Executive Summary:

The National Deliberative Poll in Japan, August 4-5, 2012 on Energy and Environmental Policy Options

Overview

This is the first Deliberative Poll® (DP) anywhere in the world that was commissioned by a government to get input on a subject of national importance before a national decision. It gathered a scientific microcosm of the Japanese people to a single place, Keio University in Tokyo, where it could spend most of two days deliberating about the key policy choices. The sample became demonstrably more informed and it changed its views in certain key respects. The public came in, as in other recent conventional polls in Japan, with support for the 0 nuclear option and a concern for safety as a first criterion. These concerns and priorities increased with deliberation even after all the arguments on either side were discussed in detail. The public embraced the combination of zero nuclear power by 2030 along with strong commitments to energy conservation and renewable energy.

Representativeness

The 285 participants in the weekend of deliberation were drawn from a larger random sample of registered voters from throughout the country totaling 6,835. While the participant sample was not perfect, it can certainly be said that it was the most nationally representative random sample of the Japanese people ever gathered together to a single place. Its representativeness can be evaluated by comparing participants (the 285) with the non-participants (the 6,550 who took the initial survey but who did not participate in the weekend) in their demographics and in their attitudes. In their demographics, there were no significant differences between participants and non-participants in their age and in their representation of every prefecture from around the country. However, the participants were significantly more male, more likely to be employed and they included fewer house wives than the non-participants.

In their policy attitudes the participants were on the same side of the issue as the non-participants on every question. Most importantly, there were no significant differences between participants and non-participants on the three fundamental policy options put forward by the government for evaluation about nuclear power. The so-called 0% option, the 15% option and the 20-25% option all showed no significant difference between participants and non-participants. In fact there were no significant differences on any question at time of recruitment about nuclear power. However, there were significant differences on eight of the 17 attitude questions, either about criteria for decision about energy or about trust. On a 0 to 10 scale, where 0 meant “not important at all” and 10 meant “most important” the participants rated “safety” on average more important by about 4% of the total range of the scale. They rated “stable supply” about 1% less important and the prevention of global warming about 4% of the range of the scale less important.

The participants also expressed significantly less trust than did non-participants in "information from the government"," information from nuclear power specialists"," information from electric power companies" and "information from the media." These differences in trust were generally larger than the differences in policy attitudes and were in the range of about 5% of the scale.

In sum, the weekend sample was a good microcosm of the nation's registered voters brought to a single place to deliberate. It was somewhat more concerned about safety and significantly more distrustful than the general population of the information it had been getting from the government, the media and the experts. But there were no significant differences at all in its policy attitudes on the nuclear question itself.

Policy Attitudes

Participants provided questionnaire responses at three intervals—T1 on first contact, T2 on arrival and T3 on departure. On some questions we have measurement of the full change from recruitment, T1 to the end of the weekend at T3. On others we just have T2 to T3. In other DPs, we find that most of the attitude change comes with the discussions at the DP. But some naturally occurs in preparation as people anticipate the discussions, read up on the issues and talk with friends and family. So where possible we use T1 to T3 but where necessary we use T2 to T3.

Participants were asked about criteria for evaluating energy choices—safety, stable supply, prevention of global warming and cost. On a scale from 0 to 10 where 0 was "not at all important" and 10 is "the most important" safety increased significantly from a mean of 8.88 to 9.27. In percentages, 87.1% thought it was important at t1 and 92.4% thought it important at t3. When asked which of the four criteria was <u>most</u> important, the percentage choosing safety increased significantly from 68.4 % at T1 to 80.7% at T3. Stable supply started and ended as the second most important, increasing significantly from 7.66 to 8.05 on the ten point scale and prevention of global warming and cost were both though to be less important, both before and after deliberation.

The three fundamental policy options posed by the Government for 2030: 0%, 15% and 20-25%, were asked at all three time periods. The public came in with strong support for the 0 option and that support only increased with deliberation. On the 0 to 10 scale, support for the 0 nuclear option increased from a mean of 6.92 to a mean of 7.31. In percentage terms the support increased from 60% to 67.4%. This increase is marginally significant (p=.08). Support for the other two options fell significantly. The 15% option fell from a mean of 6.07 to 5.16 (in percentages support fell from 47.8% to 40.4%). Support for the 20-25% nuclear option fell from a mean of 4.28 to 3.37 (in percentages from 29.8% to 23.9%).

When asked whether the Japanese people have already saved enough energy or should save more, there was a significant increase in support for more energy saving (from the already high mean of 6.96 to a mean of 7.80, or in percentage terms from 62.5% support to 72.8% support after deliberation).

There was a similar significant increase in support for Japanese industry saving more (from a mean of 6.83 to 7.44 or in percentage terms from 59.3% to 67% after deliberation).

There were some other key issues of energy policy where there was strong support both before and after for the same option. Notably, there was 87.8% support for increased efforts to promote renewable energy (only a slight rise from 85.6% before deliberation). And both before and after deliberation there was more than 70% support for the proposition that "because nuclear fuel affects future generations, we have to quit using nuclear power as soon as possible."

The Center for DP at Keio University conducted an additional analysis. It examined participants' preferences for the three options by categorizing the participants into supporters, multiple supporters, and non-supporters. The analysis was based on the questions rating the three scenarios on a 0 to 10 scale, where 0-4 indicated no support, 5 was exactly in the middle, and 6-10 indicated support. The aim was to identify the amount of support for an option as the most preferred option. For example, participants who rated the 0% scenario higher than the 15% and 20-25% scenario were considered 0% scenario supporters—that scenario was the most preferred one for them. And, participants who rated the 15% higher than the other two scenarios were considered 15% supporters and so on. Then, if participants rated the scenarios the same, they were considered multiple supporters. And, of course, participants who rated any of the scenarios between 0 and 4 were considered non-supporters. Based on this examination, the support for the 0% option, as most preferred, increased from 32.6 at T1 to 41.1 at T2 to 46.7 at T3. The 15% option remained fairly stable, 16.8 to 18.2 to 15.4 and the 20-25% option remained the same across the time points at 13 percent.

It is important to realize that even on a salient issue such as nuclear power in Japan, many participants in the random sample came into the process with low levels of knowledge and a lack of firm opinions. This was a representative sample of the public, not a mobilized group of self selected activists. In the DP process they were seriously engaged in the arguments on both sides of each option or policy issue. Even in cases where they offered the same questionnaire response at T3 as at T1, those responses were tested over the weekend against all the pros and cons of all the positions in the discussion by the time participants responded at T3. Hence we can view the final opinions as considered judgments at T3 rather than "top of the head" impressions of sound bites and headlines at T1. At T3 the responses have survived testing against competing arguments and against the new information people have learned. At T1 they have not.

Knowledge

Participants were asked three knowledge questions at all three times, T1, T2 and T3, and three other questions at T2 and T3 only. The overall knowledge gains are substantial and statistically significant. Averaged over the six questions, the overall knowledge gain is 7.4%. The percentage of Japan's electricity generation that comes from nuclear power (about 30%) showed an increase of 13.7

points from 47.4% at T1 to 61.1% at T3. Knowledge tends to be correlated with other knowledge so we view the index of knowledge questions as a whole as an indicator of knowledge gain on the issue. The particular questions are selected to be relevant to the deliberations but also so not to be too easy (as then everyone would get them right at the beginning and there would be "ceiling effects") and not to be too hard (as then we could not capture the changes in knowledge levels). In this case the index clearly showed that there was relevant and substantial knowledge gain among the participants.

Participation in Small Groups

Through initial analysis of the transcripts, this summary examined the total number of words and statements the participants contributed through the deliberative event. The tables below present the total number of words and statements by gender (first table) and by age (second table). A tally of the total number of words showed that male participants contributed statistically significantly more words than female participants. Male participants also contributed more statements as well. And, in breaking out the two small group sessions, the table shows that the contributions levels were the similar between males and females. It is important to note that the breakdown of gender for this event was roughly 67 percent males and 32 percent females. Therefore, it is possible that it is the sheer number of male participants that contributed to the more words and statements by men.

The second table below examines the age of participants and their contribution levels. Age was broken out into six categories and the table shows there were no statistically significant differences among the total number of words or statements, whether overall or by session. A closer look at the number of statements show that those that are 60 years of age and older appear to contributed a couple more statements more than other age groups. That also contributes to the slightly more words by those 60 years and older as well.

Note: The tables below should the *average* number of total words/statements. S1 = Session 1 and S2 = Session 2. Total = Session 1 plus Session 2.

Gender	Male	Female	Male - Female	Sig.
Total Words	996	689	307	0.001
Total Statements	19	14	5	0.013
S1 Words	561	385	175	0.002
S1 Statements	10	8	2	0.100
S2 Words	508	344	164	0.001
S2 Statements	10	7	3	0.006

Age	20-29	30-39	40-49	50-59	60-69	70-79	Sig.
Total Words	682	760	888	794	979	980	0.570
Total Statements	15	14	16	14	20	20	0.120

S1 Words	489	442	540	414	548	485	0.543
S1 Statements	11	7	9	7	11	10	0.257
S2 Words	332	376	433	411	483	543	0.589
S2 Statements	7	8	9	8	11	11	0.818

The table below breaks out the participation levels by the small group rooms.

By Small Group	Total Words	Total Statements	S1 Words	S1 Statements	S2 Words	S2 Statements
A	2809	11	1318	6	1490	5
B	2733	29	1000	11	1732	17
C	2686	17	1285	8	1400	9
D	2884	11	1421	5	1463	6
E	2889	12	1374	5	1641	8
F	2744	20	1404	12	1340	8
G	2477	11	1220	6	1258	5
H	2873	30	1392	11	1729	21
I	2519	17	1240	8	1278	9
J	2267	11	1004	5	1368	7
K	2679	23	1474	16	1205	7
L	2453	15	1374	9	1079	6
M	2462	25	1487	11	1236	16
N	1931	24	876	11	1055	13
O	1907	17	871	9	1035	8
P	2218	21	1254	17	1123	6
Q	3068	20	1601	11	1466	9
R	2132	15	1038	9	1094	7
S	2907	24	1618	13	1641	14
T	1735	22	814	10	986	13

Evaluations

The participants answered a series of evaluation questions at the end. They consistently rated the process highly. On a 0 to 10 scale where 0 to 4 was “not at all useful” and 6 to 10 was “very useful” with 5 in the middle, 85.6% rated “the event as a whole” on the “very useful” side of the scale. 87.4% rated the small group discussions that way, as did 78.6% for the large group plenary sessions and 60% for the briefing materials.

Participants also felt that the process helped them clarify their views. 77.9% agreed their opinion became more clear, 76.2% said they could understand complicated issues, while only 29.5% thought it became difficult to summarize their views.

The evaluations of the group process were similarly supportive. 82.4% felt that the "group moderator provided the opportunity for everyone to participate in the discussion", 61% thought that the members "participated relatively equally" and 82.8% disagreed with the statement that "my group moderator sometimes tried to influence the group with his or her own views." While only 29.5% agreed that" my group moderator tried to make sure opposing arguments were considered" 63.1% thought "the important aspects of the issues were covered in the group discussions." There were similarly strong positive evaluations of the plenary sessions and the moderation of the plenary sessions, all the questions scoring between 66% and 80% for the desired evaluations.

The only marginal evaluation was a question about the briefing materials. Only 34.7 % agreed that "the briefing materials included different opinions equally." But only 26% disagreed that they did with the largest number of respondents (36%) exactly in the middle.

The degree of seriousness with which participants approached the event was impressive. 86.8% read half or more of the materials before the event and 24.6% "not only read them but also looked up some of the issues by myself."

Trust

The participants came in with extremely low levels of trust for all the information sources available to them. On first contact only 6.4% trusted information from the government, only 19% trusted information from nuclear power specialists, only 3.6% trusted information from electric companies, and only 11.7% trusted information from the media. Most of this distrust was not affected by the event. But trust in nuclear power specialists rose significantly but modestly to 21.4%. And trust in NPOs and NGOs (not asked at T1) rose significantly from T2 to T3 from 23% to 31.9%. These levels of distrust are remarkable and speak to the traumatic nature of the disaster. The contrast between the participants' distrust of all the sources available to them in ordinary life and their strongly positive evaluation of every component of the DP is worth noting.

Partners

The project was conducted by the Center for DP at Keio University under the direction of Professor Yasunori Sone. It was commissioned by the national government and conducted with the active advice of Professor James Fishkin and Dr Alice Siu of the Center for Deliberative Democracy at Stanford and Professor Robert C. Luskin of the University of Texas, Austin. For details on all the partners and advisors as well as the policy context see the briefing document "Deliberative Poll on Energy and

Environmental Policy Options": https://cdd.stanford.edu/2012/energy-and-environmental-policy-options-for-japan/.