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Giving in the Netherlands: The impact of the introduction of the multiplier in the ‘Geefwet’ in 2012 on the gifts to the Cultural and Art charities.

Abstract

The main interest of this research is to find out whether the multiplier (a tax deductibility for the Cultural and Arts sector of 125% of the gift) that was introduced in the ‘Geefwet’ in the Netherlands in 2012 led to higher amounts of the gifts that were being donated. This was researched by an individual fixed effects regression. The Data available was panel data with about 1100 observations from the years 2006 until 2016. The data included the amount of the gift and different socio-economic control variables per individual. The results from the regression were not significant so based on this we cannot say there is an effect of the multiplier on the amount of the gift people give because of the introduction of the multiplier in the ‘Geefwet’. Based on the descriptive statistics however, we do see an increase in the relative number of gifts since the introduction of the multiplier, the Cultural and Arts part relative to all the donations increased from 9,7% to 12,5% from 2012 until 2016.

Introduction

In the United States, the philanthropic sector is big for years now because the government support is relatively low. In the Netherlands, this is not yet the case. We do however see a slight shift in the government support for charities. This has become less and less over the years. To compensate, the government introduced a new change in the law, the 'Geefwet' in 2012, called the multiplier. This change contains advantageous conditions concerning the tax deductibility when households give donations to charities. The reason for this change of the law was to stimulate people to give more donations to charities to compensate for the decreasing support of the government. Of course, it could also be the case people did not increase their donations, they just happily deduct more from their taxes. Therefore, I would like to research whether indeed this change of the law had the consequence that charities received higher and more donations since then. The main question of my research is:

What is the effect of the introduction of the Multiplier in the 'Geefwet' on the gift an individual gives?

Relevance

When in 2012 Rutte won the Dutch elections, he had to come to an agreement to get support from Wilders. Wilders wanted to spend less on culture and other charities, therefore the public spending reduced. However, another law was introduced to make sure charities would still receive enough money. This is the change of the 'Geefwet', called the multiplier of 2012 (Kamerstuk II, 2011). The government hoped by introducing this multiplier, the public support would compensate for the decrease of the governmental support. Question is however, if this had the effect they hoped for. The multiplier was getting a lot of support from especially the Cultural sector, because until 2011, only 10% of the total gifts was for cultural organizations (Rüger, 2011). The Cultural sector therefore hoped this change would encourage people to support this sector more.

However, not everyone was so fond of the change of the 'Geefwet'. One of the changes of the 'Geefwet' was that there was no longer a threshold nor maximum amount for periodic donations for at least five years for the tax deductibility of the gift. In 2016 the cabinet was doubting to again have a threshold for periodic donations and also have a maximum (Hemels p. d., 2016). This was because of technocratic reasons; the government feared people might deduct too much from their taxes. This was a concern because people did not necessarily have

to give more, in order to deduct more from their taxes. They only needed to have it officially documented that they would give a periodic gift for at least five years, but they might still give the same amount, but spread their gift over 5 years. Because people give the same amount but can deduct more from their taxes of this amount, the majority of the gifts would be paid by the society, not by the givers itself. The donator pays the gift of course, but because you can deduct so much from your taxes, the society is the one who bears a significant part of it. This however would mean that actually the 'no threshold' for periodic gifts would have been abolished. Another point of discussion we should take in mind is that maybe only donors benefit from this change of law. They can deduct more from their taxes, but do not necessarily give more to charities. This way, actually the society has to pay for the high deductions, while the charities might not even benefit from it (Hemels P. d., 2011). Another critical point is whether a fiscal law will actually improve the giving behaviour of people. According to Martijn Sanders, people won't give more because of a fiscal law, they give because they like the cause or feel very related to it (Kammer, 2010).

Lastly, it could also be the case people do not give more because of the introduction of the 'Geefwet', but they simply change to what causes they donate. So it could be that people stop giving money to for example environment causes, but start giving to cultural causes because this is more favourable for the tax deductibility. This way the total amount of gifts to good causes could remain the same, but the amount given to cultural causes increased while another category, for example environment, decreased. At least from these discussions it is clear that the giving to the philanthropic sector and whether or not to support this by for example tax laws, is something that is very relevant. Especially now when the governmental support is decreasing, this might be a way to make sure charities still have enough money for their good and social relevant work.

Since the introduction of the law was only in 2012, not a lot of research has been done regarding the effects of the change of the 'Geefwet', the multiplier. There has been done some research by the VU, university in Amsterdam which is called 'giving in the Netherlands' (Bekkers, Schuyt, & Gouwenberg, 2017). The aim of this research was to look in general at gifts from consumers and companies, based on surveys. Besides, the data and conclusions are from 2015, sometimes 2016. They concluded that about 9% of the total gifts were donated to the Cultural and Arts sector. They also conclude that a lot of people do not know of the 'Geefwet' for the tax deductibility.

There is also another research done by the VU which is called: ‘Ontwikkelingen in giften, sponsoring en andere inkomsten van culturele instellingen in Nederland’, (translated: developments in gifts, sponsors and other incomes of cultural institutions in the Netherlands) (de Nooij, Bekkers, & Felix, 2017). This research (also based on data by surveys) looks at the gifts to the Cultural sector in the period 2011-2015. They use the same data resource I will use, only I will look at more years, 2006-2016. The conclusion is that especially companies donate more to the Cultural and Arts sector. Also, households seem to donate more, however only middle income households, not the higher income households. They conclude that the percentage of people with middle incomes giving to the Cultural and Arts sector increases as well as the amount of the gift. Also, the portion of gifts to Cultural and Arts sector compared to the total number of gifts increased. There is also a different effect to people who know and understand the multiplier and therefore use it and people that do not. People who do use it, tend to give more, however it is hard to make strong conclusions about this because only 10% of the people use the multiplier, which is not enough to make strong conclusions. It also shows us a lot of people are not aware of the multiplier. All in all, the paper concludes the multiplier did have a positive effect on the giving behaviour of companies and individuals with a middle income.

I want to look specifically at the introduction of the law and I also want to look at the last 10 years. The same kind of research has also been done in the United States, where they analyse the giving to philanthropic sector annually. I looked at a report from 2016 (Philanthropy, 2017). However, the philanthropic sector in the USA is a lot larger than in the Netherlands. One possible reason for this is because the political situation in the US is very different to the situation in the Netherlands, one of the big differences is that the government support for charities is a lot less in the United States compared to the Netherlands. I want to do this research for a longer time period in the Netherlands, because the Netherlands and the United States cannot be compared so easily because of this political difference. I will first discuss the theoretical framework, what research has already been done and clarifications of the theories that matters for this research. I will then discuss the data I use and what kind of data it is. Then I will discuss the methodology that will be used for this research. After this I will discuss the results and the limitations of this research. Lastly, I will have a conclusion part where I will conclude the results of my research once more and the implications of these results.

Theory for answering the problem

Legal framework

Before 2012 the law was that consumers could deduct their total annual gifts from their gross income. However, there is a threshold, which is 1% of your gross income, so this amount is not tax deductible. Everything above this threshold and up until 10% of your income, (maximum tax deductible amount) was deductible from your gross income. After the introduction of the change of the 'Geefwet' in 2012, this changed. There were two important new rulings for consumers which we will focus on in this research (Kamerstuk II, 2011):

- (2012) Periodic donations (at least 5 years): total annual donations are deductible from your gross income, there is no threshold or maximum. This means you need to give a donation to a certain cause for at least 5 years. Besides this, you need to have an agreement with the foundation, for example a notarial agreement. Lastly you cannot get anything in return for the gift.
- (2012) Donations to cultural organizations (cultural ANBI): your annual gift multiplied by 1.25 (125%) is deductible from your gross income. In this case the threshold of 1% of your income is still applicable. There is also a maximum, the multiplier can be a maximum of €1250. This means there is a max of €5000 that you can multiply.

The periodic gift and multiplier can be combined, if you give a periodic gift to a cultural ANBI. So before 2012, if you gave periodic donations, you still had a threshold of 1% of your income and a maximum of 10% of your income which was not tax deductible. After 2012, there was no longer a threshold for periodic gifts. Before 2012 you could also only deduct 100% of your gift, while after 2012 this was 125% of the amount of the donation you give.

Example

Yearly income: €50.000
Periodic gift: €1000 a year

Before 2012:

Threshold: 1% of €50.000 = €500
Maximum: 10% of €50.000 = €5000
Tax deductible: €1000-€500 = **€500**

After 2012:

No threshold, no maximum
Gift: €1000*125% = €1250
Amount because of the multiplier:
€1250-€1000 = €250.
Tax deductible: **€1250**

Example

Yearly income: €50.000
normal gift: €6000

Before 2012:

Threshold: 1% of €50.000 = €500
Maximum: 10% of €50.000 = €5000
Tax deductible: €6000-500 = €5500,
however, max is **€5000**

After 2012:

No threshold, no maximum
Gift: €6000*125% = €7500
Amount because of the multiplier:
€7500-€6000 = €1500, however max is €1250
Tax deductible: **€7250**

Please note that the multiplier is also applicable for donated goods. The amount is then determined by the economic value at the time of the donation. For gifts to other sectors, nothing changed. This means gifts are deductible with a 1% threshold and a maximum of 10%.

However, to make use of any fiscal deductions for donations, the most important requirement is that you give your donation to a so called ANBI (an institution that intends to invest in common goods), an association, or a SBBI (an institution that takes to heart social interests). To make sure this is all clear, an institution that wants to have the ANBI status, needs to request this. When they get this ANBI status, they have to put this on the website and need to publish different sorts of information. If they do not do this, their ANBI status will be withdrawn and the donations people make to this institution will no longer be tax deductible. (Wat is een ANBI?, n.d.)

Characteristics associated with giving behaviour

As mentioned before, there is research done (based on surveys) to the giving behaviour of consumers/households to good causes in the Netherlands. This is called 'giving in the Netherlands' (Bekkers, Schuyt, & Gouwenberg, 2017). In this research they concluded that the amount people give is strongly associated with socio-economic characteristics. The ones named in this research are: age (older people give more), the level of education (the higher the education, the more people donate), the income (If your income is higher you have more money to give away therefore a higher income means higher donations) and whether people are religious or not (religious people tend to give more, especially protestant people. This research is also done in the US (Philanthropy, 2017) in which they conclude actually the same in regard to the socio-economic characteristics, which is what we are interested in.

Another survey based research done in the US is the study of High Net-Worth Philanthropy (U.S. Trust, 2018). This is a study in the USA which is done every two years. The most recent one is from 2018. The key findings of this research for this paper is that giving is shaped by different characteristics, the most important ones are gender, ethnicity and age. Besides it showed that women are more engaged with good causes than men. This paper therefore showed us that also gender is an important factor in the giving behaviour.

The last important research that is done in regard to this paper is an empirical research done to determine by what influences giving behaviour of people (Yao, 2015). The conclusion of this paper is that again a lot of socio-economic characteristics influence the giving behaviour. The most important influences according to Yao are: income, age, marital status, gender, religion, number of children, political party affiliation, and self-rank of social position. This is the same conclusion as in other researches; however some are other variables that were not mentioned earlier. These are marital status, number of children, political party affiliation and self-rank of social position.

Reasons for behavioural altruism

An important question for this research is the reason why people actually donate to good causes. If people do it only for the tax deductibility there is a big chance that if there is a law change which means people can deduct more from their taxes, the amount and number of gifts will change a lot. If, however people do it because they care about a cause or to make themselves feel better, a change in the law on tax deductibility will most likely not have a big effect.

One motivation for giving donations could be explained by your general status in the groups you feel connected with in the society. So, if the group you belong to has a higher social status, people's self-esteem might increase and therefore people are more likely to donate. This is what Wichardt researched in this empirical research where he reviewed and combined economic and social psychology (Wichardt, 2009). The conclusion of this paper is that people tend to give more if they feel connected to a group because they care about the status of this group, they are willing to exchange economic donations to increase the social status of the group they belong to. Therefore, giving donations to groups can be motivated by the care of the status of their group. This motivation however can still be selfish, because you want the status of the group you belong to, to be the best it can be. Because if the status of the group you belong to is higher, your status increases as well because society will link you to the group with high status. The effect depends on how much a person can identify itself with this group. The more you feel identified by this group, the more people tend to care about giving to this group.

There are however also people who give purely because they want to help others and care about the well-being of other people. This sums up the altruism-hypothesis in the theoretical research

of Sober & Wilson (Sober & Wilson, 1998). This hypothesis also means the ultimate goal for you is the well-being of others, sometimes even if it hurts yourself. Usually the main driver of this motivation to give something to others is then caused by empathy. This is usually stronger to our family members or people we know, or who belong in our group, but it can also be for a random stranger according to another theoretical research by Radovanovi (Radovanovic, 2019).

Another important paper on the reasons of giving is a literature review (Bekkers & Wiepking, 2010). The main question of this research is why people donate to charities. This research is done by a review of more than 500 articles. The conclusion is that there are eight main drivers of altruistic behaviour: awareness of need, solicitation, costs and benefits, altruism, reputation, psychological benefits, values and efficacy.

The first one is awareness of need. This means that people have to be aware of the support that is needed for certain causes. The way of raising the awareness of need is the Media (Simon, 1997). The conclusion of this article is that the (mass)media has a large impact, compared to the coverage of an earthquake. Study also showed that when countries have a higher poverty rate or a period with more poverty, donations are higher (Abrams & Schmitz, 1984). This is supported by a recent study that showed that if there is more income inequality, people feel more need to support the poorer people and therefore donate more (Bielefeld, Rooney, & Steinberg, 2005).

The second main driver is solicitation, this means approaching people and ask them to donate. In two studies it is found that over 80% of the people give money to good causes because they are simply asked to do so (Bryant, Slaughter, Kang, & Tax, 2003) (Bekkers R. , 2005). However, over-solicitation does not work, because people might lower their donation because they get 'donor fatigue' (van Diepen, Donker, & Franses, 2009)

The third main driver is costs and benefits. Costs is clear, because a donation will always cost you money. If the cost of a donation is lowered, by for example beneficial tax laws, donations will increase (Eckel & Grossman, 2003). There is most to just economic costs, there are other circumstances that matter, for example the time of the year (people are more likely to give in December (Pharoah & Tanner, 1997) and weather circumstances (Smith & McSweeney, 2007).

If a person itself profited from a certain non-profit organization, this also seems to increase the gift, however evidence is not that strong (Marr, Mullin, & Siegfried, 2005).

The fourth driver is altruism, which means that if people care about a certain cause, their donations will be higher. Altruism might get crowded out when the support from the government is too much, however the crowding out effect by researches done suggest it is often less than perfect (Brooks, 1999).

The fifth important mechanism is reputation. By reputation is meant the social aspects of giving, the way people see you. Giving is usually seen as a good and positive thing to do and makes people loved (Muehlman, Bruker, & Ingram, 1976). On the other hand, if you do not give, and especially when this is publicly known, it makes people not loved and it takes down your reputation (Alpizar, Carlsson, & Johansson-Stenman, 2007).

The sixth main driver of giving behaviour is psychological benefits. We are then talking about psychological benefits for the donor. First of all, people experience joy when they donate (Batson & Shaw, 1991). There might also be a bit of guilt behind your motivation of giving. For example if a lot of people give and you do not, you might feel guilty and therefore give or you feel guilty about something and donating might fix your guilt feeling. (Carlsmith & Gross, 1969). Your self-image therefore is very important as well and giving might be good for one's self-esteem (Ickes, Kidd, & Berkowitz, 1976).

The seventh mechanism is values. This means donors appreciate the work of non-profits a lot and feel like it is good for the world that these charities exist. But what exactly are the social values that make people donate more? It is hard to find evidence for any social value however the most researched value is social justice (Furnham, 1995).

The last mechanism is Efficacy by which is meant the impact the donation will have, according to the beliefs of the donor. Of course, if people think their gift is not that useful, people are less likely to give (Arumi, et al., 2005). People who believe money is well spend and does not go to fundraising costs and overhead for example, tend to give more (Sargeant, Ford, & D.C., 2006).

Influence of the economic cycle on giving behaviour

The economic cycle can also be of importance for the giving behaviour of individuals. This is very important for my research because the period we are looking at, there was an economic crisis in the Netherlands. There is one theoretical research about this, which looks at influence of the economic cycle on the individual giving behaviour to higher education (Drezner, 2006). The conclusion of this paper is that indeed the giving behaviour to higher education is highly affected by the economic cycle. It is however hard to determine to what extent the giving motivation is purely altruistic or because of economic reasons, or a combination. Better understanding of this would help to have the best policy as possible, for which more future research is needed.

Another research (empirical) done on the effect of tax changes in giving behaviour (Auten, Sieg, & Clotfelter, 2002). This is done by a model and the data they use is 15-year panel data of tax returns from 1979-1993 in the United States. The conclusion of this paper is that the effect of the change of income on gift giving behaviour can be split into two effects: a transitory and a persistent one. Transitory shocks in income do not have a big effect on gift giving behaviour, persistent ones do. So if a higher amount of the gift is deductible (persistent change), people will give higher gifts. This would therefore suggest that tax deductions would be effective to stimulate giving behaviour and this indicates introducing for example a multiplier (not temporarily), will have an effect on the gift giving behaviour.

Another paper also with a panel data set but with only middle-class taxpayers challenges this view (Barrett, McGuirk, & Steinberg, 1997). This paper implies laws for tax deductibility would not be efficient. This is also an empirical paper with panel data of tax returns from individuals over the years 1979 until 1986. The findings of this paper is that the deduction is not treasury efficient, which means they do not stimulate increase in donations, the increase in donations are not actually higher than the foregone tax revenues.

Data

The data used in this research is from the centre for open science (OSF). The data is obtained by a survey. This survey is done every two years from 2002 onwards and the latest available observation is from 2016. It is panel data, so from every respondent you can see all the years (if they donated every year). If someone does not donate in a certain year, there are no observations available. The data is organised, so you can see exactly what amount of the total donation went to what cause exactly. There are 14 different categories to what you can donate money.

Besides this, there are multiple socio-economic characteristics variables such as age, gender, marital status, education, region, gross household income, whether you have other income from wealth yes or no, whether you own a home, whether you are religious and what religion and the number of times you visit church. There is a variable which specifies the amount of money given per category, and there is a variable that specifies the total amount of goods given per sector, of which the worth is given in euros, the worth is the economic value at the time of donation. There are 5 periods of observations without the change of the 'Geefwet' (2002, 2004, 2006, 2008 and 2010), and 3 periods of observations when the 'Geefwet' was introduced (2012, 2014 and 2016). The total number of observations is about 11.000.

For my research, I am only interested in the data of gifts to cultural causes and the periodic gifts, because the change of the 'Geefwet' is only applicable for those two kinds of gifts (cultural and periodic). For periodic gifts, it is unfortunately only from 2016 onwards known whether gifts are periodic or not since this question was only introduced in the survey from this year onwards. Because the periodic gifts deductibility was applicable from 2012 already, we do not know anything about the period 2012-2016. We do not know which gifts were periodic. Besides, for the periodic gift to be tax deductible, it is also necessary to have this officially documented. There is no way for us to know this. I will not look at the periodic gifts because of this. There would be too many missings.

For cultural gifts this is easier because when the multiplier was introduced, this was automatically applicable for every gift donated to a Cultural sector. This was not needed to be documented, if you made a cultural gift, the beneficial tax laws (the multiplier) was applicable. For the data, this means we know for sure that every gift done to the Cultural and Arts sector from 2012 onwards could make use of the multiplier.

I am only going to look at the gifts of an amount in euro's, and I will not look at the goods donated to the Cultural and Arts sector, since there are only 66 observations out of the total of more than 11.000 observations. Observations where no donation was made to the Cultural and Arts sector are not deleted but are not considered in my results because they simply report a missing, since no donation was made to the Cultural and Arts sector. I do use these observations in my descriptive statistics to get an overall view of the population that took part in this survey.

The total number of observations of gifts donated to the Cultural and Arts sector is 1183. Since there are however quite some missings in the data, the total number of useful observations is 729. The missings are mostly from the early years because some socio-economic control variables, marital status and income, were not included in the survey yet. Most missings are in 2002 and 2004 and therefore those time periods are not complete enough so I am looking only at the observations from 2006 until 2016. There are 3 periods before the multiplier was introduced, and 3 periods after the multiplier was introduced. This should be sufficient because the implementation of the multiplier in the 'Geefwet' did not take a lot of time to implement, it was first announced in June 2011 that this would be implemented in January 2012 (Kamerstukken II, 2010/11, 32 740, nr 6). People could immediately deduct more of their gift from the taxes from 2012 onwards. Therefore, I do not think there will be a significant lag effect.

Methodology

For this research, I would like to use an individual fixed effects research method. The dependent variable of my research is gifts. The control variables based on the research I have done should be: age, gender, marital status, education, gross household income and religion. Since however I am using the method of individual fixed effects, there should be no control variables for the time-invariant variables because those are already implicitly captured in this regression. Besides, I would like to differentiate between gifts. I would like to just look at the gifts done to the Cultural and Arts sector because only this sector was affected by the multiplier of the ‘Geefwet’.

There are weights included in my data set, and without taking the weight into account no conclusions can be drawn. The weights are probability weights and are different every year for every individual. The weights are therefore also included in my statistic method to be able to draw conclusions. With probability weights every observation is weighted to determine the number of subjects it represents, so the probability of the observation for the group that is being researched. The weights are calculated by taking the inverse of the sampling fraction. The sampling fraction is the fraction of a certain group in the total amount of observations. If for example there are 500 Spanish and 100 Italian people, the sampling fraction of the Spanish people is 1/5, and the fraction of the Italian people is 1/1.

The regression of the cultural gifts would then look like this:

$$Gifts_{it} = \alpha_{it} + \beta_1 GeefwetCG_{it} + \beta_2 age_{it} + \beta_3 maritalstatus_{it} + \beta_4 education_{it} + \beta_5 grossincome_{it} + \beta_6 year_{it} + \varepsilon_{it}$$

In this regression the i is for the ID of the person (respondent ID) and the t is for year (since the data that is used is panel data from 2006-2016).

Gifts is a variable that gives the amount of the gift that is being made in euros. The data is structured, so the amount is given per sector of the gift. Therefore, you know immediately to what cause the gift went for this research we gifts is gifts given to the Cultural and Arts sector. The variable $GeefwetCG_{it}$ is a binary variable that looks at the cultural gifts that are influenced by the introduction of the change in the law of the ‘Geefwet’. This will be a binary

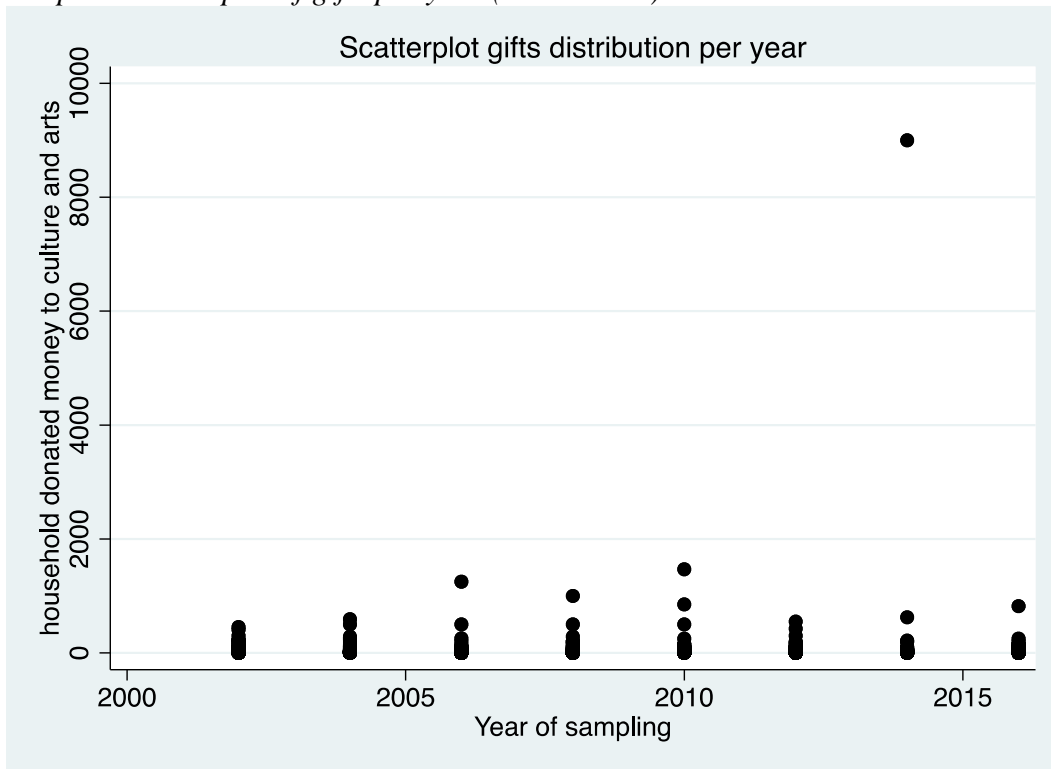
variable with a '0' if it is a cultural gift before 2012 and '1' if it is a cultural gift after 2012. We can do this because every cultural gift from 2012 onwards automatically falls under the new multiplier law. This is our most important variable, because this variable will tell us whether the gifts are actually influenced by the change of the law. *age_{it}* is a variable that gives the age of a person at the moment the survey is being held. *maritalstatus_{it}* is a categorical variable. 1 is for unmarried (never been married), 2 is for unmarried cohabiting, 3 is for living apart together, 4 is for married, 5 is for divorced and 6 is for widowed.

education_{it} is again a categorical variable from 1-8. 1 is for primary school, 2 is for LBO, this is further education after Mavo level 1 or 2, 3 is for mavo, 4 is for mbo, which is further education after mavo level 3 or 4, 5 is havo/vwo, 6 is for hbo or university bachelor and 7 is university master. *grossincome_{it}* is the gross income of the household, this is again a categorical variable. This variable is from 1-13, in which 1 is 0-10,000 a year 2 is 10,000 to 20,000 a year etcetera. 11 is for 100,000-150,000 a year, 12 for 150,000-200,000 a year and 13 for 200,000-250,000 a year. There are missings reported for people who did not want to give information about their annual gross household income. *year_i* is a time dummy for the year fixed effects. This Dummy is for every year the survey is being done, so every 2 years from 2006 onwards.

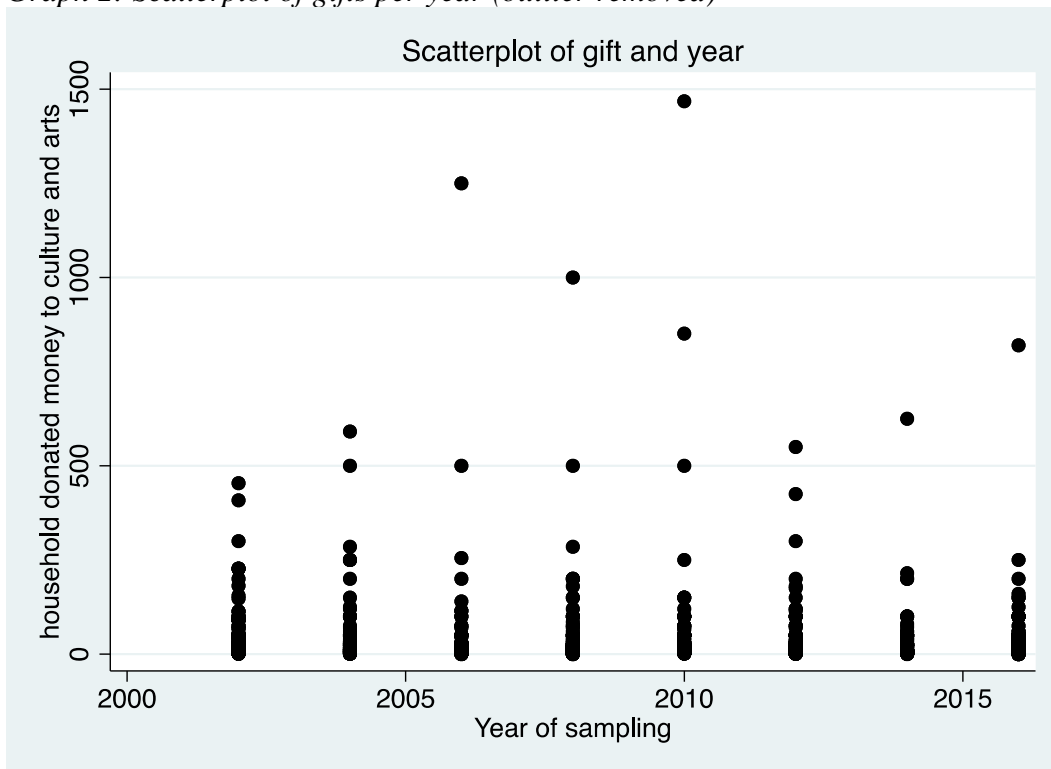
The reason for the control variables I am using, is because this is what I found in multiple researches done on this subject as I discussed in my theoretical framework. The important control variables therefore are: age, multiplier, marital status, highest education followed and household income (Bekkers, Schuyt, & Gouwenberg, 2017) (U.S. Trust, 2018) (Yao, 2015). I think these control variables are time variant and that is the reason why I have included them. These are the most mentioned important variables in other researches as well.

I made some changes in the data before I used it for my regressions. Firstly, I generated the new variable 'multiplier', because of course this variable was not yet included in the data. I made this a dummy variable, which is '0' before 2012 (before the multiplier was introduced) and '1' if it was subjected to the multiplier law from 2012 onwards. Lastly there was one outlier in 2014 as you can see below in graph 1. Because this extreme outlier influenced my results, I removed this observation. As you can see in graph 2 below, there are no other outliers besides this one.

Graph 1: Scatterplot of gifts per year (with outlier)



Graph 2: Scatterplot of gifts per year (outlier removed)



Descriptive Statistics

To get a good overall image, the descriptive statistics are a good source of information. As we can see in table 1a and 1b of the appendix, all the gifts are classified per category. Since there are only 8823 observations and 29810 donations, it becomes clear that a lot of people give gifts to multiple categories per year. Out of the total of 29810 donations done to all categories, only 843 donations are made to the Cultural and Arts sector, about 2.83%. However out of all the observations (8823), 843 people gave a gift to the Cultural and Arts sector which is 9.6% over all the years. Before the multiplier was introduced, 3.5% of all the gifts were donated to the Cultural and Arts sector. After the introduction of the multiplier, this percentage increased to 3.9%. (This was calculated by dividing the total of gifts to the Cultural and Arts sector by the total of gifts out of all sector). Based on this, we could conclude like de Nooij, Bekkers and Felix (de Nooij, Bekkers, & Felix, 2017) that the gifts to the Cultural and Arts sector increased slightly since the introduction of the multiplier. Since there are over 5000 individuals in our research and only 490 individuals who donate to the Cultural and Arts sector, it means only about 10% of the individuals in our data set donates to the Cultural and Arts sector.

As we can see in table 1, the average amount of the gifts to the Cultural and Arts sector actually decreased after introducing the multiplier, as well as the number of gifts. However, as we can see in table 1a and 1b of the appendix, the total number of gifts decreased in all categories. If we look at the relative percentage, the percentage of the number of gifts to the Cultural and Arts sector actually increased.

Table 1: Descriptive statistics (weighted) sorted by multiplier from the gifts to Cultural and Arts sector (2006-2016)

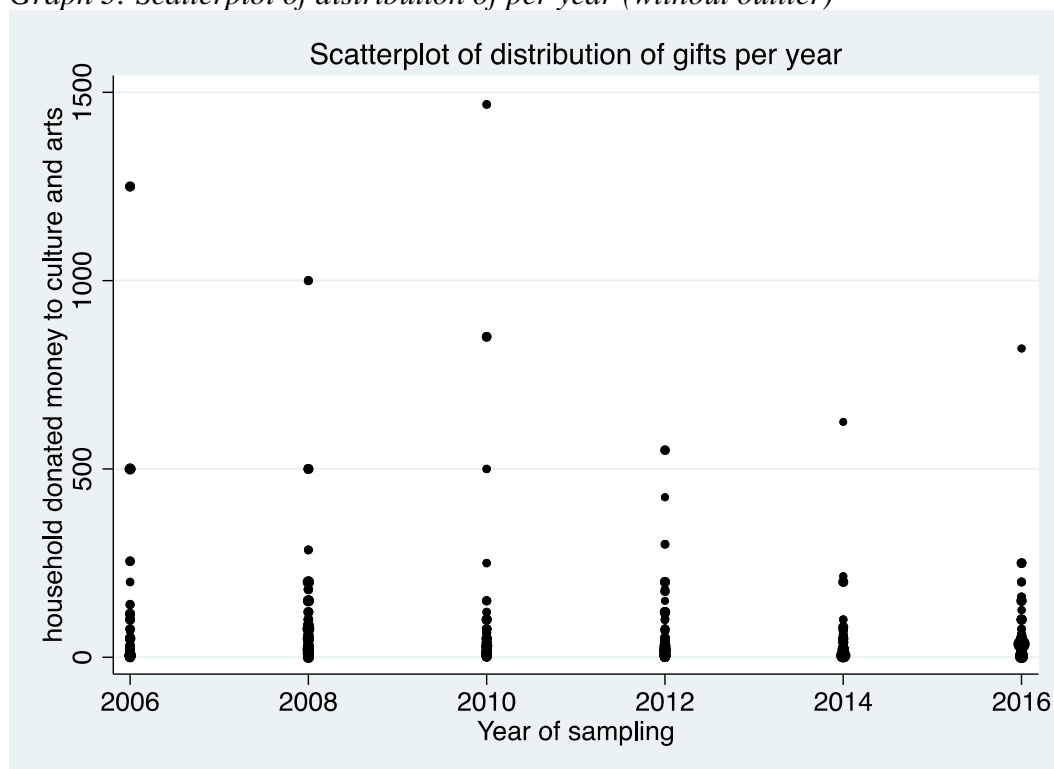
Multiplier	Obs.	Mean	Min	Max
No	470	37.097	1	1468
Yes	373	30.391	1	820

The age of the people who participated this survey is between 18 and 98. It is a bit skewed to the right as we can see in graph 1 in the appendix, however most people are between 18 and 75 and just a few between 75 and 100. Most observations are between age 30 until 50. The multiplier variable has a mean of 0.416 as you can see in table 1 in the appendix, which means 42% of the observations are after the introduction of the multiplier.

Lastly, we can see in table 2a and 2b of the appendix that 53% of the people who donate to the Cultural and Arts sector is female and 47% is male. So out of all the donations, the majority is given by women, however it is only slightly more. Before the introduction of the multiplier, 55% of all the donations were being made by woman and after the introduction of the multiplier 51% of the donations are given by women. We can see that the average total amount males give is actually higher than females, which is not what we would expect because according to the literature on this matter (U.S. Trust, 2018), it is said women on average give more than man because more emotions are usually involved. We do however see that the relative number of gifts woman give is higher (55% before and 51% after the introduction of the multiplier), which is in line with the literature we found. So women give more gifts, but the amount of the gift is lower on average.

To get a clearer image of the way the gifts changed after 2012, with the introduction of the multiplier we can look at a scatterplot (graph 3). You can see clearly that there were more high donations before 2012 the introduction of the multiplier, more than there were after. There also seems to be a low point in 2014, however 2012 and 2016 seems to be in line with the other years. It also seems that it fluctuates over the years. In table 2

Graph 3: Scatterplot of distribution of per year (without outlier)



In table 2 we can see the descriptive statistics of the gifts to the Cultural and Arts sector sorted by year. Like I already said, out of all the observations (8823), 843 people gave a gift to the Cultural and Arts sector which is 9,7% over all the years. It would be interesting to look at this percentage per year as we can see in table 2. The percentage is measured by the number of gifts to the Cultural and Arts sector per year divided by the amount of observations per year (table 3 of the appendix), so we can see what percentage of the people per year donated to the Cultural and Arts sector. We can see that although the average amount people donate does not seem to increase, the relative number of people who donate in our sample does seem to increase from 2012 onwards. This is also in line with the results of De Nooij, Bekkers and Felix (de Nooij, Bekkers, & Felix, 2017). It rises from 9.7% to 12.5%, which is an increase of about 30%.

Table 2: descriptive statistics (weighted) sorted by year from the gifts to Cultural and Arts sector (no missings)

Year	Obs	Mean	Min	Max	Percentage
2006	137	35.436	1	1250	10.1%
2008	168	35.002	1	1000	9.6%
2010	165	40.772	1	1468	9.8%
2012	142	32.210	1	550	9.7%
2014	110	24.334	1	9000	11.1%
2016	121	33.452	1	820	12.5%

In table 3 we can see the descriptive statistics of Marital status on gifts to the Cultural and Arts sector. We can see that married couples give a relatively low amount of gift compared to the other categories. As you can see in table 4 of the appendix, 55% so most of the people in our research are married and 66% percent of the gifts to the Cultural and Arts sector are donated by married people. So, we can say that a relative high percentage of the gifts are given by married people. What is striking in table 3 is that bewidowed people tend to give the highest amount of the gifts. An explanation could be that bewidowed people donate part from the amount they inherit from their former partner to good causes which makes the amount of the gift a lot higher. Apart from this, there does seem to be a positive trend because since the introduction of the multiplier, the relative percentage of the people who donated to the Cultural and Arts sector compared to the total number of people who donated does either increase or remain the same since the introduction of the multiplier.

Table 3: descriptive statistics (weighted) sorted by marital status from the gifts to Cultural and Arts sector

Marital Status		Obs.	Mean	Min	max	percentage
unmarried	Before 2012	66	44.313	1	1250	1.4%
	After 2012	56	25.823	1	625	1.6%
Unmarried Cohabiting	Before 2012	39	13.693	2	120	0.8%
	After 2012	35	23.212	1	100	1.0%
Living apart together	Before 2012	6	115.353	5	500	0.1%
	After 2012	12	36.485	1	150	0.4%
married	Before 2012	318	30.602	1	1000	6.6%
	After 2012	241	23.829	1	250	7.0%
divorced	Before 2012	17	22.619	2	100	0.4%
	After 2012	12	93.239	10	300	0.4%
bewidowed	Before 2012	24	126.020	2	1468	0.5%
	After 2012	17	145.729	5	820	0.5%

In table 4 we can see the descriptive statistics of highest level of education followed on gifts to the Cultural and Arts sector. LBO and MBO are all the more practical jobs in the Netherlands, MAVO, HAVO and VWO are all high school, in which MAVO is the most practical form of education while VWO educates people to be able to go to university. HBO is the Dutch name for a university of applied sciences. We can see the relative percentage of gifts by people with LBO seems to decrease, however most seem to remain about the same. The only strongest increases seem to be in the highest education, HBO/WO Bachelor and Wo master. The highest average amount of the gifts is given by people with WO-master level. The lowest average amount is when the highest education followed is primary school, which is what you would expect.

Table 4: descriptive statistics (weighted) sorted by education from the gifts to Cultural and Arts sector

Education		Obs	Mean	Min	Max	Percentage
Primary School	Before 2012	18	23.781	2	140	0.4%
	After 2012	9	26.488	2	100	0.3%
LBO	Before 2012	79	36.833	1	1000	1.7%
	After 2012	38	19.728	1	180	1.1%
MAVO	Before 2012	24	23.749	2	200	0.5%
	After 2012	24	33.963	1	250	0.7%
MBO	Before 2012	146	31.675	1	1250	3.0%
	After 2012	109	17.737	1	160	3.2%
HAVO/VWO	Before 2012	38	33.043	1	250	0.8%
	After 2012	24	34.296	1	425	0.7%
HBO/VO	Before 2012	115	42.322	1	851	2.4%
Bachelor	After 2012	109	32.928	1	300	3.2%
WO-Master	Before 2012	50	55.676	1	1468	1.0%
	After 2012	60	55.574	1	820	1.8%

The descriptive statistics of gross household income on the Cultural and Arts gift are in table 5. We can see that for most of the income brackets, the relative amount (percentage) number of people that donated an amount to the Cultural and Arts sector either increases or remains the same. This suggests the multiplier does have a slight positive effect on the number of people that donate, however it is not very convincing. You would expect that the amount of the gift would increase if the income increases. This does not seem to be the case. What is striking is the high amount of the gift in the lowest bracket, however there are only 13 observations so we cannot really draw conclusions based on this. Also people with an income between 20.000 and 30.000 euros a year give a relatively high amount to the Cultural and Arts sector. Another striking thing is that there are no gifts in the bracket from 150,000-200,000 while there are about 0.4% of the people in this survey with this income, (table 6 appendix). The same amount as 200,000 or more and there are gifts to the Cultural and Arts sector from this income bracket.

Table 5: descriptive statistics (weighted) sorted by Annual income from the gifts to Cultural and Arts sector

Annual Income		Obs.	Mean	Min	Max	Percentage
0-10,000	Before 2012	10	61.947	1	200	0.2%
	After 2012	3	57.687	5	100	0.1%
10,000-20,000	Before 2012	25	21.261	1	150	0.5%
	After 2012	19	25.313	3	200	0.6%
20,000-30,000	Before 2012	61	73.387	1	1250	1.3%
	After 2012	47	40.3324	1	300	1.4%
30,000-40,000	Before 2012	96	23.523	1	255	2.0%
	After 2012	56	7.739	1	200	1.6%
40,000-50,000	Before 2012	27	44.914	2	500	0.6%
	After 2012	65	27376	1	425	1.9%
50,000-60,000	Before 2012	79	37.853	1	1468	1.6%
	After 2012	61	52.864	1	820	1.8%
60,000-70,000	Before 2012	43	20.052	1	100	0.9%
	After 2012	-	-	-	-	0%
70,000-80,000	Before 2012	25	20.659	1	120	0.5%
	After 2012	26	13.166	1	50	0.8%
80,000-90,000	Before 2012	12	29.790	2	70	0.3%
	After 2012	-	-	-	-	0%
90,000-100,000	Before 2012	-	-	-	-	0%
	After 2012	25	29.891	1	100	0.7%
100,000-150,000	Before 2012	20	26.689	5	100	0.4%
	After 2012	12	21.664	2	115	0.4%
150,000-200,000		-	-	-	-	0%
200,000 or more	Before 2012	3	63.906	20	100	0.1%
	After 2012	4	29.735	10	75	0.1%
Missing	Before 2012	69	42.269	1	851	1.4%
	After 2012	55	17.432	1	175	1.6%

In table 6 we can see the correlation table of all the relevant variables for this research. As we can see, quite some correlations are significant. I do however have to mention that the variables in the regression are not significant. As we can see however, there are quite some significant correlations in this table, which is surprising considering the individual fixed effects regression I ran is not significant. There are however not a lot of extremely high correlations between variables which is good for my research because this means there is not a lot of collinearity. As we can see the correlation between the gift and the multiplier are positively correlated which would mean that when the multiplier is introduced, the gifts people report are slightly higher. It is however not significant. Besides we can see that also age, marital status, education and income are positively correlated with gifts. This means that if for example the income of a person increases, people tend to report higher gifts.

Table 6: Correlation table (weighted) of the gifts on Cultural and Arts sector

	<u>Gift</u>	<u>Mult</u>	<u>Age</u>	<u>Marr</u>	<u>Educ</u>	<u>Inc</u>	<u>Fema</u>
<u>Gift</u>	1						
<u>Multiplier</u>	-0.035	1					
<u>Age</u>	0.124*	0.019	1				
<u>Marrital Status</u>	0.079*	-0.033*	0.532*	1			
<u>Education</u>	0.074*	0.006	-0.272*	-0.199*	1		
<u>Income</u>	-0.046	0.049*	-0.093*	0.036*	0.293*	1	
<u>Female</u>	-0.065	-0.002	-0.054*	0.075*	-0.014	-0.081*	1
<u>Roman-catholic</u>	0.069*	-0.107*	0.191*	0.122*	-0.083*	-0.040*	0.027*
<u>Protestant</u>	-0.050	-0.013	0.080*	0.067*	0.009	0.018	0.009
<u>Other Religion</u>	0.062	-0.090*	-0.039*	0.037*	0.013	-0.055*	-0.002
<u>Not Religious</u>	-0.044	0.117*	-0.172*	-0.154*	0.044*	0.044*	-0.023*

	<u>Romcat</u>	<u>Prot</u>	<u>Othrel</u>	<u>Notrel</u>
<u>Roman-Catholic</u>	1			
<u>Protestant</u>	-0.154*	1		
<u>Other Religion</u>	-0.103*	0.007	1	
<u>Not religious</u>	-0.627*	-0.519*	-0.347*	1

* significant at a 5% confidence level

In the regression we do not include female and religion as control variables because we assume those are constant factors and are therefore not interesting in our individual fixed effects regression. However, since this is a correlation table and not an individual fixed effect, we are interested in whether those two factors are correlated with gifts since the literature on this subject suggested they are. Therefore, they are included in the correlation table. As we can see gifts and gender are negatively correlated which means woman tend to report slightly lower gifts, although the correlation is not significant. This is not the result we were expecting, since the literature suggested woman usually report higher gifts (U.S. Trust, 2018), For religion, roman catholic and other religions are positively correlated which means people with this religion tend to report slightly higher gifts, while protestant and no religion is negatively correlated with gifts and therefore tend to report slightly lower gifts. However, only the correlation between other religion and gifts is actually significant.

Results

For answering the main question of my research, I ran an individual fixed effect regression. The reason for this is because it is panel data from 2006 until 2016. The main question of my research is:

What is the effect of the introduction of the Multiplier in the 'Geefwet' the gift an individual gives?

For answering this question, we looked at the gifts in the Cultural and Arts sector, since these are the only gifts that are influenced by the multiplier. We would expect that the amount of the gifts people give would rise slightly. Besides, the financial crisis of 2008 was getting better in 2012, so you would also expect this would also have a positive effect on the amount of the gifts people give. We would also expect the number of gifts to rise, as already researched by De Nooij, Bekkers and Felix (de Nooij, Bekkers, & Felix, 2017). In this paper it concluded that the percentage of people who give to the Cultural and Arts sector has risen since the multiplier. Since they use partly the same data as I do, this should also be the conclusion of this research. This is also what we found in the descriptive statistics. We will look now at the results of the regression.

There are 490 individuals who give donations either once or multiple years to the Cultural and Arts sector. Since there are only 729 observations, it means there are a lot of people who give a donation to the Cultural and Arts sector only sporadically. This is also supported by the results that there is an average of 1,5 gifts per person to the Cultural and Arts sector. So most people only give once or twice a gift to the Cultural and Arts sector during the period of the survey, 2006-2016. The highest number of observations per person is 6, the least is 1.

As we can see most of the results are insignificant. Our most interesting variable is the Multiplier, which is also insignificant. This means based on this research, we have to conclude there is no significant effect on gifts by introducing the multiplier in the 'Geefwet' of 2012. Based on this research, age also does not seem to have an effect on the giving behaviour of people, which contradicts with the other researchers where age did seem to have an effect (Bekkers, Schuyt, & Gouwenberg, 2017).

Table 13: Individual fixed effects results on the relation between gifts to Cultural and Arts sector and some socio-economic characteristics (2006-2016)

Gifts	Coef.	Robust Std. Err.	T	P> t 	95% confidence interval	
Multiplier	226.023	622.553	0.36	0.717	-997.185	1449.232
Age	-20.984	61.242	-0.34	0.732	-141.314	99.346
Marital Status						
Unmarried	21.888	31.335	0.70	0.485	-39.680	83.457
Cohabiting						
Living Apart Together	7.389	43.721	0.17	0.866	-78.514	93.293
Married	35.088	51.894	0.68	0.499	-66.875	137.052
Divorced	44.166	70.284	0.63	0.530	-93.929	182.262
Bewidowed	296.089	12.496	23.69	0,000*	271.536	320.642
Education						
LBO	4.639	19.987	0.23	0.817	-34.633	43.911
MAVO	30.884	46.812	0.66	0.510	-61.093	122.862
MBO	14.249	40.358	0.35	0.724	-65.047	93.544
HAVO-VWO	30.326	48.747	0.62	0.534	-65.454	126.107
HBO/WO bachelor	24.231	47.334	0.51	0.609	-68.772	117.234
WO-master	-22.861	57.109	-0.40	0.689	-135.069	89.347
Annual Income						
10,000-20,000	-80.375	145.592	-0.55	0.581	-366.437	205.687
20,000-30,000	-30.812	91.026	-0.34	0.735	-209.662	148.041
30,000-40,000	-41.060	82.074	-0.50	0.617	-202.321	120.202
40,000-50,000	-50.054	73.734	-0.68	0.498	-194.929	94.820
50,000-60,000	-51.665	72.898	-0.71	0.479	-194.897	91.567
60,000-70,000	-61.395	70.800	-0.87	0.386	-200.504	77.714
70,000-80,000	-63.866	66.887	-0.95	0.340	-195.287	67.555
80,000-90,000	-84.925	79.756	-1.06	0.287	-241.631	71.781
90,000-100,000	-58.160	73.998	-0.79	0.432	-203.554	87.233
100,000-150,000	-170.469	136.070	-1.25	0.211	-437.823	96.886

Year						
2008	65.106	130.065	0.050	0.617	-190.450	320.661
2010	111.713	253.088	0.44	0.659	-385.561	608.987
2012	-84.562	241.889	-0.35	0.727	-559.832	390.709
2014	-37.630	124.296	-0.30	0.762	-281.849	206.590
Constant	994.727	2817.13	0.35	0.724	-4540.438	6529.893

** significant at a 5% confidence level*

Marital Status is also a dummy variable of which unmarried (never been married) is the reference variable. Most of the dummies are again insignificant, however only bewidowed is significant. This means that if a person becomes bewidowed, the gift they give to Cultural and Arts sector increases with 296 euros. The dummy variable for education is completely insignificant. For this dummy, category 1 which is primary school, is the reference variable. The constant is also insignificant, which means the individual fixed effects based on this research are not significant.

For income there are 13 categories as mentioned before. From category 12, which is an annual income between 150.000-200.000 euros, there are no observations available. The dummy of category 13, an annual income of 200.000 euros or more, is omitted because of collinearity. Category 1, which is an income between 0-10.000 euros a year, is the reference variable for this category. Again, all of the dummies are insignificant. You would expect the amount of the donations to increase if people get a higher income. If you would however have all the observations of people in this category, also the people who donated nothing, there is a big chance that on average the amount of the gift does get higher when the income increases. The most obvious reason is that there are a lot of missings.

Discussion

The most important results of this research are the results of the individual fixed effect regression we ran and the conclusions we could make from the descriptive statistics. In the descriptive statistics we saw that there seemed to be a slightly positive effect on the gifts since the introduction of the multiplier. In the descriptive statistics we saw that the percentage of people donating to the Cultural and Arts sector rose by from 9.7% in 2012 to 11.1% in 2014 and to 12.5% in 2016 (table 2). We would expect to also see this in the regression. However,

based on the regression there does not seem to be an effect because of the introduction of the multiplier. The reason we do not get this result could be because we do not have a lot of observations per person and a lot of missings.

We also looked at the amount of the gift that people donated. From the descriptive statistics, based on table 1, it seemed that the amount of gift decreased slightly after the introduction of the multiplier, while the relative number of gifts increased. Why or based on what characteristics of people the amount of the gift decreased is not clear from the descriptive statistics. We can only say that there is an overall decrease of the amount in almost all categories.

The correlation table showed us there were quite a lot of variables correlated with each other, however not too much so there is no danger of collinearity. From the results of the regression we cannot draw conclusions because most of the results we got are not significant. Based on the literature, we would expect to see that the control variables would be significant, however the reason that they are not significant could be because the lack of observations per person. We have an average of 1.5 observations per person so this makes it hard to look at the individual fixed effects, because you cannot draw conclusions from 2 observations in a time period of 10 years, 6 waves. All in all, the amount of the gifts does not seem to increase because of the introduction of the multiplier in the 'Geefwet'. However, the relative number of gifts to the Cultural and Arts sector does seem to increase. This would imply that more people start giving because of the advantageous tax deductibility, but that people who already donated money to the Cultural and Arts sector do not increase the amount of gift they already give.

Besides, it could also be that the economic financial crisis of 2008 had an impact on the giving behaviour. We do see in the descriptive statistics a slight increase of the number of gifts, but the question is whether this is all because of the multiplier but maybe also partly because the economic environment simply got better because the financial crisis was slowly coming to an end. The paper discussed in the introduction (de Nooij, Bekkers, & Felix, 2017), in which they researched the Cultural and Arts gifts as well with the same data set as I used, had the conclusion that the gifts increased since the introduction of the multiplier. These results are in line with the results from my descriptive statistics, they are however not in line with the results from the individual fixed effect regression. The reason that the Individual fixed effect regression does not match with my results from the descriptive statistics and the results from De Nooij, Bekkers and Felix could be like I already said because there are a lot of missings

and not a lot of observations per person. Besides, it could be that we should add more control variables, however I did not have access to more control variables for this research.

Limitations

There are quite some limitations in this research. First of all, some control variables that were used in the literature I found in comparable researches, were not included in the data so I could not control for them. There is therefore a serious risk of omitted variable bias in this research. The control variables I was not able to use are ethnicity, political preference, number of children and the self-rank of social position. For future research it might be interesting to include those variables and see whether maybe these also have effect.

Another risk is that there might be endogeneity. There might be observed or unobserved variables that are not included in our model but do have an effect on a variable we used in the individual fixed effects regression. Another limitation like I mentioned before is the lack of number of observations per individual. There are only 1 or 2 observations per person on average and this makes it hard to draw conclusions based on this. Besides we do not have observations on the years people did not donate. People who never donated are also not included in this dataset which makes the results incomplete. It would be better to have 6 observations per person, because that would make your results more reliable. It would be better to also know the years in which individuals did not give to the Culture and Arts sector. It would be better to have a model with two stages, first whether people give to Cultural and Arts sector yes or no and if so, how much. Now we only know for some people that they donated in certain years, but we know nothing about the years we have no observation of them. Moreover, we have only 843 useable observations in about 10 years which is a very small percentage of the total that is actually given by households, so this also affects the result. Besides this, another limitation is that my data is based on surveys. Surveys are not very reliable because there is a big risk of missings and wrongly interpreted answers. Lastly there is also a big risk of mistakes for example by accidentally filling in wrong answers. Also, most surveys, and this one too, are usually voluntary which may also bias results.

Another limitation of this research is that the results could be biased by the economic financial crisis from 2008 onwards. The effect of the multiplier on the total number of gifts could therefore be overrated. This may have biased the results. It might be that the gifts also increased partly because of the better financial environment so the gifts would have increased anyway

also if the multiplier was never introduced, but that is something we cannot know based on this research. For further research it might therefore be interesting to look at a country comparable to the Netherlands considering gift giving and that did not introduce a law like the multiplier but kept it the same over the years. We could then compare whether the gifts decreased even more so we can see whether the multiplier has had effect. We could do this with the difference in difference method. The last limitation of this paper is the external validity. The Netherlands is a relatively small country and people are used to the fact that most things are organised by the government. In America for example, philanthropy is a big sector because the government support is a lot less. Therefore, there are relatively a lot of people who donate money because the taxes are lower and they know the government does not take care of everything but need donations. There is a big chance that a law like this would have more impact in such a country than in the Netherlands. Besides this, we do not have a lot of observations so we cannot conclude that this research is applicable on all people. For the Netherlands, this is probably okay, however for other countries we would have to look at the tax system whether this might have an effect or not.

Conclusion

The main interest of this research was to look at the giving behaviour of individuals in the Netherlands, especially the donations to the Cultural and Arts sector and look whether the number of gifts or the amount of the gift individuals donate increased because of the introduction of the multiplier in the 'Geefwet'. The main research question was therefore: What is the effect of the introduction of the Multiplier in the 'Geefwet' on the gift an individual gives?

The observations from this research are all from 2006 until 2016. This means most observations are during the economic financial crisis from 2008 onwards until the period the economic crisis came to an end. This might be a bias in our research because it makes sense that the gifts will increase when the economic environment gets better, when the economic crisis is coming to an end. So at the first periods of my research, it makes sense people donate less because if people really do not have a lot of money or lose their job for example, it makes sense that donations is the first thing people will try to save money on. However, when the crisis is getting to an end, it makes sense people will start donating more. So, it could be that the effect of the multiplier might get overrated. Therefore, it makes sense that in the descriptive statistics we see that the number of gifts increases, with the introduction of the multiplier in the 'Geefwet'.

Based on the individual fixed effect regression of this research however, we cannot draw conclusions on the change of the giving behaviour because of the introduction of the multiplier in the 'Geefwet', because all the results are not significant. We can only say that based on this research, there is not a significant increase or decrease in the gifts because of the introduction of the multiplier, therefore introducing such a law will not change anything on the giving behaviour of people. It could be very different when such a law would be introduced during a more economic prosperous times, because then people are more likely to be able to give more money to good causes.

Based on this regression of this research, the policy implications are not clear because there does not seem to be a significant effect, however this contradicts the findings in the descriptive statistics and in other papers. Besides there is a good explanation why there is no effect, there are too many missings and not enough observations to get a good result from the regression. The policy implications based on our descriptive statistics is that people who already donate, will most likely not increase the amount of their donation because of beneficial tax laws, but

people who did not give something could be triggered to start giving donations because of beneficial tax laws.

Future research

For Future research it would be interesting to look at other countries and the tax laws those countries have. Besides this it would be better to have more observations, and especially have multiple observations per individual. Besides it would be interesting to make a model with two stages that also takes the years that people do not donate into consideration. So, every year we would look for every individual whether they donated or not, and if they did what the amount of the gift was exactly. Of course, we might want to add more control variables in our research like we did find in the articles with comparable researches. Also, a difference in difference regression would be interesting to do to compare different countries with and without certain laws on tax deductibility of gifts.

Besides this it would also be interesting to do some research on the periodic gifts and whether the giving behaviour of people changed when tax deductibility for periodic gifts became more beneficial. This was also introduced in 2012. I however did not have sufficient data to do research on this. The tax deductibility of periodic gifts is not just applicable for the Cultural and Arts sector, but for all the donations people make to charities.

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Appendix

Table 1a: Descriptive statistics (weighted) of gifts given per category from 2006-2010

<u>Variable</u>	<u>Observations</u>	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Percentage</u>
Hmchurch	1375	352.191	0	34000	10.2%
Hmhealth	3284	47.655	0	3000	24.5%
Hmintaid	1887	80.803	0	1500	14.1%
HmNat	1479	34.335	0	638	11.0%
HmAn	1141	23.253	0	600	8.5%
HmEnv	909	34.905	0	750	6.8%
HmEducRes	298	52.420	0	2000	2.2%
HmSportsRecr	680	34.768	0	935	5.1%
HmSocBen	1650	26.317	0	1480	12.3%
Hmother	251	148.409	0	2500	1.9%
Hmcampaigns	-	-	-	-	-
HmcultureArts	475	36.677	0	1468	3.5%
Total	13429				100

Table 1b: Descriptive statistics (weighted) of gifts given per category from 2012 until 2016

<u>Variable</u>	<u>Observations</u>	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Percentage</u>
<u>Hmchurch</u>	<u>877</u>	<u>325.137</u>	<u>0</u>	<u>12000</u>	<u>9.0%</u>
<u>Hmhealth</u>	<u>2290</u>	<u>42.436</u>	<u>0</u>	<u>2600</u>	<u>23.6%</u>
<u>Hmintaid</u>	<u>1234</u>	<u>67.268</u>	<u>0</u>	<u>1680</u>	<u>12.7%</u>
<u>HmNat</u>	<u>1085</u>	<u>35.158</u>	<u>0</u>	<u>5000</u>	<u>11.2%</u>
<u>HmAn</u>	<u>840</u>	<u>30.436</u>	<u>0</u>	<u>3000</u>	<u>8.6%</u>
<u>HmEnv</u>	<u>625</u>	<u>28.817</u>	<u>0</u>	<u>360</u>	<u>6.4%</u>
<u>HmEducRes</u>	<u>273</u>	<u>44.304</u>	<u>0</u>	<u>2000</u>	<u>2.8%</u>
<u>HmSportsRecr</u>	<u>417</u>	<u>33.313</u>	<u>0</u>	<u>1500</u>	<u>4.3%</u>
<u>HmSocBen</u>	<u>1154</u>	<u>28.105</u>	<u>0</u>	<u>1000</u>	<u>11.9%</u>
<u>HmOther</u>	<u>205</u>	<u>207.230</u>	<u>0</u>	<u>9000</u>	<u>2.1%</u>
<u>Hmcampaigns</u>	<u>332</u>	<u>32.260</u>	<u>0</u>	<u>500</u>	<u>3.4%</u>
<u>HmCultureArts</u>	<u>381</u>	<u>29.694</u>	<u>0</u>	<u>820</u>	<u>3.9%</u>
<u>Total</u>	<u>9713</u>				<u>100%</u>

Table 2a: descriptive statistics (weighted) sorted by gender from the gifts to Cultural and Arts sector before 2012

Gender	Obs.	Mean	Min	Max
Male	215	44.418	0	1468
Female	260	30.382	0	1000

Table 2b: descriptive statistics (weighted) sorted by gender from the gifts to Cultural and Arts sector from 2012 onwards

Gender	Obs	Mean	Min	Max
Male	188	35.936	0	820
Female	193	24.694	0	425

Table 3: Overall percentage of year of sampling (weighted)

Year of sampling	Frequency	Percentage
2006	1361.569	16.61%
2008	1758.837	21.61%
2010	1683.488	20.58%
2012	1466.766	17.61%
2014	986.991	11.92%
2016	965.349	11.67%
Total	8223	100%

Table 4: Overall percentage of marital Status (weighted)

Marital Status	Frequency	Percentage
Unmarried (never been married)	1718.558	20.90%
Unmarried cohabiting	983.348	11.96%
Living Apart Together	352.720	4.29%
Married	4492.431	54.63%
Divorced	392.594	4.77%
bewidowed	283.350	3.45%
total	8223	100%

Table 5: Overall percentage of Highest Level of Education followed (weighted)

Highest level of education followed	Frequency	Percentage
Primary School	453.882	5.52%
LBO	1360.705	16.56%
MAVO	686.628	8.36%
MBO	2791.115	33.97%
HAVO-VWO	601.430	7.32%
HBO/WO Bachelor	1577.000	19.19%
WO-Master	746.239	9.08%
Total	8217	100%

Table 6: Overall percentage of Gross household income in categories (weighted)

Gross household income in categories	Frequency	percentage
0-10,000 euro	183.763	2.78%
10,000-20,000 euro	802.418	12.13%
20,000-30,000 euro	1252.554	18.94%
30,000-40,000 euro	1522.219	23.02%
40,000-50,000 euro	679.933	10.28%
50,000-60,000 euro	100.148	15.12%
60,000-70,000 euro	309.191	4.67%
70,000-80,000 euro	368.706	5.57%
80,000-90,000 euro	71.675	1.08%
90,000-100,000 euro	168.000	2.54%
100,000-150,000 euro	203.503	3.08%
150,000-200,000 euro	25.487	0.39%
200,000 euro or more	26.404	0.40%
total	6614	100%

Graph 1: deviation of age

