EFFECTS OF FOREIGN OWNERSHIP ON LOCAL CORPORATE PHILANTHROPY

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Effects of Foreign Ownership on Local Corporate Philanthropy

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ABSTRACT: This paper examines the role of parent firm nationality as a determinant of local corporate philanthropy. While research has previously been conducted on numerous other factors that influence firms to give charitably, no study to date has looked directly at differences in donation behaviors of domestic and foreign-owned companies. Furthermore, this paper attempts to show that these differences are manifested at the local level. I use a dataset constructed from plant level corporate donations recorded by branches of the United Way and data that is descriptive of these firms, found in the 2004 D & B Business Directory for the region. The results suggest that the differences in giving practices change over the spectrum of a plant’s employment level. While small foreign-owned firms tend not to donate to their local United Ways, larger firms in this category appear to be some of the most generous companies observed.

Approved: [Signature]

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1. General Overview of Literature

In the late 20th century, economics researchers became concerned with the emerging fields of Corporate Social Responsibility (CSR) and Foreign Direct Investment (FDI). This project attempts to reconcile certain parts of these two concentrations. A general definition of corporate social responsibility is the concept that firms can act or organize their practices in a manner that is of benefit to the community beyond the usual positives associated with the production or provision of goods and services. Thus, CSR is a blanket term that covers everything from firm-based community volunteering initiatives to simple corporate philanthropy of the arts, sciences or various public goods. At the center of the notion of CSR is the idea that firms can affect the communities (either locally or more widely conceived) in which they operate in ways beyond simple business practices.

The field of CSR has developed a series of hotly contested debates over the last half century involving many different aspects of related firm behavior. CSR was born with the notion that firms ought to contribute something greater to their community. However, even this first premise turned out to be inherently contestable. In an article in the New York Times Magazine circa 1970, Milton Friedman openly challenged the idea that firms ought to alter their business practices for this purpose (Friedman 1970). In his September 13th article titled “The Social Responsibility of Business is to Increase its Profits”, Friedman argues that a firm that allocates a portion of profits to social causes of any form, is in essence imposing an unfair tax upon its shareholders who have invested in the firm. While not arguing against philanthropy or social causes, Friedman
instead asserts that it should be left to the shareholders to decide how they wish to spend their returns on the investments that they have made. Theoretically speaking, the same end that can be achieved through shareholders performing philanthropy on an individual basis can also be reached through more consolidated giving by firms. Friedman concludes his argument stating, “there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud”.

As a counter to such arguments, which are entrenched in the ideals of free market capitalism, the framework of the stakeholder model was developed. In the stakeholder model, the shareholders still have a voice and a claim to decisions regarding the behavior of firms. However, unlike the Friedman model, the opinions and positions of other groups affected by firms’ decisions, including a corporation’s management, employees, customers, suppliers, and their greater communities, are taken into account as well (Freeman 2007). This model set up a framework for addressing issues of how firms affect the communities in which they operate. As we live in an increasingly interconnected world, more firms have tended to adopt operational models that are mindful of their communities’ opinions and interests. In order to facilitate this trend, further research has become more and more focused on non-traditional effects of firms on their communities.

Another vein of literature that has come out of this debate consists of studies on the ways that corporate philanthropy affects donating firms. Bartkus et al. (2004) was
able to establish that while cash flow was a significant determinant of a firm's corporate donation, a firm's propensity to give did not affect its financial performance. The article does not find results applicable to the debate surrounding whether or not a firm can carry out philanthropy in a manner that enhances profits or investment returns. Nevertheless, these results suggest that corporate philanthropy can be conducted in a manner that creates a Pareto improvement for society, benefiting the party receiving the gift without hurting any other entity.

The second field of research that this project will examine rises out of concerted efforts to understand one of the ways in which the world is becoming more interconnected. Specifically, this is the field concerned with examining the behaviors of a certain type of firm, the multinational enterprise (MNE). What separates MNEs from other firms, at least in definition, is that MNEs are firms that control production in more than one country. To elaborate on this definition a little more, control is the term used to convey the fact that these firms are the ones that make the decisions regarding what is produced and how. Furthermore, production is used in a broad sense that encompasses the management, development, making or marketing of a good or service. Thus it is possible, and in reality quite common, that MNEs carry out different aspects of production within the various countries in which they conduct business.

Consequently, multinational enterprises are interested in a variety of qualities when choosing where to locate their production processes. The act of an MNE actually beginning operations in a country other than where it is originally based is called Foreign Direct Investment (FDI). Informing the choice of production components in
which a firm invests at different spots around the globe are factors such as access to
suppliers, consumers, intellectual property rights, and tax breaks to name a mere few.
Thus the effects on the local communities in which these firms locate can vary widely in
nature and intensity. Researchers, such as Graham and Krugman (1995), have written
entire books detailing some of the effects of multinational enterprises’ activities on the
United States community. This book also briefly examined the local policy implications
of FDI. However, this research often focuses on a more macro level and less is known
about the effects of FDI on local communities.

Blonigen and Figlio (2000) examined the effects of FDI’s manufacturing
presence within a county on wages and the composition of county level budgets for the
state of South Carolina. The study came to the conclusion that counties for which the
share of manufacturing jobs provided by foreign-owned firms was larger, tended to
enjoy higher real annual wages when controlling for other influencing factors.
Furthermore, statistically significant differences in county level budget compositions
were also identified across communities with varying levels of manufacturing FDI.
This shows that MNEs have some effects on the communities in which they choose to
locate that differ from those of domestic firms. Given that wages are determined either
by the firm itself or the market for the good produced, while county budget allocation is
determined by the government and taxpayers, it is clear that the effects of FDI on local
communities are potentially wide ranging and warrant further examination.
2. Project Focus and Research Question

The question of how and to what extent FDI affects local communities is not one based in xenophobic prejudices of researchers. The issue is not concerned with pointing out differences for the sake of distancing the foreign from the domestic. Instead the concern is founded in the process that brings many of these firms into specific communities. Most communities make the local presence of good-paying jobs a priority for their government leaders. Generally speaking, the greater the number of jobs that can be attracted to a community, the more the area will flourish economically, and the better the local government will look for overseeing the development.

Very large companies engage in a vast percentage of FDI, as access to high levels of capital is often a prerequisite for such investment. This said, the arrival of most MNEs promises to bring a large number of new jobs and tax revenue into a community. Given the desirability of these aspects of FDI, communities are willing to compete with each other to attract the investment. This competition is often the main source of the communities’ costs, which counterbalance the benefits of FDI. Thus, FDI affects the communities it enters both through the process that attracts it and once it has physically manifested itself in the area.

It should be noted that this anticipated influx of employment possibilities appears to be little more than perception when looked at in very broad terms. Graham and Krugman (1995) note that the net effect that FDI has on total employment in the United States is likely miniscule. This claim is based on employment’s closer relationship to levels of supply than levels of demand. Yet to acknowledge only the
pure economic rationale surrounding the issue of employment's intersection with FDI, is to fail to appreciate the complexity and importance of political considerations regarding investments by foreign multinational firms.

Despite this aggregate ambiguity, local governments are willing to employ all sorts of incentives to potentially attract additional jobs and tax dollars. A study conducted by University of Oregon undergraduates Melinda Rowan and Jennifer Witt (2003) concluded that the incentive package used to attract Hynix Semiconductor of America to Eugene entailed $46 million in tax credits and $3 million worth of road enhancements. It should be noted that the same study pegged the net benefits of Hynix's presence in the community at around $227 million over five years. However, it is often difficult to tell if these incentive schemes are fiscally defensible in advance without knowing the nature and extent of other effects that FDI has locally. While wages, taxes, and infrastructure costs are quantifiable and measurable, there are plenty of other effects that are less visible, but still demand inspection.

One such set of effects is that of corporate social responsibility conducted by foreign-owned firms. Government officials would be better situated to make prudent decisions regarding how they entice FDI if they had some idea of what type of corporate citizen these firms tended to be. As I noted earlier, FDI often results in the reallocation of local budgets. Because of these alterations, some government programs are bound to see cutbacks in funding. Consequently, it is possible that valued aspects of the community might suffer from the shortfalls in funding. However, some of the public goods for which I see cuts in funding often attract the support of various
corporate initiatives. This raises the question of the corporate sector's ability and willingness to provide for its communities in ways that the government is no longer pursuing like it did in the past. While I can clearly see that some firms are willing to engage in giving back to their community, the key questions remain as to which firms are the ones engaging in this activity and to what extent is this behavior occurring?

The breadth of ways in which firms choose to engage in CSR makes it often difficult to make comparisons of activity across firms. However, there are practices within the umbrella of CSR for which this issue is alleviated. One such practice is that of corporate philanthropy, or the donating of portions of firms' revenues to charitable causes. It is possible to obtain comparable dollar measures of corporate giving for myriad firms. The donated money can go towards any number of programs benefiting the community, including organizations concerned with feeding the hungry in the area, cleaning up public lands, or assisting in the provision of public goods. Therefore, levels of corporate philanthropy, when broadly measured, work as a reasonable proxy for firms' overall engagement in corporate social responsibility.

Returning to the issue of differences in the effects on local communities of domestic and foreign-owned firms, I now have a quantifiable variable to examine in the assessment of what firms are engaging in CSR and at what level. In fact, this leads to the primary research question of this project. Relative to domestic firms, to what extent are U.S. affiliates of foreign firms involved in corporate philanthropy at the local level? This project attempts to identify any trends of local corporate involvement in community initiatives by both domestic and foreign-owned firms as revealed by their
levels of giving to charity. Knowledge of any such trends could help to better inform the decisions of government officials involved in choosing which companies they believe will be of the most benefit to their communities, and thus most desirable from which to attract investment. Any differences in corporate philanthropic behavior at the local level could potentially mitigate or compound the effects that MNEs have on the communities into which they move. Knowledge of the extent of these additional effects could be helpful in either promoting or curbing efforts to attract FDI in the future. As a local government looks to attract more companies, and thus jobs, to its area, it will invariably be faced with the question of which companies would be best for the community. Since feasibility issues rule out inviting every potential economic suitor to the community for a test run so to speak, a model to estimate the effects of such firms would serve to aide in the answering of this question.

One other note of import concerns the relative scale of typical corporate donations and incentive packages, both measured in dollar amounts. The largest single year donation made by a firm in the dataset that I use is just under $160,000. When a donation of this size is compared to $3 million spent on new infrastructure, it is easy to dismiss the corporate gift as a drop in the bucket. However, an equally weighted comparison of these two figures fails to appreciate the nature of the two things which they represent. While much greater in size, the infrastructure investment can claim anyone who uses the new roads or utilities as its beneficiaries. Furthermore, the expenditure is a one time event. It is true that additional roads and utility lines imply greater maintenance costs over time, but these later costs are generally much smaller in
size and balanced against continuing benefits to the public. On the other side of the comparison, the data examined in this study suggests that most philanthropically inclined corporations have a proclivity for charitable giving. Another way to look at this behavior is to consider that over the course of a decade, the collective donations of a single firm can often breach the $1,000,000 threshold. Hundreds of such firms in a community can collectively contribute very large sums to charitable causes.

3. Model Development

Any model intending to determine the effects of parent firm nationality on a company’s local giving practices requires the inclusion of controls for other determinants. In an effort to figure out which of these controls were most pertinent to the model that I hoped to develop, I searched for a wide array of determinants of established statistical significance. These options were then paired down according to feasibility concerns. By no means are these controls of limited interest. In fact, the effects of these other variables on corporate giving to local charities form a set of secondary foci for the paper.

Brown et al. (2006) used firm size, measured in employees, dollar sales, or dollar equity, to standardize the corporate donations in their sample. Gordon and LeClair (2000), also controlled for the effects of firm size on corporate donations, standardizing all dependent and independent variables in their models by a measure of firm sales. This practice of standardizing the donation amounts allows for the examination of other determinants without the interference of firm size. Where such an
approach falls short, is that it makes estimating the effects of firm size as a determinant of corporate giving difficult. For this reason, I favor setting firm size up as its own set of terms within the corporate donation model specification.

Clearly, controlling for a firm's size is of utmost importance. This relationship might best be explored anecdotally. Firm size is a rather ambiguous term. To see this ambiguity, consider two hypothetical firms. Firm A employs 20 people at its plant in Eugene, Oregon. Firm B maintains a labor force of 100 individuals at its Eugene location. With the information provided so far, the answer to the question of which firm is bigger is obviously firm B. However, if a little more research is conducted and the sales of each firm are revealed, there is now a new dimension of information to consider in answering the size question. If firm A does $5,000,000 in sales every year while firm B's annual sales are $2,000,000, firm A now appears "larger" in some respects. To be fair this type of conundrum is not the usual case. Generally speaking, firm employment and sales are positively correlated. Oftentimes, anomalies in this correlation can be explained by differences in some of the other determinants that I explore below.

Ideally, the data set used for this project would contain measures of all types of firm size, including employment, sales, profits and assets (tangible or otherwise). However, the lack of such a cache of data does not spell doom for the success of the model I develop. Indeed there are distinct advantages to more parsimonious model specifications as well. What these simpler models lack in detail they make up for in the clarity of the narratives that they allow the researcher to tell. For this project, firm size is represented by the single variable of plant employment. This measure is superior to
others in that this project is locally oriented and plant employment judges the size of a firm within the boundaries of the community. Total firm assets would not be a good metric for determining the effects of localized firm size on corporate giving. A measure such as total assets would be better suited for a study of national or international corporate philanthropic endeavors.

So why does firm A record a sales per employee figure of $250,000 while the same statistic for firm B is only $20,000? In all reality, there are any number of potential explanations for such a discrepancy. Which of these explanations prove fruitful depend on the actual nature of the firms in question. For now, assume that firm A is law firm of high repute, specializing in finance law. Furthermore, let firm B be a discount grocery store. It seems normal that a good lawyer would bring in more company revenue and subsequently enjoy a higher wage than a stocker at the super market. There are several ways of dealing with this commonality when developing a model. Studies such as the one conducted by Gordon and LeClair (2000), which looked at patterns in corporate philanthropy of the arts and other specific causes, used the independent variables of employment and profits, both divided by sales, to control for firm size. Both employment and profits were significant in explaining variation in corporate giving as a percent of sales. Effectively, the model developed in Gordon and LeClair (2000) allowed for the control of three aspects of firm size through the use of two regression terms. The coefficients estimated in that study suggest that employment affected corporate contributions at roughly twice the extent that could be attributed to
profits. Employment appears relatively more attractive as a metric for firm size in light of these results.

These productivity differences can be measured more or less explicitly in the relative intensities with which these firms use capital and labor (both skilled and unskilled). However, given that differences in types of firms is of less importance to the central questions of this project, an explicit measure of firms’ production functions is not necessary. Recording what industry a firm works in and then allowing a model to differentiate between firms of disparate sectors is one way to control for the effects of firm nature on corporate giving. Amato and Amato (2007) used this type of scheme to control for industry effects. Firms of the same industry are likely to utilize inputs with similar intensities. Another nice quality of this approach is that measures for firm type in the form of Standard Industrial Classification (SIC) codes are easy to obtain.

The organization of a firm’s plants also holds implications for how a firm carries out corporate giving. Many of the companies examined in this study are small businesses with only one plant. These firms tend to be close to the communities in which they operate because the majority of their customer base is local. Examples of these types of firms are neighborhood corner stores, restaurants, mom and pop shops, and specialty goods stores.

Another type of organization is that of the multi-location firm. This category can be subdivided further into headquarters and branches. A headquarters is the primary location in which a firm conducts managerial decision making. Such locations are often, though not always the chronologically first plants that a firm builds. Sometimes
headquarters are relocated and the first location is abandoned or turned into a branch. However, for many businesses the headquarters plant may not participate directly in the physical production of goods or services. Despite this, headquarters do generally house a larger proportion of employees with the managerial clout necessary to decide issues of corporate giving. Also, in the case of a headquarters being a firm’s first plant, the company might feel or exhibit a closeness to this primary locale that is not evident in other communities in which operations occur.

The second type of plant established by multi-location firms is the branch. Branches tend to be set up in order for a firm to overcome geographic or politico-economic boundaries and gain access to new consumers or resources. In this way branches are very similar to plants created through FDI. The key difference is that branches are set up in the same countries as their headquarters. While this difference might seem insignificant, it allows for the exploration of this project’s central focus.

One last control that warrants attention in a study such as this one is that of firm visibility. While one might like to think that altruism is the only driving factor behind a firm’s choice to donate, with firm size as a determinant of the company’s means to do so, such is not entirely the case. Except for relatively rare anonymous donations, corporate giving is an inherently public act. People often notice when the company down the block donates to the local food bank or school. Some firms’ behavior receives more scrutiny and attention than others. These firms can be described as highly visible. Therefore, corporate giving can become a public relations tool for some visible firms. A measure of firm visibility would have been great for this study. However, in order to
obtain explicit data on the visibility of local firms, an in depth survey would have been required. Such a survey could have constituted an honors thesis in its own right, and was thus outside the scope of this study.

With this in mind, I hypothesize about the unobserved role of firm visibility at various points in this paper. These hypotheses will be based on the notion that a firm’s visibility should be positively correlated with its size and maybe even negatively correlated with the size of the community in which a firm operates. A firm that employs one hundred people in Cottage Grove is likely known by everyone in town, and thus fit the description of highly visible. Another firm, identical to the first one in every aspect except that it operates in downtown Portland, will not usually be as visible to its overall community. More people might recognize the firm in Portland. However, the Portland operation could still be relatively less visible within that community.

4. Hypotheses and Supporting Theory

Central to the development of economic theory is the notion of hypothesizing widely and thoroughly. Without conceptually sound theory on which to ground statistical analysis, relationships can only be described as correlations. As a result, it has been necessary to develop competing but potentially overlapping theories surrounding the determinants of disparate firms’ philanthropic behaviors. There are three separate hypotheses that accompany the primary research question explored in this paper.
4.1. Null Hypothesis

The null hypothesis is that there will be no significant difference between the levels of locally oriented corporate philanthropy by U.S. affiliates of foreign firms and domestic firms, ceteris paribus. While there are certainly many differences between the two types of firms, it should not be forgotten that communities compete for foreign firms because they promise to offer new jobs. These new jobs will be primarily filled by local workers, and there is no reason to believe that long term members of a community working for a foreign-owned firm would act any differently because their new CEO is now of a different nationality. Such individuals likely still care just as much about local issues, thus maintaining the potential to foster a workplace community that is conscientious of local causes. Furthermore, new hires will not be limited entirely to the lowest levels of the corporate hierarchy. Many locals might take on managerial positions and thus have some say in the process of corporate philanthropy.

4.2. Hyper Philanthropic Hypothesis

The second hypothesis is that foreign-owned firms would be more philanthropic at the local level. This hypothesis is rooted in the idea that corporate social responsibility can be used strategically to boost profits by improving public relations and thus favorably altering consumers' preferences. A firm that is noticed as helping to fund local charity events might see itself rising in public popularity within a community, and thus may see an increase in sales from more new customers. In a section of the
book *Philanthropy and Economic Development*, the author asserts, “Charitable donations need not siphon off profits. If targeted wisely, as part of a well conceived marketing plan, contributions can actually improve bottom line performance” (Mescon et al. 1995). A U.S. affiliate of a foreign firm might find itself in a disadvantaged position in terms of public relations relative to locally owned firms, and seek to boost its position through CSR. Another possibility is that some consumers could harbor various prejudices against foreign companies’ products even if American manufacturers make them. For instance, Honda employs Americans to make its cars here in this country. However, there are some individuals who would still refuse to purchase a Honda over say a Ford or Chevrolet even if it would be a better choice for them in all regards other than name. All this leads to the hypothesis that U.S. affiliates of foreign firms would be more inclined to participate in corporate social responsibility to compensate for the aforementioned disadvantages. Thus, it would be fair to expect that such firms would engage in higher levels of corporate philanthropy than their domestically-owned counterparts, ceteris paribus.

4.3. Hypo Philanthropic Hypothesis

The third and final primary hypothesis is that U.S. affiliates of foreign firms are less philanthropic. At the core of this hypothesis is the notion that for most firms of this sort, the executives who are ultimately in charge of issues regarding the allocation of profits are in some way less involved or connected to the local American communities where their companies operate. This is not to suggest that such individuals do not
believe or engage in philanthropy. Instead it is an acknowledgement that these 
executives are more likely to practice corporate giving in other locations or other 
manners. A corporate executive might be less interested in donating to the communities 
where his or her plants are located and more inclined to pursue nationally based 
initiatives for reasons similar to those discussed in the second hypothesis. Here I can 
see that two executives motivated to perform corporate philanthropy for similar reasons 
might do so in different places and thus exhibit vastly dissimilar patterns at the local 
level. While both people are donating, one is having a direct effect on the local 
community and one is not.

4.4. Secondary Hypotheses

The relationship between firm size and corporate giving has been studied 
broadly. Amato and Amato (2007) found the relationship to be cubic in nature. More 
specifically the model they developed exhibited that small and large firms tended to 
donate more to charity, while medium sized firms donated less. That study used data on 
firm assets rather than employment and contained observations for firms with assets 
ranging from $0 to over $250 million. I too hypothesize that a linear trend will not be 
sufficient to model the effects of plant size on corporate giving. The coefficient for the 
linear component should be positive as larger firms have more resources at their 
disposal. As to the signs of the parameters for the non-linear size terms, the nature of 
the dataset used for this project should be considered carefully. Given that most of the 
firms observed are nowhere near as large as the biggest firms in the Amato and Amato
(2007) study, I expect the middle firms in the previous study to be comparable in size to the largest companies in this study. Therefore, the quadratic and cubic parameters should both have negative signs. If larger firms were observed in the data the cubic term might be positive, but this is likely not the case for this study.

I expect the organization of a plant to be a significant determinant of plants' propensities to give to charity. Given that headquarters tend to be more developed firms than single locations and have greater access to disposable revenue, I believe the coefficient for the associated dummy variable will be positive. With this in mind, it is possible that such firms will take funds that could be donated to causes in the communities where branches are located and reallocate these funds towards charitable ends in the primary locales. This expectation mirrors the hypo-philanthropic hypothesis described earlier with regard to domestic affiliates of foreign firms. A trend such as the one just detailed could show in the data as a negative and significant coefficient for the branch dummy variable.

Concerning the significance of the various industry controls, a detailed analysis of each individual industry prior to the running of statistical tests lies outside the scope of this project. However, it is fair to say that I expect some of the variables to be significant while others will not. As stated earlier, firms within the same industry are likely to have similar production functions. Therefore, these like firms should have similar abilities to conduct giving. However, this is not to say that some dissimilar industries will not arrive at the same giving habits through different means. Those
variables which do turn out statistically significant coefficients will be explored in the
section on empirical results and analysis.

5. Data Description

A central component to this project has been the pursuit of suitable and reliable
data. As discussed earlier, the lack of readily available, firm-level data on corporate
giving has led some academics to propose further research on the subject, while
allowing it to remain untouched. Indeed, Amato and Amato (2007) recognized the
potential of future studies using such datasets in their article on the role of firm size and
industry as determinants of corporate giving. The article concludes with the
commentary that further research could improve understanding of corporate
philanthropy by looking at cross-cultural effects (parent firm nationality) and using data
that is disaggregated along several dimensions. The dataset used in Amato and Amato
(2007) was retrieved from the IRS Corporation Sourcebook for the Statistics of Income.
The dataset contained aggregate figures on corporate giving for firms with different
industry classifications. Furthermore, the IRS dataset contained information
categorizing giving by the size of firms' assets. These two aspects of the IRS data
allowed the researchers to examine industry and firm size effects on giving respectively.

Given the established importance of firm size and industry as determinants of
corporate giving, I wanted to include measures of both within my model. However, I
saw potential room for improvement through obtaining a set of firm level data.
Conscious of the existing problems with self-reported survey data on giving, and also
aware of the myriad difficulties entailed in the development, distribution and collection of a homemade survey, I decided to take another approach. The United Way became an obvious choice as a source of giving data after the Lane county branch graciously provided me with four years of data on the donations of over 100 local plants. With the original data set in hand, I was able to compile a spreadsheet complete with measures of firm size, plant organization, and industry.

Before various branches of the United Way could be contacted and solicited for giving data, a random sample of potential data sources had to be generated. I began this process by obtaining an excel file listing Metropolitan (and Micropolitan) Statistical Areas in the United States. From there, a random number generator served to select a reasonably sized sample of 34 population centers. I was able to match only 24 of these regions with email addresses for local United Way branches. The loss of 29.4 percent of the sample at this step was not promising, but the poor response rate of the contacted United Ways proved to be the main source of attrition against this data procurement strategy. Effectively no usable data was derived from this first method.

I consolidated my focus on population centers in the Pacific northwest. If the conclusions drawn from this study would lack national applicability, at least they could be reliable in explaining corporate giving behavior close to home in a variety of cities and towns. I gathered a list of United Ways in cities around Oregon and Washington. A conscious effort was made to include population centers of varying size. This list included cities ranging in size from Salem OR, to Seattle WA. Overall interest in the provision of data was tepid. Several branches of the United Way were willing to help.
The branch from the Mid-Willamette Valley provided a dataset to accompany that of Lane County. Another, dataset came from the Portland area. Unfortunately this last dataset, containing 15 years of observations arrived too late to be feasibly included in this study. Hopefully future iterations of the model developed in this project can utilize the additional data from Portland and draw more widely applicable results. In an effort to round out the sample used for this project I also included over 200 randomly selected firms from the D & B Business directory. The inclusion of these non-donor firms allows for a more representative sample. If these companies were left out, the regression might suggest that all firms donate amounts that are much larger than what is actually observed.

5.1. Dependent Variable

Because it is difficult to obtain accurately measured observations of each firm’s total donations on a local level, I use the dollar amounts of these firms’ donations to local chapters of the United Way as a proxy variable for total local levels of philanthropy. The United Way is an umbrella organization, which is involved in a wide variety of charitable programs and thus is likely to attract a healthy proportion of local philanthropic donations. This means that donations to the United Way should be highly correlated to total donation figures in each county. Furthermore, the United Way is not as subject to the misrepresentation of donation figures as the data provided by individual donor firms might be.
Corporate Giving is the value of the corporate donation to the firm’s local branch of the United Way within a given year. Corporate giving is recorded by the individual United Way branches itself. The measure only entails donations from the corporate entity. In some cases these donation figures also include employee donations accompanied by corporate matches.

5.2. Independent Variables

Firm Size

Plant employment is the primary control for the effects of firm size on local corporate giving as defined above. This data series was aggregated from several sources because no all inclusive set existed at the outset of this project. The United Way of Lane County included data on the number of workers employed at each of the donating firms. The United Way of the Mid-Willamette Valley did not provide such information on donating firms though.

To overcome this lack of data as well as gain information on non-donor firms in Lane, Marion, Polk and Yamhill counties, I developed a methodology for finding reliable data. I developed a hierarchy of potential data sources and attempted to retrieve the relevant data on a firm by firm basis. The superior source for plant employment figures was the 2003/2004 Dun & Bradstreet Regional Business Directory for the Oregon Area. The first year that I have donation data for is 2004. Ideally, the plant employment series would be updated for every single year. Such a series would allow
changes in the employment situation of firms to proxy the effects of the business cycle on corporate giving. However, the collection of such a dataset would have entailed tracking down a copy of the 2000-plus page directory for each year from other libraries and effectively tripled the duration of the data hunt.

As an alternative to this more lengthy process, I opted for consistency and utilized the 2004 data for all firms for which it was provided. When no data was available in the D & B directory, I utilized the free directory Manta.com. One advantage of Manta to other similar services is that it often reported its own figures as well as those of D & B directories to which it had access. Whenever possible, the D & B figure reported by Manta was used. Otherwise, the Manta figure was used instead. On several occasions, a range was listed for plant employment rather than an exact figure. In all these cases the midpoint of the range was used. All observations that contained such assumed values were flagged and eventually excluded from the sample used to generate coefficient estimates for my models.

Hypothesizing that plant employment affected corporate giving in a nonlinear fashion, I have also included squared and cubed series of plant employment within my data set. The majority of variation in corporate giving that can be attributed to plant employment levels will likely come from the linear term for firm size. Larger firms are certainly expected to donate greater absolute sums than their smaller peers. The inclusion of the square and cubic plant employment terms will capture changes in the returns to donations that come from variation in firm size.
**Industrial Organization**

In order to control for the effects of industrial organization on corporate giving, dummy variables are included in the model for different types of firms. The first of these variables, hq, was coded 1 if a plant was the headquarters of a multi-location firm, and 0 if it was any other type of plant location. This type of plant is not to be confused with that of single location (single) firms, which were used as the industrial organization reference category. Obviously a single location firm is its own headquarters. However, a headquarters that is tasked with running multiple plants will have a different set of managerial concerns than will a similar headquarters that only has to operate itself.

The second possible industrial organization dummy variable is called branch. Plants are coded 1 for this variable if they are one location out of many within a firm, and not the organization’s headquarters. Top level management tends not to operate from multi-location firms’ branch plants. Often the highest level of management located at branch plants will not have unrestricted latitude over decisions regarding charitable behavior. Given that the process leading to corporate giving is different for this type of plant compared to headquarters, it is fair to differentiate plants further within the category of multi-location firms.

The first specification that I test utilizes these organizational dummy variables in the most simple of manners. The dummy variables shift the intercept for the plants which fall into the specific categories. The schedule of corporate donations across the spectrum of firm size is allowed to start at different levels for firms from dissimilar
categories. While attractive in its simplicity this approach to specification might not prove to be the best way to model plant donation behavior. An alternative way to control for the effects of industrial organization on donation practices, used in the second specification, is to allow the dummy variables to interact with both linear and nonlinear plant employment. This second type of specification allows disparate types of plants to start in the same place, and engage in corporate giving according to different schedules as plant employment rises. The interaction variable for branch and plant employment takes a value of 0 if the plant is not a branch and the value of the plant's employment level if it is a branch.

**Nationality**

In order to ensure an exhaustive list of foreign firms operating in the sampled areas, I utilized the directory service of uniworldbp.com. The service facilitates a search by various types of areas (zip code, state, region, etc.) for foreign firms operating in the United States. Desiring a list of all foreign owned firms operating in the regions from which I had accrued donation data, I developed a specific search methodology.

This process began with the listing of Oregon counties where the donations originated. The list consisted of Lane, Marion, Polk, and Yamhill counties. From there, I expanded the list to include all of the zip codes in each of these counties. The zip code listings were taken from a free lookup service that utilizes a MelissaData.com database. The resulting zip codes were entered into the uniworldbp.com search engine one at a time. This allowed me to infer from the initial result listing which zip codes were home
to foreign firms and which ones were not. Having generated a final list of which
counties contained foreign firms, I purchased a list of these firms and their American
subsidiaries. The report for Marion, Polk and Yamhill counties was in PDF form. I
ordered the Lane county report in the form of an excel spreadsheet so as to more
efficiently incorporate the firms into my master spreadsheet.

The reports from uniworldpb.com included information on foreign firms and
their American subsidiaries such as NAICS codes, parent firm and domestic affiliate
employment, international sales, local and foreign addresses, and names of important
managers. These NAICS codes were later converted into SIC codes for use in my
regression models. For the sake of this project, not all the available information served
an immediate purpose. However, the excess information did assist in the process of
cross referencing the uniworldpb.com findings with entries in the D & B directory.

Only the foreign-owned firms were entered into the regression dataset. The reasoning
for this is that only the affiliate conducts tangible production in the region. While the
parent firm is recorded in the directory, all information pertaining to these firms is
descriptive of the foreign firm and is associated with an address abroad.

Written as Foreign, the variable for nationality of a plant’s parent firm, is coded
1 for firms with foreign parents, and 0 otherwise. In one case, a merger between an
American and foreign firm led to the coding of the related plants as 1. Interaction terms
between a plant’s nationality and linear as well as nonlinear plant employment were
also employed in both specifications explored below. The coefficient of these variables,
if significant, will speak to the additional effects of plant employment on corporate
giving that results from the firm having a foreign parent.

**Industry Effects**

To control for differences in giving behavior across the spectrum of industries,
SIC codes are included for every plant in the data set. Several coding schemes were
explored through regression analysis. The scheme used for the ultimate models is based
on groupings used in Amato and Amato (2007), with some changes to adjust for the mix
of industries present in my corporate giving sample. For instance a category devoted
specifically to the petroleum industry in the 2007 article is not included in this study
due to a lack of such firms in the sample. The adaptations were cross-referenced with an
SIC list from the Securities and Exchange Commission to ensure against any
nonsensical groupings. An upper and lower bound was selected to describe the range
of SIC codes associated with each of 11 relevant industries. 11 industry dummy
variables were created. Each dummy variable is coded 1 if the plant’s SIC falls within
the associated range of values. Every dummy variable for which a plant did not have a
relevant SIC recorded a 0.

Some of the sampled firms reported producing in several different SIC ranges.
These multi-industry firms are only recorded as operating in their primary SIC range for
this project. Table 1 presents the industry dummy variables and the associated SIC
ranges. In the final model specification each industry dummy variable goes by icX,
where X is a whole number in the series 0, 1, 2 ... 10. The reference category for this
set of variables is Retail Trade (ic6). An alternative specification crossed plant
employment and the various industry dummies to generate variables that go by the form
empicX, with X defined in the same manner.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Industry Code Variable</th>
<th>SIC Code Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraction, Mining &amp; Construction</td>
<td>0</td>
<td>0-1499</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1</td>
<td>1500-3999</td>
</tr>
<tr>
<td>Transportation</td>
<td>2</td>
<td>4000-4799</td>
</tr>
<tr>
<td>Communications</td>
<td>3</td>
<td>4800-4899</td>
</tr>
<tr>
<td>Utilities</td>
<td>4</td>
<td>4900-4999</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>5</td>
<td>5000-5199</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>6</td>
<td>5200-5999</td>
</tr>
<tr>
<td>Depository Institutions</td>
<td>7</td>
<td>6000-6099</td>
</tr>
<tr>
<td>Financial, Insurance &amp; Real Estate</td>
<td>8</td>
<td>6100-6299, 6400-6799</td>
</tr>
<tr>
<td>Insurance Carriers</td>
<td>9</td>
<td>6300-6399</td>
</tr>
<tr>
<td>Service Industries</td>
<td>10</td>
<td>7000-9000</td>
</tr>
</tbody>
</table>
6. Empirical Results and Analysis

This section contains the empirical results of statistical tests run to verify or refute my hypotheses. First, I use a specification involving dummy variables for different types of plants and a near-minimal level of interaction terms to look at the effects of these qualities on a plant’s donation behavior. Next, I test an alternate specification, which interacts all dummy variables with plant employment. Ordinary
least squares regression is performed on both of these specifications. Finally, I subject the second model specification to a tobit regression and examine the results.

6.1. Model 1

Table 3 presents the estimates generated by an ordinary least squares regression on the model described in Equation 1. This specification contains linear and nonlinear plant employment terms. Controls for plant type and firm industry, in the form of dummy variables are also included. Firm nationality is controlled for in this specification through the inclusion of the foreign dummy variable. Finally, linear plant employment and the foreign firm dummy were interacted to examine cross effects.

**Equation 1: Model 1 Specification**

\[
(uw\_gift) = b_0 + b_1(emp\_plant) + b_2(emp\_plant)^2 + b_3(emp\_plant)^3 + b_4(empfor) + b_5(branch) + b_6(hq) + b_7(foreign) + b_8(ic0) + b_9(ic1) + b_{10}(ic2) + b_{11}(ic3) + b_{12}(ic4) + b_{13}(ic5) + b_{14}(ic7) + b_{15}(ic8) + b_{16}(ic9) + b_{17}(ic10)
\]

All observations for which inference was used to generate plant employment were dropped out of the regression sample. These observations were originally included in the interest of using a large sample for the regressions. However, even with the exclusion of the questionable data, the sample still retained over 900 observations. Given that a number of previous studies on the determinants of corporate giving utilized under 100 observations, the sample used for this study is amply sized for the purpose of
drawing reliable conclusions. Furthermore, the results generated from the restricted sample are largely the same as that of the larger dataset. However, the model fits the restricted sample much better, and all terms of significance in the regression that used the whole sample were equally if not more significant in the output of the regression of the restricted sample.

The model specified by Equation 1 represents the notion that dissimilar types of plants in different industries will all give base amounts to their local United Ways, and the average magnitude of this base donation is reliant on each plant's specific situation. While easily modeled and conceptualized, this approach has its faults. The regression output generates a series of coefficients for each plant type and industry. Some of these coefficients are statistically significant and negative enough in absolute terms to suggest that an average firm of a specific description would donate negative amounts to the United Way. For example, the results contained in Table 3 suggest that a foreign-owned manufacturing firm which employs a small number of employees will give a negative corporate gift to the United Way on average. A negative donation is obviously fictitious.
Table 3: OLS Regression Output (Model Specification I)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Employment</td>
<td>17.9836***</td>
</tr>
<tr>
<td></td>
<td>(3.1787)</td>
</tr>
<tr>
<td>Plant Employment Squared</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.0028)</td>
</tr>
<tr>
<td>Plant Employment Cubed</td>
<td>-6.67e-07</td>
</tr>
<tr>
<td></td>
<td>(4.65e-07)</td>
</tr>
<tr>
<td>Foreign</td>
<td>-3626.558**</td>
</tr>
<tr>
<td></td>
<td>(1471.344)</td>
</tr>
<tr>
<td>Plant Employment x Foreign</td>
<td>32.9982***</td>
</tr>
<tr>
<td></td>
<td>(4.4943)</td>
</tr>
<tr>
<td>Branch</td>
<td>-1199.409**</td>
</tr>
<tr>
<td></td>
<td>(599.3849)</td>
</tr>
<tr>
<td>Headquarters</td>
<td>-1195.8</td>
</tr>
<tr>
<td></td>
<td>(881.411)</td>
</tr>
<tr>
<td>Extraction, Mining &amp; Construction</td>
<td>-1776.868</td>
</tr>
<tr>
<td></td>
<td>(3397.58)</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>641.7871</td>
</tr>
<tr>
<td></td>
<td>(878.0584)</td>
</tr>
<tr>
<td>Transportation</td>
<td>25.9454</td>
</tr>
<tr>
<td></td>
<td>(1626.886)</td>
</tr>
<tr>
<td>Communications</td>
<td>461.769</td>
</tr>
<tr>
<td></td>
<td>(2104.908)</td>
</tr>
<tr>
<td>Utilities</td>
<td>2693.51*</td>
</tr>
<tr>
<td></td>
<td>(1601.645)</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>3976.934***</td>
</tr>
<tr>
<td></td>
<td>(1026.026)</td>
</tr>
<tr>
<td>Depository Institutions</td>
<td>1080.531</td>
</tr>
<tr>
<td></td>
<td>(1211.604)</td>
</tr>
<tr>
<td>Financial, Insurance &amp; Real Estate</td>
<td>1813.571</td>
</tr>
<tr>
<td></td>
<td>(1109.65)</td>
</tr>
<tr>
<td>Insurance Carriers</td>
<td>-7373.465***</td>
</tr>
<tr>
<td></td>
<td>(2396.707)</td>
</tr>
<tr>
<td>Service Industries</td>
<td>-657.0352</td>
</tr>
<tr>
<td></td>
<td>(836.9257)</td>
</tr>
</tbody>
</table>

Notes: Numbers in parentheses are standard errors. Statistical significance is denoted by *, **, *** for the 10, 5, and 1 percent levels respectively.
6.2. Model 2

In order to confront these seemingly fictional results, an alternative specification was designed. Equation 2 describes the specification for this second model and the regression output using this specification is presented in Table 4. The main concept behind this alternate specification is that interacting the dummy variables for plant type and industry with plant employment allows the model to look at what I call the separate donation trajectories of these dissimilar establishments as employment increases. Figure 1 displays the set of donation trajectories generated by Model 2.

Equation 2: Model 2 Specification

\[(uw\_gift) = b_0 + b_1(\text{emp\_plant}) + b_2(\text{emp\_plant})^3 + b_3(\text{emp\_for}) + b_4(\text{emp\_for}) + b_5(\text{emp\_branch}) + b_6(\text{emp\_branch})^2 + b_7(\text{emp\_hq}) + b_8(\text{emp\_hq}) + b_9(\text{emp\_0}) + b_{10}(\text{emp\_1}) + b_{11}(\text{emp\_2}) + b_{12}(\text{emp\_3}) + b_{13}(\text{emp\_4}) + b_{14}(\text{emp\_5}) + b_{15}(\text{emp\_7}) + b_{16}(\text{emp\_8}) + b_{17}(\text{emp\_9}) + b_{18}(\text{emp\_10})\]

As plant employment changes, the size of corporate gifts to local United Ways generally vary according to these paths. These trajectories are representations of average firm behaviors and not necessarily descriptive of any specific firm or firms. Nevertheless this second approach to modeling firm donation practices allows plants to behave differently without imposing separate deterministic starting points for the giving behavior of each type of plant. Instead all plants give a corporate gift of zero dollars
when employment is zero. While seemingly obvious, this prediction does not arise when using model 1. In absolute terms, larger plants have a greater potential to differentiate their giving practices from other plants of similar size than do smaller operations. This potential is visible in figure 1, where different types of firms’ trajectories are divergent as employment increases.

The quadratic plant employment term is not significant when the additional interaction terms are included in the model. However, the cubic term for plant employment did prove significant. Plant type dummy variables were interacted with both the linear and quadratic plant employment terms in order to develop a detailed picture of how corporate gifts change over the spectrum of plant size. Interactions with cubic plant employment served no purpose but to dilute the strength of the model. While the largest firm in the sample employed over 5000 people, the vast majority of establishments had labor forces not exceeding 1000 individuals. Therefore Figure 1 does not display trends for firms above this threshold.

Figure 1 tells several interesting stories about plants’ local corporate giving practices. Branches appear to donate in a very similar manner to headquarters. The main difference between the two plant types, when both are domestically-owned, is that the donation trajectory of branches is flatter as if the same curve was rotated slightly clockwise. Both domestically owned branch and headquarters plants display concave donation trajectories, implying a decline in the propensity of these firms to donate relative to their employment levels as they build their labor force. Plants of foreign-owned multiple location firms also exhibit the trend of quasi-parallel donation
trajectories for headquarters and branches. While the donation hierarchy of headquarters over branches is maintained among these foreign-owned firms, their trajectories are convex, indicating increasing returns to donations from plant employment.
Table 4: OLS Regression Output (Model Specification 2)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Employment</td>
<td>43.5352***</td>
</tr>
<tr>
<td></td>
<td>(3.0437)</td>
</tr>
<tr>
<td>Plant Employment Cubed</td>
<td>2.09e-06***</td>
</tr>
<tr>
<td></td>
<td>(5.21e-07)</td>
</tr>
<tr>
<td>Foreign x Plant Employment</td>
<td>-54.7969***</td>
</tr>
<tr>
<td></td>
<td>(14.5666)</td>
</tr>
<tr>
<td>Foreign x Plant Employment Squared</td>
<td>0.0683***</td>
</tr>
<tr>
<td></td>
<td>(0.0181)</td>
</tr>
<tr>
<td>Branch x Plant Employment</td>
<td>-23.5721***</td>
</tr>
<tr>
<td></td>
<td>(3.8238)</td>
</tr>
<tr>
<td>Branch x Plant Employment Squared</td>
<td>-0.0143***</td>
</tr>
<tr>
<td></td>
<td>(0.0031)</td>
</tr>
<tr>
<td>Headquarters x Plant Employment</td>
<td>-21.0448***</td>
</tr>
<tr>
<td></td>
<td>(4.0843)</td>
</tr>
<tr>
<td>Headquarters x Plant Employment Squared</td>
<td>-0.01362***</td>
</tr>
<tr>
<td></td>
<td>(0.0029)</td>
</tr>
<tr>
<td>Extraction, Mining &amp; Construction x Plant Employment</td>
<td>-10.5509</td>
</tr>
<tr>
<td></td>
<td>(11.6360)</td>
</tr>
<tr>
<td>Manufacturing x Plant Employment</td>
<td>4.3479*</td>
</tr>
<tr>
<td></td>
<td>(2.3815)</td>
</tr>
<tr>
<td>Transportation x Plant Employment</td>
<td>-12.4207</td>
</tr>
<tr>
<td></td>
<td>(14.4076)</td>
</tr>
<tr>
<td>Communications x Plant Employment</td>
<td>-10.2604</td>
</tr>
<tr>
<td></td>
<td>(13.3157)</td>
</tr>
<tr>
<td>Utilities x Plant Employment</td>
<td>11.3367</td>
</tr>
<tr>
<td></td>
<td>(16.6520)</td>
</tr>
<tr>
<td>Wholesale Trade x Plant Employment</td>
<td>37.7627***</td>
</tr>
<tr>
<td></td>
<td>(2.7268)</td>
</tr>
<tr>
<td>Depository Institutions x Plant Employment</td>
<td>0.6219</td>
</tr>
<tr>
<td></td>
<td>(6.3759)</td>
</tr>
<tr>
<td>Financial, Insurance &amp; Real Estate x Plant Employment</td>
<td>1.5658</td>
</tr>
<tr>
<td></td>
<td>(4.1632)</td>
</tr>
<tr>
<td>Insurance Carriers x Plant Employment</td>
<td>-9.3522***</td>
</tr>
<tr>
<td></td>
<td>(3.6086)</td>
</tr>
<tr>
<td>Service Industries x Plant Employment</td>
<td>-16.5400***</td>
</tr>
<tr>
<td></td>
<td>(3.0088)</td>
</tr>
</tbody>
</table>

Notes: Numbers in parentheses are standard errors. Statistical significance is denoted by *, **, *** for the 10, 5, and 1 percent levels respectively.
Domestically-owned single location firms donate more than any other type of firm until employment reaches roughly 750 people. At this point, foreign-owned firms from the same organizational category usurp their domestic counterparts as the largest donors. Companies with several plants employing nearly 1000 people are likely to focus their charitable efforts on less localized causes. The largest disparity between the corporate gifts of plants from multiple location firms and those of single location firms
is realized towards the upper bound of Figure 1. Domestically-owned single plant firms and all foreign-owned firms exhibit convex donation schedules.

The fact that donation trajectories are not unanimously concave or convex suggests that size affects firms differently with regard to donating practices. Single location firms appear to show signs of placing an increasing priority on corporate giving as they grow. As more of a population center is brought into the fold by a local firm, these firms seem to become increasingly important fixtures in the community. In other words, a large firm that only operates in Eugene, Oregon is generally viewed as a key part of the Lane county community. On the other hand, a headquarters in Eugene that has plants all over the country will undoubtedly be viewed by the public as part of not only the local community, but national community as well. Therefore such a multi-location firm is likely to attempt to carry out philanthropy in a way that is maximally visible on the national stage, and (practically by definition) not focused on the local branch of the United Way. These results do not imply that large headquarters plants average smaller donations than equally sized single plant firm. Instead, the implication is that localized corporate giving is an activity that large single plant firms typically engage in to a greater extent.

While a headquarters in Eugene might sensibly donate locally as well as in the communities where it operates branches, a single location firm located in Eugene is relatively less likely to give to charity in other parts of the country where it does not conduct business. Plants from multiple location firms of foreign parentage do not display the same trend of decreasing returns to corporate giving as employment rises. It
appears that the effects of a plant having a foreign parent are more powerful than the effects attributable to the fact that a plant is part of a multiple location firm. While seemingly the last to appear on the philanthropic scene, foreign-owned multiple plant firms are quick to overtake their domestic counterparts in terms of absolute local donations.

Model 2 does not describe certain types of firms donating sizably negative amounts right at the lower bound of the employment spectrum. Instead all firms donation paths have an intercept of zero. However, the donation trajectory for foreign-owned firms is still in the negative until plant employment reaches 400 (single plant) to 700 (branch plant) employees. This estimate of negative donations is still a problem weakening the credibility of this model’s predictions. The model attempts to fit a trend line to the data, and in this case the only way it can achieve this end with the specification provided is to estimate negative corporate gifts for some values of employment. In Figure 1, all negative values were displayed as zeros. A tobit regression was used to attempt to overcome this problem.

6.3. Tobit Regression of Model 2

In order to confront the issue of negative donation estimates, a tobit regression was performed on the model specified in Equation 2. The tobit regression helps to deal with the issue that negative donation amounts cannot be observed in reality. Table 5 presents the output of the tobit regression. Figure 2 shows the donation trajectories arrived at though the tobit regression. The picture largely resembles that of Figure 1
except the curves have the appearance of being slightly pulled apart vertically. The minimum value estimated for the corporate gifts of foreign-owned firms is more negative in Figure 2 than it was in Figure 1. While slightly more pronounced, the results generated by the tobit regression generally support the findings from ordinary least squares regression using the same specification.

One of the most interesting patterns revealed by both regressions on the interactive model is that of foreign-owned firms. Both the linear and quadratic interaction terms were significant at better than the 1 percent level of a one-sided t test. The signs of these exceedingly significant coefficients are opposite. Are foreign-owned firms more or less giving in the sense defined for this project? In quintessential economics fashion, the correct answer is “it depends”. The data actually supports both of the dueling hypotheses developed earlier, contingent on the firm’s employment level. The strongly negative coefficient for the plant employment-foreign interaction term means that at low employment levels these foreign owned firms tend to donate less than their domestically owned peers, ceteris paribus. However, foreign-owned firms that employ large numbers of people give more than their peers to the local United Way branches. By the time a foreign-owned firm employs 200 people, the trajectory hits its minimum. The threshold at which such a firm begins to donate appears to be around 400 employees. Once such a firm employs about 850 laborers, its corporate gift to the local United Way surpasses that of all other types of firm on average.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Employment</td>
<td>51.2256***</td>
</tr>
<tr>
<td></td>
<td>(4.2599)</td>
</tr>
<tr>
<td>Plant Employment Cubed</td>
<td>3.62e-06***</td>
</tr>
<tr>
<td></td>
<td>(7.46e-07)</td>
</tr>
<tr>
<td>Foreign x Plant Employment</td>
<td>-102.2225***</td>
</tr>
<tr>
<td></td>
<td>(24.1544)</td>
</tr>
<tr>
<td>Foreign x Plant Employment Squared</td>
<td>0.1193***</td>
</tr>
<tr>
<td></td>
<td>(0.0294)</td>
</tr>
<tr>
<td>Branch x Plant Employment</td>
<td>-17.6472***</td>
</tr>
<tr>
<td></td>
<td>(5.4820)</td>
</tr>
<tr>
<td>Branch x Plant Employment Squared</td>
<td>-0.0246***</td>
</tr>
<tr>
<td></td>
<td>(0.0044)</td>
</tr>
<tr>
<td>Headquarters x Plant Employment</td>
<td>-11.7564**</td>
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<tr>
<td></td>
<td>(5.8723)</td>
</tr>
<tr>
<td>Headquarters x Plant Employment Squared</td>
<td>-0.0249***</td>
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<td></td>
<td>(0.0042)</td>
</tr>
<tr>
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</tr>
<tr>
<td></td>
<td>(17.6847)</td>
</tr>
<tr>
<td>Manufacturing x Plant Employment</td>
<td>3.5243</td>
</tr>
<tr>
<td></td>
<td>(3.3410)</td>
</tr>
<tr>
<td>Transportation x Plant Employment</td>
<td>-25.0072</td>
</tr>
<tr>
<td></td>
<td>(24.1605)</td>
</tr>
<tr>
<td>Communications x Plant Employment</td>
<td>-0.9864</td>
</tr>
<tr>
<td></td>
<td>(19.0916)</td>
</tr>
<tr>
<td>Utilities x Plant Employment</td>
<td>52.5910**</td>
</tr>
<tr>
<td></td>
<td>(22.8575)</td>
</tr>
<tr>
<td>Wholesale Trade x Plant Employment</td>
<td>41.4596***</td>
</tr>
<tr>
<td></td>
<td>(3.807)</td>
</tr>
<tr>
<td>Depository Institutions x Plant Employment</td>
<td>10.7409</td>
</tr>
<tr>
<td></td>
<td>(8.9162)</td>
</tr>
<tr>
<td>Financial, Insurance &amp; Real Estate x Plant Employment</td>
<td>2.7085</td>
</tr>
<tr>
<td></td>
<td>(5.7081)</td>
</tr>
<tr>
<td>Insurance Carriers x Plant Employment</td>
<td>-16.5185***</td>
</tr>
<tr>
<td></td>
<td>(5.4819)</td>
</tr>
<tr>
<td>Service Industries x Plant Employment</td>
<td>-18.9788***</td>
</tr>
<tr>
<td></td>
<td>(4.2502)</td>
</tr>
</tbody>
</table>

Notes: Numbers in parentheses are standard errors. Statistical significance is denoted by *, **, *** for the 10, 5, and 1 percent levels respectively.
This trend can be viewed in two ways. The first way to think about this is to imagine a single, small domestic affiliate with a foreign parent growing into a larger company and changing its donation practices as it expands. Another method is to envision two foreign-owned firms of vastly different size giving disparate amounts. The most compelling reason that I can offer for this trend is that small foreign firms are likely able to move into a community and remain under the public’s radar. A small foreign firm, employing only a few skilled laborers (as is often the case), is unlikely to require the incentives of massive public infrastructure expenditure or customized tax breaks in order to be attracted to a new area. These firms might be looking to take advantage of an existing tax incentive for technology start-ups, or proximity to positive spillovers from other similar firms. Neither of these potential incentives are libel to attract the ire or skepticism of the public, allowing firms in search of these advantages to pursue the benefits without accruing any costly negative visibility. With visibility low, these firms have a lower propensity to donate to local causes for all reasons delineated in the hypo philanthropic hypothesis.

The picture changes immensely if such a firm grows to become a major local employer, or requires the lure of incentive schemes that are costly to the public. These larger firms do not have the luxury of low visibility enjoyed by their smaller counterparts and younger selves. A foreign firm that is granted specific tax breaks and other concessions not enjoyed by local domestic firms will face a somewhat more uphill public relations battle than will its peers. One possible strategy to deal with this adversity is for these firms to develop a reputation for giving back to the community in
which they operate. Whether or not this is the specific motivation of foreign-owned firms’ donation practices, the data does suggest that these enterprises conduct corporate giving in a vastly different manner than their American grown counterparts.

Figure 2: Model 2 Donation Trajectories (Tobit Regression)

One last set of interesting results is that of the differing extents to which various industries donate to local United Ways. Figure 3 shows the donation trajectories of single plant firms in different industries. All of the curves were generated using the
results from the tobit regression. The reference category was retail trade, and all industries not listed in the legend performed corporate giving in a manner that was not statistically different from that of the retail industry. Utility companies tend to be regionally located and their more locally philanthropic nature seems to reflect this greater connection to their communities. The other types of service industries do not share this type of connection though. Given the often national nature of insurance carriers, it is not entirely surprising that their local corporate giving practices are depressed compared to other industries. Service providers among the sample used in this project appear to donate less than their peers. Whether this trend comes out of a decreased ability or desire is impossible to tell from the results generated in this analysis.
7. Conclusion

This paper presents results suggesting that foreign-owned firms do in fact donate
different quantities of cash to their local branches of the United Way than do their
domestically-owned counterparts, ceteris paribus. On average, foreign-owned firms
appear to abstain from donating to their local United Way until they employ over 400
people. Beyond this employment threshold, the donation trajectory of these foreign
firms is steep enough to swiftly overtake the average corporate gifts of all other types of
firms. The evidence shows that this result holds for medium-sized communities in Oregon’s Willamette Valley. While geographically limited, these conclusions were arrived at utilizing firm level data on corporate giving and firm characteristics. This has allowed for a more ground up look at company donating behavior than has previously been the norm for studies on related subjects.

Another limitation of this study is that it does not incorporate data that would allow controlling for managerial discretion and values as determinants of corporate giving. Buchholtz et al. (1999) found that firm resources only proved to be significant determinants of giving when the models lacked these aforementioned qualitative controls. This previous study was able to show that such discretion and values metrics were able to mediate the influence of firm size and assets on giving. Future research that develops a survey similar to the one used in Buchholtz et al. and incorporates the findings with data on firm level donation behaviors of domestic and foreign-owned firms could prove promising. Unfortunately, the threshold of feasibility for such a future study is probably crossed long before the sample size reaches 900 observations, especially when a detailed survey of firms’ CEOs is required.

Future research could indeed improve on this study by simply expanding the sample size and looking at a wider variety of foreign firms. If enough firms are examined, it could be possible to establish the differences in the giving practices of corporations with parents of different nationalities. The inclusion of 15 years of United Way data for the Portland metropolitan area could easily improve the applicability of this paper’s results. Again, the late arrival of the Portland data coupled with the time
intensive nature of cross referencing the observations with information from the Duns & Bradstreet Directory prevented the expansion of the dataset at present. I do intend to work with the Portland data in the coming weeks to further develop my understanding of various firms’ donation habits.
8. References


Online References
