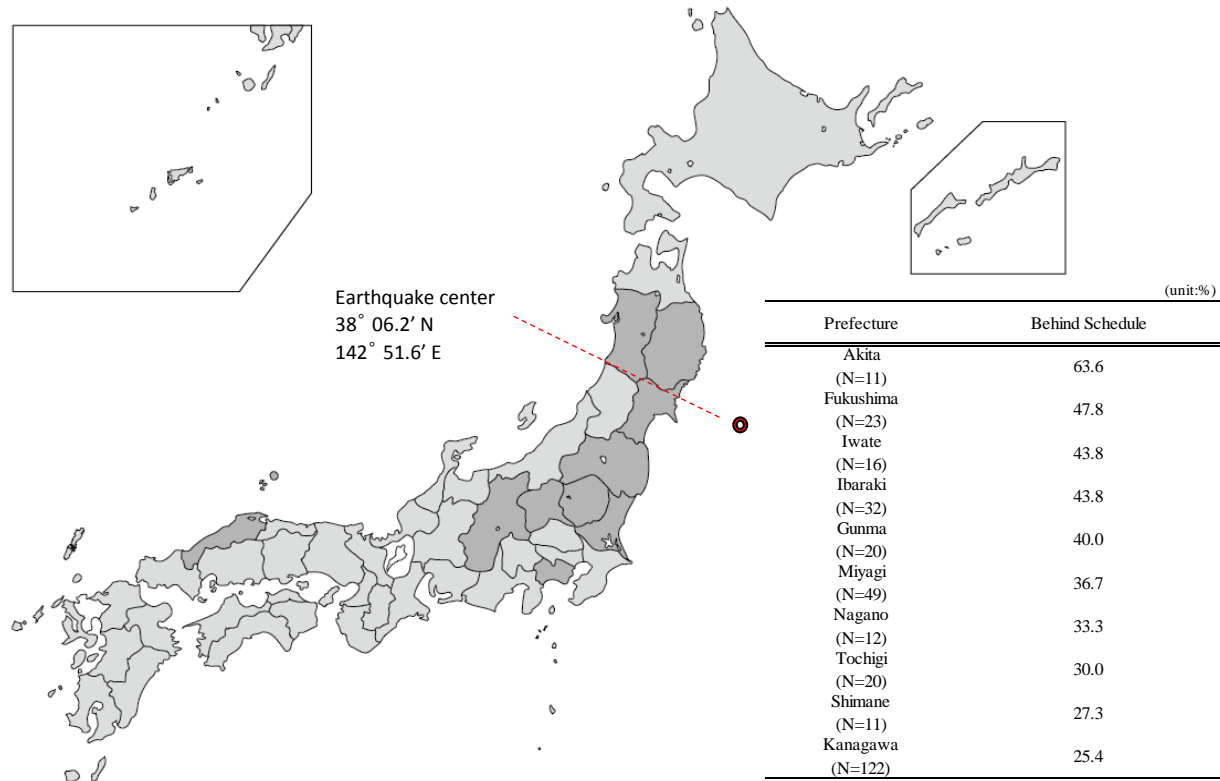
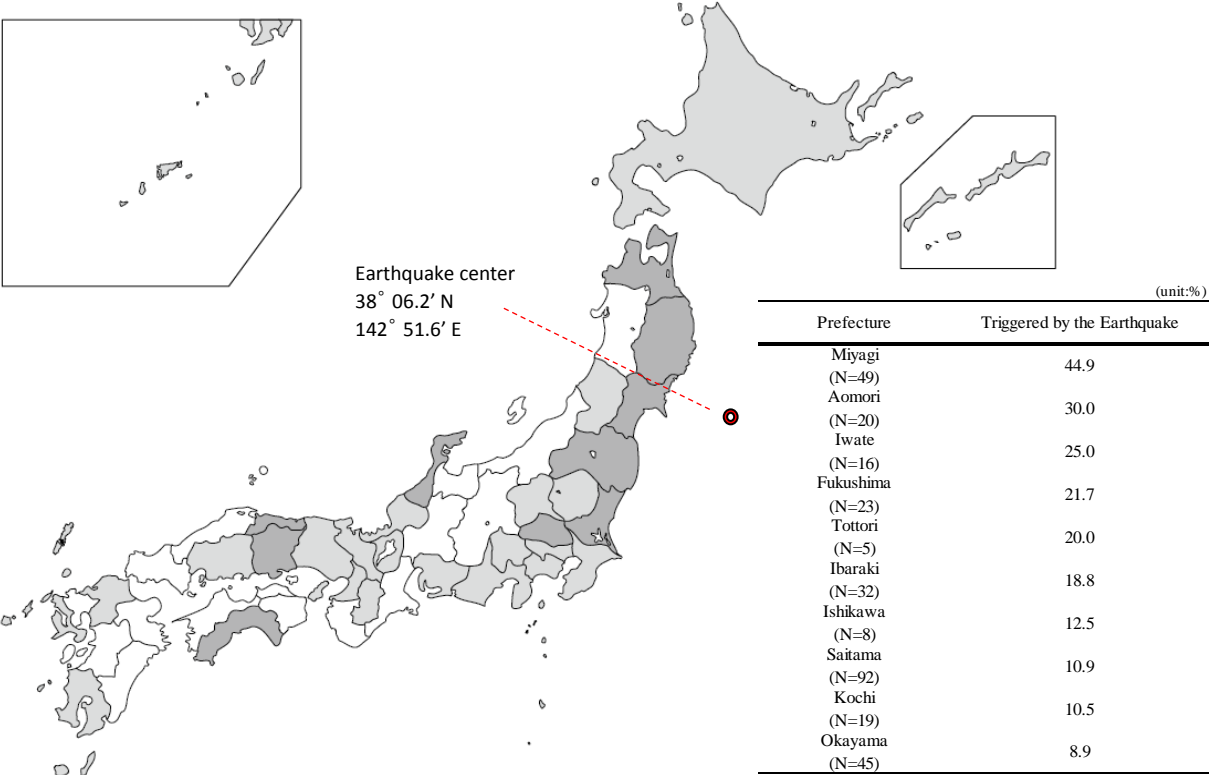


Figure2 Distribution of “Startups behind the Schedule”



Note: There was one or more “startups behind the schedule” in the shadowed prefectures. Dark shadowed prefectures are the top 10 prefectures percentage-wise.

Figure2 Distribution of “Startups Triggered by the Earthquake”



Note: There was one or more “startups triggered by the earthquake” in the shadowed prefectures. Dark shadowed prefectures are the top 10 prefectures percentage-wise.

Table 2 Occupation Just Before Startup

(Unit : %)

	Entrepreneur (Company CEO or Sole proprietor)	Company Executive or Manager	Fulltime Employee	Part time Employee	Others
Startups Triggered by the Earthquake (N=130)	3.8	47.7	24.6	13.8	10.0
Startups on the Schedule (N=1,647)	4.9	39.4	35.2	12.0	8.5
Startups behind the Schedule (N=369)	5.7	35.5	35.8	12.7	10.3

Note: Hereafter, "startups earlier than the schedule" are excluded from the analyzing sample.

Table 3 Reason of Leaving from the Former Job

(Unit : %)

	by my own decision	because of the circumstances of the employers			Reached to the Contracted Retirement Age	Others
		because of the bankruptcy or business closure of the employer	because of downsizing or closure of the business unit			
Startups Triggered by the earthquake (N=117)	62.4	27.4	9.4	17.9	0.0	10.3
Startups on the Schedule (N=1,525)	78.1	12.7	4.9	7.9	0.8	8.4
Startups behind the Schedule (N=331)	77.3	9.1	3.6	5.4	2.1	11.5

Table 4 Industry Sector

(Unit : %)

	Construction	Manufacturing	IT	Transportation	Wholesale	Retail	Restaurant	Hotel	Medical and Welfare	Education and Study Training	Services	Real-estate Brokerage	Others
Startups Triggered by the earthquake (N=132)	9.1	3.0	1.5	0.0	6.1	11.4	22.0	0.0	9.8	4.5	27.3	4.5	0.8
Startups on the Schedule (N=1,669)	6.2	2.5	1.3	2.5	5.7	12.8	17.1	0.2	18.6	2.8	26.5	2.8	1.0
Startups behind the Schedule (N=376)	2.4	1.3	0.3	2.1	4.0	10.6	30.1	0.0	21.3	2.1	23.4	2.1	0.3

Figure 5 Terms for Preparations

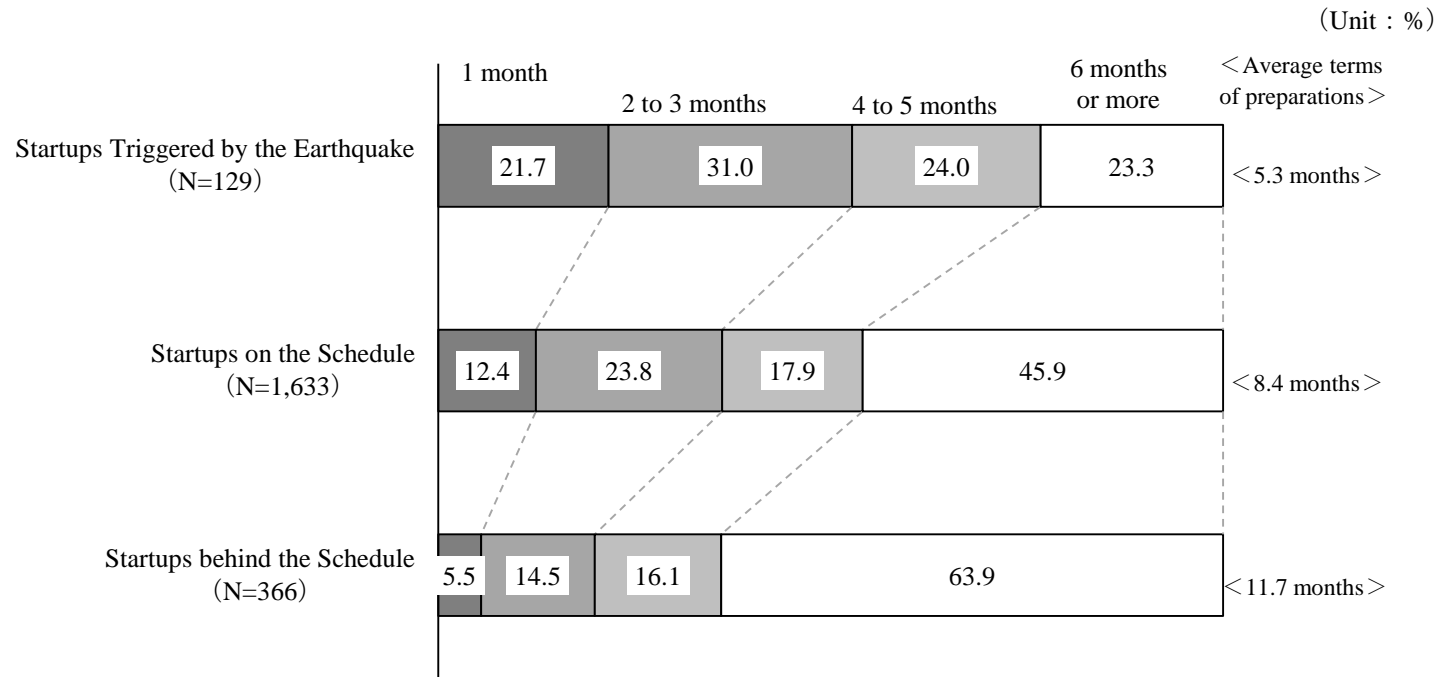


Figure 6 Average Number of Workforces (Entrepreneur and Employees)

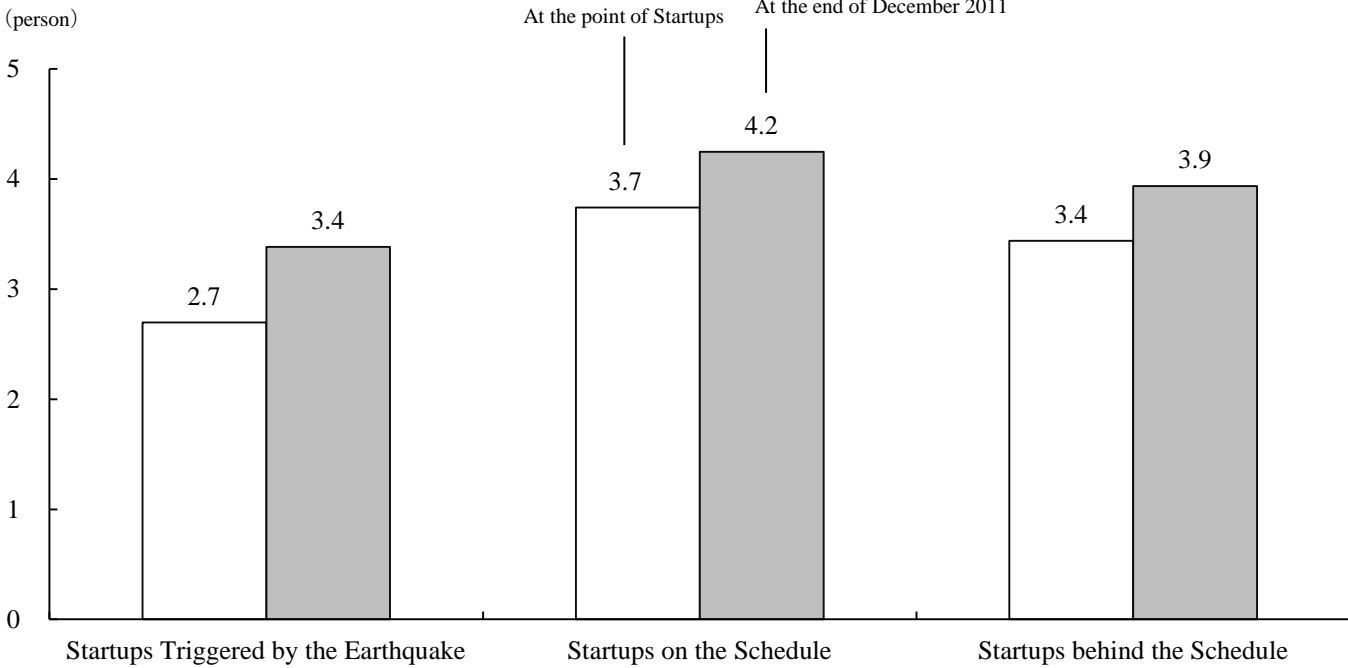
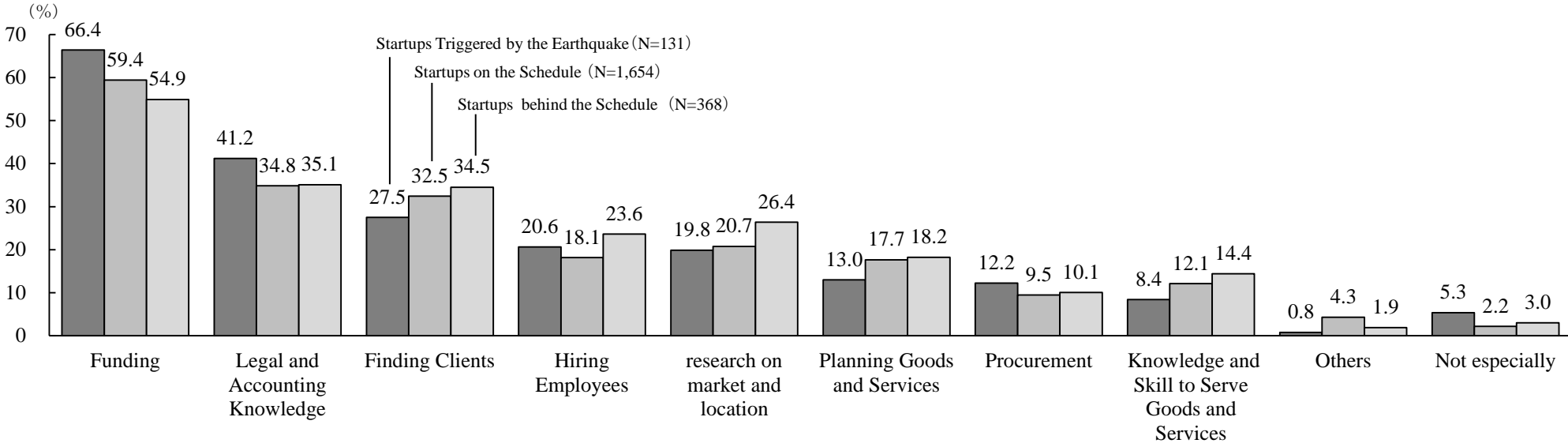
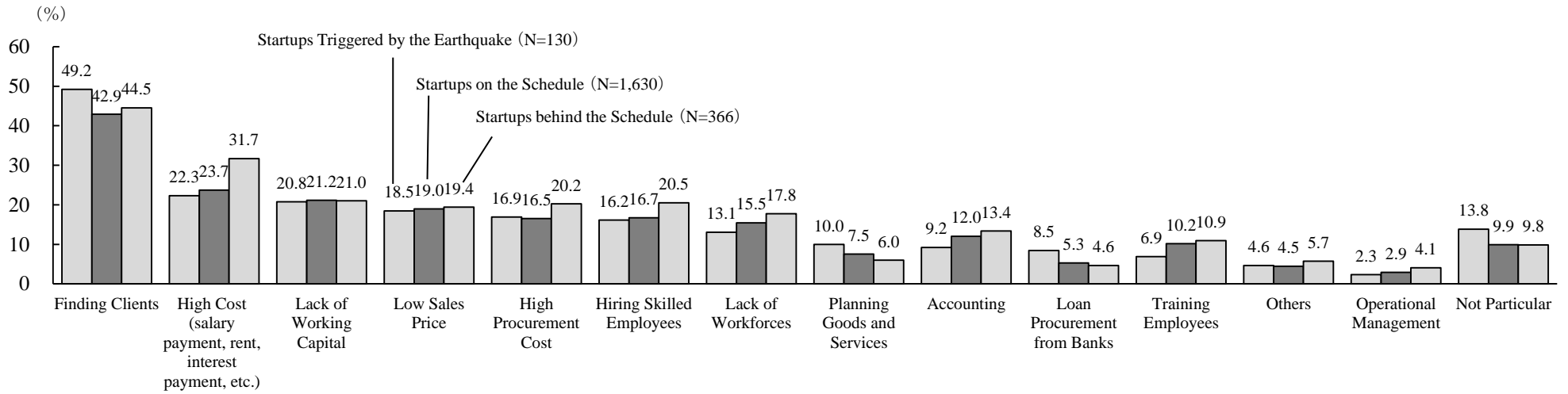


Figure 7 Managerial Problems of Startups (Multiple Answers up to 3)



Note: Multiple answers up to three, and the total of percentages excess 100%.

Figure 8 Current Managerial Problems (at the end of December 2011) (Multiple Answers up to 3)



Note: Multiple answers up to three, and the total of percentages excess 100%.

Figure 9 Business Condition (at the end of December 2011)

(Unit: %)

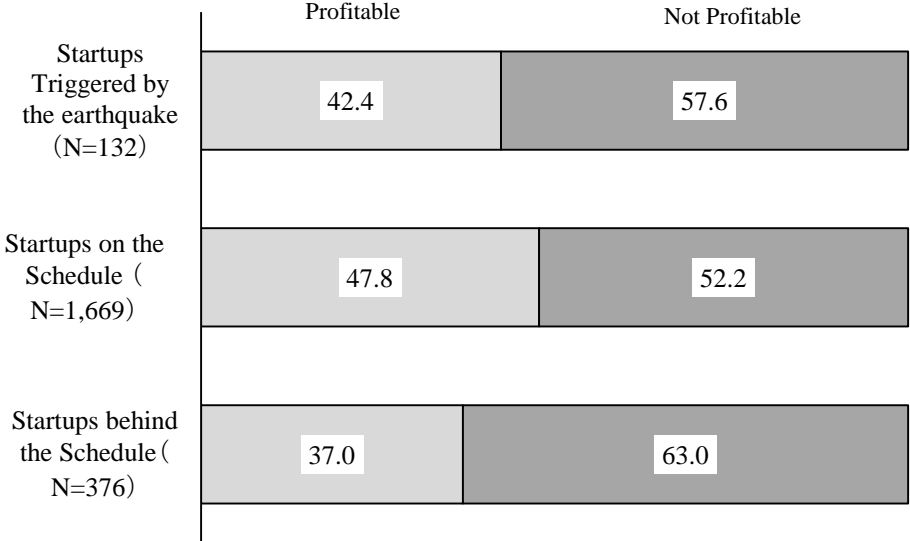


Figure10 Satisfaction Levels of Startups (at the end of December 2011)

(1) Income

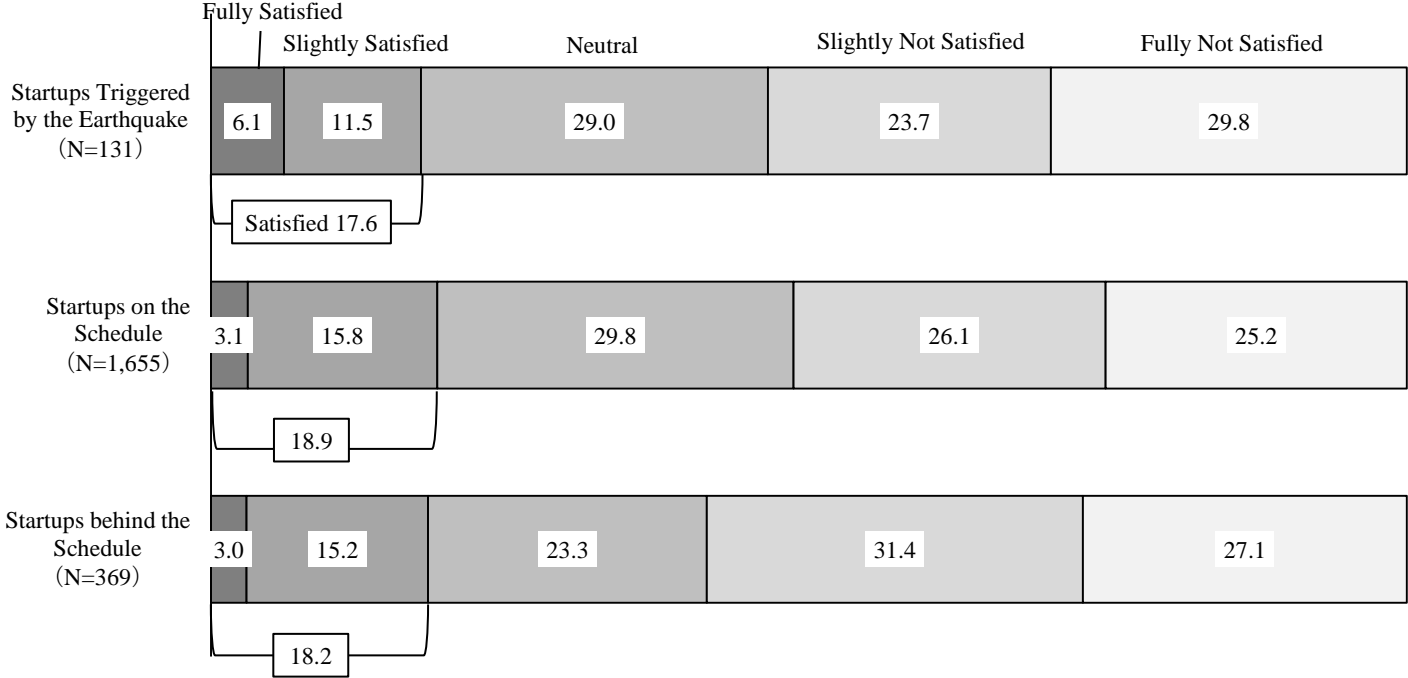


Figure10 Satisfaction Levels of Startups (at the end of December 2011)

(2) Job Worthwhileness

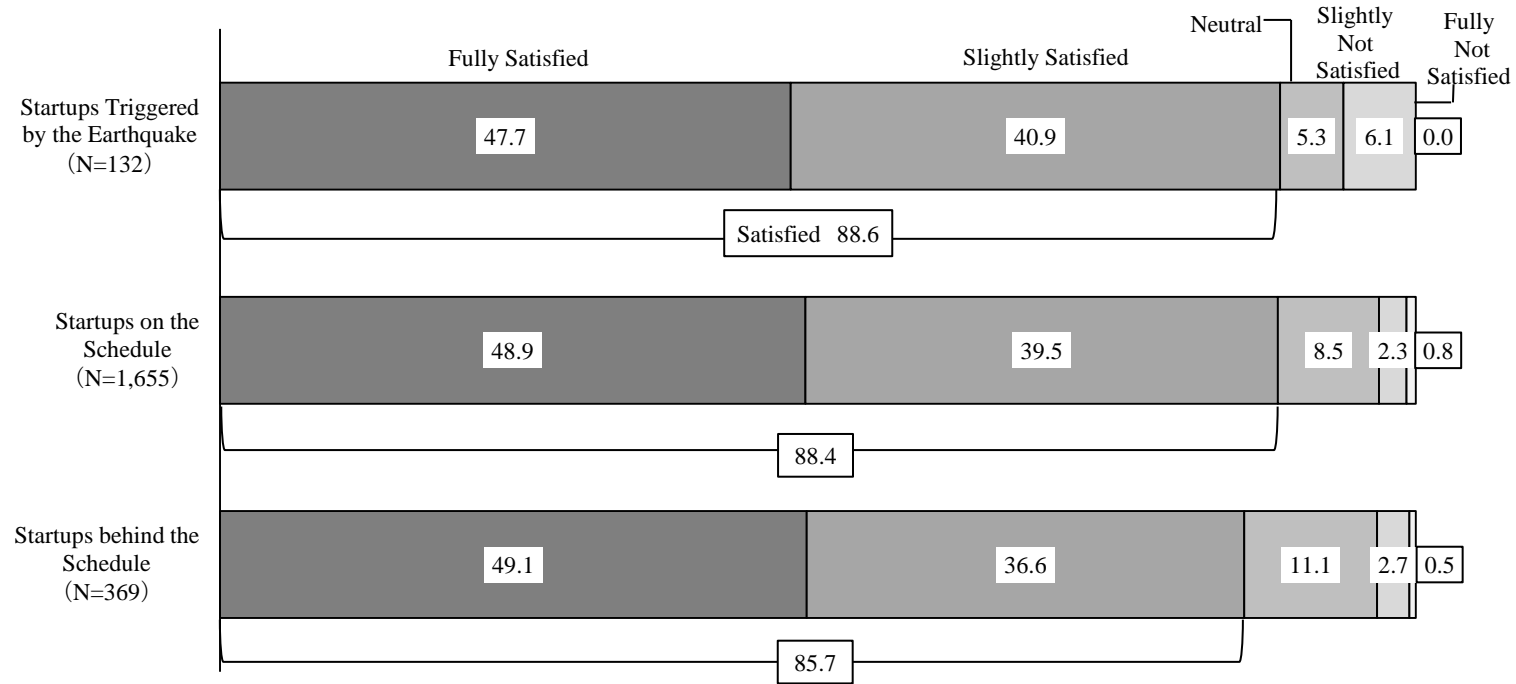


Figure10 Satisfaction Levels of Startups (at the end of December 2011)

(3) Total Satisfaction

