

DO TRADE-ORIGINATED INCOME SHOCKS MOBILIZE  
HIGHER BACKLASH AGAINST FREE TRADE?

EXPERIMENTAL EVIDENCE FROM THE UNITED STATES AND JAPAN

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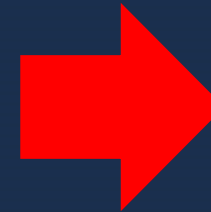
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# THE TIDE HAS CHANGED: PROTECTIONIST TRUMP VS. FREE-TRADING ABE



米側が用意した「輸入大国日本」と書かれたTシャツを着る渡辺通産相とヤイター米通商代表＝1986年5月



## MOTIVATION: TWO KEY CHANGES IN U.S.-JAPAN TRADE RELATIONS

- Protectionist U.S. vs. Free-trading Japan
- Partisan reversals since 2009
  - Republican voters more protectionist than Democrats (2009-present)
  - The DPJ government pursued higher level of agricultural subsidization than the LDP government (2009-2012)
  - The LDP government weakened the power of JA (2015) and signed TPP (2015) and signed US-Japan Trade Agreement (2019)

## THIS PAPER (AND LARGER BOOK PROJECT)

- **Argument:** The role of Great Recession in fueling voter backlash against government compensation in the United States and Japan (“compensation resentment”)
  - Perceived “undeserved-ness” of heavily-assisted industries
  - The rise of protectionism in the US: Backlash against stimulus programs and resulting failure of policy substitution (oppose compensation, support tariffs among Republican voters)
  - The rise of free-trading, agriculture-liberalizing Japan: Backlash against compensating heavily-subsidized farmers

## THIS PAPER: EVIDENCE

- **Experimental:** Coordinated survey experiments in Japan and the United States around the 2012 House of Representatives and presidential elections

This Paper

- **Observational:** Behavioral and survey data that show *the precise timing* of voter backlash coinciding with the Great Recession and major national elections

# EXPERIMENTAL CONTEXT (JAPAN)

- *Pre-Recession – Invisible Taxation = High food prices (40% tax equivalent to consumers)*
- *2008-2010 – Great Recession: Economic hardship of workers, but farmer subsidization continued.*

This Paper

- *2007-2012 – Partisan Politics Converging toward Farm Votes*
  - **Income Compensation Program for Farm Households (戸別所得補償)**
  - **Increase food self-sufficiency campaign**
- *2012 – Invisible becomes Visible Taxation: Compensation resentment*

# COORDINATED SURVEY EXPERIMENTS IN JAPAN AND THE UNITED STATES

- **Sampling:** Nationally-representative American voters via Cooperative Congressional Election Studies (CCES) and Census-approximating opt-in sample of online survey  
Japanese monitors via Macromill Research  
This Paper
- **Sample Size:** 2,000 respondents for U.S. and 3,798 for Japanese sample
- **Timing:** Before and after the 2012 HofR election & Presidential election

# EXPERIMENTAL DESIGN: 3 X 2 FACTORIAL DESIGN

**Table 1: Experimental Design**

	Trade Agreement	Natural Disaster	Control (Unspecified)
Manufacturing	1	3	5
Agriculture	2	4	6

Note: Columns list three sources of financial losses, and row lists two sectors that suffer from the losses.

- **Randomize information about:**
  - **Sources of income shocks: trade agreement, natural disaster and unspecified cause (control group)**
  - **Who suffers from it: manufacturing industries vs. agriculture**



# SURVEY INSTRUMENTS

**Trade Treatment** (Manufacturing; Group 1 above): When manufacturing companies suffer large financial losses due to a trade agreement, such as The Trans-Pacific Partnership Agreement currently under negotiation, the government should use tax payer dollars to help them out.

**Disaster Treatment** (Manufacturing; Group 3 above): When manufacturing companies suffer large financial losses due to a natural disaster, the government should use tax payer dollars to help them out.

**Control Group** (Manufacturing; Group 5 above): When manufacturing companies suffer large financial losses, the government should use tax payer dollars to help them out.

Respondents choose from: *Agree, Somewhat agree, Can't say one or the other, Somewhat disagree, Disagree, Don't Know, Skipped.*

## OUTCOME OF INTERESTS: SUPPORT FOR COMPENSATION & SUPPORT FOR TRADE AGREEMENT

Currently, the U.S. government is participating in the negotiation of The Trans-Pacific Partnership agreement, a trade agreement with eight other countries. Do you support or oppose the U.S. government's participation in the Trans-Pacific Partnership agreement?

Answer (Single Choice): *Support, Oppose, Don't know or Not Sure, Skipped.*

# THE RESULTS OF THE JAPANESE EXPERIMENT: SUPPORT FOR COMPENSATION

Figure 7a: Average Treatment Effects on Support for Compensation (Manufacturing)

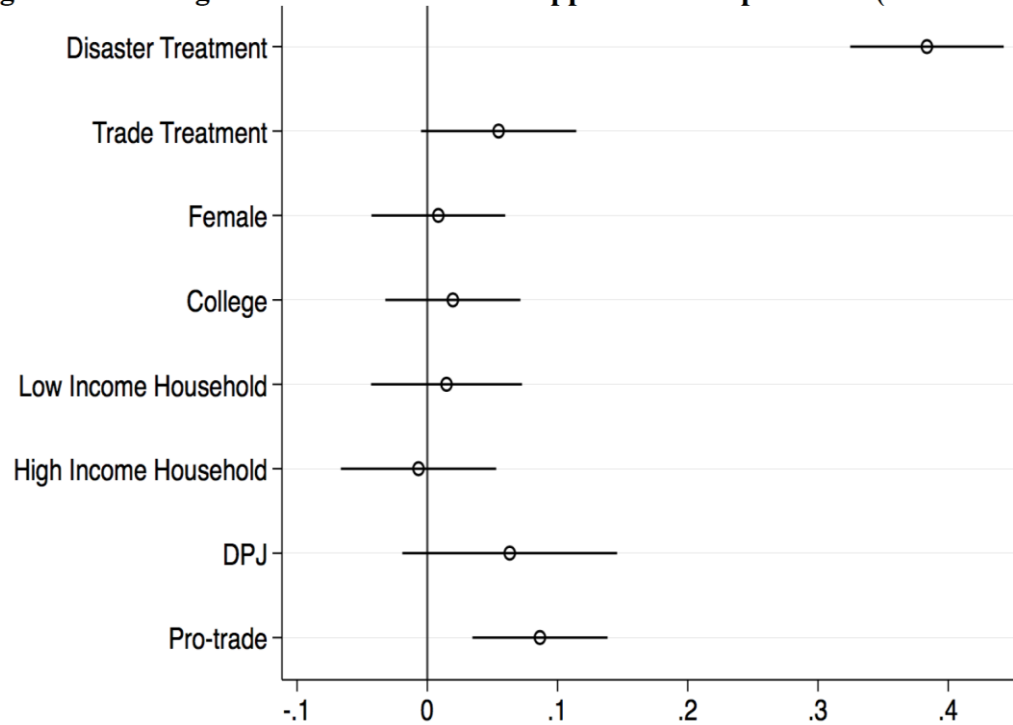
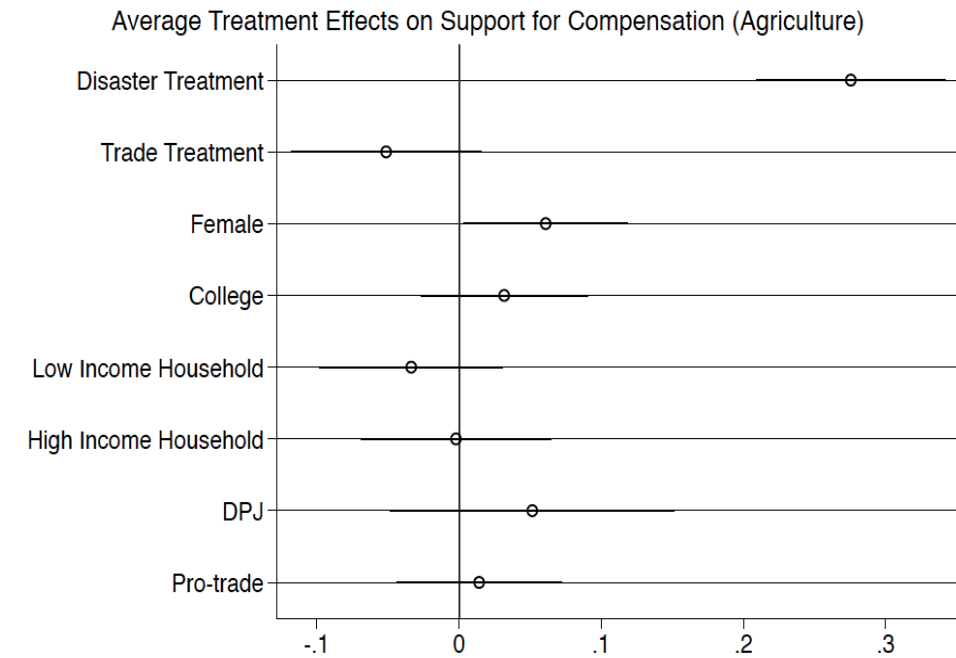


Figure 7b: Average Treatment Effects on Support for Compensation (Agriculture)



Take away: Trade-shock translates into support for compensation for manufacturing (+ 5 points), but not for agriculture (-5 points; backlash effects)

# THE RESULTS OF THE JAPANESE EXPERIMENT: SUPPORT FOR TPP

Figure 8a: Average Treatment Effects on Support for TPP (Manufacturing)

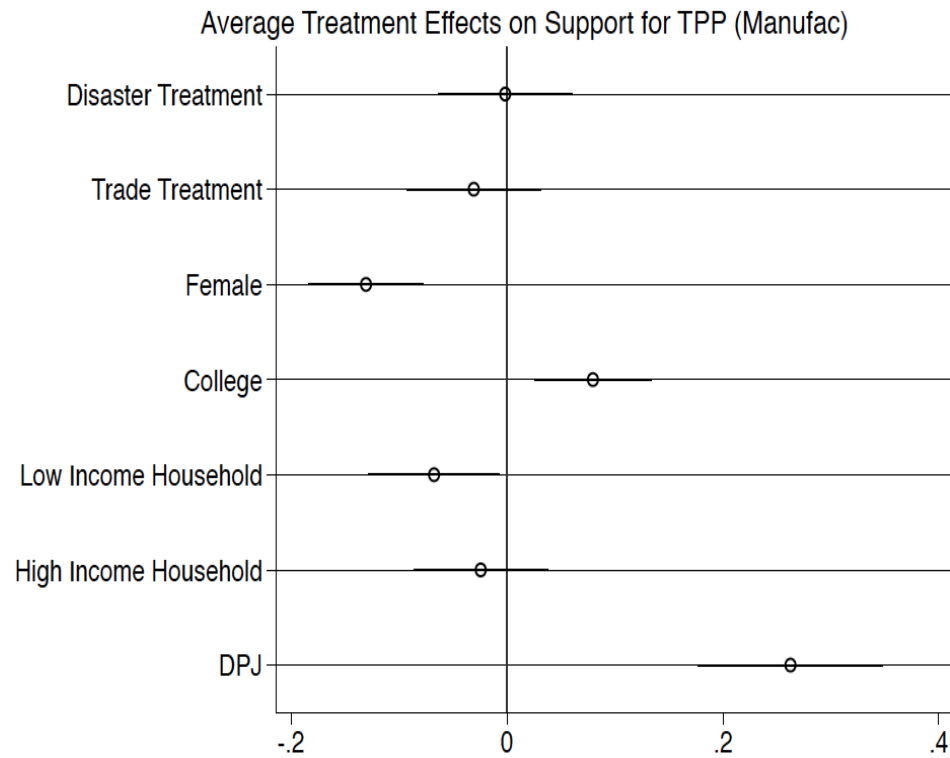
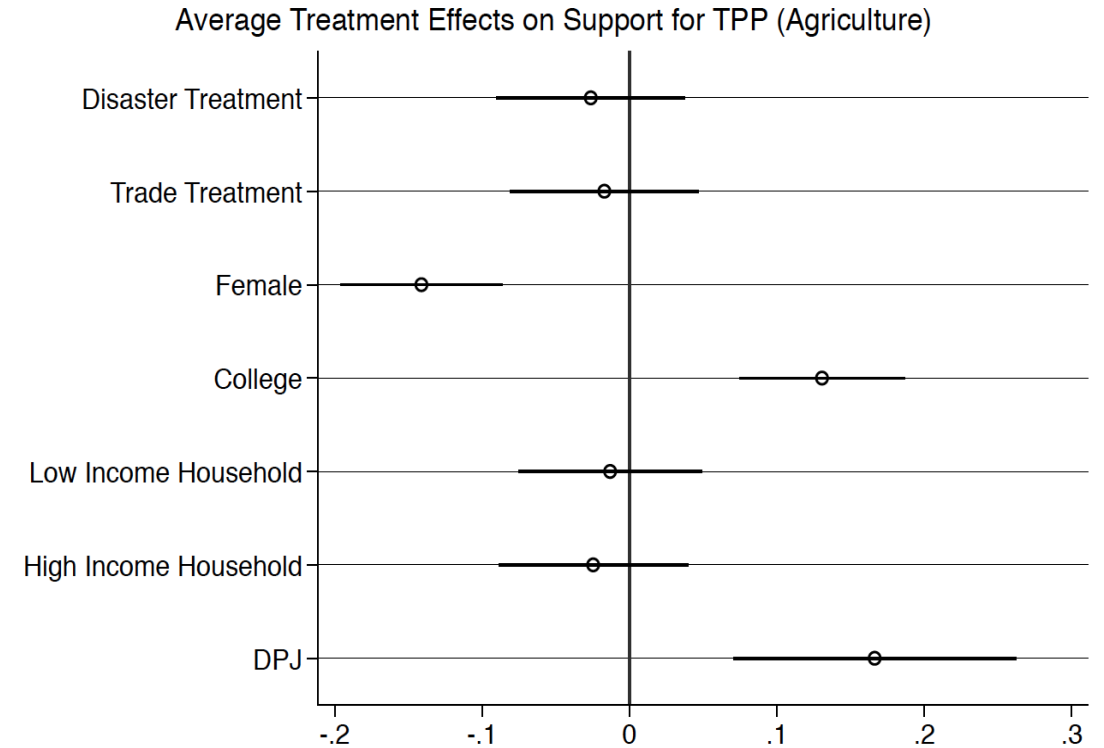


Figure 8b: Average Treatment Effects on Support for TPP (Agriculture)



Take away: Info about trade-shocks *do not* translate into support for protectionism

# THE RESULTS OF THE US EXPERIMENT: SUPPORT FOR COMPENSATION

Figure 4a: Average Treatment Effects on Support for Compensation (Manufacturing)

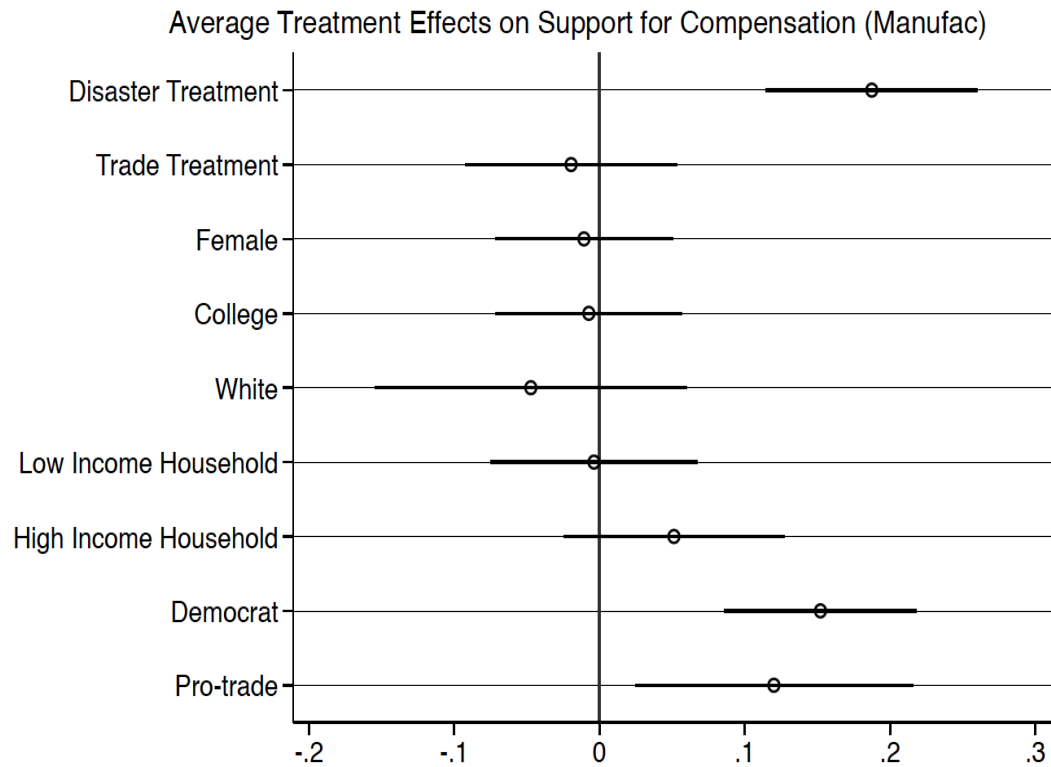
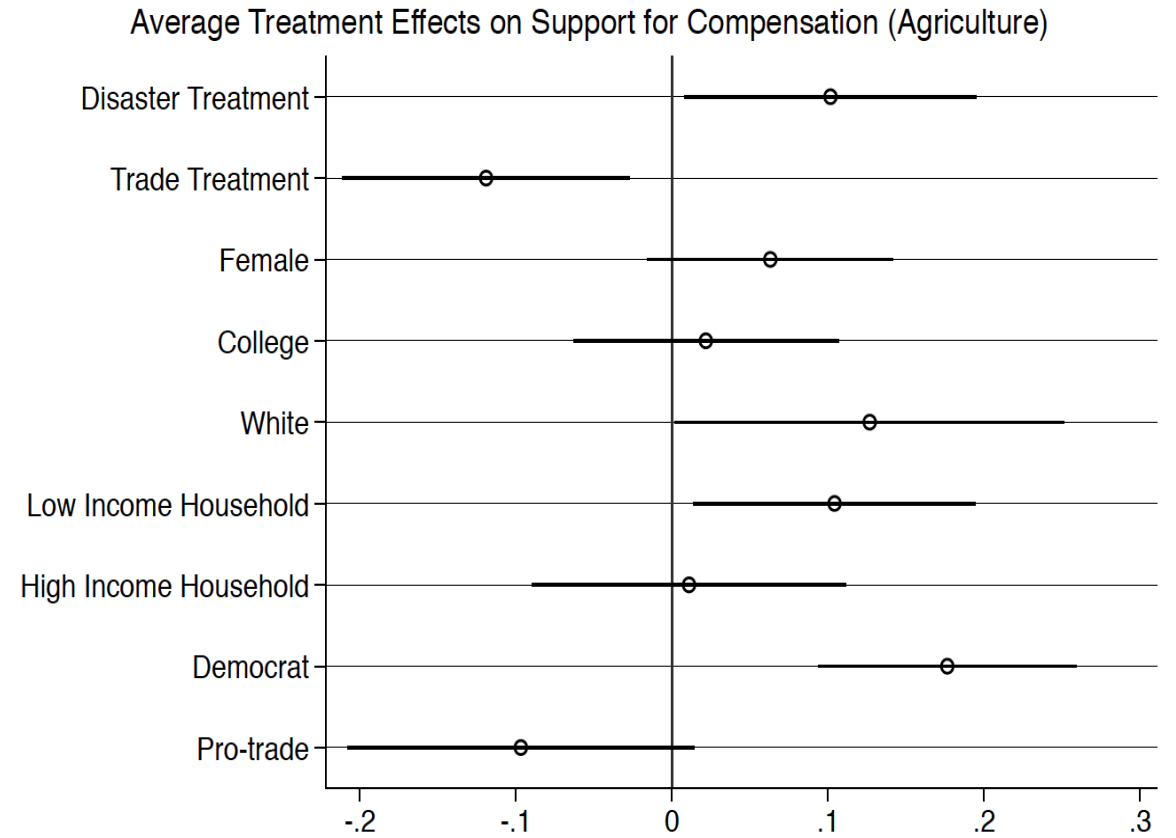


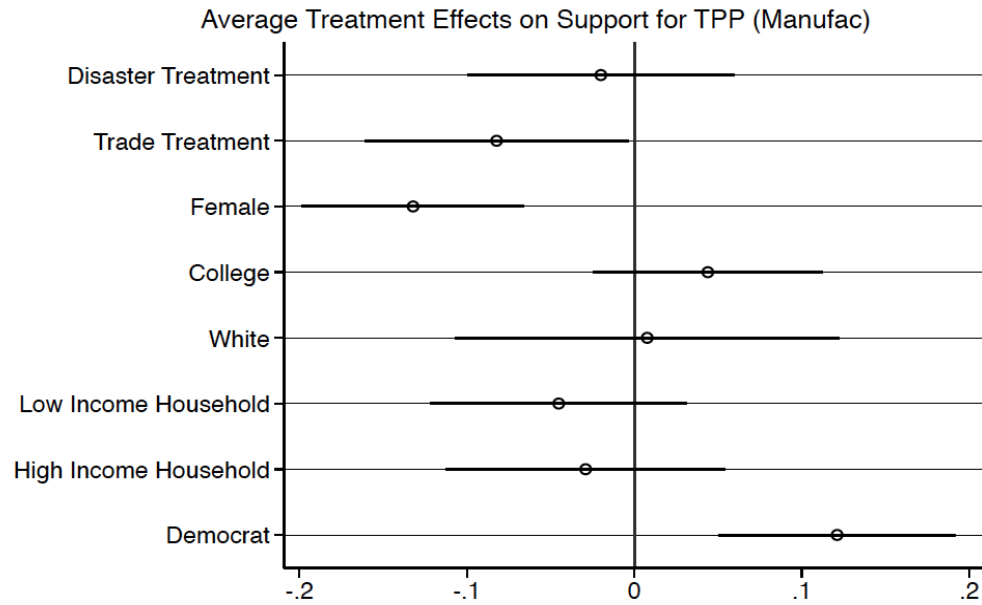
Figure 4b: Average Treatment Effects on Support for Compensation (Agriculture)



Take away: Info about trade-shocks *do not* translate into support for compensation

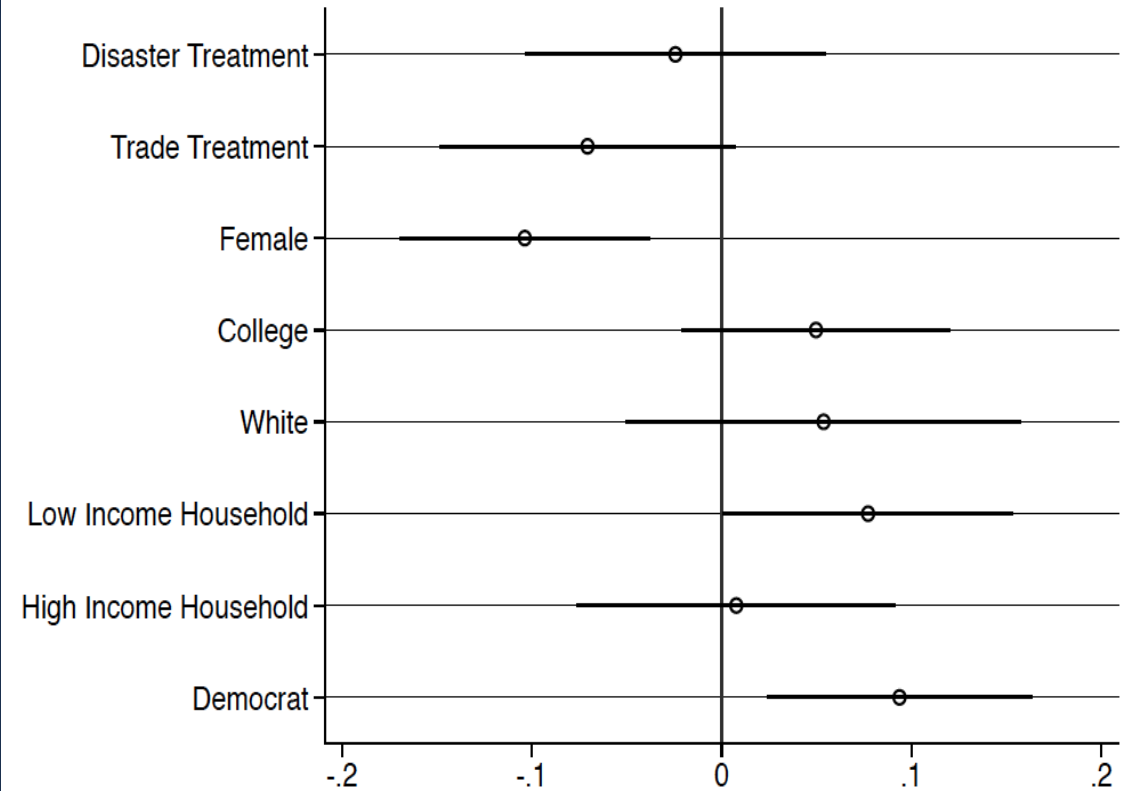
# THE RESULTS OF THE US EXPERIMENT: SUPPORT FOR TPP

**Figure 5a: Average Treatment Effects on Support for TPP (Manufacturing)**



Note: Coefficient estimates summarized above are based on the data that codes “don’t know” and “I am not sure” answer to the TPP question as zero. The results hold the same when treat these answers as missing, with smaller, but still statistically significant, coefficients due to one third of respondents dropped out of the sample.

**Average Treatment Effects on Support for TPP (Agriculture)**



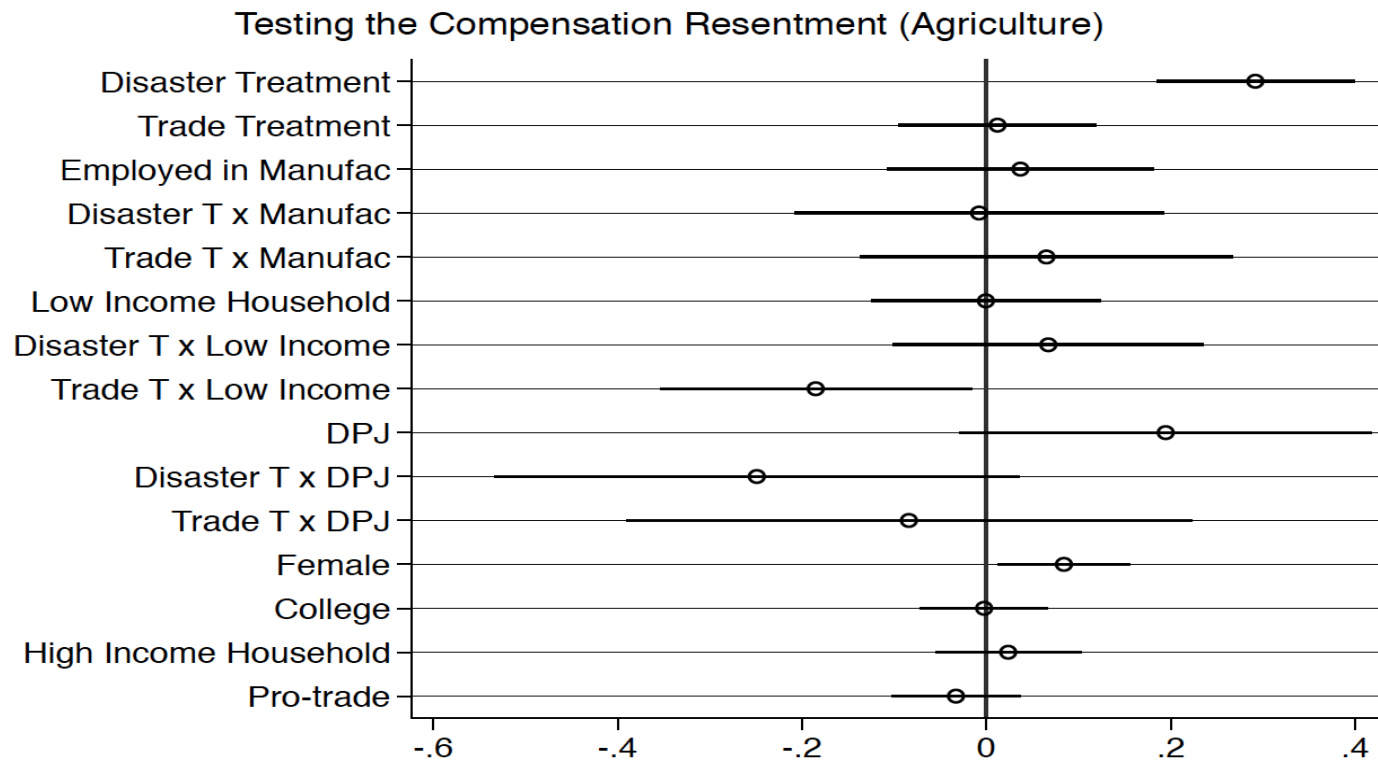
Take away: Info about trade-shocks translate into support for protectionism (-5 to -10 points reduction in support for TPP)

# TESTING THE COMPENSATION RESENTMENT ARGUMENT

- Most Resentful: who shoulders the cost of subsidizing farmers
  - **Low-income** consumers via the higher Engel Index
  - **Manufacturing workers:** “Sacrifice” better access to export market for agricultural protection in trade negotiations.
  - **DPI supporters?** The prediction unclear due to the convergence toward farm votes
- Interact each of the treatment indicators (disaster vs. trade) with **Low Income, Manufacturing** and **DPI** with demographic controls & estimate their effects on **Support for Compensating Farmers**

# BACKLASH FROM THE LOW-INCOME CONSUMERS IN JAPAN

**Figure 9: Testing the Compensation Resentment (Agriculture)**

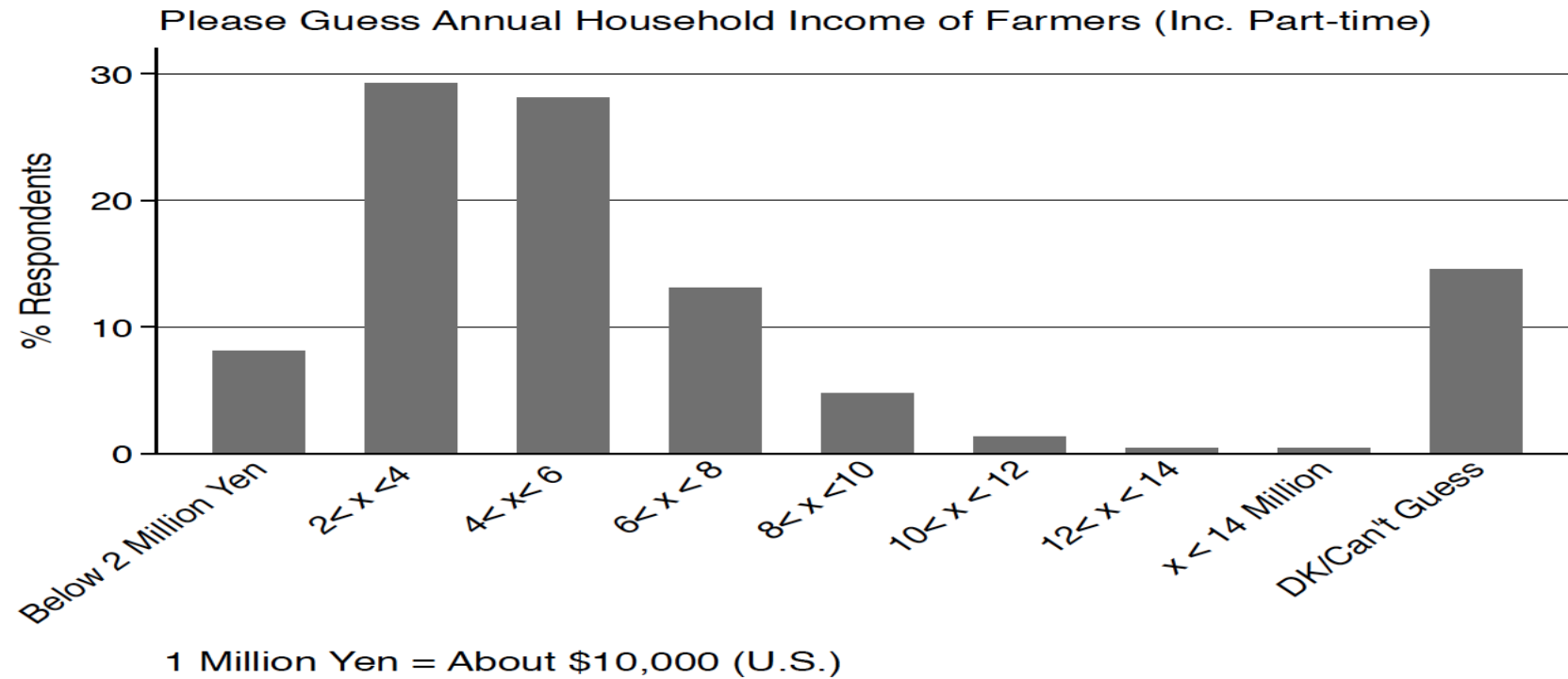


Trade treatment makes low-income respondents (household income < 4 million Yen (around \$40,000) 18 points less supportive of compensating farmers. Middle income bracket is excluded as a base category



# TESTING THE COMPENSATION RESENTMENT FURTHER: INFO/MISINFO ABOUT FARMERS' INCOME

**Figure 10: Respondents' Guestimates of Average Annual Income of Farm Household**

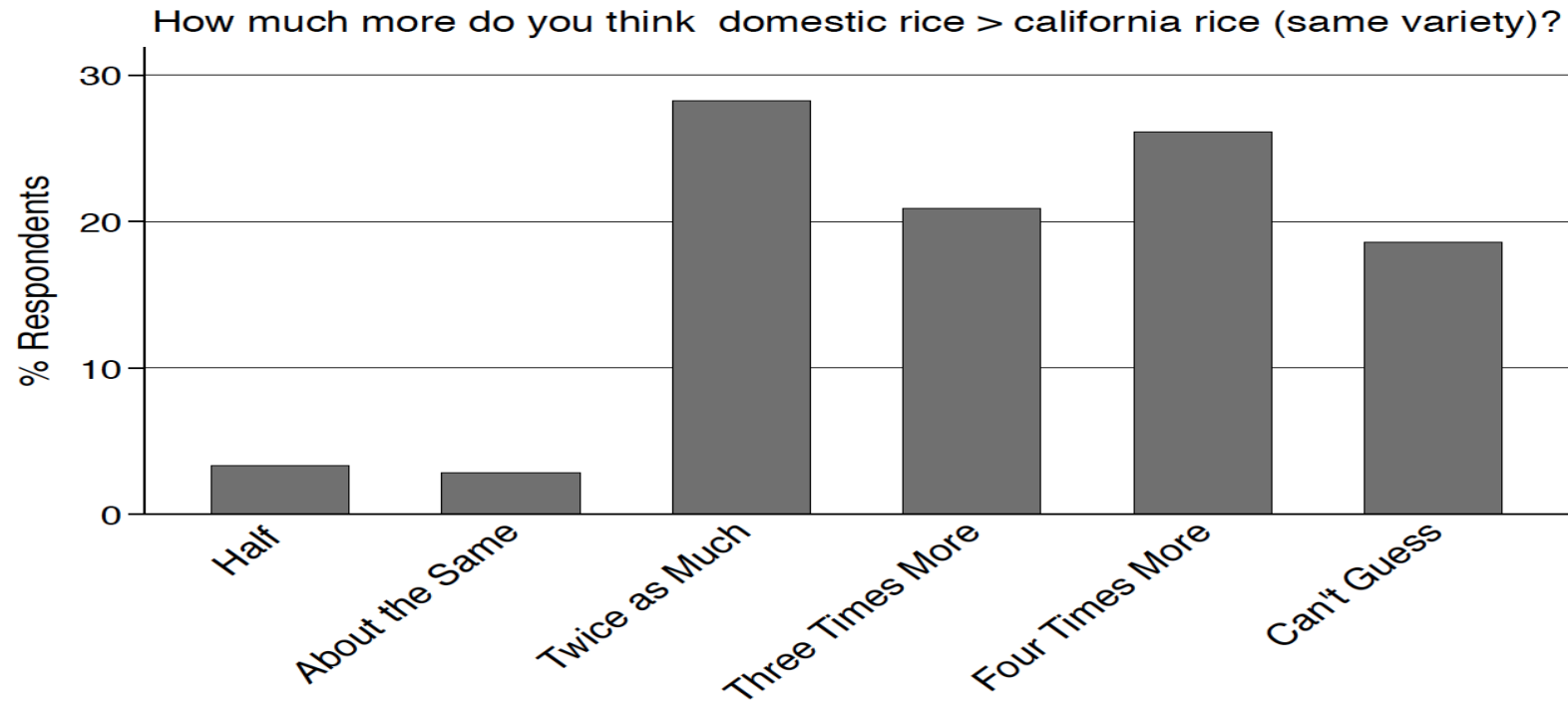


Source: Author's survey conducted with Micromill company in January of 2012.

**Correct Answer: Little under 6 million Yen/Year.**

# TESTING THE COMPENSATION RESENTMENT FURTHER: RELATIVE PRICE OF DOMESTIC RICE > CALIFORNIA RICE

**Figure 11: Respondents' Guestimates of the Price of Domestic Rice Relative to California Rice**

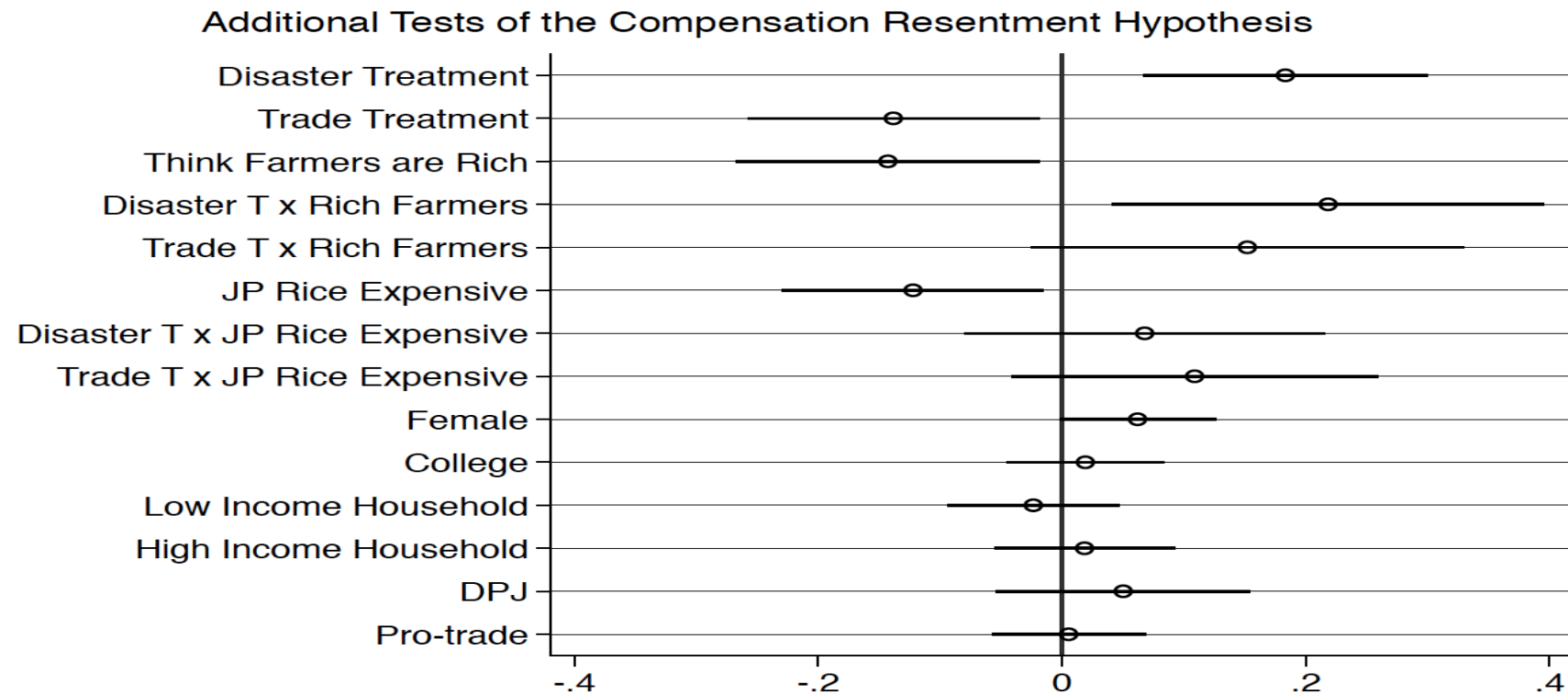


Source: Author's survey conducted with Micromill company in January of 2012.

**Correct Answer: Domestic rice 2.6 times more expensive than California rice (Koshihikari variety)**

# TESTING THE COMPENSATION RESENTMENT FURTHER

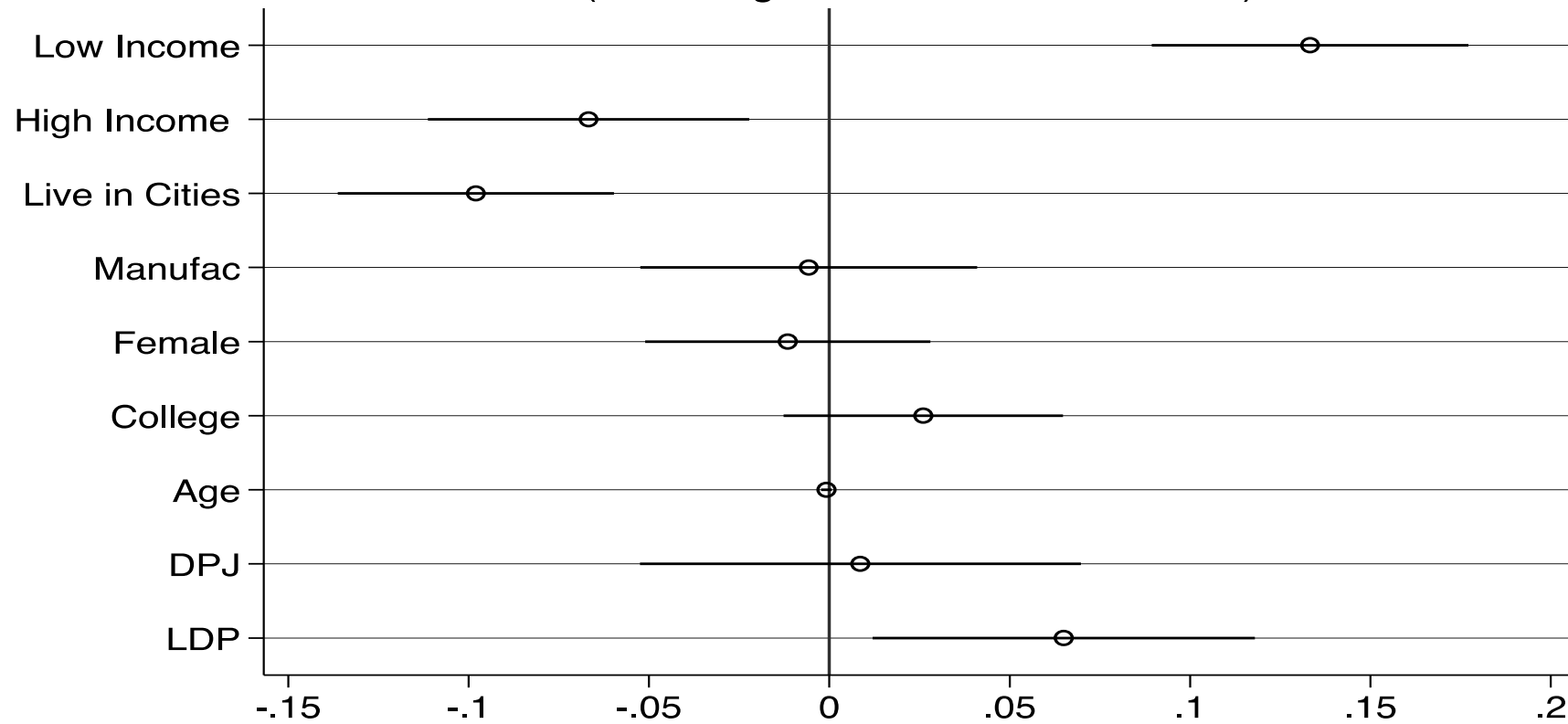
**Figure 12: Additional Tests of the Compensation Resentment Hypothesis**



Source: Author's survey conducted with Micromill company in January of 2012.

# LOW-INCOME VOTERS ARE MORE LIKELY TO BELIEVE THAT FARMERS ARE POOR

Determinants of Belief that Farmers are Poor  
(Guessing under 4 million Yen/Year)



# OBSERVATIONAL EVIDENCE ON THE TIMING OF BACKLASH: PUBLIC OPINION SURVEYS ON FOOD SELF-SUFFICIENCY

Great Recession/2009  
HofR Election



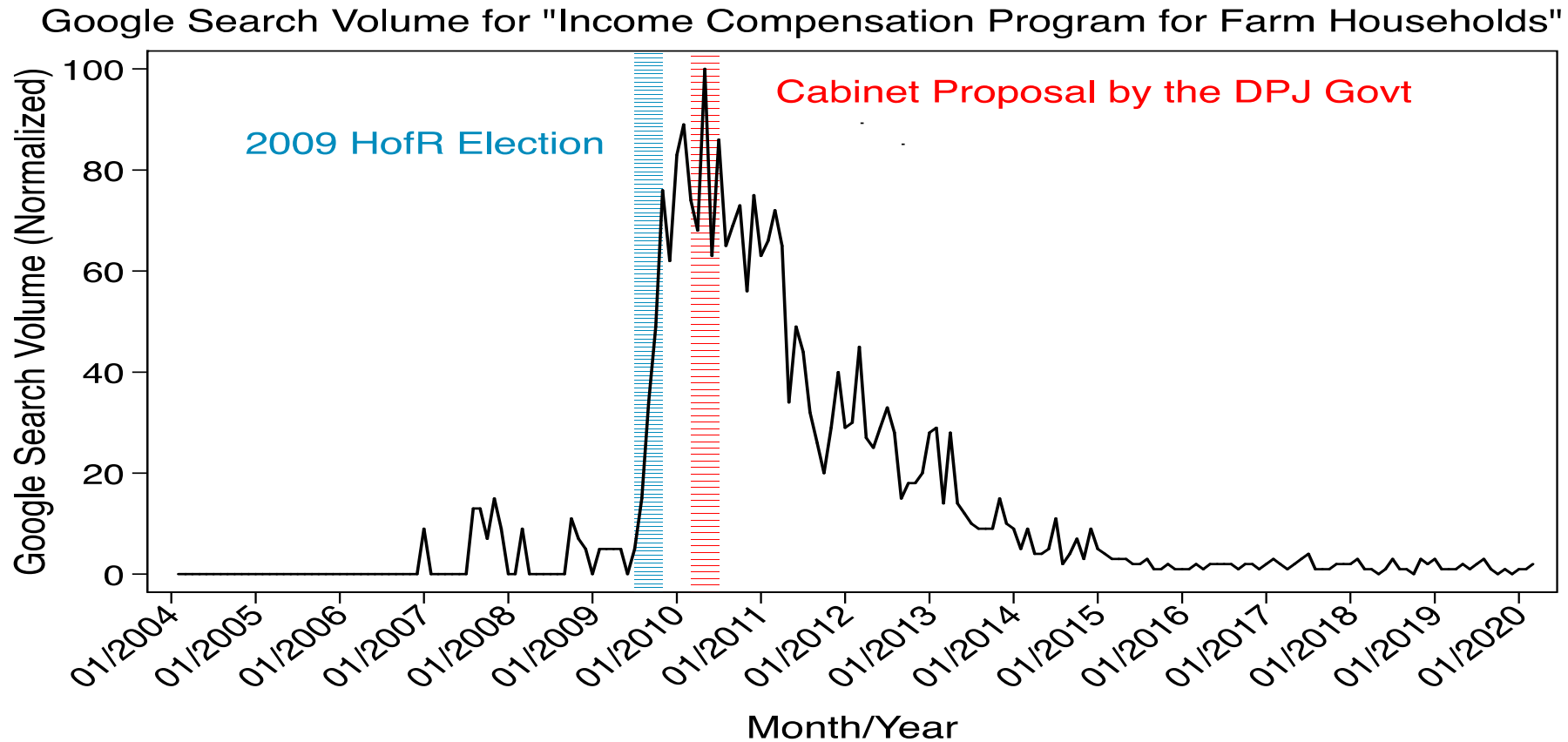
"What do you think about 40% food self-sufficiency ratio?"	2000	2006	2008	2010	2014
"40% is low"	32.9	47.0	57.6	51.6	44.2
"40% is about right"	19.8	11.8	8.3	10.0	15.9
"Don't Know"	16.6	12.6	5.2	8.2	8.9
Cabinet	LDP	LDP	LDP	DPJ	LDP

Source: Cabinet Office, *Special Public Opinion Surveys on Food Supply*, Various Years.

Method: Door-to-door surveys.

Sample size: Between 1,727 respondents to 3,570 respondents for each wave (response rates between 59% to 64%, depending on waves)

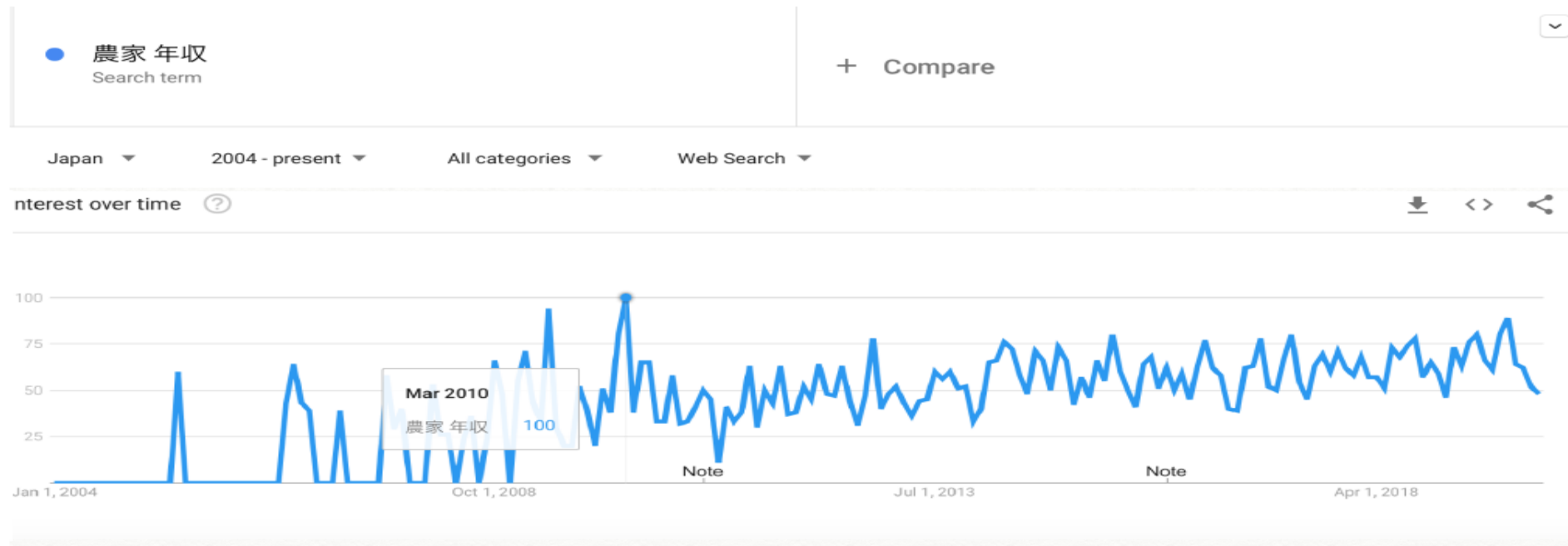
# OBSERVATIONAL EVIDENCE ON THE TIMING OF BACKLASH: GOOGLE SEARCH VOLUME



Source: Japanese key word is 戸別所得補償, An alternative key word, 所得補償 gives roughly similar trend.

# OBSERVATIONAL EVIDENCE ON THE TIMING OF BACKLASH: GOOGLING “FARMERS & INCOME”

**Figure 3: Google Trend Data on “Farmers AND income” Peaking during the 2009 election & 2010 in Japan**



Note: Y-axis is month/year from July 1, 2004 to January 5, 2020. Blue solid line is normalized google search volume for the terms “farmers AND income”

## DISCUSSION

- Do trade-induced income shocks (as opposed to non-policy origin income shocks) mobilize support for compensation vs. support for protectionism?
  - Japan: Yes for compensating manufacturing industries, No for protectionism – successful policy substitution
  - US: Yes for protectionism, No for compensation – failure of policy substitution
  - Both US and Japan: Backlash against compensating farmers income losses from a trade agreement – - 5 to - 10 points reduction in support.
- Two sources of backlash: Tax burden (high food prices) for low-income consumers (in Japan) and partisan polarization (in the US)
- Compensation resentment led to free-trading, agriculture-liberalizing Japan



# Supplementary Slides

# Voter backlash was partly driven by elites: the LDP, Ministry of Finance, Conservative media and Public Intellectuals



Above: Cover of April 2010 Issue of the third best-selling monthly political opinion magazine, "Wedge."

Special Issue on "Soaked in Subsidies, Sudden Death to Agriculture (補助金どっぷり 農業ほっくり)"

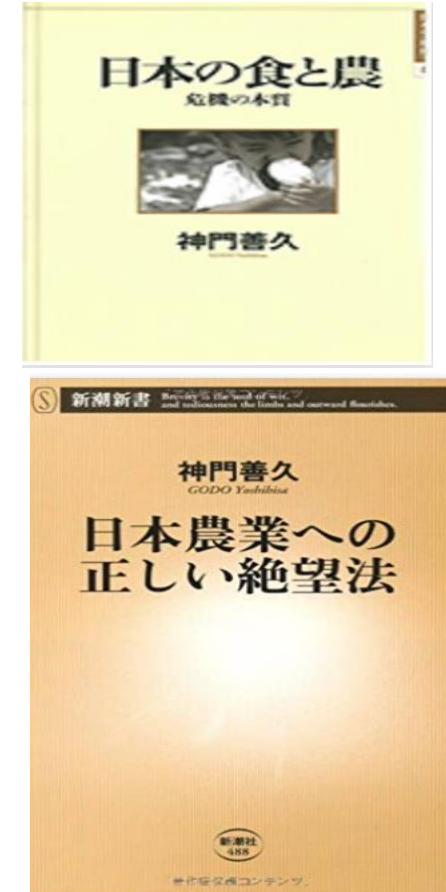


"No need to use tax payers' money to help farmers out. They are rich."

Kazuhito Yamashita, a former MAFF bureaucrat, Senior Research Fellow at RIETI/Cannon Institute of Global Studies



Yoshihisa Goudo, Agricultural Economist at Meiji Gakuin University



Paperback: "How to correctly analyze hopelessness of Japanese agriculture" (2012)

# Voter backlash was partly driven by elites: Food Action Nippon Program run by the Min. of Agriculture, Forestry & Fisheries

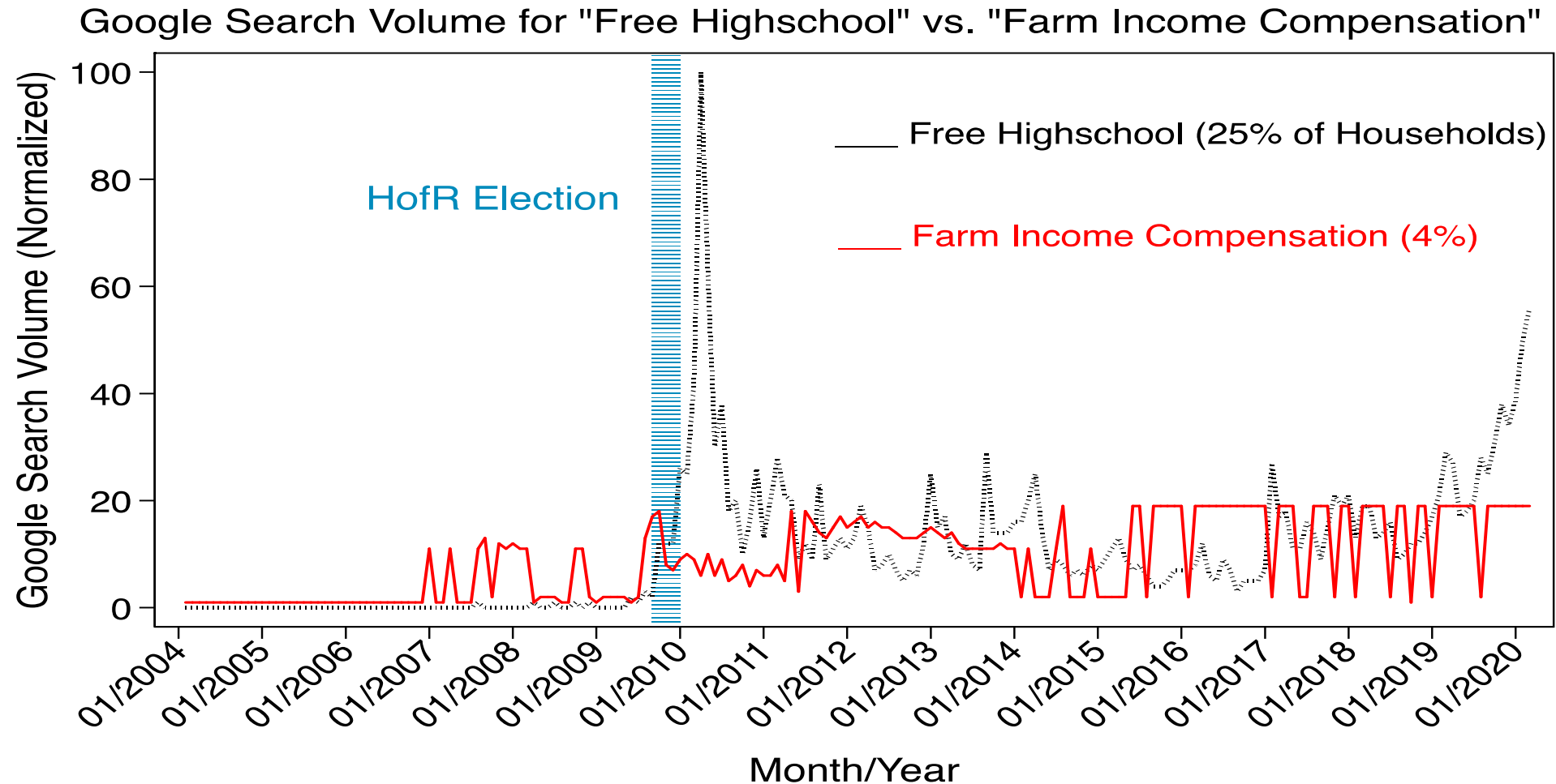
Until 2013, FAN's website logo called for increasing Japan's "food self-sufficiency ratio"



By 2020, FAN's website no longer referred to "food self-sufficiency"



# High Salience: Comparison with Google Search Volume for “Free Highschool Education” Program Proposed during the 2009 Election



Source: Japanese key words are 高校無償化 and 戸別所得補償

# Symbolic Underdogs: Agriculture in Japan and Manufacturing Industries in the United States

## Japan: Farmers

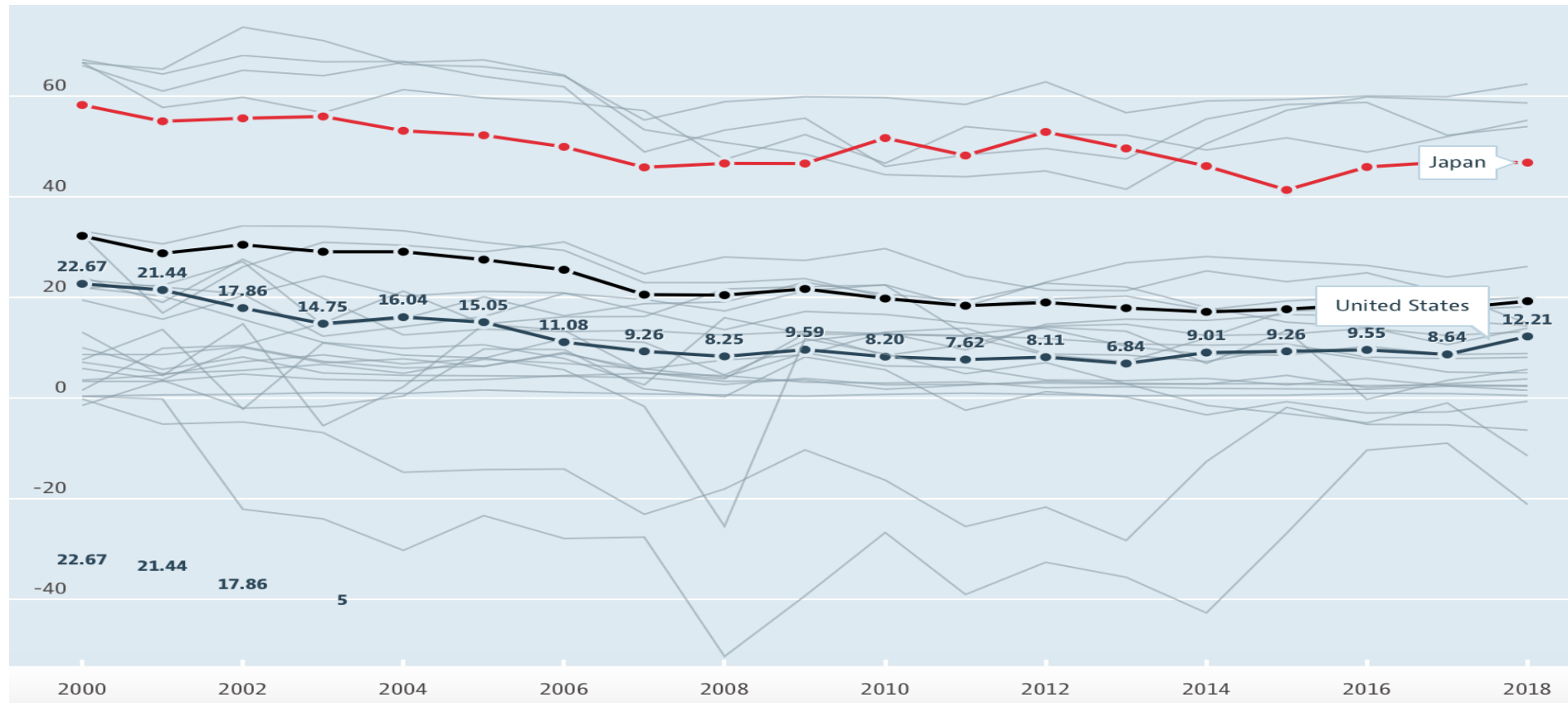


## U.S: Manufacturing industries



In 1981, amid tensions over Japanese exports and the loss of American jobs, members of the United Autoworkers Local 588 of Ford Motor Co. in Chicago Heights, Ill., used sledgehammers and crowbars to destroy a Toyota Corolla. . PHOTO: ASSOCIATED PRESS

Yet, farmers are heavily subsidized both in Japan & US  
(Producer Support Estimates = % of farmer income from government subsidization/protection)



Source: Data and data visualization available at OECD Website: *Producer and Consumer Support Estimates Database*:

<https://www.oecd.org/unitedstates/producerandconsumersupportestimatesdatabase.htm>

# The Key difference: Who Shoulders the Costs of Subsidizing Farmers?

- Japan: Consumers shoulder 91% of total costs of subsidizing farmers with high food prices, tax payers shoulder 9%
- US: Consumers shoulder 37%, tax payers shoulder 63% of total costs; yet, consumers are also subsidized by the government via Supplementary Nutrition Assistance Program (“SNAP” – formerly known as Food Stamp Program).

Source: OECD, *Producer and Consumer Support Estimates Database*, Various Years.