

Research Report

**Overview of Panel Survey on Business Start-ups
Tracking Businesses Commencing in 2011**

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Abstract

This research report provides an overview of the “Panel Survey on Business Start-ups” in which new businesses that started operation in 2011 were continuously followed up with for five years. This is the third cohort survey following the first cohort survey of businesses that started in 2001 and the second for businesses that started in 2006.

As a result, the panel survey found that, in general, start-ups were experiencing smooth growth, although some number of them went out of business. The average number of workforces and the average sales of start-ups, which were continuing their businesses, were gradually increasing. The survey also found that the third cohort had many points in common with the second, such as similar basic attributes of the start-ups and their entrepreneurs, a decrease in working hours of entrepreneurs after starting their businesses, a significant increase of business income after the first several years, a decrease of loans from the Japan Finance Corporation (JFC) from the initial large amount, and a shift to loans from private financial institutions.

In the third cohort, on the other hand, the increase in the number of workforces including entrepreneurs and sales was larger partly because of changes in economic conditions, and the percentage of profitable businesses was also higher. The panel survey also found that the business closure rate after five years was significantly lower than former cohorts. With regard to difficulties in business management, the survey revealed that a larger number of third cohort businesses experienced difficulties related to human resources compared to second cohort businesses. The survey also revealed that some start-ups started businesses triggered by the Great East Japan Earthquake and that the impact of the earthquake was mitigated over several years. Furthermore, it was found that the impact of the earthquake was particularly significant in the disaster-stricken areas, which experienced a higher business closure rate.

The survey results show that start-ups in the third cohort contributed to the Japanese economy through the creation of employment and the provision of products/services, etc. It appears that starting a business was generally a good choice for entrepreneurs, and the survey reaffirmed the importance of developing new businesses. Meanwhile, the survey also found that different environments surrounding the businesses, such as changes in economic conditions and the occurrence of the Great East Japan Earthquake, led to several differences in the activities of the start-ups. This may suggest the necessity of modifying the support methods for start-ups depending on economic and local conditions.

1 Introduction

The Japan Finance Corporation Research Institute (JFCRI) has conducted the Survey on Business Start-ups every year from 1991¹ and published the survey results as the “White Paper on Business Start-ups” the following year². The surveys collected samples from homogeneous populations of JFC customer start-ups and were suitable not only to clarify the actual conditions of the start-ups that started in the survey year, but also to observe changes in the attributes of the entrepreneurs and start-ups depending on difference of the time when the businesses started. However, it was difficult to analyze each start-up’s growth process because different start-ups answered different questions in each survey. To resolve this issue, the JFCRI tried to analyze the differences by the number of years after each business started. It conducted special surveys that expanded survey targets to those that started in the past several years³. Then, some differences in the conditions of the businesses by the number of years after starting their businesses were clarified by these surveys. However, there remained issues, such as the difference of time when the businesses were launched, unclear responses about their situations at the beginning due to the long period of time that had passed, and uncollectable data from start-ups that went out of business by the time of the survey.

In order to solve these issues, the JFCRI conducted the Panel Survey on Business Start-ups⁴. A panel survey is a periodical survey with the same respondents or sample. The first start-up panel survey (the first cohort survey) followed up on start-ups that started in 2001 over the course of five years. The details of the survey results were consolidated by Higuchi, Murakami, *et al.* (2007)⁵. This survey revealed the actual business closure situations of the start-ups and the changes they experienced after starting their businesses. For example, 15.4% of the new businesses that were surveyed went out of business by their fifth year. The business closure rate was higher among small-scale businesses, businesses operated by older entrepreneurs, and businesses with smaller funds by entrepreneurs. New businesses generally increased employment in total, considering job losses of closed businesses. Loans from private financial institutions increased every year on average after starting a business.

Following the first start-up panel survey, the JFCRI conducted a second start-up panel survey of businesses that began operations in 2006 (the second cohort survey). JFCRI & Suzuki (2012) consolidated the second cohort survey results and gave a detailed analysis with statistical approaches utilizing the characteristics of the panel data. JFCRI & Suzuki (2012) further revealed the actual

¹ The surveys were initially conducted by the People’s Finance Corporation Research Institute. Later, as a result of the integration of government-affiliated financial institutions, they were conducted by the National Life Finance Corporation Research Institute from October 1999 and by the JFCRI from October 2008.

² For the latest version, see JFCRI (2017).

³ For example, Takeuchi (2001) divided businesses whose ages were 30 months or less by a three-month period after their founding, and showed the percentage of loss-making businesses for each category.

⁴ The survey was initially conducted by the National Life Finance Corporation Research Institute. Later, the survey was taken over by the JFCRI from October 2008 in the middle of the second cohort survey.

⁵ Data of the first cohort presented in this paper are sourced from research reports in the book: Higuchi, Murakami, *et al.* (2007). The titles of each research report are omitted in this report because of a large number of citations.

[Procedures]

- (1) Target start-ups The first questionnaire survey was conducted with 9,287 businesses that were assumed to have started in 2011 with loans from JFC Micro Business and Individual Unit. Of businesses that responded to the survey, 3,046 that were confirmed to have started businesses in 2011 (excluding real estate leasing) were selected for the subsequent surveys.
- (2) Survey method The questionnaire surveys were conducted as of the end of each December starting from 2011, sending questionnaires in the following February of each year. Questionnaires were sent and collected via postal mail. A total of five questionnaire surveys were conducted until 2015.

(3) Number of respondents

	As of	Number of respondents
1st survey	End of December 2011	3,046 businesses
2nd survey	End of December 2012	1,787 businesses
3rd survey	End of December 2013	1,472 businesses
4th survey	End of December 2014	1,380 businesses
5th survey	End of December 2015	1,413 businesses

Note: Start-ups that went out of business were excluded from the number of respondents.

(4) Business closure criteria

In this survey, the following businesses were recognized as having closed their businesses.

- 1) Start-ups that selected "currently not operating a business" in questions asking about business continuation
- 2) Start-ups that were confirmed as not operating businesses through on-site surveys, etc.
- 3) Start-ups that were confirmed by JFC branches as not operating businesses.

conditions of the start-ups in detail. For example, performance fluctuation decreases, on average, in two or three years after starting a business. The impact of human capital on business management, such as the length of work experience in industries related to start-up businesses and educational background, changes over time. Businesses that are likely to survive and businesses that are likely to grow are not always the same, and there is a positive correlation between income and satisfaction with income.

This Panel Survey on Business Start-ups is the third cohort survey following the above two cohort surveys, and continuously followed up on start-ups that started business in 2011 over five years. To compare with the first and second cohorts, the sample was collected in the same way as in the previous surveys, and the same survey method was adopted using the same questions with the addition of new questions.

This research report gives an overview of the profiles of businesses that started in 2011 and the changes they underwent over the next five years based on the results of a total of five questionnaires and surveys on business continuation/closure. The report also compares third cohort data with second cohort data, as appropriate, and verifies whether phenomena observed in the second cohort are robust.

2 Survey Method

(1) Target Start-ups

Target Start-ups were new businesses that started in 2011 (see "Procedures"). First, the JFCRI conducted the first questionnaire survey of 9,287 businesses that were assumed to have started in

2011 receiving loans from JFC Micro Business and Individual Unit between October 2010 and December 2011. Of these businesses, 3,046 respondent start-ups, excluding real estate rental businesses, which were confirmed to have started in 2011, were selected as the sample for the third cohort panel survey. The JFCRI conducted a questionnaire survey of this sample every year from 2012 to 2015. A total of five questionnaires were conducted, including the first one.

The sampling method was basically the same as that used for the first and second cohort surveys. In consideration of the impact of the Great East Japan Earthquake, the JFCRI did not send the questionnaire to businesses in some areas that were heavily damaged, such as areas along the Sanriku Coast, if the businesses had received loans before March 2011. However, if businesses received loans in or after April 2011, they were not excluded even if they were located in the disaster-stricken areas. Businesses in Okinawa Prefecture, which is not the JFC's business area, were not included in the sample.

The sample had some biases when compared with overall new businesses in Japan because it was collected from businesses that received loans from the JFC. Very small-sized start-ups that did not need much money and start-ups that had sufficient funds and did not need loans were not included. There was the possibility that larger start-ups that could obtain finances from banks or venture capitals might also be excluded. Start-ups that started in 2011, but went out of business by the time the first questionnaire survey was conducted at the end of 2011, were also excluded from the respondents, although the number of such businesses was small.

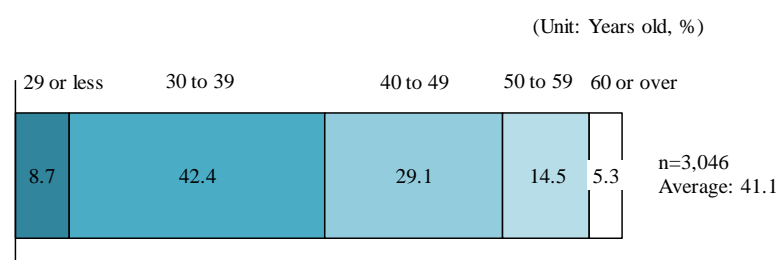
(2) Survey Method

Questionnaires were sent and collected via postal mail. Panel surveys can obtain better data when more businesses respond to all questionnaires. Hence, in the second and subsequent questionnaire surveys, the JFCRI sent postcards to respondents immediately before the questionnaire response deadlines and requested that they answer and send back the questionnaires in order to increase the response rate. In addition to the postcards, the JFCRI called respondents and asked them to complete and return the questionnaires. The delivery and collection of the second and subsequent questionnaires was outsourced to Teikoku Databank, Ltd.

(3) Business Closure Criteria

The JFCRI assumed start-ups as having gone out of business if they fell under any of the following criteria: 1) businesses that selected "currently not operating a business" in the questionnaire, 2) businesses that were confirmed as not operating through on-site surveys conducted by Teikoku Databank, Ltd., which was in charge of questionnaire delivery and collection, or through other evidence, and 3) businesses that were confirmed as not operating based by the information from JFC branches. These criteria are also the same as those used in the previous Panel Surveys on

Figure-1 Age of Entrepreneurs when starting businesses



Source: Panel Survey on Business Start-ups (the third cohort), JFCRI; the same applies hereinafter.

Business Start-ups.

The questionnaires asked for the date of business closure. For the regarded businesses that filled in the dates as having closed their business, the closure dates were fixed as appropriate⁶. On-site surveys were conducted by observing name boards, shop/office conditions, etc., on the outside of the businesses, instead of direct visits/interviews. Open information on the internet, such as corporate websites and entrepreneur blogs, were also utilized, as appropriate.

3 Profiles of Respondents

(1) Attributes of Entrepreneurs

From here, this report confirms the attributes of the entrepreneurs of responding businesses and businesses themselves by comparing the data of the second cohort when possible⁷.

First, 8.7% of entrepreneurs started businesses when they were at the age of “29 or less,” and 42.4% of entrepreneurs started at the age of “30 to 39.” Age groups “40 to 49,” “50 to 59,” and “60 or over” accounted for 29.1%, 14.5%, and 5.3%, respectively (Figure-1)⁸. The average age was 41.1. Regarding the gender of the entrepreneurs, 80.8% of entrepreneurs were “male” while 19.2% of entrepreneurs were “female.” In the second cohort, the average age was 41.9, with “male” accounting for 83.8% and “female” accounting for 16.2%. Thus, the percentage of female entrepreneurs slightly increased in the third cohort.

Entrepreneur educational backgrounds included “junior high school” (3.3%), “high school” (30.6%), “specialized training college/miscellaneous school” (29.1%), “college/university” (29.0%),

⁶ For example, if a business noted that it went out of operation in March 2013 in the fifth questionnaire survey conducted at the end of 2015, the business was regarded as “operating” until the end of 2012 and “closed” after the end of 2013.

⁷ The data of the second cohort are sourced from research reports contained in JFCRI/Suzuki (2012). The titles of individual research reports are omitted in this report because of a large number of citations. The same shall apply hereinafter.

⁸ Data in Chapter 3 are from all responding businesses unless otherwise noted (n=3,046). When there are responding businesses that did not provide an answer or did not apply to the specific conditions, n is shown in (). In such cases, responses were tallied by excluding those respondents. The breakdown may not add up to 100.0% or to the total due to rounding.

and “graduate school” (2.7%) (n=3,017)⁹.

98.9% of entrepreneurs had work experience before starting a business, and the average length of service was 18.3 years. Thus, most of the entrepreneurs of these start-ups had work experience (work experience: n=3,040, length of service: n=2,901). 86.1% of entrepreneurs had work experience related to their current businesses with an average length of 14.0 years, showing that many of the entrepreneurs started their businesses after accumulating related work experience (work experience: n=3,005, length of experience: n=2,518). In the second cohort, work experience and the length of experience were 88.1% and 14.3 years, respectively. It appears that the entrepreneurs’ tendency of starting businesses after accumulating the related work experience did not change very much.

Approximately 40% of entrepreneurs were engaged in managerial work before starting a business as shown in “corporate officer (excluding corporate representative)” (8.4%) and “regular employee (supervisory employee)” (30.9%) (n=3,008)¹⁰. “Regular employee (non-supervisory employee)” accounted for 34.6%. Non-regular employees (the total of “part-timer,” “contract employee,” and “temporary staff”) accounted for 11.8% while “family employee” accounted for 2.0%¹¹. There were also “corporate representative” (2.9%) and “solo-proprietor” (2.5%). 93.2% of all entrepreneurs were working immediately before starting a business. “Housewife/househusband” (1.4%), “student” (0.2%), and “unemployed” (2.0%) were selected by only a few entrepreneurs (n=3,008)¹².

In the second cohort, “corporate officer,” “regular employee (supervisory employee),” “regular employee (non-supervisory employee),” and “non-regular employee” accounted for 11.4%, 36.9%, 34.8%, and 8.8%, respectively. In the third cohort, the percentage of non-regular employees is slightly higher, but the overall tendency does not differ much.

The number of employees of the former place of employment was “4 or less” (16.8%), “5 to 9” (22.2%) and “10 to 19” (16.5%), with businesses with 299 or fewer employees accounting for 87.8% (n=2,768). In contrast, “300 or more” (11.3%) and “government office” (0.9%) were minorities¹³.

As reasons for leaving the place of employment, “by my own decision” was most frequently cited at 76.8% (n=2,765).

On the other hand, involuntary leaving, such as “bankruptcy” (1.5%), “business closure” (3.5%), “downsizing or closure of the business unit” (5.1%), and “dismissal” (2.6%), accounted for 12.7%. “Reached the contracted retirement age” and “other” accounted for 1.1% and 3.8%, respectively. “Still working (have not left/retired)” was also selected by 5.5% of respondents.

(2) Attributes of Businesses

With regard to the type of business when they started, corporations accounted for 29.4%, which

⁹ “Technical college,” “community college,” and “other” accounted for 1.1%, 3.6%, and 0.5%, respectively.

¹⁰ Entrepreneurs selected their occupation at the time of separation if they left their jobs to start businesses.

¹¹ Non-regular employees were comprised of “part-timer” (8.5%), “contract employee” (2.8%), and “temporary staff” (0.5%).

¹² “Other” accounted for 3.3%.

¹³ “20 to 29,” “30 to 49,” “50 to 99,” and “100 to 299” accounted for 8.9%, 7.2%, 8.1%, and 8.2%, respectively.

Table-1 Industries for start -ups

(n=3,046)

Industry	%
Construction	6.4
Manufacturing	2.6
Information and communications	1.2
Transport	2.6
Wholesale	5.1
Retail	12.2
Eating and drinking places/accommodations	19.6
Medical, health care, and welfare	17.5
Education, learning support	2.9
Services for individuals	19.4
Services for businesses	6.6
Real estate	3.1
Other	0.8
Total	100.0

broke down to “stock company” (26.7%), “NPO” (0.6%), and “other corporation” (2.0%). On the other hand, “solo-proprietor” accounted for 70.6%, and 6.2% of respondents joined franchises (n=2,989). In the second cohort, corporations and solo-proprietors accounted for 33.0% and 67.0%, respectively. The percentage of solo-proprietors is slightly higher in the third cohort. In the second cohort, franchised businesses accounted for 5.5%.

As for the industries for these start-up businesses, “eating and drinking places/accommodations” (19.6%) was most frequently cited, followed by “services for individuals” (19.4%), “medical, health care, and welfare” (17.5%), and “retail” (12.2%). These four industries add up to nearly 70% of all responses (Table-1). The top four industries were the same in the second cohort (15.2 % “eating and drinking places/accommodations,” 14.3% “services for individuals,” 12.8% “medical, health care, and welfare,” and 14.0% “retail”), but the percentage of “eating and drinking places/accommodations,” “services for individuals,” and “medical, health care, and welfare” significantly increased in the third cohort.

The initial cost of each business averaged 11.473 million yen, which is slightly less than the 12.319 million yen in the second cohort (n=2,891).

The number of workforces including entrepreneurs at the start of each business was 3.7 on

Table-2 Business continuation/closure

(Unit: %)

	Operating	Closed	Unknown
1st survey (baseline) (as of the end of 2011)	100.0	0.0	0.0
2nd survey (as of the end of 2012)	97.5	2.4	0.1
3rd survey (as of the end of 2013)	94.5	5.3	0.2
4th survey (as of the end of 2014)	92.1	7.5	0.4
5th survey (as of the end of 2015)	89.2	10.2	0.7

average. Looking at the breakdown, “entrepreneur himself/herself” was 1.0 person, “family employee” was 0.4 persons, “full-time officer/regular employee” was 0.8 persons, “part-timer/contract employee” was 1.5 persons, and “temporary staff” was 0.0 persons (n=3,019)¹⁴.

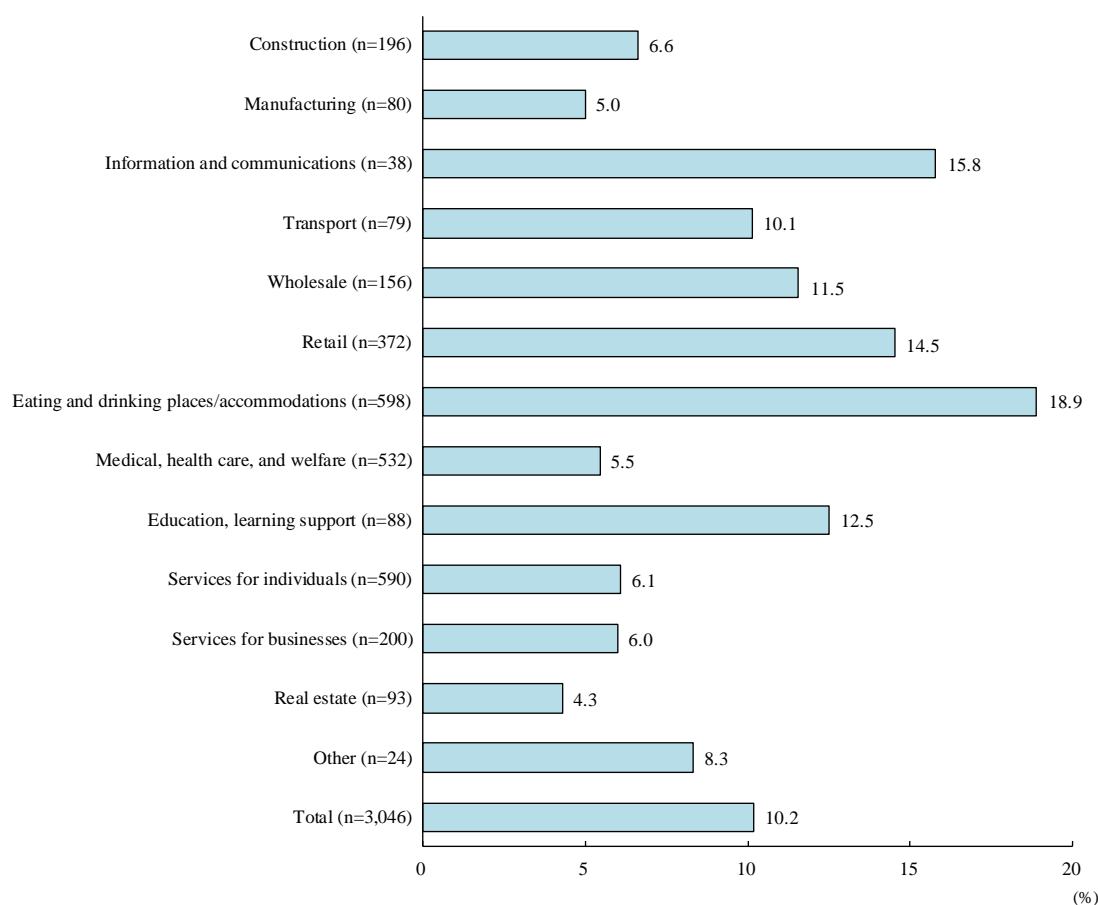
4 Continuation After Starting a Business

As mentioned above, panel surveys have a big advantage of allowing continuous observation of the situations of the same respondents. In the case of ordinary one-time questionnaire surveys, they can cover only businesses that existed at the time of the surveys. Hence, it is difficult to comprehend the past situation of businesses that closed before the surveys. On the other hand, this panel survey confirmed whether businesses, including those that did not respond to the questionnaires, were still operating or had closed their business. The results are as follows:

In comparison with businesses that were still operating at the end of 2011 (baseline), 97.5% of businesses were still “operating” while 2.4% of businesses had “closed” at the end of 2012 (Table-2). That is to say, 2.4% of new businesses were closed in 2012. Later, at the end of 2013, 94.5% of businesses were still “operating” while 5.3% of businesses had “closed.” At the end of 2014, 92.1% of businesses were still “operating” while 7.5% of businesses had “closed.” At the end of 2015, “operating” and “closed” accounted for 89.2% and 10.2%, respectively. Business closures in 2011 were not counted because the baseline was set at the end of 2011. Therefore, these are the percentage of businesses that went out of business during those four years.

¹⁴ Data in Figure-3 below are only from businesses that answered all employee breakdowns in the five questionnaire surveys. Therefore, they slightly differ from the data shown here.

Figure-2 Business closure rate by industry (as of the end of 2015)



The business closure rate was slightly higher in 2013 by 2.9 percent points than in 2012, but decreased to 2.2 percent points in 2014, and increased again to 2.7 percent points in 2015.

Businesses for which continuation or closure was “unknown” accounted for 0.7% as of the end of 2015. These include, for example, businesses for which continuation or closure is unclear from the outside because they have no official office, such as owner-driven taxi businesses, door-to-door cosmetic sales businesses, and construction¹⁵.

Looking at the business closure rate by industry, “eating and drinking places/accommodations” shows the highest closure rate at 18.9% (Figure-2), followed by “information and communications” (15.8%), “retail” (14.5%), and “education, learning support” (12.5%). On the other hand, the closure rates of “real estate” (4.3%), “manufacturing” (5.0%), “medical, health care, and welfare” (5.5%), “services for businesses” (6.0%), and “services for individuals” (6.1%) are below the average

¹⁵ Basically, the JFCRI knows whether respondents are still operating or have gone out of business while respondents have outstanding loans because the JFC gave loans to these responding businesses. After all borrowings are repaid, however, the JFCRI does not always continue to keep contact with these businesses and sometimes does not confirm their business continuation/closure.

(10.2%).

In the first cohort (businesses that started in 2001), “operating” accounted for 82.7% while “closed” accounted for 15.4% as of the end of 2005. In the second cohort (businesses that started in 2006), “operating” accounted for 83.3% while “closed” accounted for 15.2% as of the end of 2010. In the third cohort, the percentage of “operating” businesses was higher than that of the previous two cohorts while the percentage of “closed” businesses was lower than those of the previous cohorts. Meanwhile, the percentage of businesses that shut down each year once increased and then decreased. This tendency is similar to that of the first and second cohorts.

Looking at the business closure rate by industry in the second cohort, the rate is the highest in “eating and drinking places/accommodations” (23.2%), followed by “information and communications” (20.8%), “retail” (19.2%), and “education, learning support” (18.0%). There is no major change in the business closure rate by industry. However, the business closure rate is lower in most industries in the third cohort than in the second cohort.

The diffusion index (DI) of existing small businesses with fewer than 20 employees in the first cohort period averaged -47.1 from 2002 to 2005. The DI of the second cohort period averaged -50.0 from 2007 to 2010. The DIs for the two cohorts were almost the same at a considerably low level¹⁶. In the third cohort period, the DI considerably improved at an average of -32.3 from 2012 to 2015, although the value remains at a low level.

The average GDP growth rate was 1.4% from 2002 to 2005, -0.2% from 2007 to 2010, and 1.3% from 2012 to 2015. This is inconsistent with the change in the business closure rate from the first to the second cohort but is consistent with the change in the rate from the second to the third cohort¹⁷. Moreover, as will be described later, the performance of responding businesses is better in the third cohort than in the second cohort. These changes in economic trends may have contributed to the lower business closure rate in the third cohort, although it is not certain¹⁸.

With regard to the bankruptcy of general enterprises, the average number of bankruptcy cases in the first cohort period from FY 2002 to FY 2005 was 15,421. The number averaged 15,013 in the second cohort period from FY 2007 to FY 2010, and 10,508 in the third cohort period from FY 2012 to FY 2015¹⁹.

This change in the number of bankruptcy cases is very much consistent with the business closure rate of each cohort in the Panel Survey on Business Start-ups.

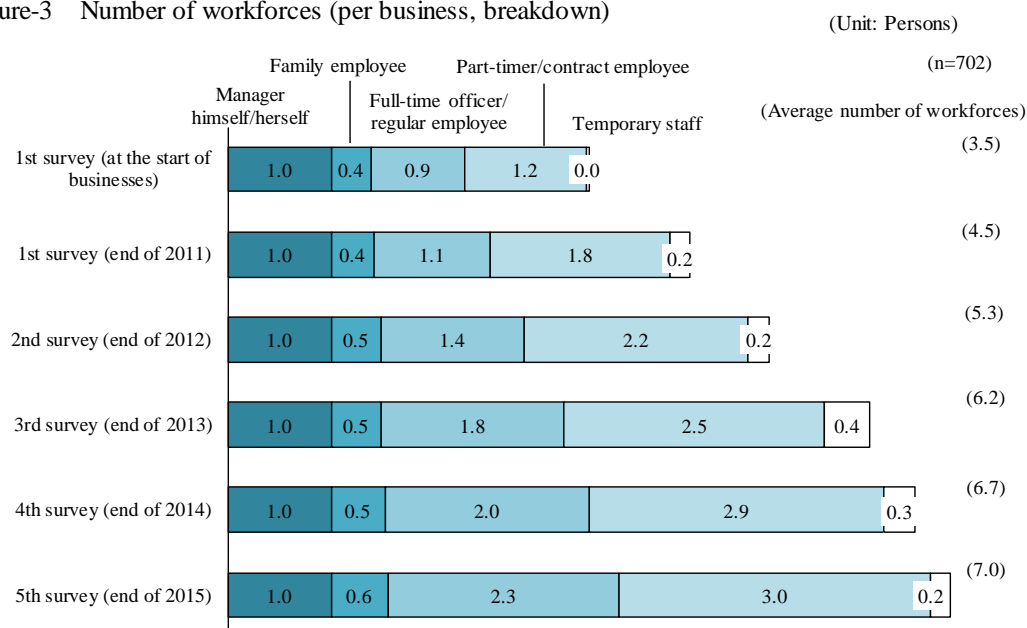
¹⁶ DIs are the average of data for 16 quarters presented in the JFCRI's *Quarterly Survey on SME Trends (Micro and Small Businesses)*.

¹⁷ The average GDP growth rate is the arithmetic average of the YoY increase/decrease rate of each year presented in the *System of National Accounts* published by the Cabinet Office, Government of Japan.

¹⁸ The percentage of businesses for which business continuation/closure is unknown decreased to 0.7% in the third cohort from 2.0% in the first cohort and 1.5% in the second cohort. However, the decrease is smaller than that of the business closure rate. Therefore, the decrease in the percentage of “unknown” businesses cannot explain the changes in the business closure rate because there is the possibility of both business continuation and business closure.

¹⁹ The average number of bankruptcy cases was calculated based on fiscal year bankruptcy data provided by the Business Mutual Aid Association (2007 and 2016).

Figure-3 Number of workforces (per business, breakdown)



Note 1: The survey tallied responses from businesses that answered the question about the number of employees in all surveys, from the first to the fifth.

2: "Full-time officer/regular employee" excludes family members.

5 Business Conditions After Starting a Business

This chapter looks at changes in the situation of start-ups after starting a business. Not all businesses responded to the second and subsequent questionnaires, and some businesses did not answer certain questions. Therefore, the situations for the same businesses cannot be compared by simply adding up all responding businesses of each questionnaire survey.

For this reason, in the following sections, the survey tallied only responses from businesses that responded to all five questionnaires and that answered all applicable questions, unless otherwise noted. Accordingly, figures may slightly differ from those shown as a general profile of surveyed start-ups described above.

(1) Changes in the Number of Workforces

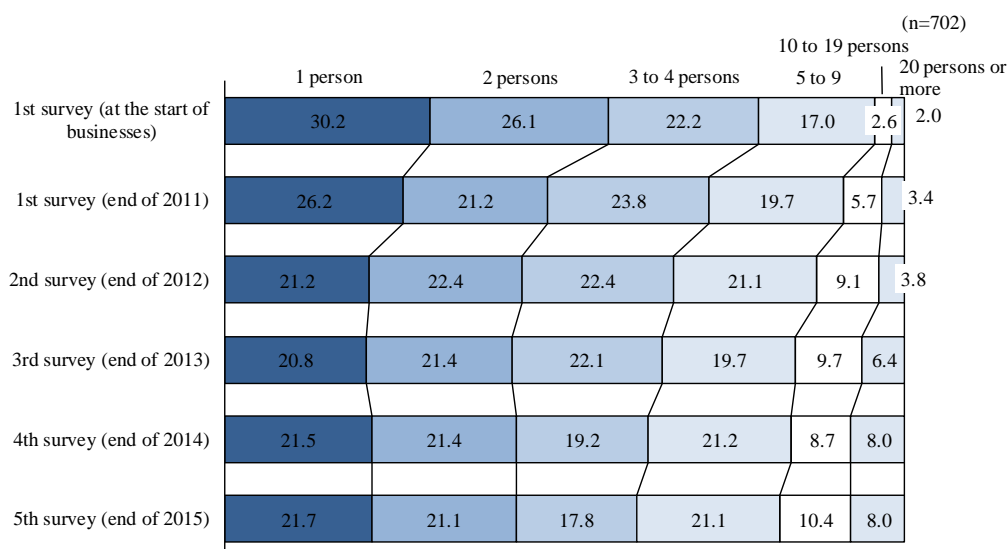
The number of workforces including entrepreneurs per business smoothly increased after starting, from 3.5 at the start of business to 4.5 at the end of 2011 and 5.3 at the end of 2012. The number increased to 7.0 at the end of 2015 (Figure-3).

Looking at the breakdown, "full-time officer/regular employee"²⁰ increased from 0.9 immediately after starting a business to 1.1 at the end of 2011 and 1.4 at the end of 2012. The number increased to 2.3 at the end of 2015.

²⁰ Family members are excluded. The same shall apply hereinafter.

Figure-4 Number of workforces (distribution of size)

(Unit: %)



Note: Same as in Figure-3 Note 1.

“Part-timer/contract employee” also increased from 1.2 immediately after starting a business to 1.8 at the end of 2011 and 2.2 at the end of 2012. The number reached 3.0 at the end of 2015.

On average, the growth in the number of “part-timer/contract employees” is larger than that of “full-time officer/regular employees.”

“Family employee” also increased from 0.4 immediately after starting to 0.6 at the end of 2015. This suggests situations such as family members who were not previously working starting to help or family members who were working for another business leaving their current jobs and participating in the business because they faced manpower shortages as they got on track.

“Temporary staff” also increased from 0.0 immediately after starting a business to 0.2 at the end of 2015, although the number slightly changed with each survey year. The number of “entrepreneur himself/herself” did not change since the number was set at 1.0.

Figure-4 shows changes in the number of workforces by employee size category. At the start of each business, “1 person” accounted for 30.2%, followed by “2 persons” (26.1%), “3 to 4 persons” (22.2%), “5 to 9 persons” (17.0%), “10 to 19 persons” (2.6%), and “20 persons or more” (2.0%). The percentage of “1 person” businesses operated only by an entrepreneur decreased to 26.2% at the end of 2011 and 21.2% at the end of 2012, but remained at the same level afterwards until the end of 2015 (21.7%). The percentage of “2 persons” comprised of one entrepreneur and one employee also remained at the same level after it decreased to 21.2% at the end of 2011. The combination of these two categories accounted for over 40% at the end of 2015. This indicates that business starters whose businesses did not grow much in size or who did not want to expand their businesses

accounted for a certain percentage.

On the other hand, there were a fair amount of business starters who expanded their businesses. The percentage of “10 to 19 persons” increased from an initial 2.6% to 5.7% at the end of 2011, 9.1% at the end of 2012, and 10.4% at the end of 2015. “20 persons or more” also increased from a very small initial percentage of 2.0% to 8.0% at the end of 2015²¹.

The total number of workforces of 702 surveyed businesses increased from 2,461 immediately after starting a business to 4,927 at the end of 2015. Looking at the total number of workforces as of the end of 2015 by employee size category, “20 persons or more” totaled 2,157 persons (43.8%) while “10 to 19 persons” totaled 932 (18.9%), showing that these larger-sized businesses are playing a particularly significant role in job creation.

In the second cohort survey, JFCRI/Suzuki (2012) included businesses that responded in regard to the number of workforces until business closure in the previous year in the analysis, in consideration of workforce losses due to business closures, and calculated the number of workforces including businesses with no workforces after business closure. As a result, the total number of workforces in the second cohort survey was 3.7 at the start of business and 4.7 at the time of the fifth questionnaire survey. When the data of this third cohort survey were calculated in the same way as for the second cohort survey, the number of workforces was 3.6 at the start of business and 6.0 at the end of 2015. More businesses increased their headcount over five years in the third cohort than in the second cohort, although the number of workforces at the start of each business was almost the same.

(2) Changes in Performance

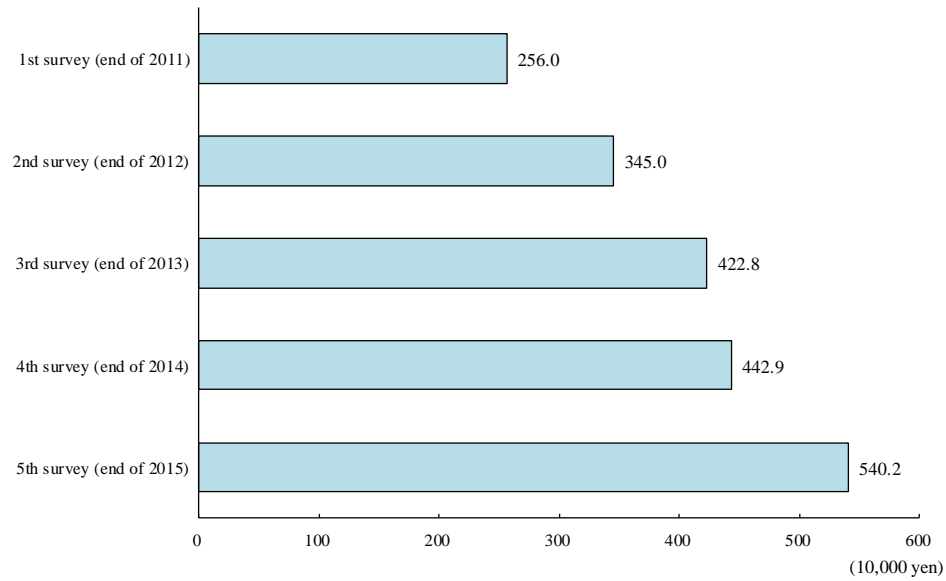
Average monthly sales increased every year from 2.560 million yen at the end of 2011 to 3.450 million yen at the end of 2012 and 4.228 million yen at the end of 2013. At the end of 2015, average monthly sales reached 5.402 million yen, more than doubling over four years (Figure-5). In the second cohort, average monthly sales increased from 3.073 million yen in the first survey to 4.572 million yen in the fifth survey. Average monthly sales of the third cohort were slightly smaller at the beginning but exceeded the second cohort in the last survey year.

Looking at the increase/decrease of monthly sales from the end of the previous year, “increased” accounted for 68.2% while “no change” and “decreased” accounted for 13.9% and 17.9%, respectively, at the end of 2012 (Figure-6). Sales continued to increase in nearly half of new businesses, although the percentage of businesses that experienced a sales increase gradually decreased to 56.4% at the end of 2013, 50.4% at the end of 2014, and 47.0% at the end of 2015. In

²¹ It is impossible to strictly compare the third cohort with the second cohort because, in the second cohort survey, businesses that responded in regard to the number of workforces until business closure were included in the analysis of JFCRI/Suzuki (2012). However, the results of the second cohort survey were consistent with the results of the third cohort survey in that: (1) the number of “part-timer/contract employees” and “full-time officer/regular employees” gradually increased, (2) the percentage of “1 person” and “2 persons” did not change much after the second or the third survey, and (3) the percentage of larger businesses increased every year.

Figure-5 Average monthly sales

(n=647)

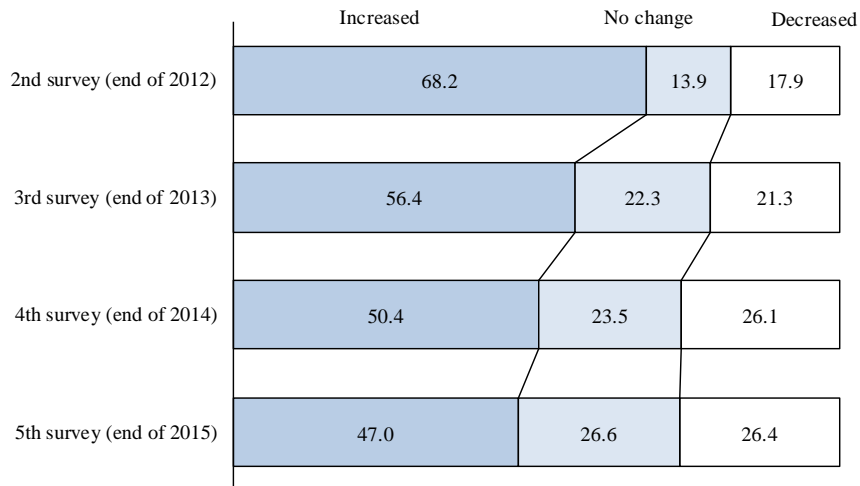


Note: The survey tallied responses from businesses that answered the question about monthly sales in all surveys, from the first to the fifth.

Figure-6 Increase/decrease in monthly sales

(Unit: %)

(n=647)



Note 1: Same as in Figure-5.

Note 2: Increase/decrease in each survey shows an increase/decrease from the end of the previous year.

the second cohort, the percentage of businesses that experienced a sales increase was 67.8%, 48.5%, 41.2%, and 41.5%, respectively. The percentage of businesses that experienced a sales increase was at the same level both in the second and the third cohorts at the time of the second survey. In the

Figure-7 Business performance



Note 1: The survey tallied responses from businesses that answered the question about business performance in all surveys, from the first to the fifth.

2: () shows the DI = percentage of "very good" and "slightly good" - percentage of "slightly bad" and "very bad"

third and subsequent surveys, however, the percentage of the third cohort was higher by nearly 10%, showing continuous sales growth for a longer period of time.

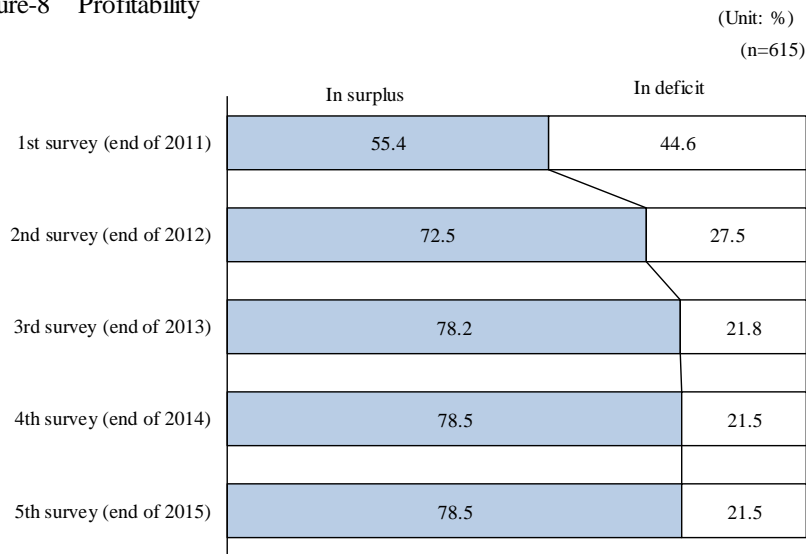
Next, 53.7% of respondents assessed their business performance as good at the end of 2011 (the total of "very good" [4.2%] and "slightly good" [49.5%]) while 46.3% of respondents assessed their performance as bad (the total of "slightly bad" [37.5%] and "very bad" [8.8%]). The DI (the percentage of "very good" and "slightly good" minus the percentage of "slightly bad" and "very bad") was 7.4 (Figure-7).

The percentage of respondents that assessed their business performance as good increased to 59.2% (the total of "very good" [5.8%] and "slightly good" [53.4%]) at the end of 2012 and 62.5% (the total of "very good" [5.1%] and "slightly good" [57.4%]) at the end of 2013. The percentage remained at the same level in the subsequent years. The DI was over 20 at the end of 2013 and afterwards.

As for profitability, 55.4% of respondents selected "in surplus" at the end of 2011 while 44.6% selected "in deficit" (Figure- 8). The percentage of "in surplus" gradually increased from 72.5 % at the end of 2012 and 78.2% at the end of 2013, but remained at the same level at 78.5 % both at the end of 2014 and 2015. This trend is similar to that of business performance. It is assessed that many of the new businesses became stable in the third year.

In the second cohort, the percentage of profitable businesses changed from 60.9 % to 73.2 %, 68.2%, 62.5%, and 64.1% from the first survey to the fifth survey. Comparing the two cohorts, the percentage of profitable businesses in the third cohort was slightly lower than that of the second

Figure-8 Profitability



Note: The survey tallied businesses from companies that answered the question about profitability in all surveys, from the first to the fifth.

cohort in the first survey, but increased to the same level in the second survey and remained higher in the third and subsequent surveys.

As described above, the performance of the respondents of the third cohort as a whole was initially comparable with or fell below that of the second cohort but exceeded afterwards. As shown in Chapter 8, the impact of the Great East Japan Earthquake on sales remained considerable in the first survey at the end of 2011. As confirmed in Chapter 4, on the other hand, economic conditions during the survey period were better in the third cohort than in the second cohort as a whole. It is assessed that this difference led to the difference in business performance. Also, better performance of the start-ups partly explains the lower business closure rate in the third cohort than that of the two previous cohorts.

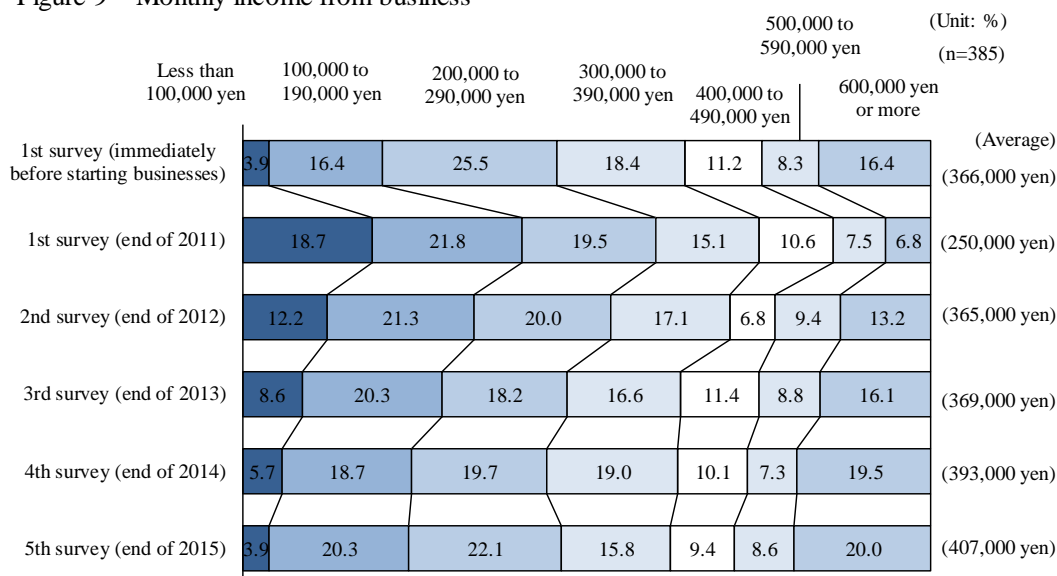
(3) Changes in Income and Work Styles

How did the entrepreneurs' monthly business incomes change? In the survey, entrepreneur incomes immediately before starting a business and business incomes after starting a business were compared²². Needless to say, income from the new businesses was not included in income immediately before starting a business.

The average income decreased from 366,000 yen immediately before starting a business to 250,000 yen at the end of 2011 after starting a business (Figure-9). However, business income increased to 365,000 yen at the end of 2012, which is comparable with the monthly income before starting a business. Later, the average income increased little by little, and reached 407,000 yen at

²² The survey tallied responses from businesses that answered all questions about income and did not experience changes of entrepreneurship. The same shall apply hereinafter until Figure-14.

Figure-9 Monthly income from business



Note 1: The survey tallied responses from businesses that answered the question about monthly income in all surveys, from the first to the fifth, and that did not experience changes of entrepreneurs during this period.

2: Income in the first survey (immediately before starting businesses) shows income from sources other than the businesses.

3: Income in the first survey (as of the end of 2011) to the fifth survey (as of the end of 2015) shows income from the businesses.

4: () shows the average. The question asked income with 10,000 yen unit, and the average was calculated with 1,000 yen unit.

the end of 2015²³.

Looking at monthly income by income amount category, “less than 100,000 yen,” which shows no income from the new businesses, decreased from 18.7% at the end of 2011 to 3.9% at the end of 2015. The percentage of “100,000 to 190,000 yen” increased from 16.4 % immediately before starting a business to 21.8% at the end of 2011, and then remained at the same level.

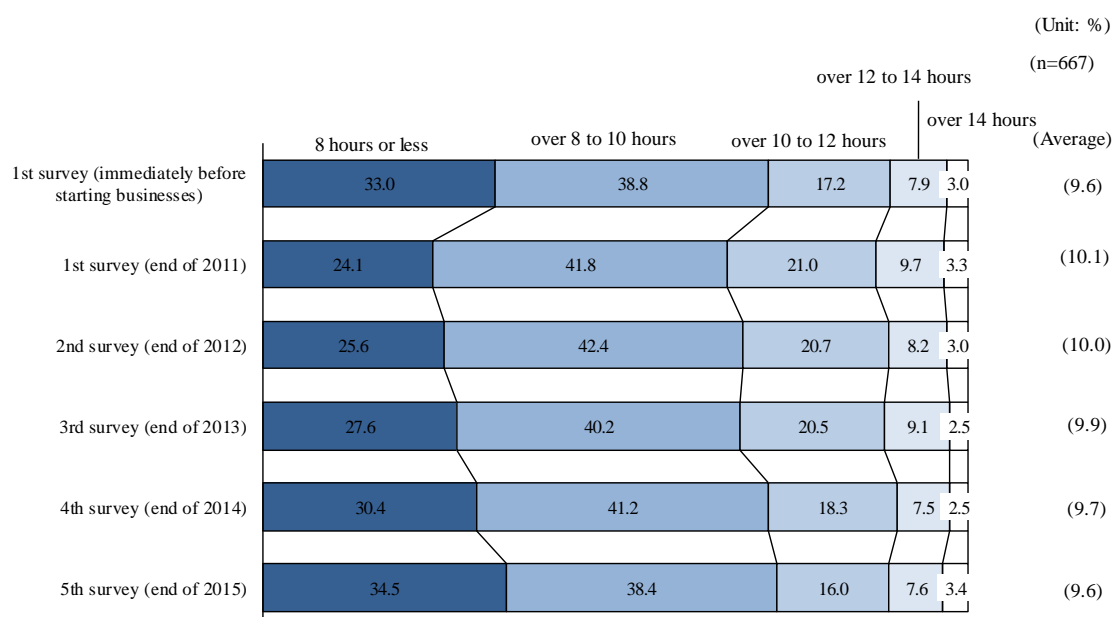
On the other hand, the percentage of “600,000 yen or more” increased every year from 6.8% at the end of 2011 to 20.0% at the end of 2015, which is higher than 16.4% before starting a business.

As seen above, average income slightly increased after starting a business and the percentage of high income earners increased, although business income remained smaller in some new businesses. As a result of comparing income immediately before starting a business with business income at the end of 2015 in the samples of Figure-8, 46.8% of respondents experienced an increase in income while 8.8% experienced no change and 44.4% experienced a decrease in income.

While this report compared only the business income of entrepreneurs themselves, in some cases, respondents who had family members living with them were receiving income from other sources. In addition, some entrepreneurs had incomes that were not from the businesses covered in this

²³ In the second cohort, JFCRI/Suzuki (2012) analyzed income including salaries of family employees and indicated that income increased from the first to the third survey, and then remained at the same level. The results of the third cohort survey are basically consistent with the results of the second cohort survey.

Figure-10 Daily working hours



Note 1: The survey tallied responses from businesses that answered the question about daily working hours in all surveys, from the first to the fifth, and that did not experience changes of entrepreneurs during this period.

2: () shows the average daily working hours.

survey, such as from operating other businesses, working for other businesses, or receiving pension benefits. Entrepreneurs in these situations can earn living expenses with small business incomes and will not need to close their businesses immediately. Among respondents tallied in the survey, 21 respondents (5.5%) had no income at the end of 2011, while one respondent (0.3%) had no income in the 2015 survey, when including the incomes of family members in addition to the income of the respondents themselves.

Some entrepreneurs might not expect a large amount of business income from the beginning, although some lower-income entrepreneurs could not earn income as initially expected.

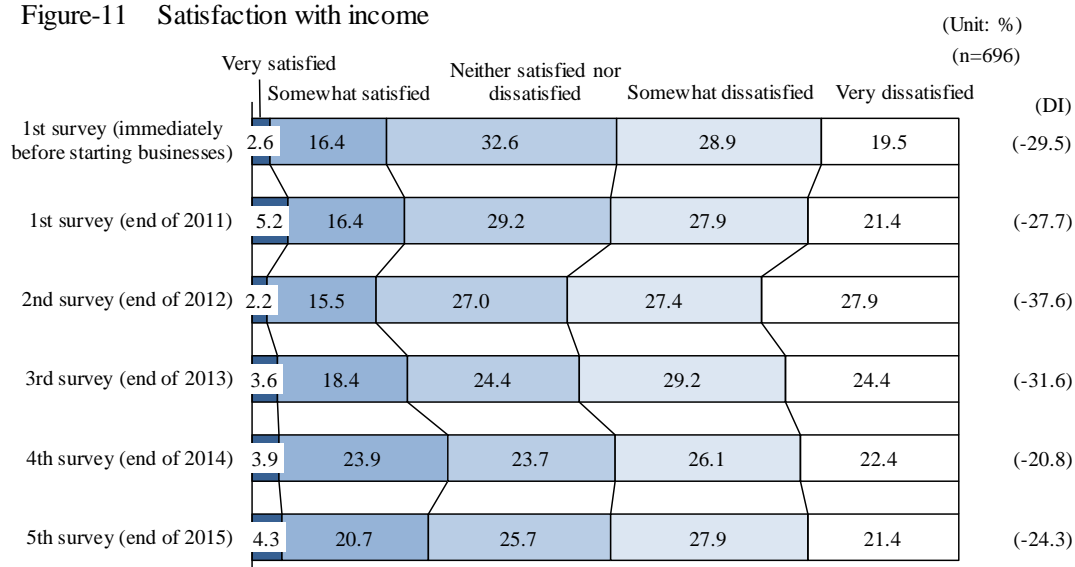
Next, the average daily working hours increased from 9.6 hours immediately before starting a business to 10.1 hours at the end of 2011 after starting a business (Figure-10)²⁴. Later, however, working hours gradually decreased to 9.6 hours at the end of 2015, which is the same as working hours immediately before starting a business.

According to the daily working hour category, the percentage of relatively low working hours (“8 hours or less”) decreased from 33.0% immediately before starting a business to 24.1% at the end of 2011, but gradually increased afterwards, and reached 34.5% at the end of 2015, which is the same level as the percentage immediately before starting a business²⁵. The percentage of “over 8 to 10

²⁴ Ten respondents (1.5%) answered that they worked for 0 hours immediately before starting their business. The tendency in working hours does not significantly differ even if these respondents are excluded.

²⁵ In the second cohort survey, JFCRI/Suzuki (2012) analyzed weekly working hours after starting a business. The results of this analysis showed a similar tendency.

Figure-11 Satisfaction with income



Note 1: The survey tallied responses from businesses that answered the question about satisfaction with income in all surveys, from the first to the fifth, and that did not experience changes of entrepreneurs during this period.

2: () shows DI = percentage of "very satisfied" and "somewhat satisfied" - percentage of "somewhat dissatisfied" and "very dissatisfied"

hours" also shows a similar pattern (38.8% immediately before starting a business, 41.8% at the end of 2011, and 38.4% at the end of 2015). The percentage of "over 12 to 14 hours" and "over 14 hours" also shows that working hours increased immediately after starting a business but gradually decreased afterwards.

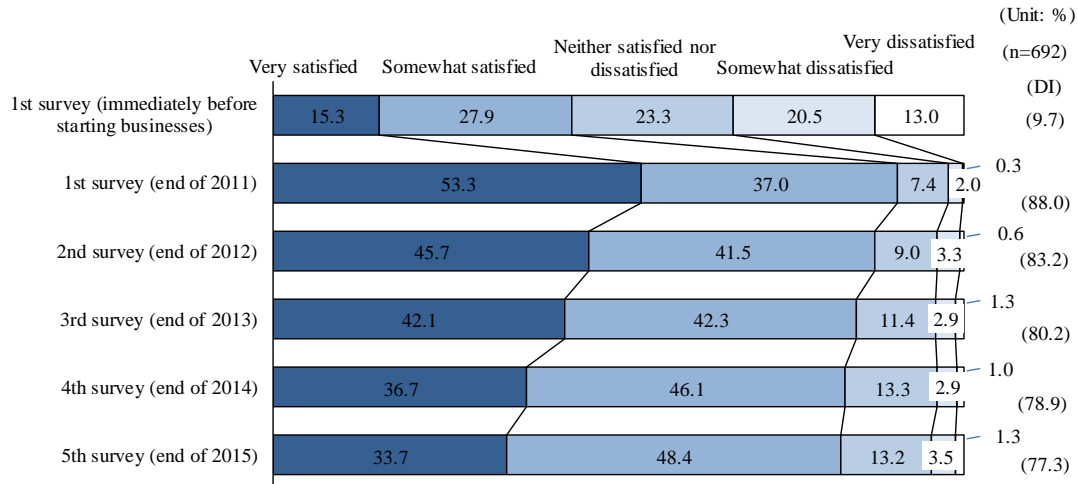
(4) Satisfaction Level with Starting a Business

To know how much entrepreneurs of start-ups were satisfied with starting a business, the panel survey analyzed satisfaction with income, work, and work-life balance, as well as comprehensive satisfaction with having started a business.

Immediately before starting their businesses, 19.0% of respondents were satisfied with their income (the total of "very satisfied" [2.6%] and "somewhat satisfied" [16.4%]), while 48.4% of respondents were dissatisfied with their income (the total of "somewhat dissatisfied" [28.9%] and "very dissatisfied" [19.5%]). Thus, more respondents were dissatisfied with their income (Figure-11). The DI (the percentage of "very satisfied" and "somewhat satisfied" minus the percentage of "somewhat dissatisfied" and "very dissatisfied") was -29.5.

At the end of 2011 after starting a business, 21.6% of respondents were satisfied with their income (the total of "very satisfied" [5.2%] and "somewhat satisfied" [16.4%]) while 49.3% of respondents were dissatisfied with their income (the total of "somewhat dissatisfied" [27.9%] and "very dissatisfied" [21.4%]), with a DI of -27.7. Thus, the DI did not differ much before and after starting a

Figure-12 Work satisfaction



Note 1: The survey tallied responses from businesses that answered the question about satisfaction with work in all surveys, from the first to the fifth, and that did not experience changes of entrepreneurs during this period.

2: Same as in Figure-11 Note 2.

business. Surprisingly, as shown in Figure-9, satisfaction remained at the same level despite a slight decrease in income.

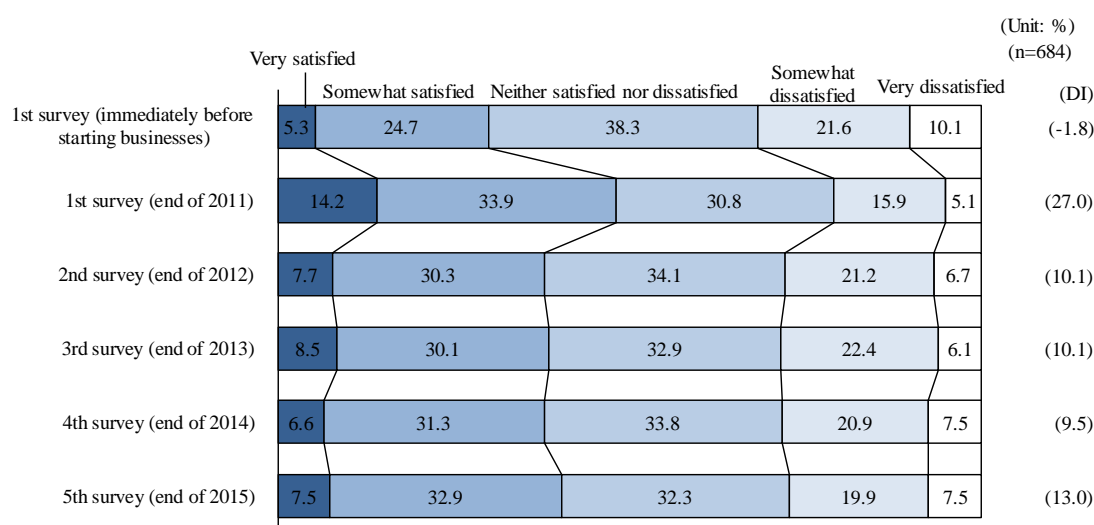
At the end of 2012, however, “very satisfied” (2.2%) and “somewhat satisfied” (15.5%) totaled 17.7% while “somewhat dissatisfied” (27.4%) and “very dissatisfied” (27.9%) totaled 55.3% with a DI of -37.6. Satisfaction levels decreased, although business income increased during that period. At the end of 2013 and afterwards, satisfaction levels slightly increased, but the DI was -24.3 at the end of 2015. It can be said that satisfaction with income was not very high as a whole.

We cannot draw a conclusion regarding such changes in satisfaction with income because the survey did not ask questions about expected income. However, it is assessed that respondents’ satisfaction levels declined because their income did not increase in the second year as expected, although they were satisfied with a small income for some time after starting a business since they did not expect a larger income.

In contrast, work satisfaction significantly improved after starting a business. Immediately beforehand, respondents who were satisfied with their work accounted for 43.2% (the total of “very satisfied” [15.3%] and “somewhat satisfied” [27.9%]) while those who were dissatisfied accounted for 33.5% (the total of “somewhat dissatisfied” [20.5%] and “very dissatisfied” [13.0%]), with a DI of 9.7 (Figure-12). At the end of 2011, “very satisfied” (53.3%) and “somewhat satisfied” (37.0%) totaled 90.3%. Only a few respondents were dissatisfied with their work (“somewhat dissatisfied” was 2.0% and “very dissatisfied” 0.3%), with a DI of 88.0.

Work satisfaction gradually decreased in the second survey and afterwards. Reasons for this decrease are unclear, but some respondents may have become somewhat bored with managerial work as they became familiar with their work and their businesses got on track. However,

Figure-13 Satisfaction with work-life balance



Note 1: The survey tallied responses from businesses that answered the question about satisfaction with work-life balance in all surveys, from the first to the fifth, and that did not experience changes of entrepreneurs during this period.

Note 2: Same as in Figure -11 Note 2.

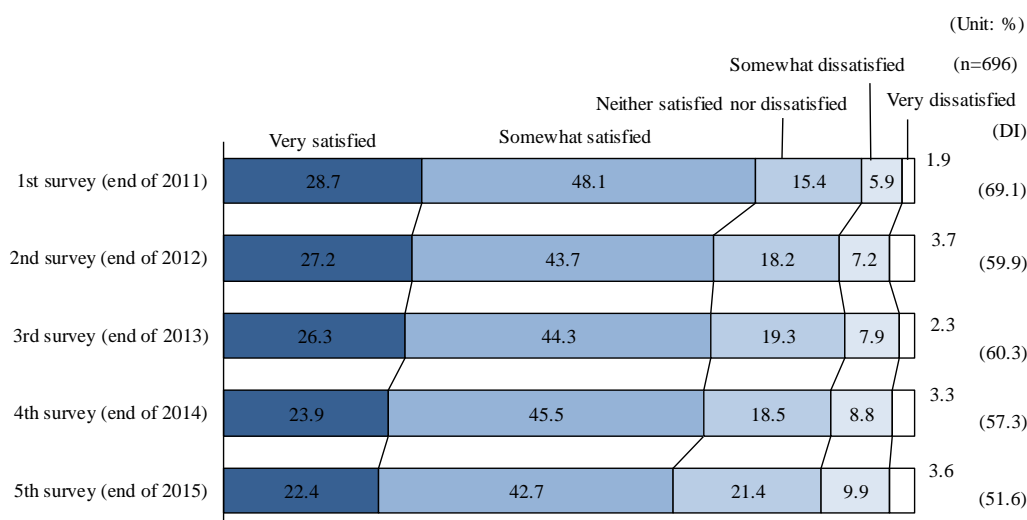
Note 3: In the questionnaires, a question regarding work -life balance (balance between work and private life) was asked.

entrepreneur work satisfaction itself was considerably high at 82.1% at the end of 2015 (the total of “very satisfied” [33.7%] and “somewhat satisfied” [48.4%]). This is a considerably higher percentage when compared with work satisfaction immediately before starting a business.

With regard to work-life balance, 30.0% of respondents were satisfied immediately before starting their business (the total of “very satisfied” [5.3%] and “somewhat satisfied” [24.7%]) while 31.7% were dissatisfied (the total of “somewhat dissatisfied” [21.6%] and “very dissatisfied” [10.1 %]), with a DI of -1.8 (Figure-13). At the end of 2011, after starting a business, nearly half (48.1%) of respondents (the total of “very satisfied” [14.2%] and “somewhat satisfied” [33.9%]) were satisfied with their work-life balance. The DI after subtracting 21.0% (the total of “somewhat dissatisfied” [15.9%] and “very dissatisfied” [5.1%]) improved to 27.0. It is believed that one of the reasons for the improved satisfaction with work-life balance is a higher work satisfaction level, although working hours increased immediately after starting a business. As is the case with work satisfaction, however, satisfaction with work-life balance slightly decreased after the end of 2012. The DI at the end of 2015 was only 13.0, although it is higher than the DI immediately before starting a business.

Lastly, looking at comprehensive satisfaction with having started a business, 76.8% of entrepreneurs were satisfied at the end of 2011 (the total of “very satisfied” [28.7%] and “somewhat satisfied” [48.1%]) (Figure-14). Dissatisfied entrepreneurs were a minority (the total of “somewhat dissatisfied” [5.9%] and “very dissatisfied” [1.9%]), with a high DI of 69.1. At the end of 2015, 65.1% of entrepreneurs (the total of “very satisfied” [22.4%] and “somewhat satisfied” [42.7%])

Figure-14 Comprehensive satisfaction with starting businesses



Note 1: The survey tallied responses from businesses that answered the question about comprehensive satisfaction with starting businesses in all surveys, from the first to the fifth, and that did not experience changes of entrepreneurs during this period.

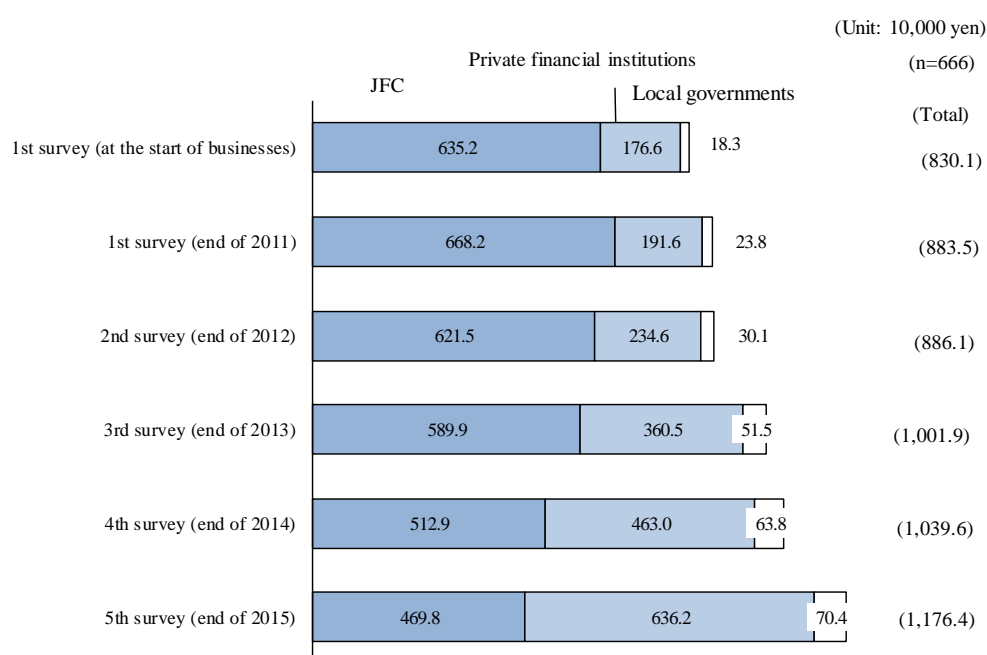
2: Same as in Figure-11 Note 2.

were satisfied with having started a business, although the satisfaction level decreased at the end of 2012 and afterwards. Meanwhile, the number of dissatisfied entrepreneurs also increased gradually (9.9% “somewhat dissatisfied” and 3.6% “very dissatisfied”), although the percentage is low. DI also decreased to 51.6, although it is still a high level.

In the second cohort, 1.4% of respondents were “very satisfied” and 16.6% of respondents were “somewhat satisfied” with their income, while 28.3% were “somewhat dissatisfied” and 22.6% were “very dissatisfied” in the first survey. In the fifth survey, the percentages of “very satisfied” and “somewhat satisfied” were 2.6% and 20.7%, respectively, while the percentages of “somewhat dissatisfied” and “very dissatisfied” were 28.8% and 29.8%, respectively. Thus, satisfaction with income was not high as is the case with the third cohort²⁶. Regarding work satisfaction, “very satisfied” and “somewhat satisfied” accounted for 36.7% and 46.0%, respectively, while “somewhat dissatisfied” and “very dissatisfied” accounted for 4.8% and 0.8%, respectively, in the first survey. In the fifth survey, “very satisfied” and “somewhat satisfied” accounted for 21.4% and 50.1%, respectively, while “somewhat dissatisfied” and “very dissatisfied” accounted for 9.9% and 1.5%, respectively. Satisfaction level was high but gradually decreased in both cohorts. Comprehensive satisfaction with starting a business was slightly higher than that of the third cohort as of the fifth survey (27.5% “very satisfied,” 47.5% “somewhat satisfied,” 6.4% “somewhat dissatisfied,” and 2.4% “very dissatisfied”).

²⁶ In the second cohort survey, satisfaction level before starting a business, satisfaction with work-life balance, and comprehensive satisfaction until the fourth survey was not asked.

Figure-15 Outstanding loans from financial institutions, etc. (per business)



Note: The survey tallied responses from businesses that answered the question about outstanding loans in all surveys, from the first to the fifth.

6 Changes in Loans

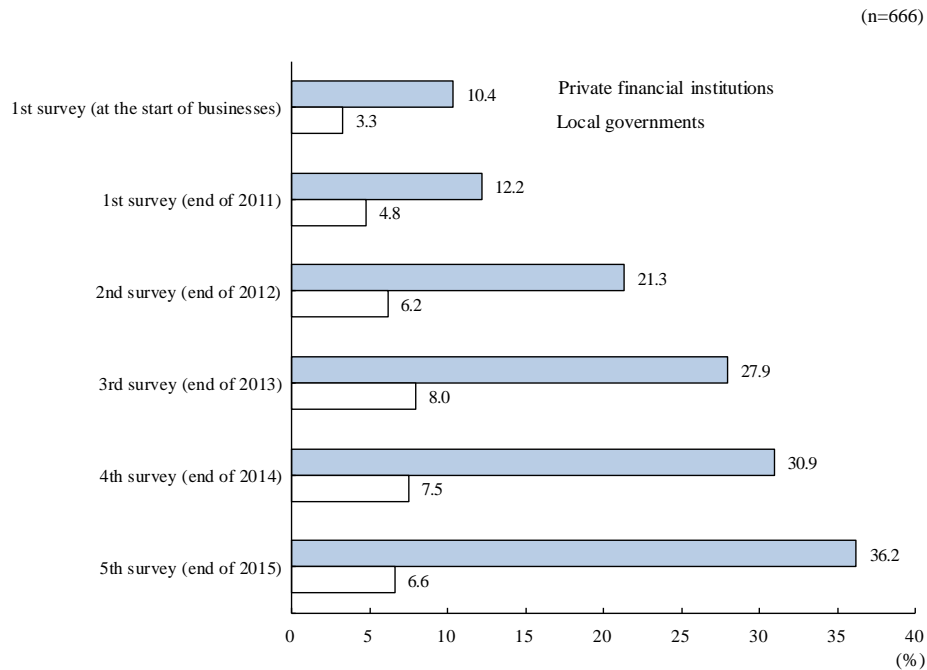
The average amount of outstanding loans from financial institutions, etc., was 8.301 million yen at the start of business, and gradually increased to 11.764 million yen at the end of 2015 (Figure-15). Looking at the breakdown, the average outstanding loans from the JFC increased from 6.352 million yen at the start of business to 6.682 million yen at the end of 2011. This is because, among all responding businesses that received loans from the JFC, some businesses received loans from the JFC not only before, but also after starting their business, for their new businesses²⁷. Later, as a result of repayment, outstanding loans from the JFC decreased every year to 6.215 million yen at the end of 2012, 5.899 million yen at the end of 2013, and 4.698 million yen at the end of 2015²⁸.

In contrast, the average outstanding loans from private financial institutions gradually increased from 1.766 million yen at the start of business to 1.916 million yen at the end of 2011 and 2.346 million yen at the end of 2012. At the end of 2015, the amount was 6.362 million yen, exceeding outstanding loans from the JFC. The percentage of businesses that had borrowings from private financial institutions also increased gradually from 10.4% at the start of business to 36.2% at the end

²⁷ Of 666 businesses, including in the sample, the number (%) of businesses that had outstanding loans from the JFC was 589 (88.4%) at the start of their business and 665 (99.8%) at the end of 2011.

²⁸ Outstanding loans decreased even if additional loans from the JFC are taken into consideration in some cases.

Figure-16 Percentage of businesses borrowing money from private financial institutions/local governments



Note: Same as in Figure-15.

of 2015 (Figure-16). This is the same tendency as seen in the second cohort²⁹.

The average outstanding loans from local governments also increased from 0.183 million yen at the start of business to 0.704 million yen at the end of 2015. The percentage of businesses that had borrowings from local governments increased from 3.3% at the start to 8.0% at the end of 2013, and then decreased to 6.6% at the end of 2015.

By industry, outstanding loans exceeded 10 million yen only in “medical, health care, and welfare” at the start of business, but the number of industries with outstanding loans of over 10 million yen increased to seven at the end of 2015, including “information and communications” (47.32 million yen) and “wholesale” (20.28 million yen), in addition to “medical, health care, and welfare” (20.75 million yen) (Table- 3)³⁰.

While outstanding loans from the JFC decreased in many industries, outstanding loans from private financial institutions increased in all industries except for “other.” Even in four industries in which outstanding loans from the JFC increased (“construction,” “information and communications,” “wholesale,” and “services for businesses”), outstanding loans from private financial institutions

²⁹ In the second cohort, the average outstanding loans at the start of business totaled 8.280 million yen (5.602 million yen from the JFC, 2.439 million yen from private financial institutions, and 0.240 million yen from other sources). As of the fifth survey, the average outstanding loans totaled 12.725 million yen (4.986 million yen from the JFC, 5.530 million yen from private financial institutions and 2.209 million yen from other sources). Businesses with loans from private financial institutions accounted for 11.4% at the start of business and 35.3% in the fifth survey.

³⁰ Some industries had small sample sizes.

Table-3 Outstanding loans from financial institutions, etc., by industry (per business)

(Unit: 10,000 yen)

Unit: 10,000 yen

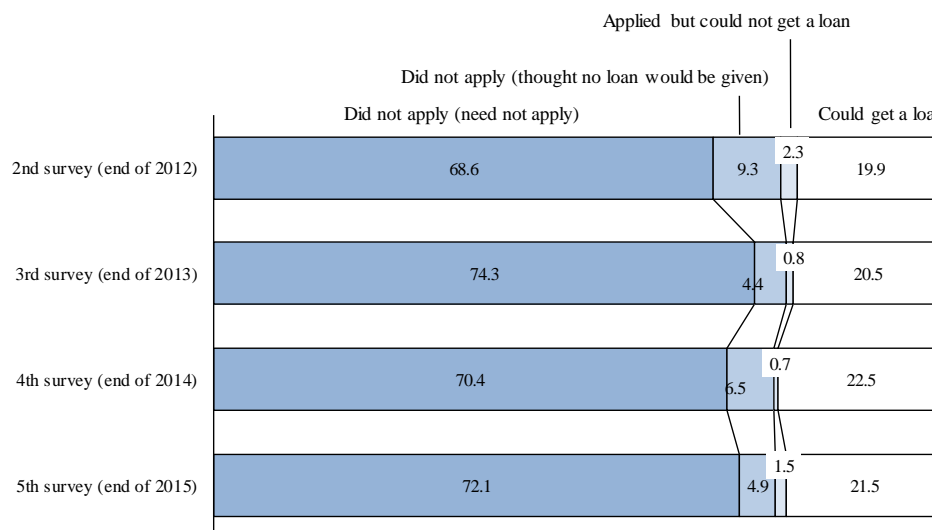
	1st survey (at the start of businesses)				5th survey (end of 2015)								n
	JFC	Private financial institutions	Local governments	Total	JFC		Private financial institutions		Local governments		Total		
						Increase/decrease		Increase/decrease		Increase/decrease		Increase/decrease	
Construction	265	92	29	386	391	126	1,392	1,300	129	100	1,911	1,526	35
Manufacturing	382	37	0	419	355	-27	437	400	87	87	880	460	23
Information and communications	260	0	0	260	1,150	890	3,179	3,179	403	403	4,732	4,472	5
Transport	226	0	50	276	115	-112	210	210	14	-36	339	62	14
Wholesale	355	44	0	399	659	304	1,056	1,011	313	313	2,028	1,628	34
Retail	621	15	15	651	525	-96	512	497	33	18	1,070	418	62
Eating and drinking places/accommodations	688	89	20	797	386	-302	236	147	30	10	652	-145	105
Medical, health care, and welfare	1,019	663	34	1,715	714	-304	1,283	620	78	44	2,075	360	138
Education, learning support	378	4	10	392	288	-90	13	10	38	28	340	-52	20
Services for individuals	602	54	8	664	332	-269	152	98	28	19	512	-152	154
Services for businesses	416	43	11	469	446	30	542	500	91	80	1,079	609	47
Real estate	523	0	35	558	484	-39	1,196	1,196	102	67	1,782	1,224	23
Other	871	0	0	871	92	-779	0	0	0	0	92	-779	6

Note: Same as in Figure-15.

Figure-17 Application for loans from private financial institutions/local governments

(Unit: %)

(n=614)



Note 1: The question asked about applications for loans from private financial institutions/local governments during the survey year.

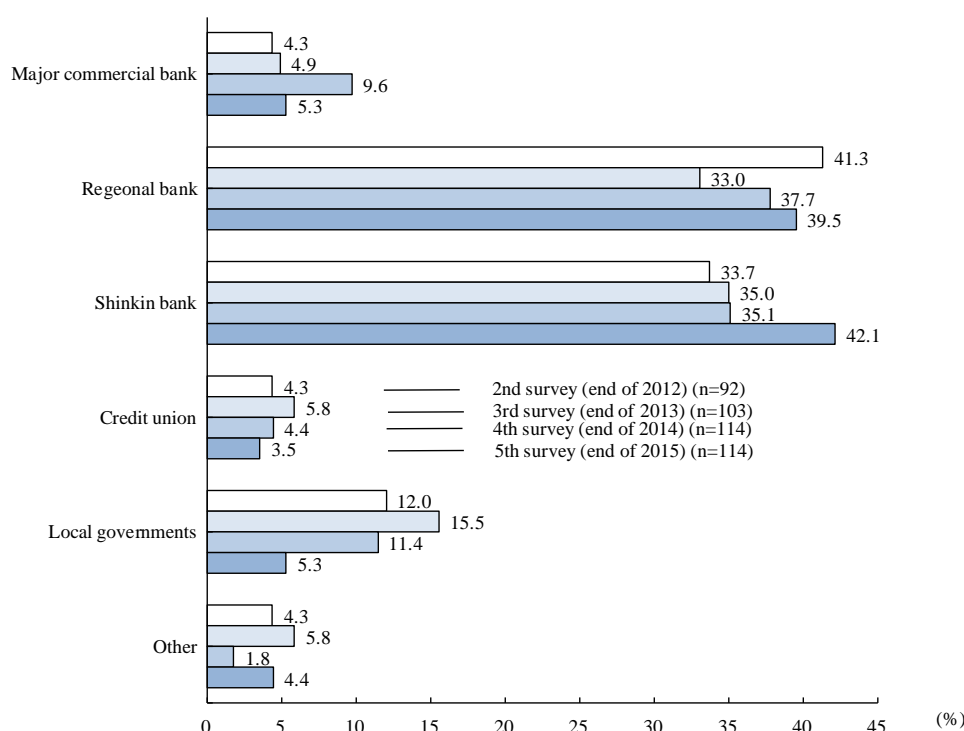
2: The survey tallied responses from companies that answered the question about loan applications in all surveys, from the second to the fifth. This question was not asked in the first survey.

3: "Applied but could not get a loan" includes "applied but did not borrow because loan conditions were unacceptable."

increased more significantly than outstanding loans from the JFC.

Looking at applications for loans from private financial institutions/local governments, "did not apply (need not apply)" accounted for 68.6% at the end of 2012, 74.3% at the end of 2013, 70.4% at the end of 2014, and 72.1% at the end of 2015 (Figure-17). This shows that approximately 70% of

Figure-18 Private financial institutions/local governments that gave new loans



Note 1: Of companies that selected "could get a loan" in Figure-17, businesses that answered types of lenders were tallied.

2: Businesses with multiple loans were asked to answer about the lenders of the largest loan amount.

3: Same as in Figure-17 Note 2.

businesses did not have to borrow funds from private financial institutions, etc., each year. On the other hand, the percentage of businesses that "could get a loan" remained at the same level at 19.9% at the end of 2012 and 21.5% at the end of 2015. The percentage of businesses that "could get a loan" was slightly higher than that of the second cohort³¹. The percentage of businesses that "applied but could not get a loan" was low at 2.3 % at the end of 2012 and 1.5% at the end of 2015³².

Calculating from these data, businesses that applied for but could not receive a loan accounted for 6.5% at the end of 2015.

We should pay attention to the existence of businesses that "did not apply (thought no loan would be given)" that accounted for 9.3% at the end of 2012 and 4.9% at the end of 2015. Results when they applied are unknown because such businesses did not actually apply for a loan, but not applying for a loan may have impeded financing and growth if businesses that could have received a loan from private financial institutions, etc., were included in these businesses.

As lenders to businesses that received new loans from private financial institutions/local governments, "Regional bank" and "Shinkin bank" accounted for 41.3% and 33.7%, respectively, at the end of 2012 (Figure-18). "Regional bank" and "Shinkin bank" accounted for 39.5% and 42.1%,

³¹ In the second cohort, businesses that "could get a loan" accounted for 12.5%, 15.4%, 15.2%, and 16.1%, respectively.

³² In the second cohort, businesses that "could not get a loan" accounted for 1.3%, 1.8%, 0.7%, and 0.6%, respectively. However, we cannot directly compare the third cohort with the second cohort because the choices given were different.

respectively, at the end of 2015, although the percentages slightly changed each year. Approximately 80% of businesses got a new loan from a Regional bank or a Shinkin bank³³.

7 Changes in Management Issues

Looking at difficulties in business management, “cannot succeed in customer development/marketing” was most frequently cited at 42.9% at the end of 2011, followed by “high expenses (labor costs, rent, interest expenses, etc.)” (24.4%) and “low unit order/selling prices” (20.7%) (Figure-19).

The percentage of “cannot succeed in customer development/marketing” decreased at the end of 2013 and then remained at the same level. However, this is the most frequently cited difficulty at 31.1%, even at the end of 2015.

Meanwhile, the percentage of issues related to human resources increased during the survey period. From the end of 2011 to the end of 2015, the percentage of “employee shortage” increased from 18.3% to 28.7%, while “cannot recruit employees who have the required skills” increased from 18.6% to 25.0%. These were the second and the third most cited issues as of the end of 2015.

In addition to the above, “cannot develop employees as intended” increased from 10.1% to 16.5%. These results suggest that difficulties in both the quantity and quality of human resources increased as start-ups grew, although the percentage of such businesses is not large.

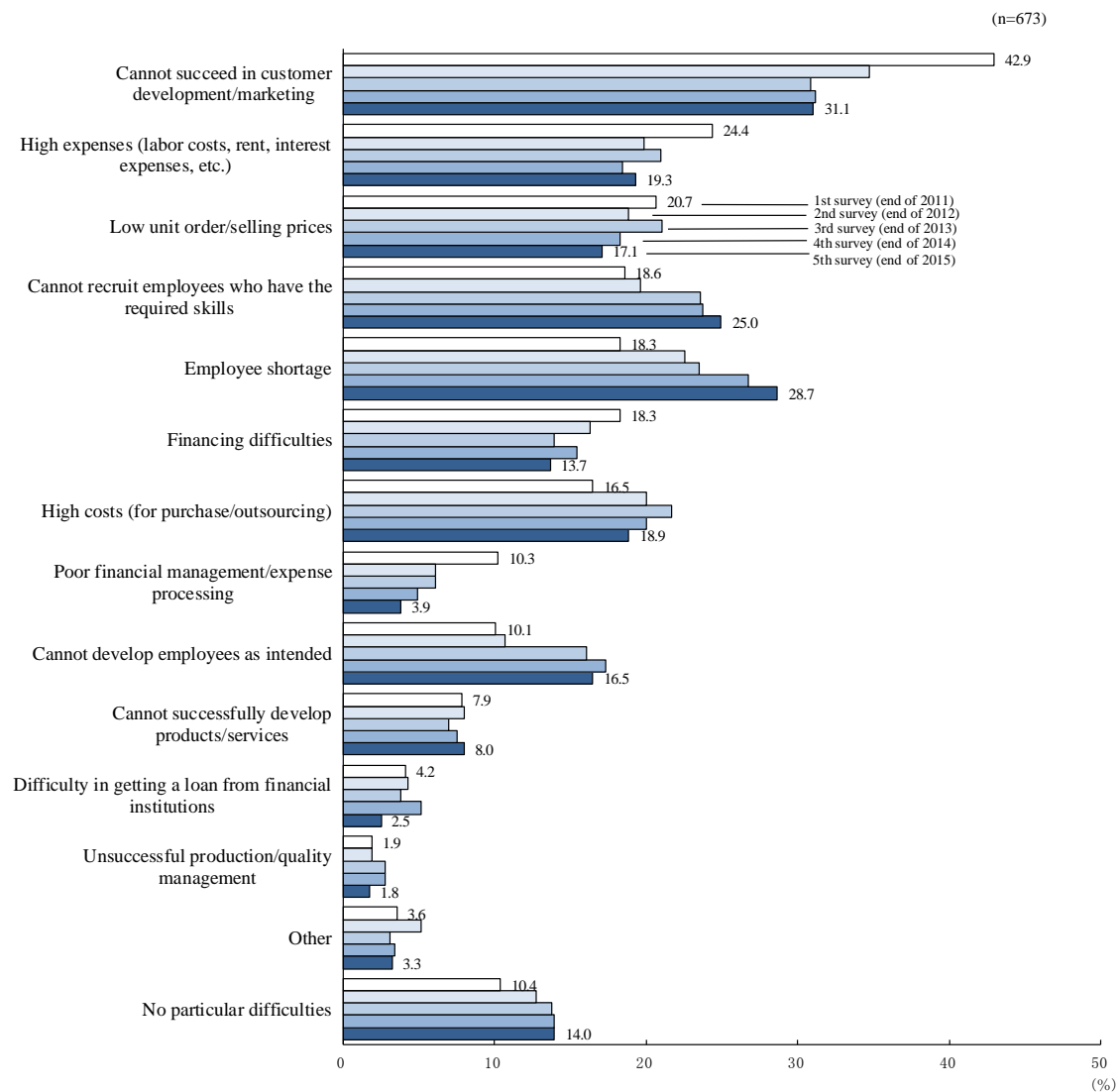
In the second cohort, in response to a similar question, “cannot succeed in customer development/marketing” accounted for 39.5% in the fifth survey. This is the most frequently cited answer throughout the survey period as is the case with the third cohort. Issues related to human resources, however, were less frequently cited in the second cohort than in the third cohort. In the fifth survey, “cannot develop employees as intended” (16.7%), “quantitative shortage of employees” (16.2%), and “cannot recruit employees who have required knowledge, skills, and know-how” (16.2%) ranked at the 6th to 8th places, respectively.

It is assessed that this difference resulted from the fact that more businesses increased the number of employees in the third cohort than in the second cohort, as well as the tight labor market in the third cohort.

Attendance at business-related seminars and lectures is believed to be one of the methods to obtaining information to resolve these management issues. In one year before starting a business, 31.9% of respondents attended business-related seminars/lectures. The percentage of respondents who attended seminars/lectures in 2011 after starting a business remained at 31.9% because some respondents had just started at the end of 2011. However, the percentage increased to 45.2% in 2012

³³ The same tendency was seen in the second cohort in the fifth survey (Regional bank: 43.7%, Shinkin bank: 36.9%).

Figure-19 Difficulties in business management (multiple answers)



Note 1: The survey tallied responses from companies that answered the question about difficulties in business management in all surveys, from the first to the fifth.

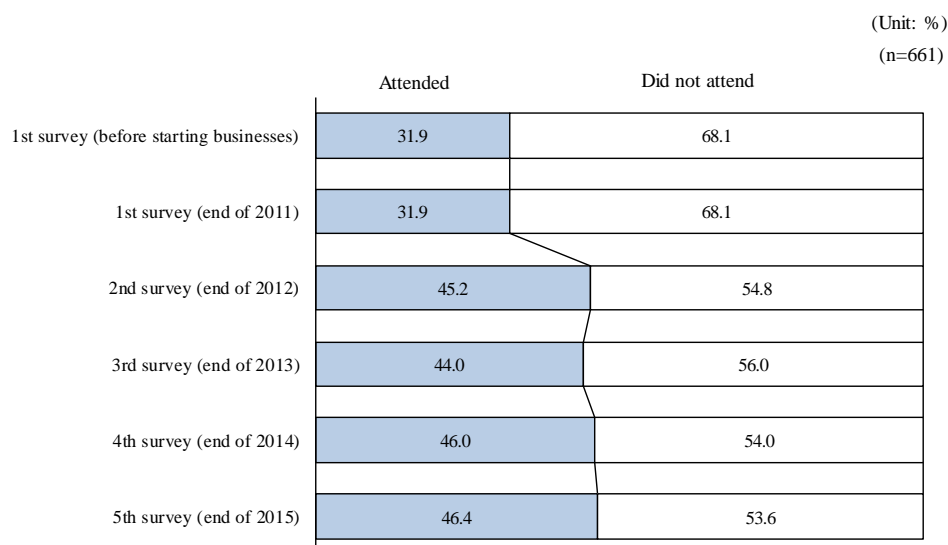
and remained at the same level afterwards (Figure-20)³⁴.

The percentage of respondents who participated in networking events and meetings where entrepreneurs got together gradually increased from 15.7% in one year before starting a business to 23.7% in 2011 and 28.3% in 2012, reaching 31.4% in 2015 (Figure-21). However, 68.6% of respondents did not participate in such events. Thus, the participation rate was not high on the whole³⁵.

³⁴ Data for 2011 covers the period from starting a business to the end of 2011. This is shorter than one year. Therefore, the percentage for 2011 may be lower than that of other years.

³⁵ Same as Note 34.

Figure-20 Attendance at business-related seminars and lectures

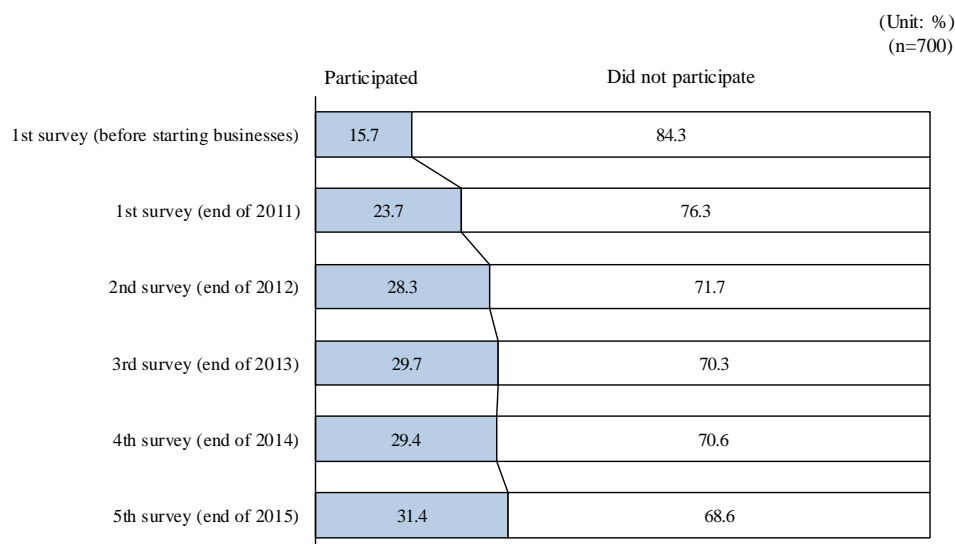


Note 1: The survey tallied responses from businesses that answered the question about attendance at seminars and lectures in all surveys, from the first to the fifth.

2: The first survey asked about attendance in one year before starting businesses and the period after starting businesses to the end of 2011. The second and subsequent surveys asked about attendance for each year.

3: The first survey asked about attendance by the "expected entrepreneurs/entrepreneurs" while the second and subsequent surveys asked about attendance by the "entrepreneurs."

Figure-21 Participation in networking events and meetings where managers got together

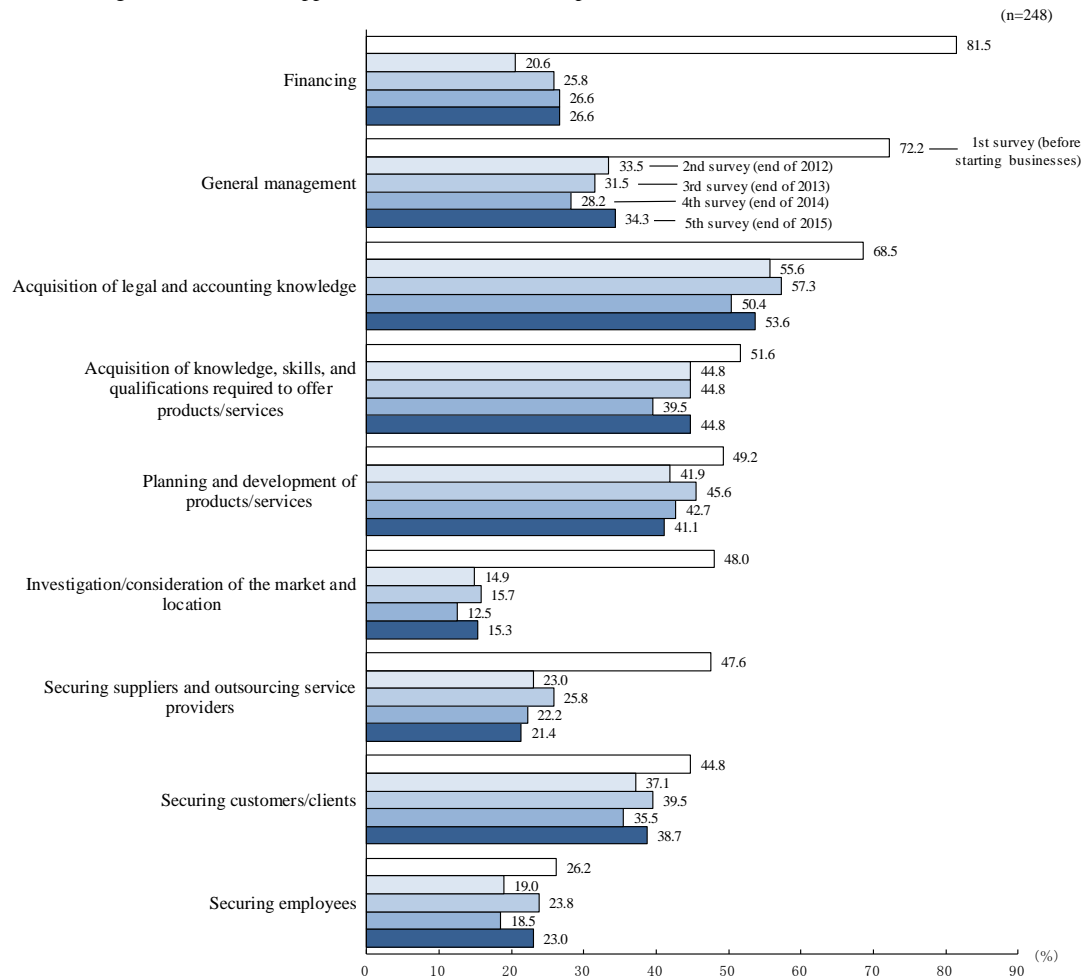


Note 1: The survey tallied responses from businesses that answered the question about participation in networking events and meetings in all surveys, from the first to the fifth.

2: The first survey asked about participation in one year before starting businesses and the period after starting businesses to the end of 2011. The second and subsequent surveys asked about participation in each year.

3: The first survey asked about participation by the "expected entrepreneurs/entrepreneurs" while the second and subsequent surveys asked about participation by the "entrepreneurs."

Figure-22 Outside supports for businesses (multiple answers)



Note 1: The survey tallied responses from businesses that answered the question about supports from the outside in all surveys, from the first to the fifth.

2: The first survey asked about supports before starting businesses while the second and subsequent surveys asked about supports in each year.

3: "General management" was presented as "development of a comprehensive business start-up plan" only in the first survey.

As a side note, at the end of 2015, profitable businesses accounted for 82.3% among businesses that attended seminars/lectures in 2015 and 74.9% among those that did not. The percentage was 83.5% among businesses that participated in networking events/meetings where entrepreneurs got together, and 76.1% among those that did not participate. It appears that there is a relationship between attendance/participation and business performance.

Direct support from the outside is also believed to be effective for resolving issues. Businesses that received direct support such as "financing" (81.5%), "development of a comprehensive business start-up plan" ("general management" in the second and subsequent surveys) (72.2%), "acquisition of legal and accounting knowledge" (68.5%), "acquisition of knowledge, skills, and qualifications required to offer products/services" (51.6%), and "planning and development of products/services" (49.2%) before starting a business (Figure-22)³⁶.

In 2012 and afterwards, the percentage of "financing" significantly decreased to 19.9%. One of

³⁶ "Development of a comprehensive business start-up plan" was changed to "comprehensive management" in the second and subsequent surveys.

the reasons for this decrease is believed to be shrinking demand for support because businesses that did not need financing accounted for approximately 70% each year as shown in Figure-17. Similarly, the percentages of “general management,” “investigation/consideration of the market and location,” and “securing suppliers and outsourcing service providers,” which are believed to be particularly necessary before starting a business, also decreased in 2012 and afterwards.

Meanwhile, the most frequently cited support as of 2015 included “acquisition of legal and accounting knowledge” (53.6%), “acquisition of knowledge, skills, and qualifications required to offer products/services” (44.8%), and “planning and development of products/services” (41.1%). It is believed that businesses felt it necessary to continuously receive such support, although the percentages are slightly lower than for those before starting a business.

A comparison between the type of support and difficulties in business management in Figure-19 shows that, with regard to “cannot succeed in customer development/marketing,” which was the most frequently cited difficulty in business management, approximately 40% of businesses that received support selected “securing customers/clients” each year. Meanwhile, regarding issues related to human resources of which the percentage is increasing each year, such as “employee shortage” and “cannot recruit employees who have the required skills,” the percentage of “securing employees” did not increase, and the option was selected only by 23.0% of respondents in 2015. Human resources-related support is believed to be one of the types of support that requires improvement, although such support may be more difficult to provide than other types of support.

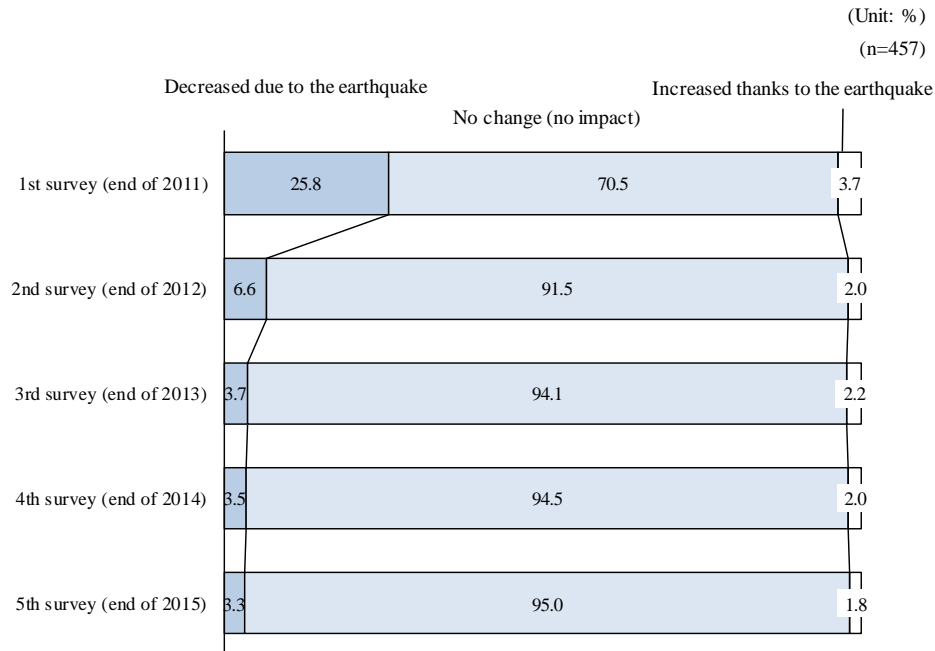
8 Impact of the Great East Japan Earthquake

Businesses that responded to the third panel survey started business in 2011. The businesses must have been strongly affected by the Great East Japan Earthquake that took place on March 11, 2011. For this reason, this chapter reviews the impact of the earthquake on new businesses based on collected data.

First, looking at the impact of the earthquake on sales, 25.8% of businesses responded that their sales “decreased due to the earthquake” at the end of 2011 (Figure-23). Of 457 businesses tallied in the survey, 26 businesses (5.7%) were located in the disaster-stricken areas, which are defined later in this report, showing that the earthquake had a wide range of impact. However, the percentage of businesses of which sales “decreased due to the earthquake” significantly decreased to 6.6% at the end of 2012 and 3.3% at the end of 2015. In contrast, businesses of which sales “increased thanks to the earthquake” also decreased from 3.7% at the end of 2011 to 1.8% at the end of 2015. “No change (no impact)” accounted for 95.0% at the end of 2015. Thus, it can be said that there was almost no impact after nearly five years following the earthquake on a nationwide basis.

However, situations were somewhat different in areas that were heavily affected by the earthquake. The survey defined the disaster-stricken areas as five prefectures (Aomori, Iwate, Miyagi,

Figure-23 Impact of the Great East Japan Earthquake on sales (overall)



Note: The survey tallied responses from businesses that answered the question about the impact of the Great East Japan Earthquake on sales in all surveys, from the first to the fifth.

Fukushima, and Ibaraki prefectures) that were close to the epicenter and suffered greater damage from the earthquake and tsunami. In the disaster-stricken areas, nearly half (46.2%) of start-ups responded that their sales “decreased due to the earthquake” at the end of 2011, suggesting a huge negative impact (Figure-24). Even at the end of 2012, 19.2% of businesses responded that their sales “decreased due to the earthquake.” The percentage slightly decreased to 11.5% at the end of 2015³⁷.

On the other hand, it appears that demand was created as a result of the earthquake in many cases in the disaster-stricken areas. Businesses of which sales “increased thanks to the earthquake” reached 26.9% at the end of 2011. Later, however, the percentage decreased to 7.7% at the end of 2015.

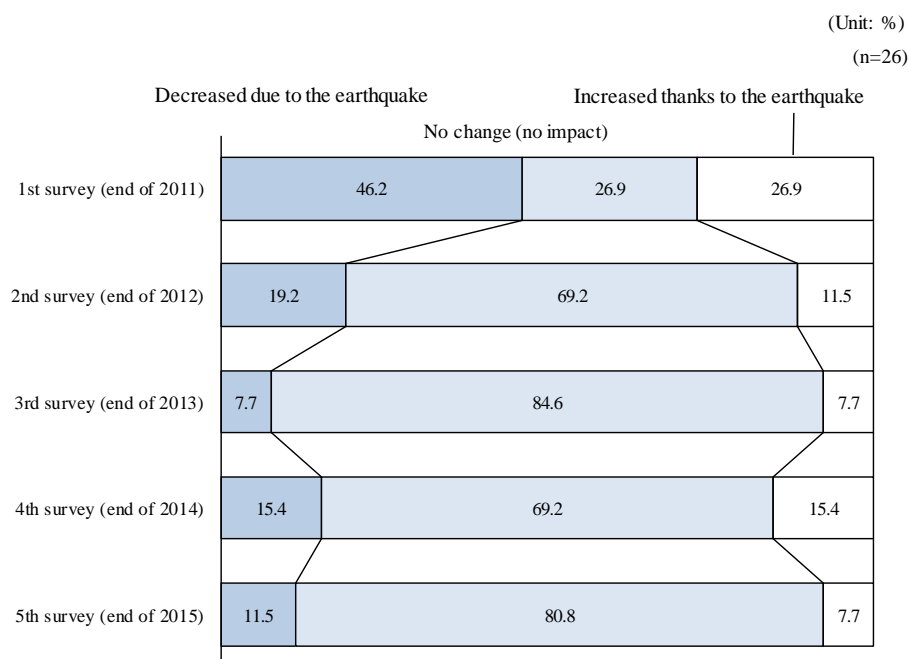
“No change (no impact)” increased from 26.9% at the end of 2011 to 80.8% at the end of 2015.

As described above, it can be said the impact of the earthquake considerably decreased at the end of 2015, about five years after the earthquake, although the impact was obviously larger in the disaster-stricken areas, both positively and negatively.

The Great East Japan Earthquake also affected the timing of starting a business and desires for whether or not to start one. The survey asked start-ups that started their businesses after the earthquake whether the earthquake affected their timing. The results showed that 75.4% of start-ups started “on schedule” while 17.0% responded that they started “behind schedule” due to the

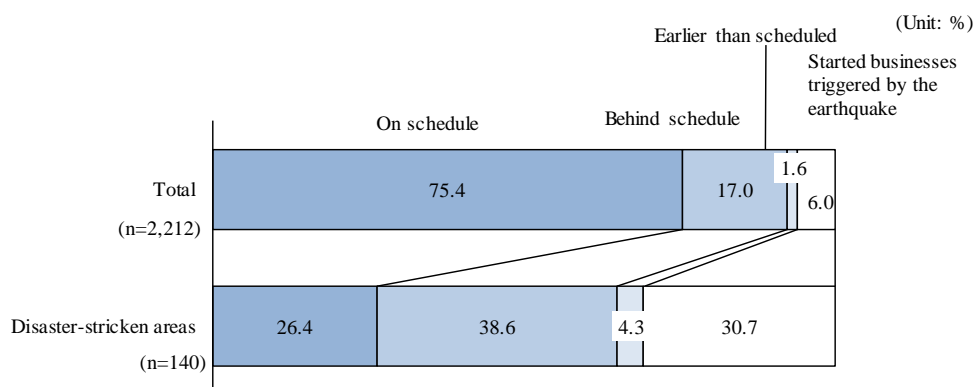
³⁷ It is necessary to note that the percentages fluctuated significantly due to the small sample size.

Figure-24 Impact of the Great East Japan Earthquake on sales (disaster-stricken areas)



Note 1: The survey defined the disaster-stricken areas as Aomori, Iwate, Miyagi, Fukushima, and Ibaraki prefectures, which suffered greater damage from the earthquake and tsunami.
 2: Of the businesses that answered the question in Figure-23, responses from businesses in the disaster-stricken areas were tallied.

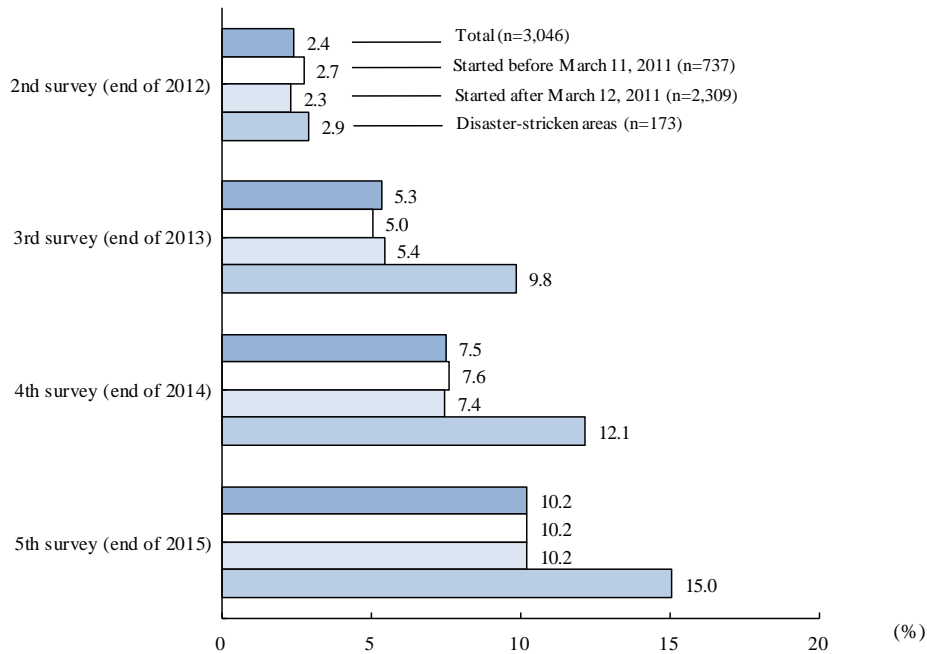
Figure-25 Impact of the Great East Japan Earthquake on the timing of starting businesses



Note 1: Responses from the first survey.
 2: Of 2,309 businesses that started after March 12, 2011, the day after the Great East Japan Earthquake, the survey tallied responses from businesses that answered the question.
 3: The disaster-stricken areas are the same as in Figure-24 Note 1.

earthquake” (Figure-25). Immediately after the earthquake, the procurement of supplies that were needed to start a business may have been delayed due to production suspensions and logistic

Figure-26 Business closure rate as it relates to the Great East Japan Earthquake



Note: The disaster-stricken areas are the same as in Figure-24 Note 1.

confusion, or renovations may have been postponed due to disaster recovery. Restaurants, etc., may have postponed opening in consideration of a mood of voluntary restraint. On the other hand, some start-ups started business “earlier than scheduled” as a result of the earthquake, although the percentage of such start-ups was low at 1.6%. There were also start-ups that “started business triggered by the earthquake” (6.0%)³⁸.

In the disaster-stricken areas, start-ups that started business “on schedule” accounted for only 26.4% while the percentage of start-ups that selected “behind schedule” was high at 38.6%. Meanwhile, start-ups that started “earlier than scheduled” accounted for 4.3% while start-ups that “started business triggered by the earthquake” accounted for 30.7%, showing that the impact of the earthquake and disaster on the timing for starting a business and desires for whether or not to start one was particularly large in the disaster-stricken areas.

Now, let’s take a look at how the earthquake and disaster affected business survival. First, the business closure rate in the disaster-stricken areas was 2.9% at the end of 2012, which is slightly higher than the nationwide business closure rate (2.4%) (Figure-26). The rate in the disaster-stricken areas suddenly rose to 9.8% at the end of 2013 and 15.0% at the end of 2015, which is considerably higher than the nationwide rate (10.2%). It is assessed that economic conditions were very harsh for

³⁸ Start-ups that “started business triggered by the earthquake” were analyzed by Fukanuma & Fujita (2015), including case studies.

start-ups in disaster-stricken areas³⁹.

The percentage of businesses that went out of business was considerably higher in disaster-stricken areas in 2013 (6.9%) while the percentage was 2.9% on a nationwide basis. However, the difference decreased in 2014 (2.3% in disaster-stricken areas and 2.2% nationwide) and 2015 (2.9% in disaster-stricken areas and 2.7% nationwide).

Moreover, the survey compared the business closure rate of businesses that started before and after the earthquake because there is the possibility that the rate changed as people became more careful about starting a business due to the earthquake. As a result, the business closure rate in both groups was the same at 10.2% at the end of 2015, and there were no major differences in other survey years.

9 Conclusion

This research report overviewed the results of the Panel Survey on Business Start-ups (the third cohort) in which start-ups that started businesses in 2011 were continuously observed over five years.

The panel survey found that the average number of workforces including entrepreneurs and the average sales of start-ups that were continuing their businesses gradually increased, and that start-ups in general were growing smoothly although some start-ups went out of business. The survey also found that the third cohort had many points in common with the second cohort in the tendency of changes in business performance, etc., over the years. For example, the basic attributes of start-ups and their managers did not differ greatly from those of the previous second cohort. Furthermore, working hours decreased after starting a business, and business income significantly increased in the first several years.

Moreover, there was a consistency between data of the second and third cohorts in terms of satisfaction levels and financial transactions. For example, comprehensive satisfaction with work and starting a business was relatively high in both cohorts, although satisfaction with income was low. Loans from financial institutions increased every year while loans from the JFC decreased from an initial large amount, showing a shift to loans from private financial institutions. These results are partly because of the same sampling method, but it appears that the growth trends of start-ups did not significantly change after five years. Thus, the fact that many indicators in the third cohort showed the same tendency as the second cohort demonstrates certain robustness in the findings of the second cohort.

³⁹ In consideration of the possibility that there were a larger number of industries with a higher business closure rate in the disaster-stricken areas than nationwide, the survey calculated the business closure rate on the assumption that the industry-specific business closure rate in disaster-stricken areas was the same as the nationwide rate. As a result, the business closure rate in disaster-stricken areas was 10.3%, which is almost the same as the nationwide rate. This indicates that the difference was at least not affected by industry balance.

Meanwhile, the number of workforces and sales increased relatively significantly partly because of changes in economic conditions, and the percentage of profitable businesses was higher at the end. It was found that the business closure rate decreased significantly to 10.2% after five years, although the cause-and-effect relationship with business performance is not clear. The survey also revealed that more businesses in the third cohort had human resources-related difficulties than those in the second cohort.

Moreover, as a result of incorporating questions about the impact of the Great East Japan Earthquake, which took place during the sampling period, in the questionnaires, the survey revealed the existence of new businesses that were started triggered by the earthquake disaster and the fact that the impact of the earthquake decreased after several years. It was also found that the impact of the earthquake was particularly large in disaster-stricken areas, where the business closure rate was higher.

As described above, start-ups in the third cohort grew smoothly throughout the survey period and made a certain contribution to the Japanese economy through the creation of employment and the provision of products/services, etc. It appears that starting a business was generally a good choice for entrepreneurs. It can also be said that the importance of new businesses acting as new customers for private financial institutions is gradually increasing. Thus, the importance of developing new businesses was reaffirmed through the series of surveys.

Meanwhile, it was also found that different environments surrounding enterprises, such as changes in economic conditions and the occurrence of the Great East Japan Earthquake, led to some differences in the performance, business closure rate, difficulties in business management, etc., of start-ups. This may suggest the necessity of modifying support methods for new businesses depending on economic and local conditions.

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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 authors provide a tentative translation.