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How Uncertain Are Economic Policies? Evidence from a survey on Japanese firms

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Abstract

This study, using data from an original survey covering both public and private firms in Japan, presents evidence on uncertainties over economic policies, their effects on managerial decisions, and firms' evaluations of the government's numerical targets related to economic policies. This study is an extension of Morikawa (2013), but the survey greatly expands its coverage including private firms and adds new questionnaires. The results indicate that Japanese firms perceive uncertainty over the future course of certain economic policies, such as the social security system, tax policy, fiscal expenditures, and international trade policy. Policy uncertainties have substantial effects on managerial decisions, especially on equipment investment and hiring of regular employees. Medium- to long-term numerical targets related to the government's economic policies are generally perceived to be difficult to achieve.

Keywords: Uncertainty, Economic policy, Management, Numerical target
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How Uncertain Are Economic Policies? Evidence from a Survey on Japanese Firms

1. Introduction

The negative impacts of policy uncertainty on the real economy are of interest to researchers. A large number of theoretical and empirical studies have been conducted on this issue (see Bloom 2014, for a survey). When uncertainties over economic policies heighten, for example, households may increase precautionary savings and firms may postpone investments and hiring of employees, resulting depressed economic activities. This mechanism is often referred to as the option value of waiting.

In the empirical studies, various proxy measures of uncertainty have been developed and employed in the analyses, including volatility of the stock market, cross-sectional dispersion of the forecasts of professional economists, and ex-post forecast errors. These empirical studies generally find that uncertainty has negative impacts on equipment investments, R&D investments, and other macroeconomic variables (GDP, industrial production, and unemployment rate). [1] However, these measures represent uncertainty over general economic conditions that do not necessarily indicate "policy" uncertainty.

A measure specific to economic policy uncertainty (EPU) is developed by Baker *et al*. (2015). This EPU index is based on counting the frequency of newspaper articles regarding policy uncertainty. The EPU index is calculated for not only for the United States but also for the other major economies including the EU, Japan, and China and is available to the public from the website.[2] Baker *et al*. (2015) indicate that the recent heightened EPU index in the US and the EU had large negative impacts on the macroeconomic performance of these economies. The EPU index for Japan heightened during the financial crisis of 1997-1998 and also whilst the two chambers of parliament were controlled by different parties (the "twisted diet") from 2007 to 2009 and 2010 to 2012.

Policy uncertainty stems from a variety of sources, but some studies focus on the impacts of political events, such as partisan conflicts and government changes as causes of uncertainty. In

[1] Morikawa (2016), using data for Japanese firms, presents empirical evidence that uncertainty over future business condition has negative impact on investment.
[2] http://www.policyuncertainty.com/papers.html.

these studies, elections (Julio and Yook, 2012), frequency of change of government (Aisen and Veiga, 2013), vote shares of the parties in the elections (Funke *et al*., 2015), frequency of newspaper articles reporting political parties' disagreement about policy (Azzimonti, 2015), and unexpected outcomes of elections (Snowberg *et al*., 2007) are used as measures of political uncertainty. These studies generally indicate that partisan conflicts and government changes have negative effects on the economy.

The studies mentioned above generally use aggregated measures of policy/political uncertainty. However, there are varieties of economic policies that affect behaviors of firms. Past studies have not identified what types of policy are more uncertain and which policy uncertainties matter for businesses. Recently, several studies focus on the effects of specific economic policies such as trade policy (Handley and Limão, 2013, 2015; Handley, 2014; Feng *et al*., 2016), monetary policy (Mumtaz and Zanetti, 2013; Sinha, 2016), fiscal policy (Fernández-Villaverde *et al*., 2015), the social security system (Caliendo *et al*., 2015; Kitao, 2016), and land use regulation (Jackson, 2016). However, as far as the author is aware, no study has compared the uncertainties of individual policies and their impacts on the economy.

Morikawa (2013) is the first attempt to conduct a survey of firms investigating the subjective uncertainties over various economic policies and their effects on managerial decisions.[3] However, the number of respondent firms used in the study was only about 300 and the coverage is limited to listed (public) firms. Against this background, we conducted a new survey that greatly expands its coverage to more than 3,000 firms including both public and private firms.

Recent economic policies often adopt medium- to long-term numerical targets such as a real GDP growth rate, a productivity growth rate, and primary budget balance. These numerical targets, if credible, may increase investment and consumption by reducing economic uncertainties faced by firms and households. In order to assess the credibility of the numerical targets, the survey asked about firms' subjective evaluation of the probability that they will be met. The detail of the survey design is explained in the next section. This study is different from past studies that focus on the time-series properties of economic policy uncertainty as a whole, as it is a cross-sectional analysis by individual policies and by firm characteristics.

The major findings of this study can be summarized as follows. First, Japanese firms perceive

[3] The analysis of Morikawa (2013) is based on an original survey conducted in 2013.

uncertainty over the future course of economic policies, in particular over the social security system, tax policy, fiscal expenditure, and international trade policy. Second, policy uncertainties have substantial impacts on managerial decisions, especially on equipment investment and hiring of regular employees. Third, the specific economic policies that impact managerial decisions due to uncertainty are different for the manufacturing and service industries. Finally, medium- to long-term numerical targets related to the government's economic policies are generally perceived to be difficult to achieve.

The rest of this paper is structured as follows. Section 2 explains the design of the firm survey used in this paper and the method of the analysis. Section 3 presents results of the survey item by item. Section 4 concludes with policy implications.

2. Survey Design and Method of Analysis

The data used in this study comes from an original survey for a large number of Japanese firms: the Survey of Corporate Management and Economic Policy conducted by the Research Institute of Economy, Trade and Industry (RIETI). The survey responses were collected from October to December 2015 from a variety of public and private Japanese firms operating in both manufacturing and service industries. The sample firms are taken from the Basic Survey of Japanese Business Structure and Activities (Ministry of Economy, Trade and Industry: METI). Among the 15,000 firms surveyed, a total of 3,438 firms responded to the survey (response rate is 22.9%). The breakdown of firms by industry are as follows: manufacturing 1,647 (48.1%), ICT 199 (5.8%), wholesale 639 (18.6%), retail 403 (11.8%), services 395 (11.5%), and other industries 144 (4.2%).[4] The sample mean and median of the number of regular employees are 380 and 136, respectively.

Regarding economic policy uncertainty, the survey covered twelve economic policies and regulations: (1) tax policy, (2) the social security system, (3) business licensing, (4) labor market regulations, (5) environmental regulations, (6) land use and zoning restrictions, (7) consumer protection laws and regulations, (8) corporate laws and regulations, (9) international trade policy,

[4] The percentages are calculated excluding "unknown" firms from the denominator. Industry classifications of the remaining 11 firms are unknown. The industry composition of respondent firms is not much different from that of the population of firms surveyed: manufacturing (47.0%), ICT (9.3%), wholesale (20.0%), retail (10.9%), services (12.5%), and other industries (0.3%).

(10) fiscal expenditures, (11) monetary policies conducted by the Bank of Japan, and (12) regional revitalization policies. The survey asked firms to indicate the degree of uncertainty they perceive about the future course of these government policies and regulations individually by selecting from the following three choices: "high degree of uncertainty," "moderate degree of uncertainty," and "no significant degree of uncertainty." The wording of the questionnaires about policy uncertainty are essentially the same as those used in Morikawa (2013) surveying policy uncertainties for 300 listed firms in Japan.

Regarding the impacts of economic policy uncertainty on managerial decisions, the survey asked about the degree these impacts on their businesses. Specifically, for each of government policy and regulation, respondents were asked to select from three choices: "significantly affected," "somewhat affected," and "hardly affected."

First, we present the simple tabulation results of the responses to the questionnaires. In order to construct a summary score of each economic policy uncertainty, we assign 1.0 for "high degree of uncertainty," 0.5 for "moderate degree of uncertainty," and 0.0 for "no significant degree of uncertainty" and calculate the sample means. In a similar manner, we construct a summary score of the impact of policy uncertainties, 1.0 for "significantly affected," 0.5 for "somewhat affected," and 0.0 for "hardly affected" are assigned to calculate the sample means.

Then we compare the degree of policy uncertainty and the impact by industry (manufacturing/service industries) and by listing status (public/private firms) and test the statistical differences. In addition to the uncertainty of individual policies and regulations, we construct a composite score for the overall policy uncertainty by taking the mean of the values of twelve individual policy uncertainty scores.

Uncertainty could affect firm behavior in a wide range of activities including equipment investment, innovation, mergers and acquisitions (M&As), and the hiring of new employees. This study examines the type of management decisions that are significantly affected by policy uncertainty. Specifically, the respondents were asked to choose up to two activities from seven choices: (1) equipment investment, (2) R&D investment, (3) entry into new businesses, (4) entry into or exit from overseas markets, (5) organizational restructuring (including M&As), (6) hiring of full-time regular (standard) employees, and (7) hiring of non-regular employees.[5]

[5] In the 2013 survey, "IT investment" and "advertisement" were included in the choices. Since the number of firms choosing these two activities was very small, our new survey dropped these two activities, but added entry into new businesses as a choice.

Finally, the survey asked about firms' subjective evaluation of the probability (%) that the numerical targets of government policies will be realized. The examples of numerical targets include "mean real GDP growth rate of 2% by the fiscal year 2022" and "primary budget balance of the sum of national and local governments to be in surplus by 2020." We calculate and report the means and distributions (standard deviations) of the reported figures.

3. Results

3.1. Policy Uncertainty and Managerial Decisions

Table 1 summarizes the results of the responses for economic policy uncertainties and their impacts on managerial decisions. The policies and regulations with a high degree of uncertainty (Table 1-A) are the social security system (39.1%), fiscal expenditures (26.5%), international trade policy (23.3%), tax policy (21.6%), and regional revitalization policies (21.6%). On the other hand, uncertainties around business licensing, land use and zoning regulations, and corporate laws and regulations are relative low. The summary scores of policy uncertainty show a similar order (column (4) of Table 1-A). Regarding the impacts of policy uncertainty on managerial decisions (Table 1-B), tax policy (47.6%), followed by labor market regulations (29.5%), and the social security system (23.3%), are ranked highly. The summary scores of the impact of policy uncertainties are reported in column (4) of this table.

Comparisons of the scores of uncertainties and their impacts on businesses by industry (manufacturing and services) and firms' listing status (private and public) are reported in Table 2.[6] The differences in uncertainty scores by industry are statistically significant in four policies (column (1) of Table 2-A). Service firms perceive higher policy uncertainty over tax policy, the social security system, and business licensing than manufacturing firms, whose score of uncertainty over environmental regulations is high relative to that of service firms. However, generally, the differences between industries are quantitatively small. In the remaining eight

[6] "Service industry" in this paper includes information and communications, wholesale, retail, and the narrowly defined service industries. Among the respondents to the survey, there are 144 firms that are classified as "other industries" (e.g., agriculture, forestry, and fishery, construction, electricity, gas, and water supply) and 11 firms of which response about industry classification is lacking.

policy areas, there are no significant differences by industry.

On the other hand, the scores of the impacts of policy uncertainties on businesses clearly reflect industry characteristics, showing statistically significant differences in ten policies (column (2) of Table 2-A). Manufacturing firms tend to be affected by the policy uncertainties in environmental regulations, international trade policy, and monetary policy than service firms are. Service firms are relatively more affected by the uncertainties of policies such as tax policy, the social security system, business licensing, and consumer protection laws and regulations. However, the mean scores of the twelve policy areas (last row of the table) are very similar and statistically indistinguishable. This result suggests the importance of analyzing individual economic policies separately in order to understand economic impact of policy uncertainty.

Panel B of Table 2 is the comparisons by firms' listing status. Private firms show higher subjective uncertainty over land use and zoning regulations and consumer protection regulations, but, as naturally expected, the uncertainty score is significantly higher in corporate laws and regulations for public firms (column (1) of Table 2-B). The perceived impacts of policy uncertainties over corporate laws and regulations and international trade policy are higher for public firms, and the differences with private firms are highly significant (column (2) of Table 2-B). Recent establishment of the "Corporate Governance Code" by the Tokyo Stock Exchange and the pressure to increasing the number of independent (outside) directors to listed firms seem to be related to the higher scores of policy uncertainty and its impact of corporate laws and regulations among public firms. [7]

3.2. Managerial Decisions Affected by Policy Uncertainty

Policy uncertainty could affect firm behavior in a wide range of activities such as equipment (tangible) investment, R&D investment, mergers and acquisitions (M&As), and the hiring of new employees. Our survey examined the type of managerial decisions that are significantly affected by policy uncertainty. The survey asked respondents to choose the two decisions most

[7] Although the number of foreign-owned firms (the ratio of foreign shareholdings exceed 33.3%) is small in our sample (less than 70 firms), we compare the differences between foreign-owned firms and other firms. The foreign-owned firms' subjective uncertainties over the security system and monetary policy are significantly lower than that of other firms. The impact of uncertainty over the social security system on businesses is also significantly lower for the foreign-owned firms.

affected by policy uncertainty from the seven choices described in the previous section.

According to the sum of the percentages of firms choosing the two most important impacts (column (1) of Table 3), the majority of firms pointed out equipment investment (66.2%) and hiring of regular employees (56.3%) to be significantly affected by policy uncertainties. Following these managerial decisions, entry into new businesses (22.2%) and hiring of non-regular employees (21.1%) were chosen by the respondent firms. The low figures for R&D investment (13.0%) and entry into and exit from overseas markets (9.6%) can be interpreted as simply due to the relatively small number of firms engaged in these activities.

Interestingly, the responses of manufacturing and service firms are very different, for all managerial decisions the figures are statistically different between industries at the 1% significance level (Table 4-A). Manufacturing firms tend to choose equipment investment, R&D investment, and entry into and exit from overseas markets as more important relative to the service firms. On the other hand, the number of firms choosing entry into new businesses, organizational restructuring, and hiring of employees are higher among service firms. The result is natural from the viewpoint of the different industry characteristics such as capital-labor ratio, R&D intensity, and engagement in the global market.

Panel B of Table 4 shows the comparison of private and public firms. The ratio of firms choosing R&D investment, entry into new businesses, entry into and exit from overseas markets, and organizational restructuring are higher among public firms. We interpret the results reflecting the wide variety of business activities of public firms. [8]

3.3. Uncertainty over the Government's Numerical Targets

Uncertainties over various numerical targets of government policies are summarized in Table 5. The figures indicate the means, standard deviations, and median of firms' subjective assessment of the probability (%) that the numerical targets of government policies to be realized.

The Japanese government has a target for the average annual real GDP growth rate to be 2% ("Basic Policy on Economic and Fiscal Management and Reform 2015"). Compared to current

[8] When comparing foreign-owned firms with other firms, only "organizational restricting" is significantly higher among foreign-owned firms.

potential growth rate estimations of less than 1%, the target of 2% appears to be a very ambitious figure. The firms' assessment of the probability of meeting this target is 33.3% and 30.0% at the mean and median, respectively (Table5-A). However, to see the distribution of the subjective probability, a relatively large number of firms answered 50% (fifty-fifty), which can be interpreted that those firms are highly uncertain about the probability of the target being met. Table 5-B classifies the responses into three categories: "less than 50%," "50%," and "more than 50%." According to this categorization, 61.3% of firms responded as "less than 50%" and the share of firms responding "more than 50%" is only 11.3%. It is obvious that the Japanese firms perceive the government's target to be difficult to achieve.

The government set the numerical target of labor productivity growth in the service sector as 2% by 2020 ("Service Industry Challenge Program" in 2015 by the Headquarters for Japan's Economic Revitalization). The respondent firms' assessment of the probability of this target being met is 32.5% and 30.0% at the mean and median, respectively. When classifying the responses into three categories, 62.7% of firms responded as "less than 50%" and the share of firms responding "more than 50%" is only 9.9%. Although improvement in service sector productivity performance is a key policy agenda due to the decline in the workforce, the large majority of firms think it difficult to significantly enhance productivity growth. The result suggests that, in order to achieve the numerical goal, additional policy measures effectively contributing to productivity growth should be established and implemented.

Under the trend of low fertility rate and declining population, it is expected to keep the size of the Japanese population in the long run. The Council on Economic and Fiscal Policy projected that Japan could maintain the population at around 100 million after 50 years ("Choice for the Future" in 2014 by the Committee for Japan's Future, Council on Economic and Fiscal Policy). The report states, "We should aim at overcoming the rapidly decreasing and aging of population and maintaining a population of about 100 million with a stable demographic structure in 50 years." The firms' assessment of the probability of maintaining the population around 100 million is 25.7% and 20.0% at the mean and median, respectively. These figures are lower than those for the real GDP growth target mentioned above. When classifying the probability distribution into three categories, 75.8% of firms responded "less than 50% and the percentage of firms responding as "more than 50%" is a mere 7.5%. Maintaining the Japanese population of 100 million in the long run is evaluated by the Japanese firms as being very hard to achieve.

The government debt to GDP ratio of Japan is the worst among the major advanced countries

and the budget deficit has continued for more than two decades.[9] In order to make the budget sustainable, the Japanese government has a target to achieve a surplus in the primary balance of the sum of national and local governments by the fiscal year 2020 ("Basic Policy on Economic and Fiscal Management and Reform 2015"). The mean and median of the subjective probability distribution of achieving this target are 25.7% and 20.0%, respectively. When splitting the probability distribution into three categories, 75.7% of firms responded "less than 50% and the percentages of firms responding "more than 50%" is extremely small (4.9%). The Japanese firms are very skeptical about the government achieving a balanced budget in the near future.

In relation to this issue, the survey asked about the possibility of government budget default by 2030. The mean and median of the probability distribution of budgetary default are 24.1% and 20.0%, respectively. Although Japanese firms think the government's budget deficit is serious, they do not foresee a high risk of default in the coming 15 years.

Recently, partly due to the depreciation of the Japanese yen, international tourists to Japan have been increasing rapidly. The government set a target to achieve 20 million visitors to Japan by 2020 ("Japan Revitalization Plan 2014"). In contrast to the other numerical targets explained above, Japanese firms are positive about the possibility of attaining this target. The firms' assessment of the probability of the target being met is 60.9% and 60.0% at the mean and median, respectively. According to the categorization, 19.6% of firms stated the achievability to be "less than 50% and the share of firms responding "more than 50%" is 56.4%. The firms' view on this numerical target is exceptional, possibly because the number of international visitors to Japan is already close to 20 million. [10]

From the viewpoint of policy uncertainty, subjective uncertainty can be interpreted as low for firms responding with a probability close to either extreme (100% or 0%). On the other hand, firms responding to the probability as fifty-fifty (50%) are the most uncertain about the realization of the policy target. In this respect, the targets of 2% real GDP growth rate and 2% labor productivity growth of the service sector are more uncertain relative to the other numerical targets discussed in this study.

[9] The Japanese government's primary deficit has been continued since the fiscal year 1993.
[10] The number of international visitors to Japan is increasing very rapidly. In 2015, the number reached 19.7 million ("Number of International Visitors to Japan," by the Japan National Tourism Organization). In March 2016, the government revised up the numerical target to 40 million visitors.

4. Conclusions

This study, using data from an original survey covering both public and private firms in Japan, presents empirical findings on the uncertainties over various economic policies, their effects on managerial decisions, and firm evaluation of government numerical targets related to economic policies. This study is an extension of Morikawa (2013), but the survey greatly expands its coverage to more than 3,000 firms including private firms, and adds new questions. Recently, economic policy uncertainty has attracted attention from researchers, but most studies have not distinguished uncertainties over individual policies. Although this study depends on the subjective uncertainty of the firms responding to the survey and the analysis is simple cross-sectional tabulations, we present new findings not yet discovered.

According to the results of the survey, Japanese firms perceive uncertainty over the future course of various economic policies, but the degree of uncertainty and its impact on businesses differ by the individual policies. For example, firms perceive greater uncertainty over the social security system, tax policy, fiscal expenditures, and international trade policy. However, regarding the impact of policy uncertainty, tax policy is the most influential to the firms' managerial decisions. Policy uncertainties have substantial effects on managerial decisions, especially on equipment investment and hiring of regular employees. These findings suggest that improving the predictability of economic policies and regulations in the highly uncertain areas would help revitalize the economy by facilitating future-oriented investments from firms.

Recently, the Japanese government set various medium- to long-term numerical targets such as the real GDP growth rate, the productivity growth rate, and primary budget balance. However, firms are skeptical about the credibility of these numerical targets. The result can be the interpreted as (1) the indication of the optimistic bias of the government's targets themselves or (2) the lack of sufficient policies or structural reforms necessary to achieve the targets. Since it is not desirable that the numerical targets be incredible, further effort is needed to tackle with these two aspects.

An important limitation of this study is that it has only cross-sectional information. For the purpose of proper policy planning and execution, it would be useful to conduct a survey of policy uncertainties periodically.

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Table 1 Policy Uncertainties and the Impact on Businesses

A. The Degree of Policy Uncertainty

	(1) High degree of uncertainty	(2) Moderate degree of uncertainty	(3) No significant degree of uncertainty	(4) Uncertainty score
Tax policy	21.6%	64.3%	14.2%	0.537
Social security system	39.1%	54.0%	6.9%	0.661
Business licensing	7.5%	58.0%	34.4%	0.365
Labor market regulations	17.9%	64.3%	17.8%	0.500
Environmental regulations	9.8%	64.5%	25.7%	0.421
Land use and zoning regulations	6.1%	54.1%	39.8%	0.331
Consumer protection laws and regulations	15.5%	59.5%	25.1%	0.452
Corporate laws and regulations	7.8%	62.1%	30.1%	0.388
International trade policy	23.3%	58.8%	17.9%	0.527
Fiscal expenditures	26.5%	60.2%	13.3%	0.566
Monetary policy of the BOJ	15.1%	68.3%	16.6%	0.492
Regional revitalization policies	21.6%	61.7%	16.8%	0.524

Note: The uncertainty score in column (4) is calculated as the sample mean of "high degree of uncertainty (1.0)," "moderate degree of uncertainty (0.5)," and "no significant degree of uncertainty (0.0)."

B. The Degree of Impacts on Businesses

	(1) Significantly affected	(2) Somewhat affected	(3) Hardly affected	(4) Impact score
Tax policy	47.6%	46.3%	6.1%	0.708
Social security system	23.3%	54.4%	22.3%	0.505
Business licensing	10.5%	42.1%	47.4%	0.315
Labor market regulations	29.5%	53.5%	17.0%	0.563
Environmental regulations	16.0%	54.2%	29.8%	0.431
Land use and zoning regulations	7.0%	39.0%	54.0%	0.265
Consumer protection laws and regulations	14.6%	51.1%	34.3%	0.401
Corporate laws and regulations	10.6%	53.6%	35.7%	0.375
International trade policy	13.1%	45.7%	41.2%	0.360
Fiscal expenditures	9.3%	47.7%	42.9%	0.332
Monetary policy of the BOJ	9.8%	56.3%	33.9%	0.379
Regional revitalization policies	9.9%	47.5%	42.6%	0.337

Note: The impact score in column (4) is calculated as the sample mean of "significantly affected (1.0)," "somewhat affected (0.5)," and "hardly affected (0.0)."

Table 2 Policy Uncertainties and the Impacts on Businesses by Firm Characteristics

A. Manufacturing vs. Service Firms

	(1) Uncertainty score			(2) Impact score		
	Manufacturing	Service		Manufacturing	Service	
Tax policy	0.524	0.548	**	0.689	0.725	***
Social security system	0.643	0.681	***	0.493	0.517	**
Business licensing	0.346	0.384	***	0.275	0.352	***
Labor market regulations	0.498	0.501		0.554	0.569	
Environmental regulations	0.437	0.401	***	0.507	0.355	***
Land use and zoning regulations	0.332	0.332		0.281	0.253	**
Consumer protection laws and regulations	0.446	0.458		0.356	0.445	***
Corporate laws and regulations	0.390	0.387		0.367	0.382	
International trade policy	0.526	0.531		0.401	0.330	***
Fiscal expenditures	0.563	0.570		0.343	0.322	*
Monetary policy of the BOJ	0.494	0.490		0.402	0.362	***
Regional revitalization policies	0.524	0.527		0.325	0.351	**
(Mean scores)	0.476	0.484		0.416	0.413	

Note: ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

B. Private vs. Public Firms

	(1) Uncertainty score			(2) Impact score		
	Private	Public		Private	Public	
Tax policy	0.538	0.522		0.707	0.708	
Social security system	0.663	0.630		0.507	0.473	
Business licensing	0.368	0.333		0.314	0.339	
Labor market regulations	0.502	0.466	*	0.565	0.536	
Environmental regulations	0.421	0.408		0.430	0.444	
Land use and zoning regulations	0.335	0.283	***	0.266	0.250	
Consumer protection laws and regulations	0.458	0.388	***	0.402	0.391	
Corporate laws and regulations	0.383	0.460	***	0.360	0.577	***
International trade policy	0.526	0.543		0.354	0.437	***
Fiscal expenditures	0.567	0.541		0.331	0.344	
Monetary policy of the BOJ	0.492	0.489		0.378	0.394	
Regional revitalization policies	0.524	0.523		0.336	0.340	
(Mean scores)	0.481	0.464		0.412	0.439	**

Note: ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3 Managerial Decisions Significantly Affected by Policy Uncertainty

	(1) Total	(2) Most	(3) Second most
Equipment investment	66.2%	50.7%	16.1%
R&D investment	13.0%	3.7%	9.6%
Entry into new businesses	22.2%	9.7%	12.9%
Entry into and exit from overseas markets	9.6%	4.3%	5.4%
Organizational restructuring	8.5%	3.2%	5.5%
Hiring of regular employees	56.3%	22.5%	34.9%
Hiring of non-regular employees	21.1%	5.9%	15.7%

Note: The respondents were asked to choose up to two activities from the seven choices.

Table 4 Managerial Decisions Affected by Policy Uncertainty by Firm Characteristics

A. Manufacturing vs. Service Firms

	Manufacturing	Service	
Equipment investment	80.6%	52.7%	***
R&D investment	18.7%	7.4%	***
Entry into new businesses	16.1%	28.0%	***
Entry into and exit from overseas markets	11.7%	7.8%	***
Organizational restructuring	5.5%	11.7%	***
Hiring of regular employees	49.9%	62.5%	***
Hiring of non-regular employees	15.0%	26.7%	***

Note: *** indicates statistical significance at the 1% level.

B. Private vs. Public Firms

	Private	Public	
Equipment investment	66.7%	59.7%	**
R&D investment	12.3%	22.6%	***
Entry into new businesses	21.5%	31.7%	***
Entry into and exit from overseas markets	8.9%	17.6%	***
Organizational restructuring	8.2%	12.7%	**
Hiring of regular employees	57.7%	38.0%	***
Hiring of non-regular employees	21.5%	15.4%	**

Note: *** and ** indicate statistical significance at the 1% and 5% levels, respectively.

Table 5 Distribution of Subjective Probability

A. Mean, Standard Deviation, and Median

	(1) Mean	(2) S.D.	(3) Median
2% real GDP growth rate (average by 2022FY)	33.3%	22.0%	30.0%
2% labor productivity growth rate of the service sector (by 2020)	32.5%	21.4%	30.0%
Maintaining stable population at around 100 million in 50 years	25.7%	21.7%	20.0%
Attaining primary fiscal surplus (by 2020FY)	25.7%	19.8%	20.0%
Default of the government budget (by 2030)	24.1%	22.7%	20.0%
20 million foreign visitors to Japan (by 2020)	60.9%	24.1%	60.0%

B. Classification into Three Categories

	(1) Less than 50%	(2) 50%	(3) More than 50%
2% real GDP growth rate (average by 2022FY)	61.3%	27.4%	11.3%
2% labor productivity growth rate of the service sector (by 2020)	62.7%	27.4%	9.9%
Maintaining stable population at around 100 million in 50 years	75.8%	16.7%	7.5%
Attaining primary fiscal surplus (by 2020FY)	75.7%	19.4%	4.9%
Default of the government budget (by 2030)	77.1%	14.3%	8.6%
20 million foreign visitors to Japan (by 2020)	19.6%	24.0%	56.4%