Charitable Giving, Tax Reform, and Government Efficiency*

Hiroki Kato [a,*], Tsuyoshi Goto[b], Yong-Rok Kim[c]

[a] *Graduate School of Economics, Osaka University, Japan*
[b] *Graduate School of Economics, Chiba University, Japan*
[c] *Graduate School of Economics, Kobe University, Japan*

Abstract

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Keywords: Charitable giving, Giving price, Tax reform, Governement efficiency, South Korea

JEL: D91, I10, I18

1. Introduction

In many countries, governments set a tax relief for charitable giving. This is because, if subsidizing charitable giving induces a large increase in donations, it is desirable for public good provision. To evaluate the effect of tax relief, many papers investigate the elasticity of charitable donations with respect to their tax price (Almunia et al., n.d.; Auten et al., 2002; Bakija and Heim, 2011; Fack and Landais, 2010; Randolph, n.d.). Focusing on the tax deduction or tax credit on the charity, they show that the price elasticity of giving is about -1 or more in terms of absolute value, which means that the tax relief for the charitable giving is good in the sense that 1% tax relief derives more than 1% donation.

However, if the government can provide public good more efficiently than the direct donation, the donation may not be preferable because the public good provision via donation would be costly then. Moreover, when the government is much more efficient than charities, people may not donate so much even if they have a warm-glow preference. Saez (2004) suggests that the change of the relative price between public good provision by donation and government will change the behavior of people and the price elasticity of donation. However, the evaluation about the efficiency of the government is usually subjective and different for people. If someone regard the government as efficient, the perceived relative price of giving would be high for them. Thus, the giving behavior would be affected by the subjective perception towards the government.

Considering these points, this paper investigates (1) the price elasticity of giving and (2) whether the different perception towards the government cause the different giving behavior using South Korean panel data. Our first main concern is the price elasticity of charity. South Korea (Korea hereafter) experienced

*This research is base on

*Corresponding Author.
Email address: vge008kh@stundent.econ.osaka-u.ac.jp (Hiroki Kato)

the tax reform in 2014, from when the tax relief on charitable giving was conducted by tax credit, though tax deduction had been used before 2014. Thus, we exploit this tax reform as an exogenous policy change to derive the price elasticity of giving. Since the extant research focus on the tax reform within the scheme of tax deduction or tax credit, this paper firstly deals with the tax reform from tax deduction system to tax credit system. Our result classifies that the price elasticity of giving in Korea is -1.07 ~ -1.26, which is within the range of the extant research.

Our second concern is the relationship between the giving behavior and the perception towards the government. As we explained, people feeling administrative inefficiency would consider the direct donation is more efficient and would have more willingness to donate. Using the Korean field data, we investigate this and show that the amount of donation is not different between those who regard government as inefficient and the others, though the giving price elasticity of the former is more elastic than the latter. This means that those who think of government as inefficient have more willingness to donate for 1% reduction of giving price.

This paper contributes two strands of charitable giving literature: the elasticity of charitable donations with respect to their tax price and the perception of government's inefficiency. The examples of papers in the first strand are (Almunia et al., n.d.; Auten et al., 2002; Bakija and Heim, 2011; Fack and Landais, 2010; Randolph, n.d.). They typically use the tax return data, the main part of which is the data about wealthy people. Since our data is based on survey, which represents the income distribution of population, we believe that we can estimate the giving price elasticity of population more precisely. Using the data with low-income households may be difficult to estimate the giving price elasticity in terms of intensive margin since they are expected to donate less than high-income households. To address this issue, we estimate not only the elasticity of intensive margin, as most of papers do, but also the elasticity of extensive margin following Almunia et al. (n.d.). Moreover, we use the data of Korea, a non-Western country, which the extant research did not examine[1].

In the second strand, there are some experimental studies and papers considering the tax evasion. Using an experiment, Li et al. (2011) compare people's willingness to give money for private charities and government agencies both of whose missions are the same. They show that people tend to donate for private charities more than government agency though they do not directly investigate the relationship between people's perception toward the government and giving behavior. Sheremeta and Uler (2020) show that people increase the voluntary public good provision when they face the wasteful government spending in the experimental setting. Although the government in their setting does not provide public good, they suggest that the willingness for donation may increase if people perceive the inefficiency of government. In

[1]This point may be important since @Kim2021 reports that the giving behavior is strongly affected by the cultural matter such as the religious belief.

the tax evasion literature, several paper suggests the perceived inefficiency of government reduce tax morale (Anderson, n.d.; Frey and Torgler, 2007; Hammar et al., 2009). We contribute on this literature by showing the relation between the perception of government efficiency and the giving behavior.

This paper consist of XXX sections. Section 2 and 3 respectively explain the institutional background and data. Section 4 deals with the analysis of giving price elasticity and section 5 shows the analysis of perceptions toward the government. We discuss the result in section 6 and section 7 concludes.

2. Institutional background

In this section, we describe the income tax relief for charitable giving in Korea and used dataset.

2.1. Tax relief for charitable giving and tax reform in 2014 (Need modification by Kim san)

The tax incentives for charitable giving in Korea stared in 2000. The income tax deduction was initially used as a tax incentive and the limit of charitable giving deduction was set as the 5% of income. The government gradually expanded the limit and it finally became 30% in 2012. However, the government reformed tax system again in 2014, where the tax credit was introduced instead of tax deduction. Since then, 15% of the total amount of charitable giving has been allowed as a tax credit.

The tax deduction and tax credit may have different effects on giving behavior. Consider that a household has a choice between private consumptions (x_i) and charitable giving (g_i). Let y_i be pre-tax total income. Then, the budget constraint is

$$x_i + g_i = y_i - T_i(y_i, g_i).$$

T_i is tax amount which depends on the pre-tax income and charitable giving. On one hand, tax deduction reduces taxable income by giving, that is,

$$T_i = \tau(y_i - g_i) \cdot (y_i - g_i),$$

where $\tau(\cdot)$ is the marginal income tax rate which is determined by $y_i - g_i$. The budget constraint will be

$$x_i + [1 - \tau(y_i - g_i)]g_i = [1 - \tau(y_i - g_i)]y_i.$$

Thus, the giving price compared to the price of private consumption is $p_i^d \equiv 1 - \tau(y_i - g_i)$ in tax deduction system. On the other hand, tax credit reduces tax amount directly, that is,

$$T_i = \tau(y_i) \cdot y_i - mg_i,$$

where $m \in [0, 1]$ is the tax credit rate. Under the tax credit system, the budget constraint is

$$x_i + (1-m)g_i = [1-\tau(y_i)]y_i.$$

Thus, the giving price of tax credit system will be $p_i^c = 1 - m$.

In the South Korea, the tax policy about charitable giving drastically changed in 2014.

- tax deduction (before 2014): $\text{Price}_i = 1 - \tau(y_i - g_i)$
  - the giving price is endogenous because people can manipulate $\tau(y_i - g_i)$ using the charitable giving g_i. Since this problem is caused by *last* donations, we use the giving price applying to the *first* donations (**first price**). The first price is calculate by $\tau(y_i)$ where y_i is the annual taxable income reported in the NaSTaB.
- tax credit (after 2014): $\text{Price}_i = 1 - m$
  - In the South Korea, the tax credit rate determines exogeneity, $m = 0.15$.

As well as other countries, the income tax in Korea can be calculated as following two steps:

$$\text{[Taxable income]} = \text{[Total income]} - \text{[Amount of tax deduction]} \quad (1)$$

$$\text{[Finalized tax amount]} = (\text{[Taxable income]} \text{Œ} \text{ [Tax rate]}) - \text{[Amount of tax credit]} \quad (2)$$

If donors gives one unit of donation additionally, the marginal income tax relief for the donation (giving price hereafter) will equivalent to one minus income tax rate when the tax deduction is applied while the giving price under the tax credit will be one minus the allowance rate of tax credit, which is 30% in Korea. Since the progressive tax rate is applied and the marginal tax rate was set as Table **??**, the high income household .

We can utilize the effect of the 2014 tax reform in the South Korea. Before 2014, tax deduction was adopted to subsidize charitable donation behavior. After 2014, tax credit have been adopted. The main difference is that tax credits reduce taxes directly, while tax deductions indirectly lower the tax burden by decreasing the marginal tax rate, which increases with gross income. In addition, the dataset contains the information about perception towards the government

3. Data

3.1. National Survey of Tax and Benefit (NaSTaB)

- The Korea Institute of Taxation and Finance implements the financial panel survey to study the tax burden of households and the benefits that households receive from goverment.
- The subjects of this survey are general household and household members living in 15 cities and provinces nationwide.

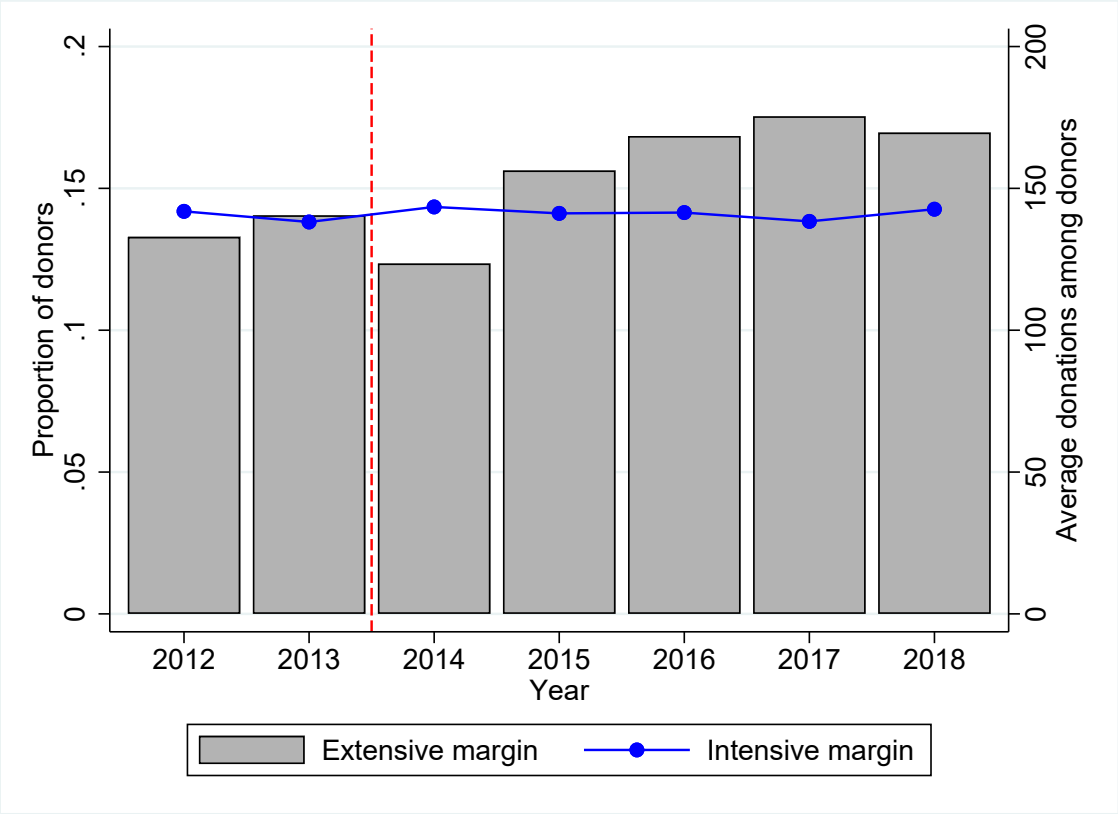


Figure 1: Proportion of Donors and Average Donations among Donors

- This survey is based on a face-to-face interview. If it is difficult for investigators to meet subjects, another family member answers on behalf of him.
- Survey items: Annual taxable income (last year), charitable donations (last year), trust for politicians (5-Likert scale), and other covariates (age, education, gender etc.).
- Survey period: 2008 ~ 2019
  - We use survey data after 2013 to focus on tax policy change in 2014.

3.2. Time Series of Chariable Giving

3.3. Summary Statistics of Covariates

3.4. Summary Statistics of Covariates (Cont'd)

3.5. What is Giving Price?

Consider allocation between private consumptions (x_i) and charitable giving (g_i). Let y_i be pre-tax total income. Then, the budget constraint is

$$x_i + g_i = y_i - T_i(y_i, g_i),$$

Table 1: Summary Statistics of Covariates

	2012	2013	2014	2015
Female	0.51	0.51	0.52	0.52
Age	38.39	39.10	39.67	40.51
Annual taxable income	1699.86	1764.04	1838.76	1872.54
University graduate	0.28	0.28	0.29	0.30
High school graduate	0.30	0.30	0.31	0.31
#.Respondents	14138	13984	13787	13524
#.Households	4756	4807	4819	4832

Table 2: Summary Statistics of Covariates (Continued)

	2016	2017	2018
Female	0.52	0.52	0.52
Age	41.07	41.89	42.55
Annual taxable income	1906.91	1951.55	2039.47
University graduate	0.31	0.33	0.34
High school graduate	0.31	0.31	0.31
#.Respondents	13238	12963	12795
#.Households	4790	4770	4765

where T_i is tax amount depending on the pre-tax income and charitable giving.

3.6. Determination of Tax Amount

Tax deduction reduces taxable income by giving, that is,

$$T_i = \tau(y_i - g_i) \cdot (y_i - g_i),$$

where $\tau(\cdot)$ is the marginal income tax rate which is determined by $y_i - g_i$.

Tax credit reduces tax amount directly, that is,

$$T_i = \tau(y_i) \cdot y_i - mg_i,$$

where $m \in [0, 1]$ is the tax credit rate.

3.7. Derive Giving Price

Under the tax deduction system, the budget constraint is

$$x_i + [1 - \tau(y_i - g_i)]g_i = [1 - \tau(y_i - g_i)]y_i.$$

Thus, the giving price of tax deduction system is $p_i^d = 1 - \tau(y_i - g_i)$.

Under the tax credit system, the budget constraint is

$$x_i + (1 - m)g_i = [1 - \tau(y_i)]y_i.$$

Thus, the giving price of tax credit system is $p_i^c = 1 - m$.

3.8. Construct Giving Price

In the South Korea, the tax policy about charitable giving drastically changed in 2014.

- tax deduction (before 2014): $\text{Price}_i = 1 - \tau(y_i - g_i)$
  - the giving price is endogenous because people can manipulate $\tau(y_i - g_i)$ using the charitable giving g_i. Since this problem is caused by *last* donations, we use the giving price applying to the *first* donations (**first price**). The first price is calculate by $\tau(y_i)$ where y_i is the annual taxable income reported in the NaSTaB.
- tax credit (after 2014): $\text{Price}_i = 1 - m$
  - In the South Korea, the tax credit rate determines exogeneity, $m = 0.15$.

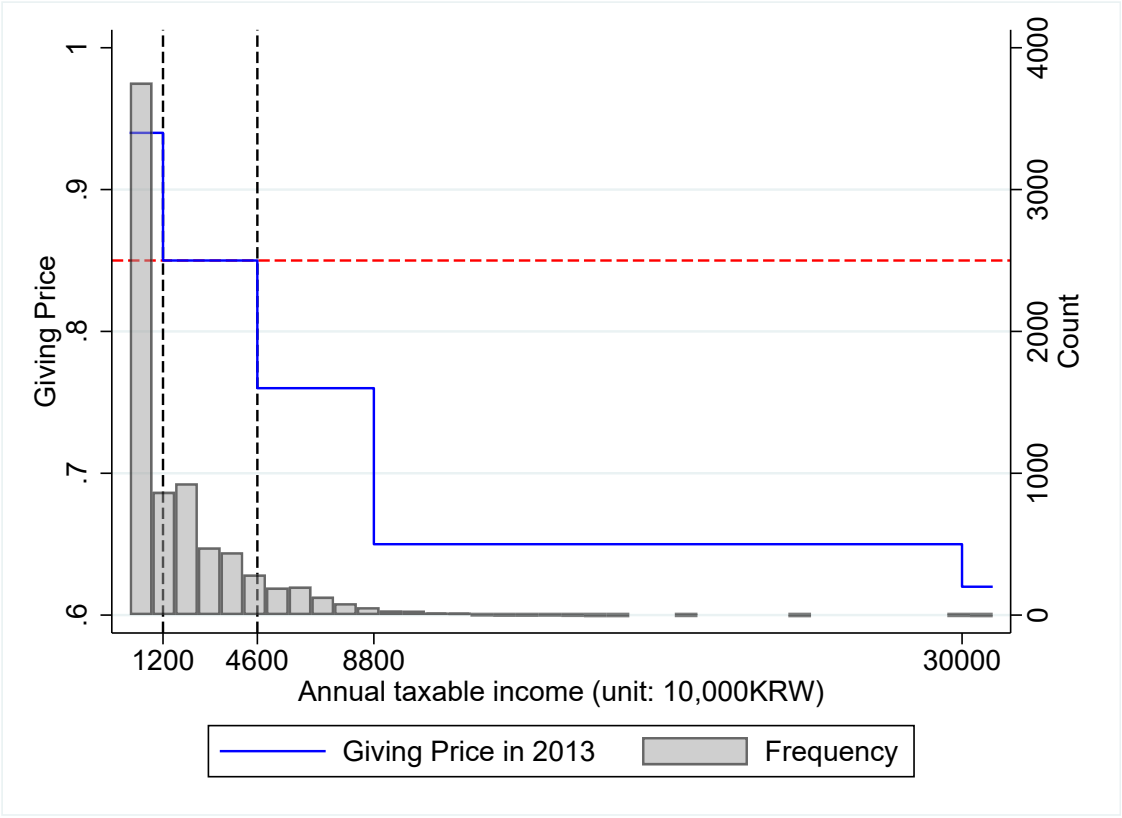


Figure 2: Income Distribution and Giving Price in 2013

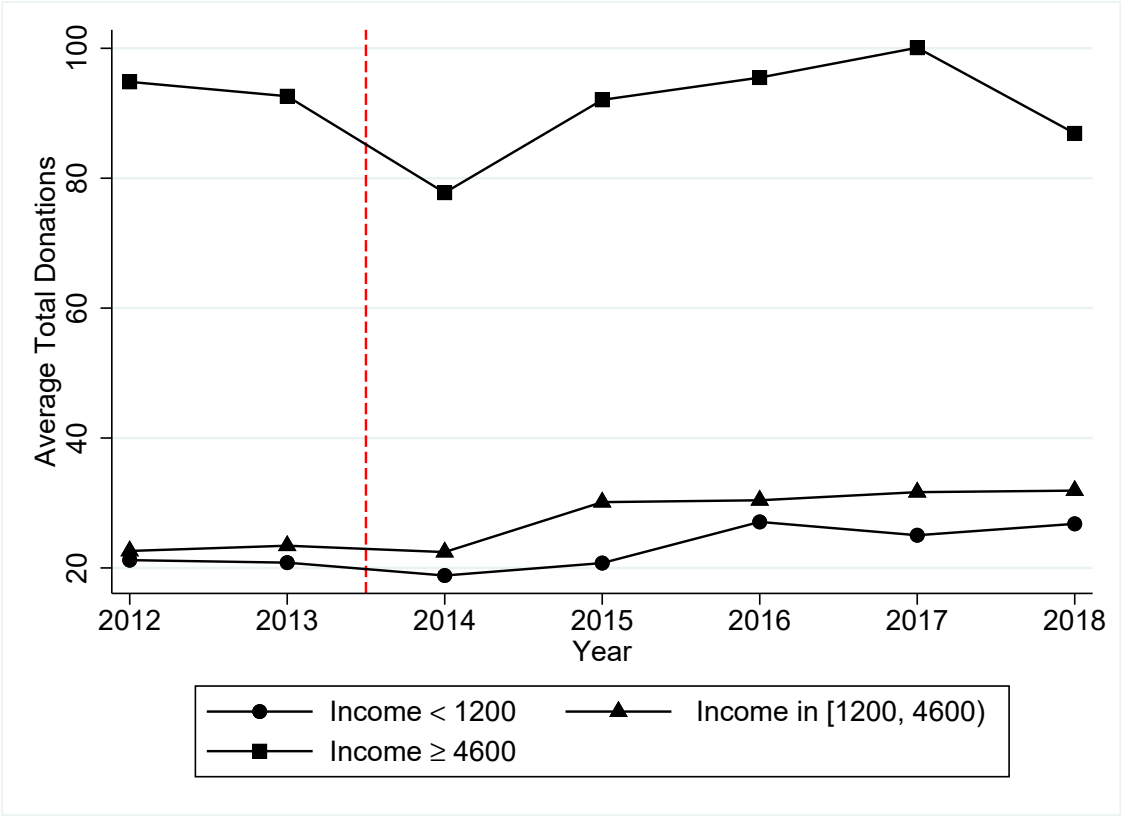


Figure 3: Time Series of Average Donations by Benefit Group

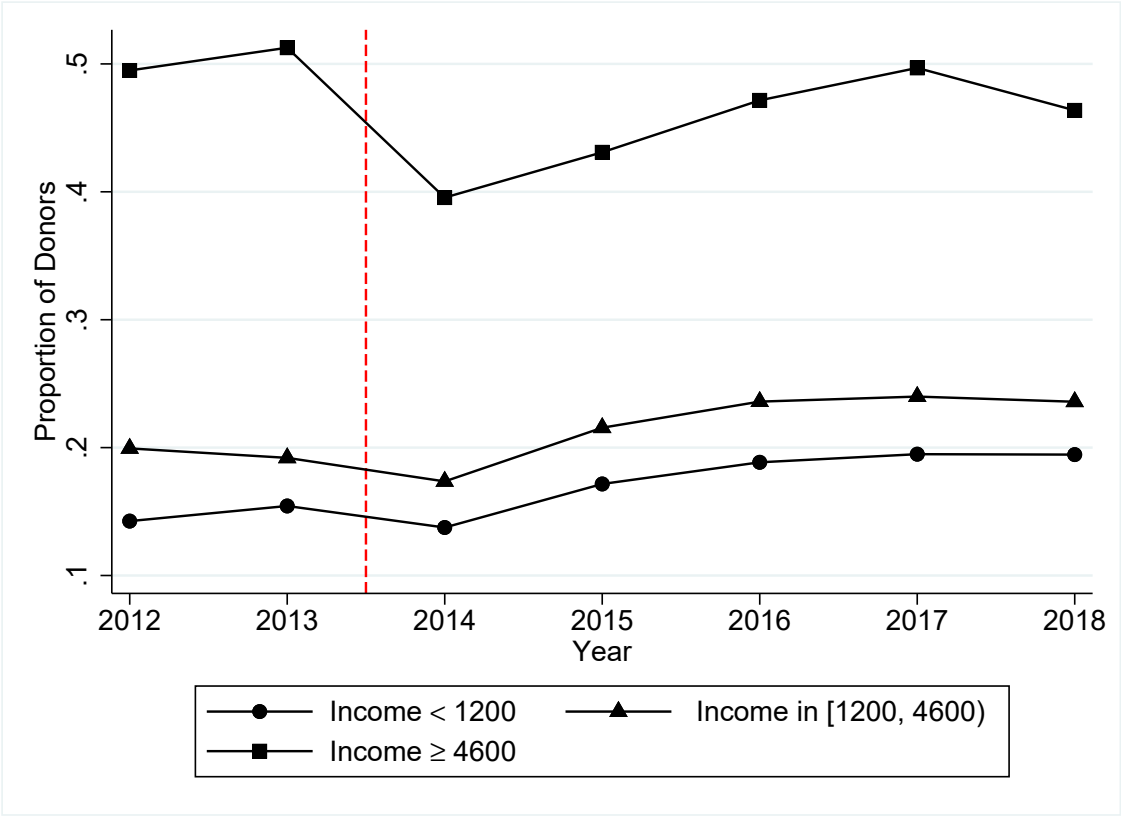


Figure 4: Time Series of Proportion of Donors by Benefit Group

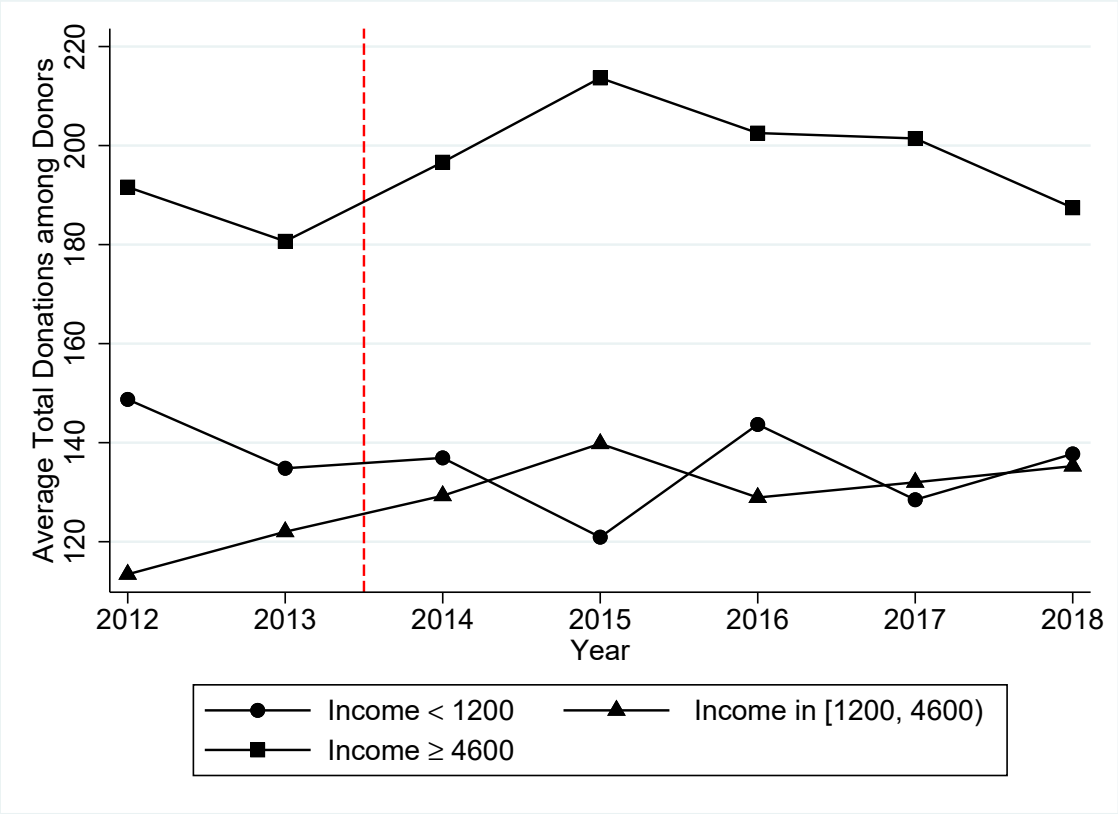


Figure 5: Time Series of Average Donations among Donors by Benefit Group

3.9. Income Distribution and Giving Price

3.10. Time Series of Average Donations By Benefit Group

3.11. Time Series of Extensive Margin by Benfit Group

3.12. Time Series of Intensive Margin by Benfit Group

3.13. Empirical Strategy

Our baseline regression equation is

$$\log(\text{Giving}_{ijt}) = \alpha_i + \beta_1 \log(\text{Price}_{ijt}) + \delta X_{ijt} + \lambda_t + \epsilon_{ijt}.$$

- $\log(\text{Giving}_{ijt})$ is logarithm of individual i's charitable giving in year t.
- $\log(\text{Price}_{ijt})$ is logarithm of individual i's giving price in year t.
- β_1 represents the price elasticity of giving.
- α_i and λ_t are individual and time fixed effect, respectively.

Table 3: Main Results

	(1)	(2)	(3)	(4)	(5)
ln(giving price)	-1.071***	-1.264***	-1.298***	-1.117***	-1.121***
	(0.201)	(0.212)	(0.229)	(0.228)	(0.228)
Time FE	Y	Y	Y	Y	Y
Age	N	Y	Y	Y	Y
Year X Education	N	N	Y	Y	Y
Year X Gender	N	N	N	Y	Y
Resident Area	N	N	N	N	Y
N	54213	54213	54211	54211	54211

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at individual level. When controlling age, we alson include its squared term.

3.14. Intensive Margin and Extensive Margin

Let D_{ijt} be a dummy variable taking 1 if individual i whose resident area j in year t donate in year t

- Intensive margin: Estiamte β_1 where outcome variable is $\log(\text{Giving}_{ijt})$, using units with $D_{ijt} = 1$.
- Extensive margin: Estimate β_1 where outcome variable is D_{ijt}.
  - Extensive-margin price elasticity can be calculated by $\beta_1/\bar{D}$ where $\bar{D}$ is the sample mean of D_{ijt}.

Covariates in each column corresponds to a column in a previous slide.

4. Main Results

4.1. Price and Income Elasticity

4.2. Robustness Check

5. Governement Efficient and Price Elasticity

5.1. Government Efficiency

From the 2015 survey, NaSTaB asks the current and ideal balance between tax burden and welfare size.

These variables provide us to investigate the relationship between price elasticity and govenrment's efficiency more directly.

Thus, we did same excercise, using the current balance bewteen tax burden and welfare size.

Table 4: Main Results: Intensive- and Extensive-Margin Elasticity

	(1)	(2)	(3)	(4)	(5)
Intensive-Margin Elasticity					
ln(giving price)	-0.593***	-0.843***	-1.022***	-0.887***	-0.891***
	(0.202)	(0.212)	(0.231)	(0.242)	(0.243)
N	11704	11704	11704	11704	11704
Extensive-Margin Elasticity					
ln(giving price)	-0.258***	-0.290***	-0.274***	-0.238***	-0.239***
	(0.046)	(0.048)	(0.052)	(0.052)	(0.052)
Price elasticity at mean	-1.699***	-1.907***	-1.807***	-1.569***	-1.573***
	(0.301)	(0.316)	(0.341)	(0.341)	(0.341)
Time FE	Y	Y	Y	Y	Y
Age	N	Y	Y	Y	Y
Year X Education	N	N	Y	Y	Y
Year X Gender	N	N	N	Y	Y
Resident Area	N	N	N	N	Y
N	54213	54213	54211	54211	54211

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at individual level. When controlling age, we alson include its squared term. The implied extensive-marign price elasticity is evaluated at the sample mean of D_{ijt}.

Table 5: Panel IV Results

Lag k	$k=1$	$k=2$	$k=3$
	(1)	(2)	(3)
ln(giving price)	-1.279***	-1.155***	-1.150***
	(0.478)	(0.414)	(0.369)
Individual FE	Y	Y	Y
Time FE	Y	Y	Y
Other Controls	Y	Y	Y
F-stat of IV	10315.94	11506.64	11569.61
N	51548	49217	46399

Notes: * $p<0.1$, ** $p<0.05$, *** $p<0.01$. Standard errors are clustered at individual level. Other controls are age (its squared value), the interaction between year dummies and education dummies, the interaction between year dummies and gender dummies, and resident area. The instumental variable is $\log(\text{Price}_{ijt}/\text{Price}_{ij(t-k)})$.

Table 6: Panel IV Results: Intensive- and Extensive-Margin Elasticity

Lag k	$k=1$	$k=2$	$k=3$
	(1)	(2)	(3)
Intensive Margin			
ln(giving price)	-0.0004	0.0261	-0.4378
	(0.5687)	(0.4410)	(0.3763)
F-stat of IV	1679.78	2040.66	2419.05
N	11332	10954	10451
Extensive Margin			
ln(giving price)	-0.3036***	-0.2944***	-0.2472***
	(0.1101)	(0.0934)	(0.0847)
Price elasticity at mean	-2.000***	-1.939***	-1.628***
	(0.725)	(0.615)	(0.558)
Individual FE	Y	Y	Y
Time FE	Y	Y	Y
Other Controls	Y	Y	Y
F-stat of IV	10315.94	11506.64	11569.61
N	51548	49217	46399

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at individual level. Other controls are age (its squared value), the interaction between year dummies and education dummies, the interaction between year dummies and gender dummies, and resident area. The instumental variable is $\log(\text{Price}_{ijt}/\text{Price}_{ij(t-k)})$. The implied extensive-marign price elasticity is evaluated at the sample mean of D_{ijt}.

Table 7: Results with 2013 and 2014 Data

Model	FE	Panel IV		
Lag k		$k=1$	$k=2$	$k=3$
	(1)	(2)	(3)	(4)
ln(giving price)	-1.466***	-1.535***	-1.683***	-1.151***
	(0.327)	(0.360)	(0.378)	(0.385)
Individual FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
Other Controls	Y	Y	Y	Y
F-stat of IV		7420.10	4490.74	5034.58
N	15134	13727	12902	12420

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at individual level. Other controls are age (its squared value), the interaction between year dummies and education dummies, the interaction between year dummies and gender dummies, and resident area. The instumental variable is $\log(\text{Price}_{ijt}/\text{Price}_{ij(t-k)})$.

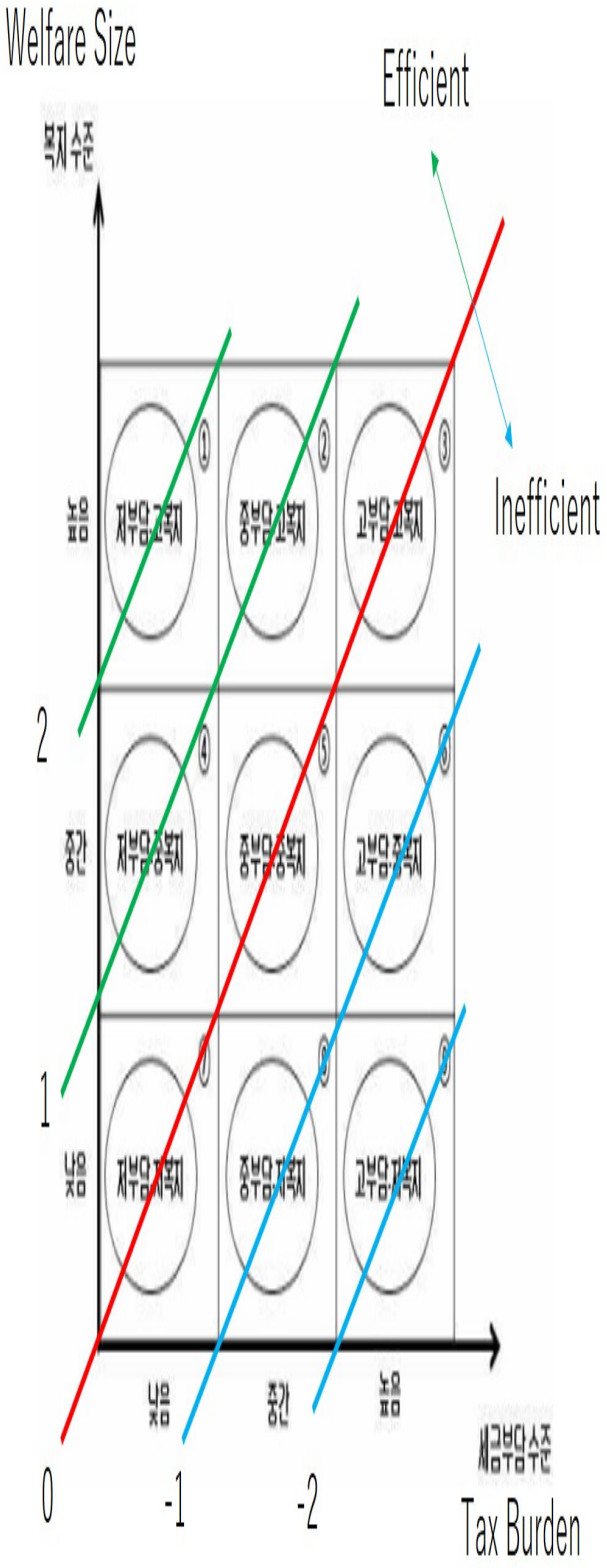
Table 8: Intensive- and Extensive-Margin Elasticity with 2013 and 2014 Data

Model	FE	Panel IV with FE		
Lag k		$k=1$	$k=2$	$k=3$
	(1)	(2)	(3)	(4)
Intensive Margin				
ln(giving price)	-0.759**	-0.736*	-0.819**	-0.543
	(0.344)	(0.418)	(0.404)	(0.371)
F-stat of IV		1920.08	1762.03	1706.53
N	2938	2746	2615	2512
Extensive Margin				
ln(giving price)	-0.332***	-0.341***	-0.380***	-0.291***
	(0.074)	(0.083)	(0.085)	(0.089)
Elasticity	-2.186***	-2.249***	-2.504***	-1.920***
	(0.488)	(0.547)	(0.559)	(0.583)
Individual FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
Other Controls	Y	Y	Y	Y
F-stat of IV		7420.10	4490.74	5034.58
N	15134	13727	12902	12420

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at individual level. Other controls are age (its squared value), the interaction between year dummies and education dummies, the interaction between year dummies and gender dummies, and resident area. The instumental variable is $\log(\text{Price}_{ijt}/\text{Price}_{ij(t-k)})$. The implied extensive-marign price elasticity is evaluated at the sample mean of D_{ijt}.

5.2. Construct Efficient Index

Questionnaire of tax-welfare balance index is


Welfare Size
Efficient
복지수준
Inefficient
높음
중간
낮음
2
1
0
-1
-2
Tax Burden
세금부담수준

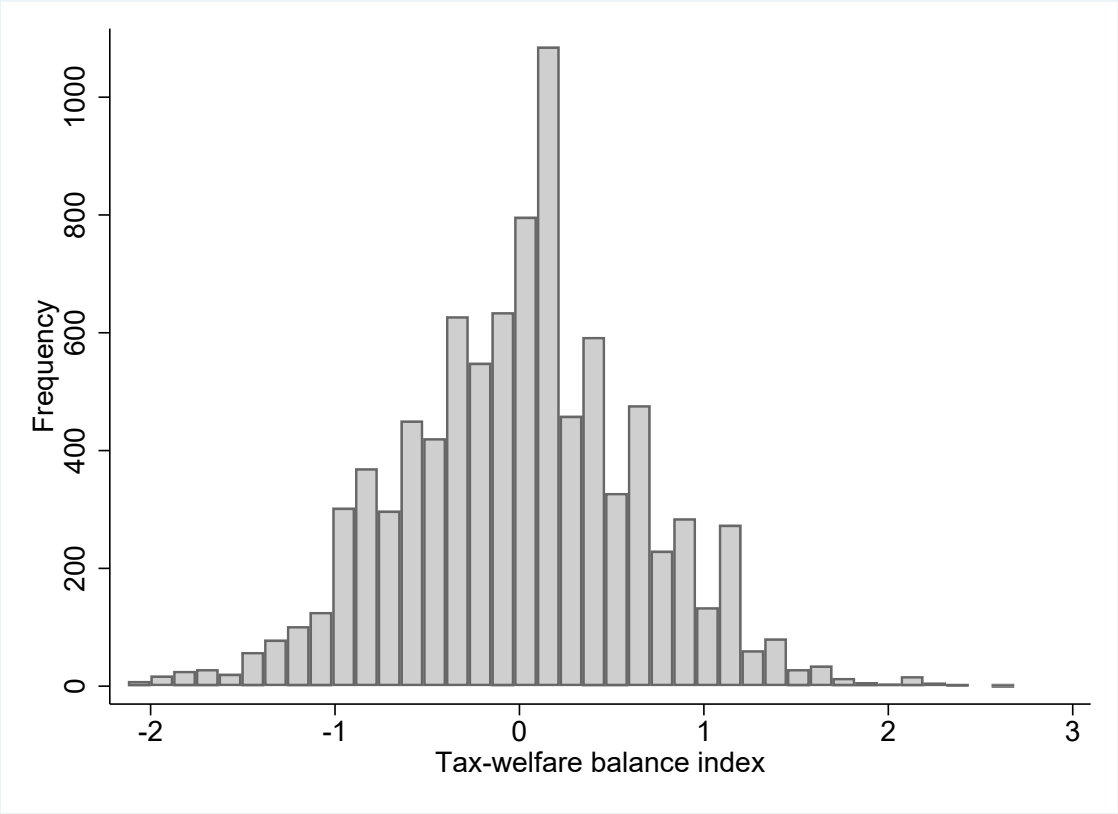


Figure 6: Histogram of Efficient Index

To rule out government's policies, we use individual fixed effect as the **efficient index**

5.3. Histrogram of Efficient Index

5.4. Heterogenous Price Elasticity by Governement Efficiency

To see the heterogenous price elasticity by efficient index, We estimated the baseline regression model (5) (see Table **??**), using sample grouped by the efficient index.

- Three quantile groups: we divide units i into the first, second, and third quantile of efficient index (1Q, 2Q, and 3Q, respectively).

5.5. Efficient Groups: Descriptive Stats

5.6. Efficient Groups: Descriptive Statis (Extensive Margin)

5.7. Efficient Groups: Descriptive Stats (Intensive Margin)

5.8. Efficient Groups: Estimation Results

5.9. Robustness Check

1. Efficient index captures both government efficiency on concerns about budget deficits

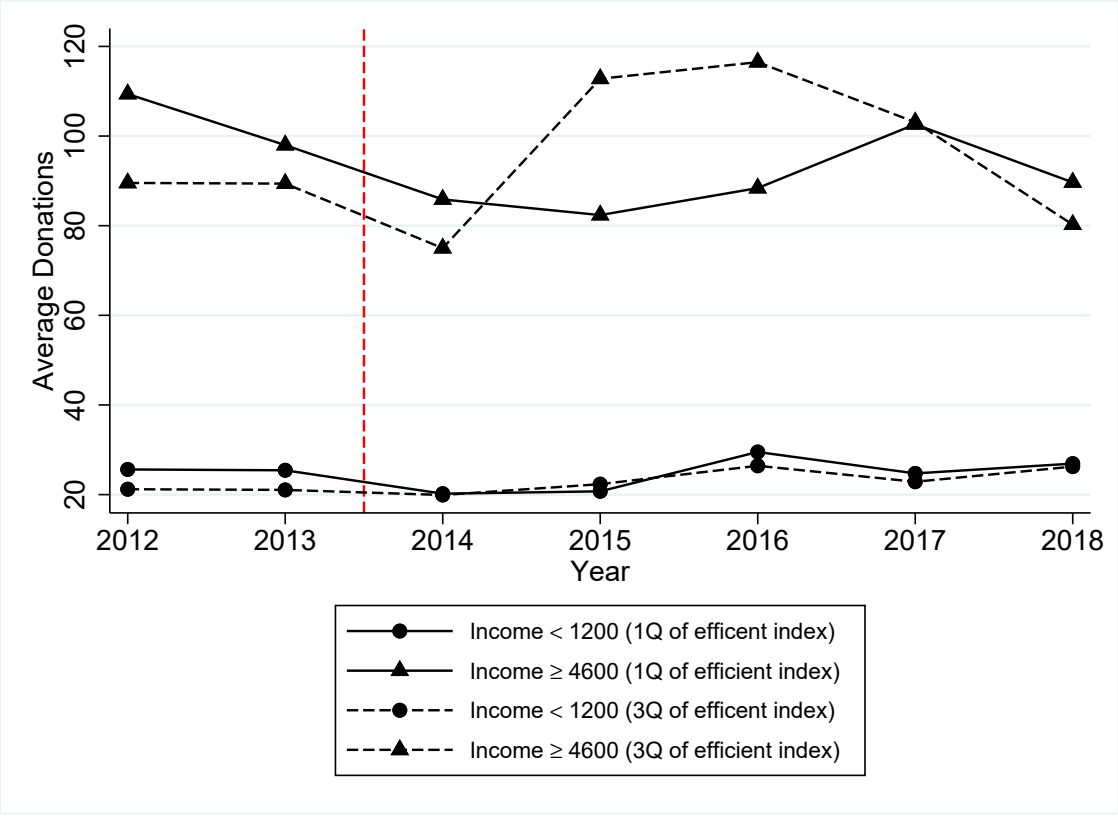


Figure 7: Time Series of Average Donations by Subgroup

Table 9: Price Elasticity by Three Quantile Efficient Groups

	1Q	2Q	3Q
Overall			
ln(giving price)	-1.321***	-0.844**	-0.929**
	(0.388)	(0.404)	(0.404)
N	17119	16662	17525
Intensive Margin			
ln(giving price)	-0.792**	-0.360	-1.111**
	(0.383)	(0.423)	(0.497)
N	3696	3591	4105
Extensive Margin			
ln(giving price)	-0.276***	-0.225**	-0.174*
	(0.087)	(0.094)	(0.091)
Elasticity	-1.380***	-1.115**	-0.787*
	(0.435)	(0.466)	(0.412)
N	17119	16662	17525

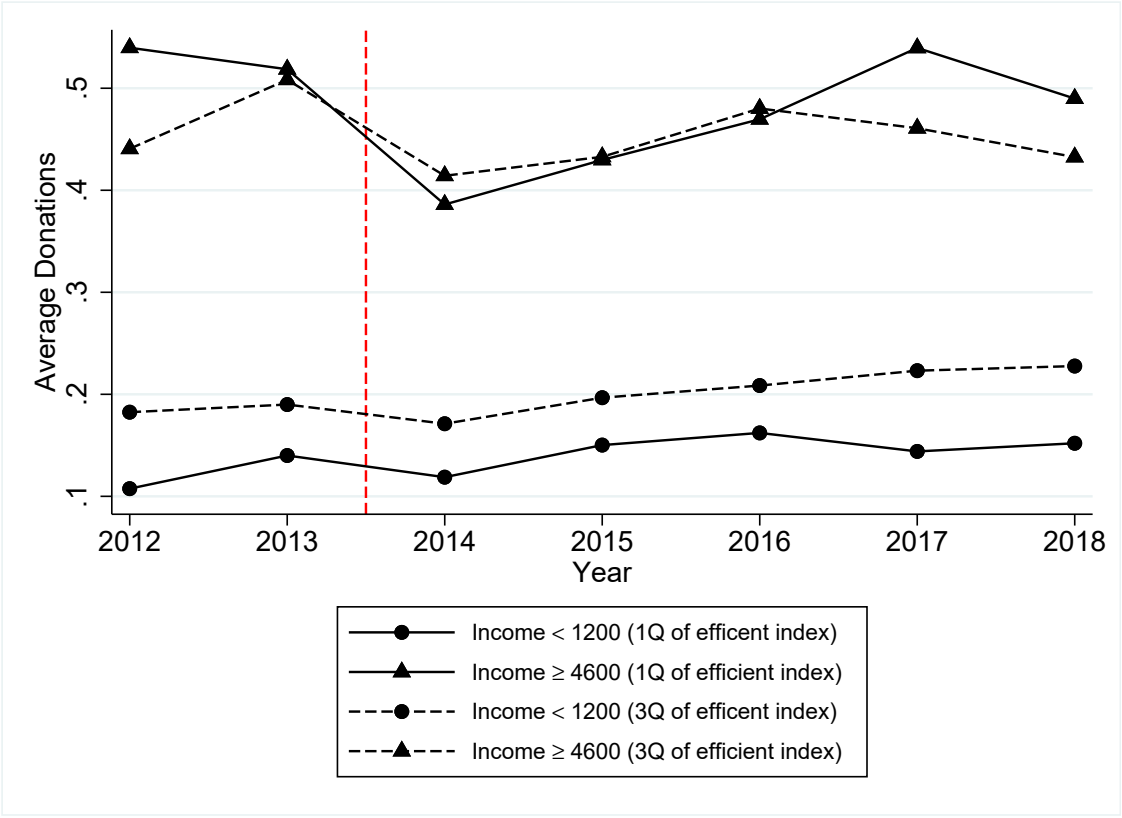


Figure 8: Time Series of Proportion of Donors by Subgroup

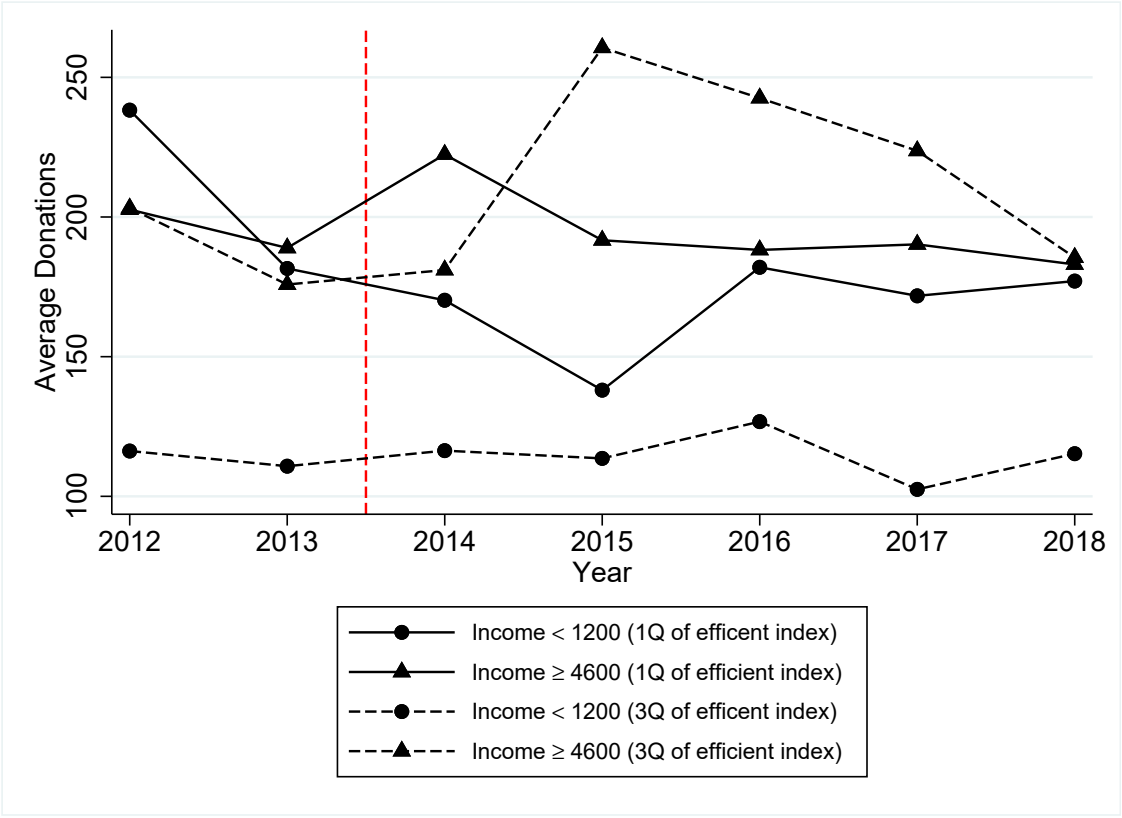


Figure 9: Time Series of Average Donations among Donors by Subgroup

2. Effect of presidential transition on efficient index
3. Effect of presidential transition on donation behavior
4. Income and donations are determined simultaneously
5. Last price elasticity
6. Self-selection of receiving tax benefit
7. Transitory and permanent elasticity

5.10. Robustness Check 1

- Efficient index may capture both government efficiency on concerns about budget deficits
  - NASTAB asks respondents to answer the ideal balance b/w tax burdern and welfare size.
  - We constructed the **ideal** efficient index, using the FE model to estimate the efficient index.
  - We droped units with the ideal efficient index is less than 0 from each quantile group and repeated the same excercise.
  - This is because respondents whose the ideal efficient index is less than 0 think governments should try to avoid budget deficits (high tax, low welfare).
- Presidential transition effect on perceived efficiency
  - We constructed president-specific (ideal) efficient index and implemented the pair-wise t-test.
  - As a result, average difference of these two indexs are not statistically siginificant zero.

5.11. Robustness Check 1: Estimation Results

5.12. Robustness Check 2

We check the following two potential concerns

- Presidential transition effect on donation behavior
- Income and donations are determined simultaneously

To address these problems, we estimated the FE model and Panel IV model with FE where instrument is $\log(\text{Price}_{ijt}/\text{Price}_{ij(t-k)})$ for $k = 1, 2, 3$, using data in 2013 and 2014. Moreover, we droped units with the ideal efficient index < 0 from each quantile group.

Note that f-statistics of IV is greater than 500 when we estimate overall elasticity and extensive-margin elasticity, and greater than 100 when we estimate the intensive-margin elasticity.

Table 10: Heterogenous Price Elasticity by Efficiency Using Units with Ideal Efficient Index > 0

	1Q	2Q	3Q
Overall			
ln(giving price)	-1.996***	-1.122*	-0.063
	(0.648)	(0.597)	(0.488)
N	7527	6900	9339
Intensive Margin			
ln(giving price)	-1.138*	-0.900	-0.952
	(0.640)	(0.652)	(0.741)
N	1541	1474	2023
Extensive Margin			
ln(giving price)	-0.317**	-0.220	0.014
	(0.136)	(0.137)	(0.119)
Elasticity	-1.582**	-1.091	0.062
	(0.681)	(0.679)	(0.537)
N	7527	6900	9339

Table 11: Robustness Check of Heterogenous Price Elasiticity by Government Efficiency

	1Q	2Q	3Q
FE Model			
ln(giving price)	-1.989**	-1.047	-1.881**
	(0.913)	(1.078)	(0.835)
N	2021	1841	2504
Panel IV (k = 1)			
ln(giving price)	-1.881*	-1.093	-2.189**
	(0.992)	(1.272)	(0.851)
N	1842	1689	2292
Panel IV (k = 2)			
ln(giving price)	-1.958*	-1.594	-1.684
	(1.101)	(1.212)	(1.024)
N	1723	1582	2174
Panel IV (k = 3)			
ln(giving price)	-1.608	-0.317	-1.544
	(1.079)	(1.219)	(0.999)
N	1645	1529	2096

Table 12: Robustness Check of Heterogenous Extensive-Margin Price Elasiticity by Government Efficiency

	1Q	2Q	3Q
FE Model			
Implied Elasticity	-1.558	-0.649	-2.453**
	(1.119)	(1.326)	(1.147)
N	2021	1841	2504
Panel IV (k = 1)			
Implied Elasticity	-1.345	-0.517	-2.934**
	(1.255)	(1.612)	(1.180)
N	1842	1689	2292
Panel IV (k = 2)			
Implied Elasticity	-1.396	-1.557	-1.998
	(1.264)	(1.486)	(1.439)
N	1723	1582	2174
Panel IV (k = 3)			
Implied Elasticity	-1.056	-0.460	-1.795
	(1.262)	(1.477)	(1.355)
N	1645	1529	2096

Table 13: Robustness Check of Heterogenous Intenstive-Margin Price Elasiticity by Government Efficiency

	1Q	2Q	3Q
FE Model			
ln(giving price)	-0.753	-2.301*	-1.362
	(0.848)	(1.310)	(0.956)
N	404	361	479
Panel IV (k = 1)			
ln(giving price)	-0.749	-3.220*	-1.471
	(1.088)	(1.812)	(1.013)
N	380	340	449
Panel IV (k = 2)			
ln(giving price)	-0.770	-1.216	-0.771
	(0.997)	(1.504)	(0.966)
N	357	322	433
Panel IV (k = 3)			
ln(giving price)	0.573	-0.691	-1.472
	(1.117)	(1.088)	(0.991)
N	337	307	414

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