

# EXPER

*Econ* Conference

**August 17, 2016**

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ณ ห้องประชุมภัทรรวมใจ ธนาคารแห่งประเทศไทย



# ผลกระทบของความเหลื่อมล้ำทางรายได้ที่มีต่อการ ตัดสินใจอุดหนุนสินค้าสาธารณะและบริจาค

ธานี ชัยวัฒน์, ธนะพงษ์ โพธิปิติ, ชนลักษณ์ ชัยศรีลักษณ์

ศูนย์เศรษฐศาสตร์พฤติกรรมและการทดลอง

จุฬาลงกรณ์มหาวิทยาลัย

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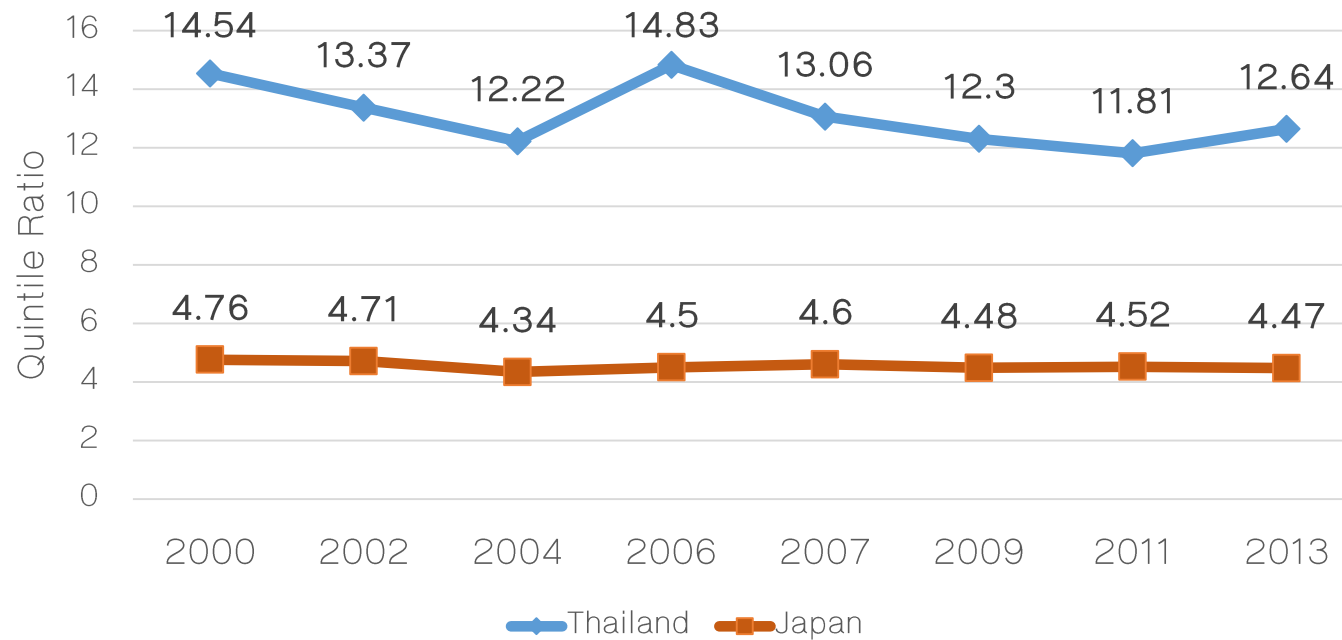


# PRESENTATION OUTLINE

- Introduction
- Research Question
- Experimental Design
- Results
- Conclusive remarks

# INTRODUCTION

- Thailand has faced income inequality problem and in higher level compared to Japan.



Source: NSO (Thailand), Statistics Bureau (Japan)

Proportion of the average income of richest group to the poorest group in Thailand is about 12 - 15 times, which are higher than Japan.

# STYLISTED FACT

- In Thailand, people are willing to donate but avoid to pay tax.
  - Thailand is one of the top 5 countries in donating money to charity. (World Giving Index, 2015)
  - But...many people have incentives to avoid paying tax. (Observed by add penalties of tax evasion in 2015)
- Japanese people make less donation but have high responsibility to pay tax.
  - Only 24% of people in japan donate money to charity. (World Giving Index, 2015)
  - Japan's tax evasion score is 11.03, that's less than Thailand (53.34). (Tsakumis et al., 2007)

# TYPES OF SHARING

- We can separate “sharing” into 2 types:
  - Public good contribution (similar to tax) is a contribution in the general form and everyone can benefit equally from it.
  - Specific donation is the donation to specific target and benefits only targeted individual.

# WHY NEED EXPERIMENT?

- Experimental economics is suitable to fulfill understanding the donation behavioral research.
  - 1. Experimental economics can eliminate lots of co-existing factors in the real world to one factor in the lab.
    - ex. many factors affect the sharing decision
  - 2. Experimental economics collects data by observing action instead of asking question.
    - ex. people cannot answer accurately their decision

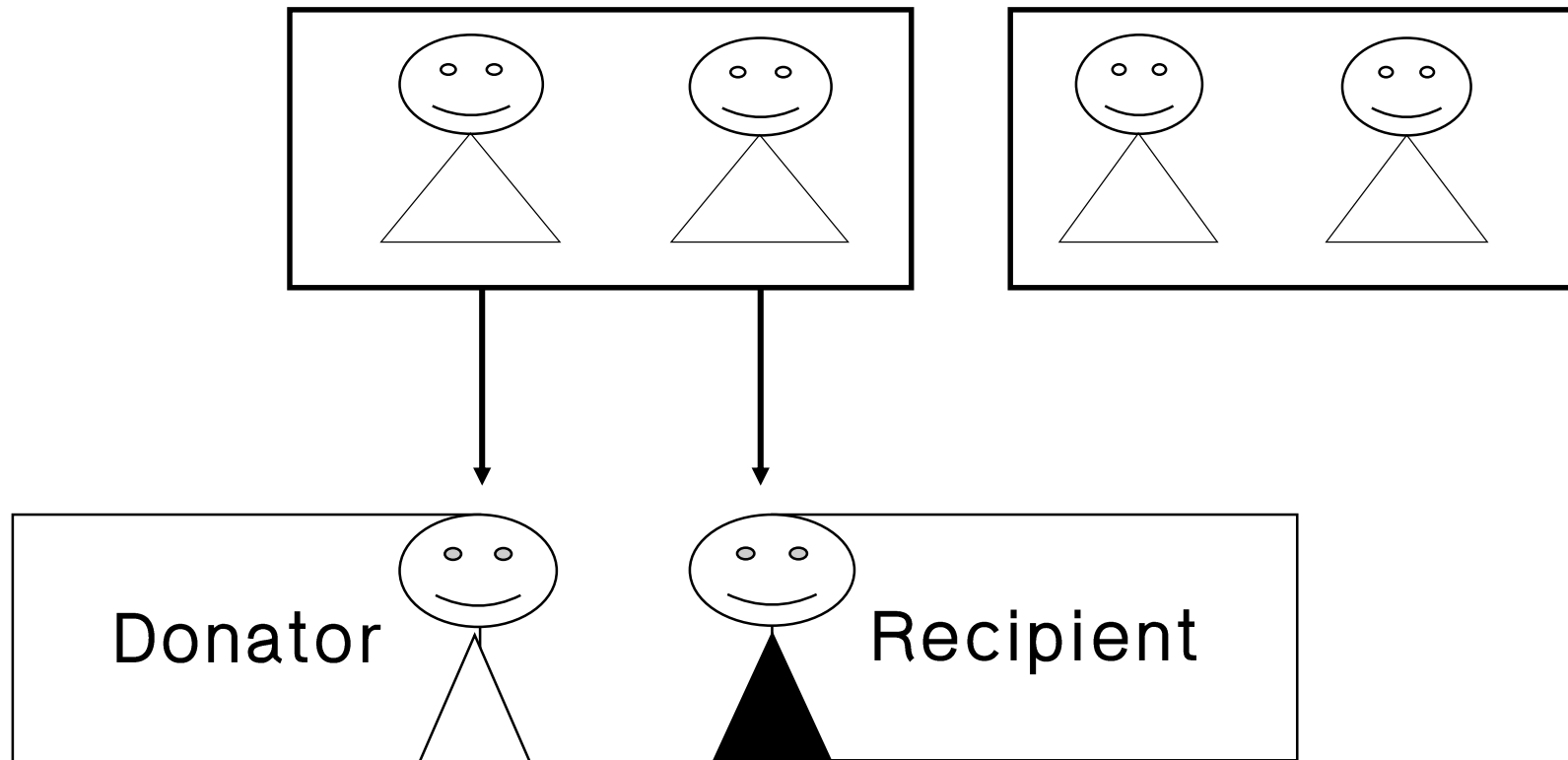
# RESEARCH QUESTION

- Which types of sharing do people decide to allocate under different income inequality scheme?
- Income inequality is decomposed into
  - income of donor
  - income of the poor
  - Income gap
- also, this study tests Inequality amplifier (public good multiplier)



# EXPERIMENTAL DESIGN

- This research applied the dictator game and public good game.
- All subjects are randomly divided into group of 4 subjects, including 2 donators and 2 recipients in every period.
- Donators know the income of recipients and public good multiplier, then they decide to share.



# DECISION AND PAYOFFS

- As usual in dictator game, donator and recipient receive the different initial endowment in each period.
- Donator can decide to share his endowment to 3 choices
  - Contributing to public good
  - Donating to the poorer
  - Keeping money for themselves.
- The donator's payoff = Remained money + Public good benefit
- The recipient's payoff = Endowment + Money received + Public good benefit

# EXPERIMENTAL SETTING

- Dictator game was played by Z-tree in lab experiment.
- The data is collected from 72 undergrad students at Chulalongkorn University and 38 students at Osaka University.
- An experiment lasted about one hour.
- Participant have only 30 sec in each period.
- Decision in previous period is independent to current period.
- The participants do not allow to talk with others.
- Each participant will be randomly matched in group and pair.

# PAYMENT

- Payment is very important to build incentives.
- Pay at the end the game.
- Average pay is at 150 baht per person in Thailand (72 people) and 1,500 Yen in Japan (38 people).

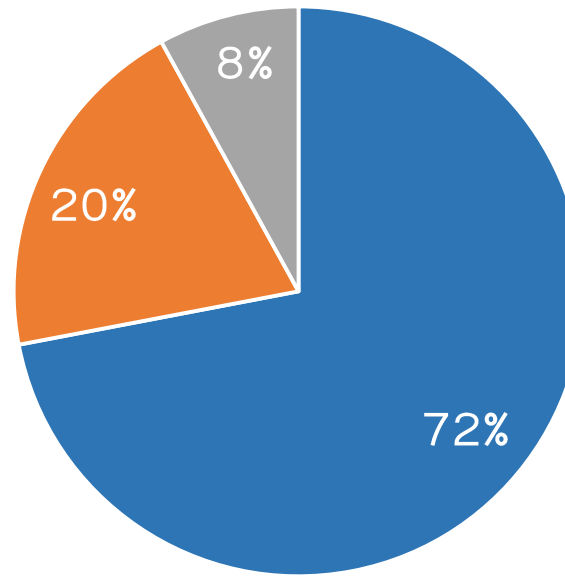
# LISTS OF TREATMENT

Treatment	Donator's Endowment	Recipient's Endowment	Public Good Multiplier
Baseline	200	0	0.5
Income of Donator	250 300 350	0	0.5
Income of Recipient	200	100 150 200	0.5
Income Gap	250 300 350	100 225 350	0.5
Public Good Multiplier	200	0	0.4 0.3 0.6

5 rounds per intervention

# RESULTS: Baseline - Thailand

- In the baseline treatment, donator decides to donate 28% of their endowment.

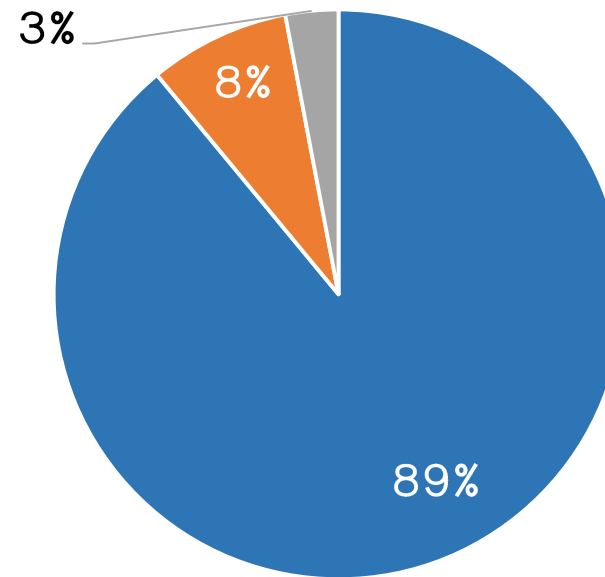


200

- ratio of average keeping money with themselves
- ratio of average contribute to public good to donator's endowment
- ratio of average donate to poorer recipient to donator's endowment

# RESULTS: Baseline - Japan

- Donator in japan decide to donate only 11% of their income.



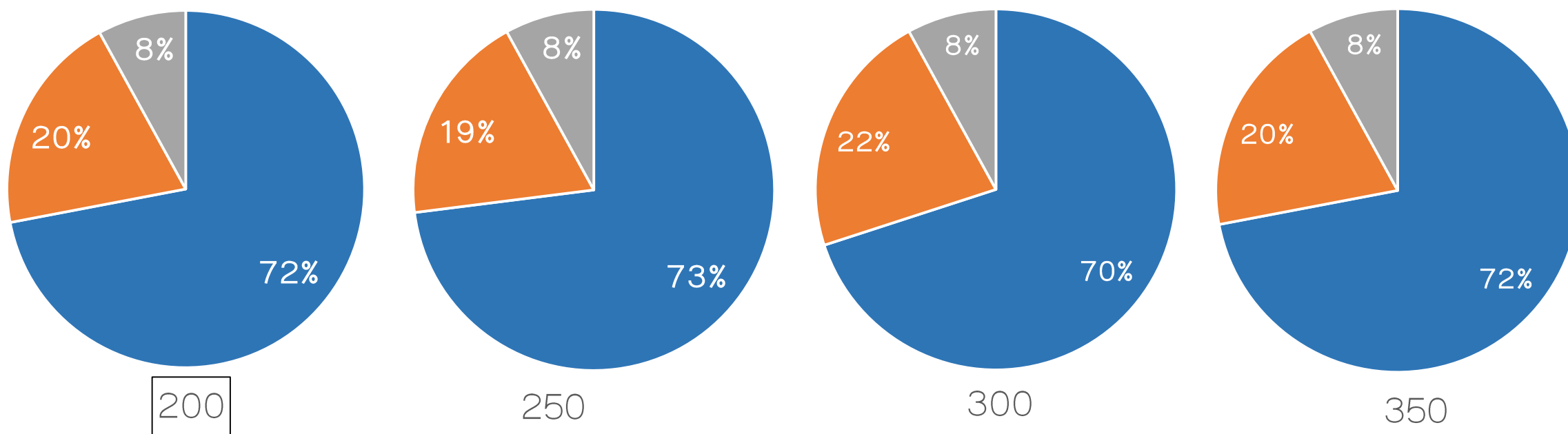
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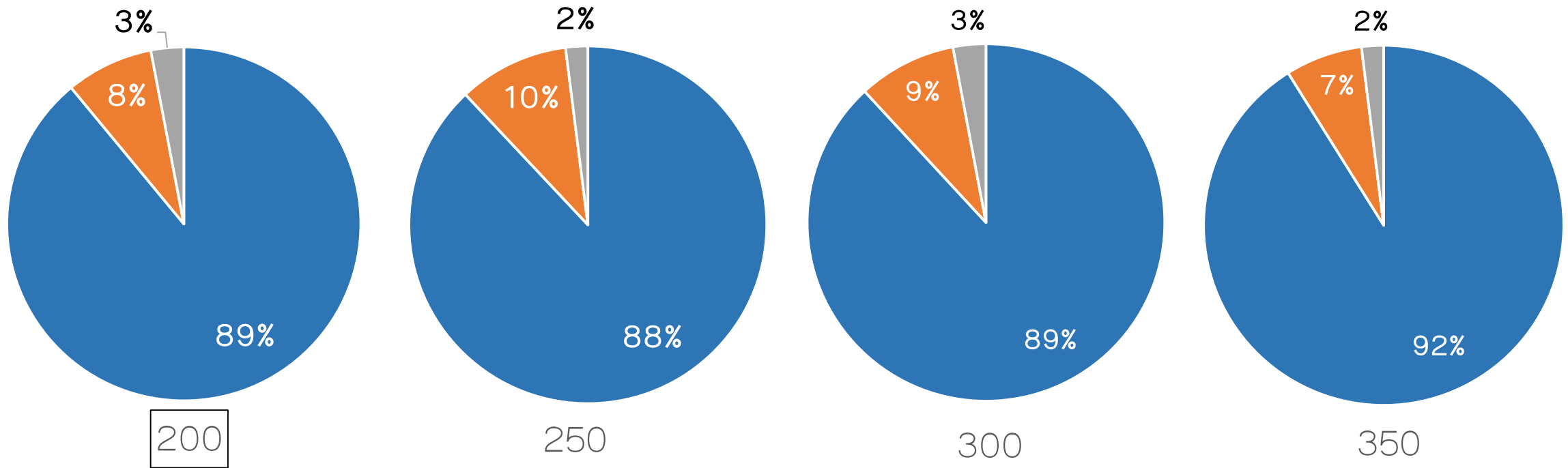
# RESULTS: Changing in income of donator - Thailand

- The increase in donator's endowment leads to people give more value in both types of sharing. But they donate at the constant proportion.



- ratio of average keeping money with themselves
- ratio of average contribute to public good to donator's endowment
- ratio of average donate to poorer recipient to donator's endowment

# RESULTS: Changing in income of donator - Japan

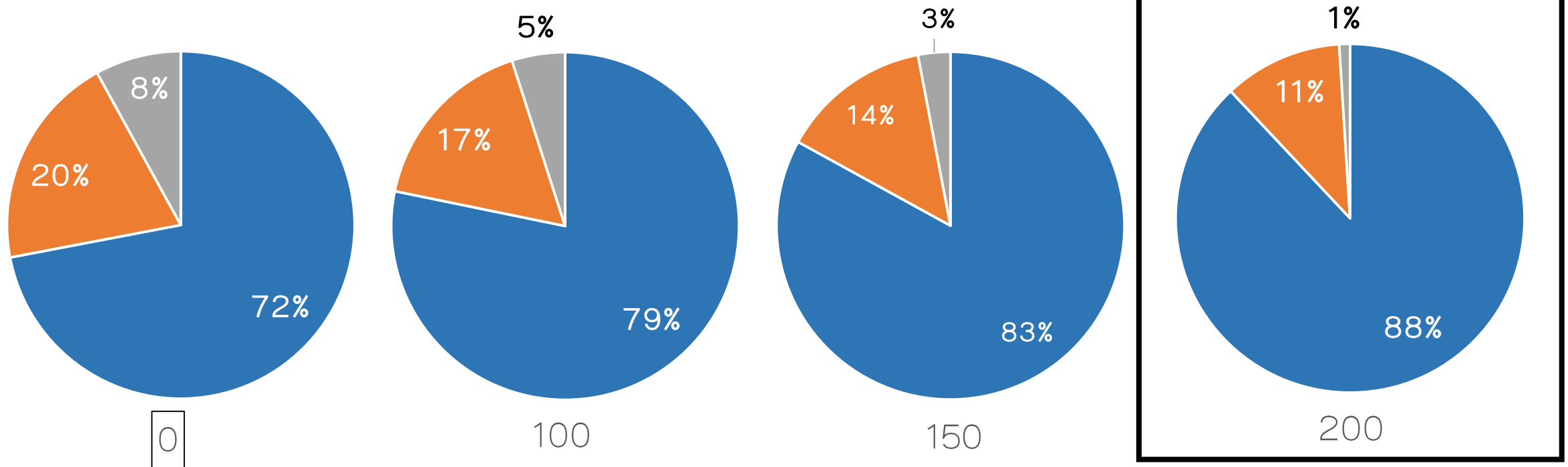


- ratio of average keeping money with themselves
- ratio of average contribute to public good to donator's endowment
- ratio of average donate to poorer recipient to donator's endowment

- Donators share the same proportion to their income.

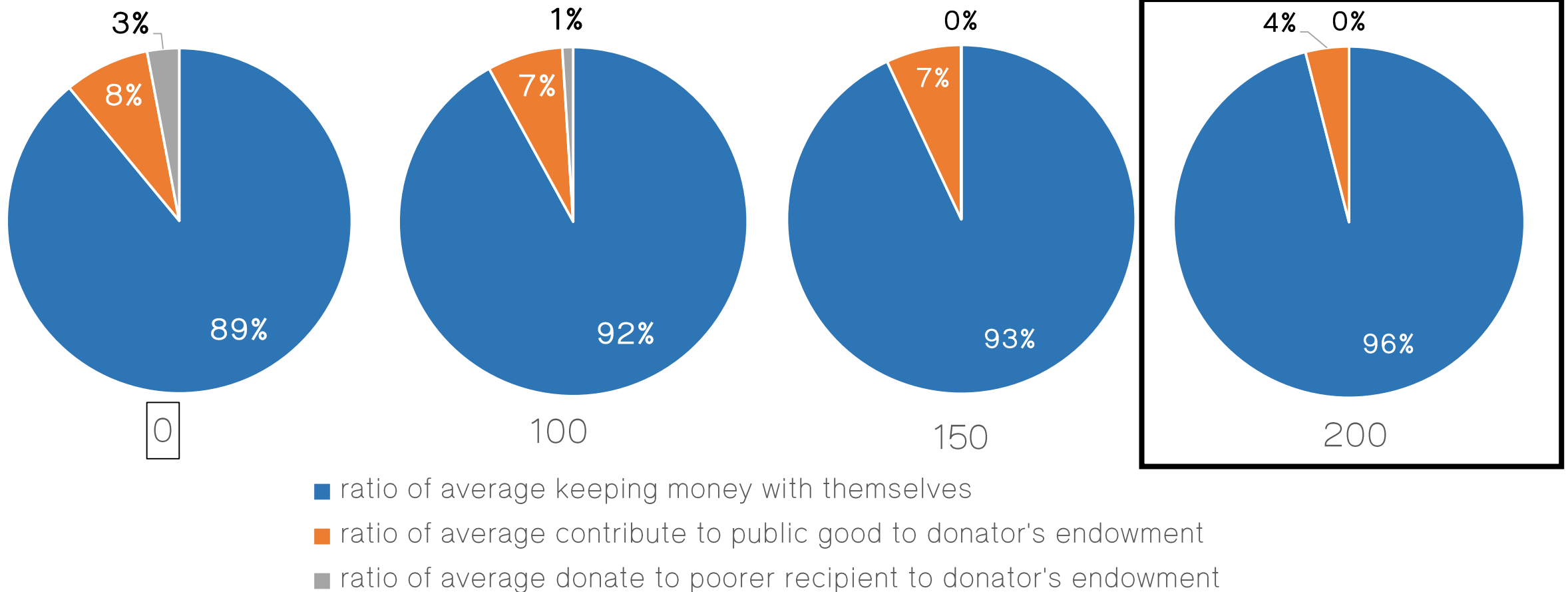
# RESULTS: Changing in income of recipient - Thailand

- The income of poorer recipient affects donator's allocation, especially in donating to poorer recipient, Both values and proportions.



- ratio of average keeping money with themselves
- ratio of average contribute to public good to donator's endowment
- ratio of average donate to poorer recipient to donator's endowment

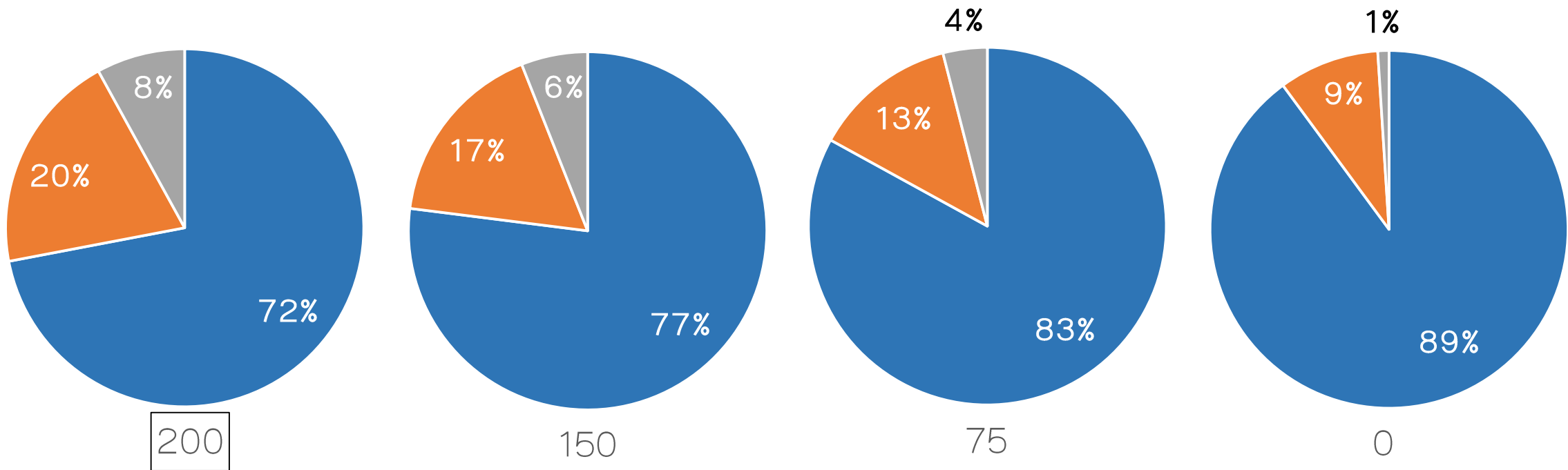
## RESULTS: Changing in income of recipient - Japan



- Subjects tend to be altruistic more than inequality aversion guys.
- Thai people tend to have higher degree of altruistic than Japanese people.

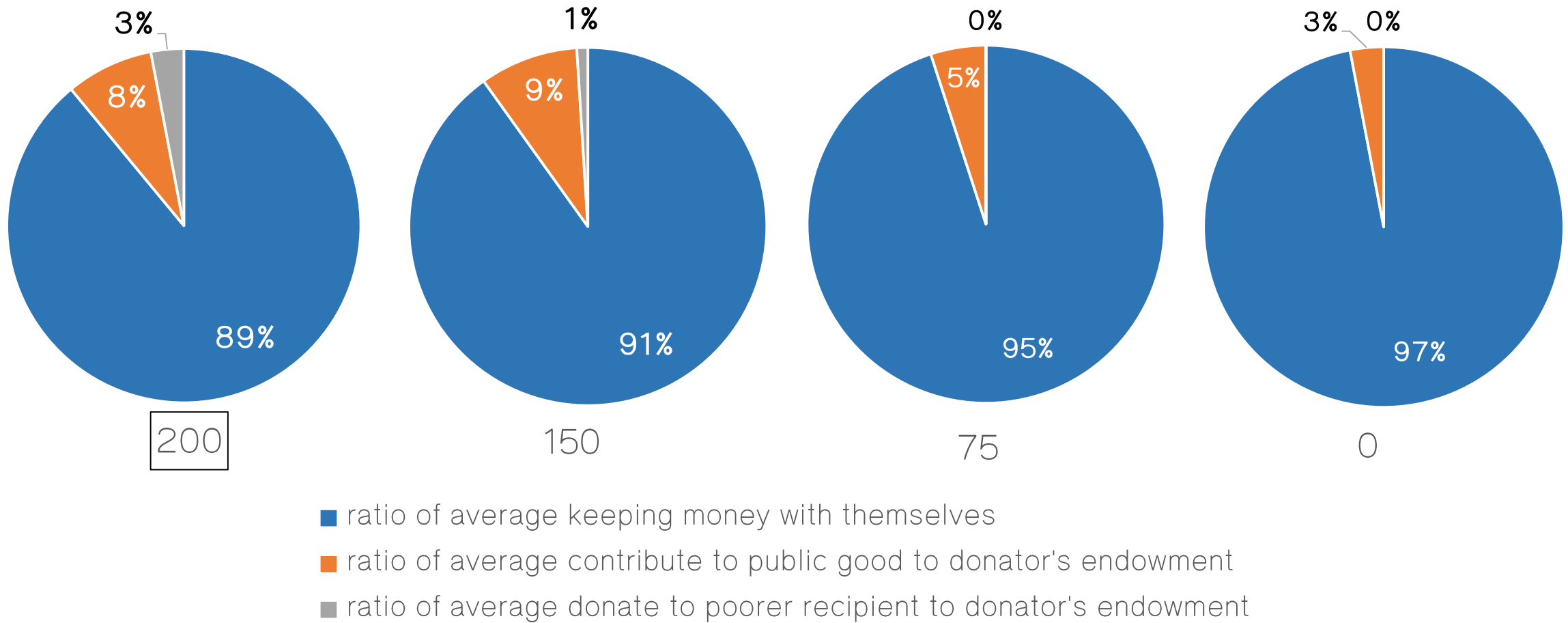
# RESULTS: Changing in income gap - Thailand

- The less income gap between donator's and recipient's endowment does influence donating to poorer recipient significantly.



- ratio of average keeping money with themselves
- ratio of average contribute to public good to donator's endowment
- ratio of average donate to poorer recipient to donator's endowment

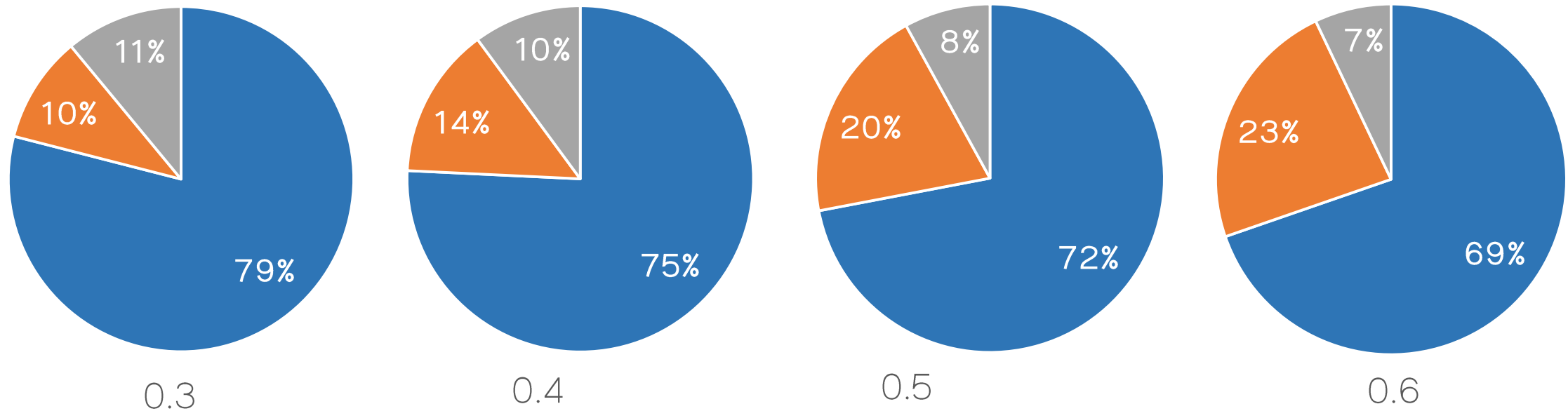
# RESULTS: Changing in income gap - Japan



- If income gap is low, donators are more sensitive to decrease donation to the poor than contribution.

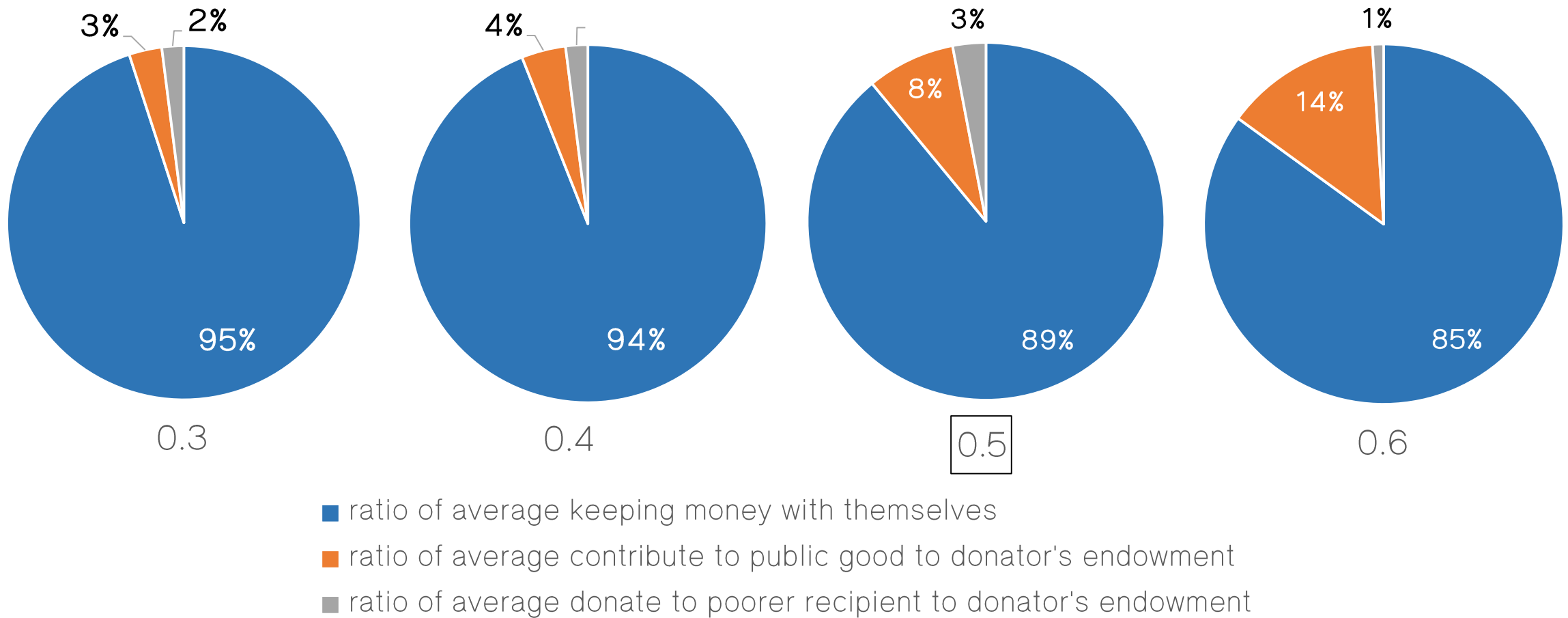
# RESULTS: Changing in public good multiplier-Thailand

- Public good multiplier motivates the demand of contributing to public good significantly.



- ratio of average keeping money with themselves
- ratio of average contribute to public good to donator's endowment
- ratio of average donate to poorer recipient to donator's endowment

# RESULTS: Changing in public good multiplier-Japan



- If the government has less effective, donators are more sensitive to decrease contribution to public good than donation.



# RESULTS: Random Effect Model



Dependent Variable	Public Good		Recipient	
	Thailand	Japan	Thailand	Japan
Donator's endowment	0.2148**	0.0787**	0.0899**	0.0196**
Recipient's endowment	-0.1542**	-0.061**	-0.0799**	-0.0189**
public good Multiplier	57.2212**	37.243**	-14.2800**	-3.9821**
R-square	0.2806	0.1108	0.2993	0.0911
Wald Test	2051.41	388.12	2150.43	296.46
p-value	0.0000	0.0000	0.0000	0.0000
#Groups	72	38	72	38
#Observations	4680	2470	4680	2470

- Control Variables:
  - Gender,
  - Religions (Buddhist, Christian, Other religions)
  - Occupation of head family (Gov't officer, Employee, Freelance, Business owner, no occupation)
  - Individual's Income Level
  - Family's income level
  - Amount of donation

# Conclusion 1

- Even if income of donator is equal to recipient, donator still allocate to both types of sharing.
  - Subjects tend to be altruistic more than inequality aversion guys.  
(probably, ให้แล้วได้บุญ)
  - Thai people tend to have higher degree of monetary altruistic than Japanese people.

## Conclusion 2

- If income gap is high, people tend to increase donation to the poor more than contribution to public good.
- If government is less effective, people also tend to decrease contribution to public good more than donation to the poor.
  - Thailand has high income gap and low government effectiveness. That's why people in Thailand donate a lot but pay tax less.
  - Japan has low income gap and high government effectiveness. So, Japanese donate less and pay tax.

# Policy Implication

- Increasing government effectiveness will increase the willingness to pay tax, so government should be improved to gain more tax.
- Since Thai people are likely to have higher degree of altruistic than Japanese people, so the donation administrative system is important, such as donation system for public goods. (including managing បុរី palace)