The Correlation Between CSR and Revenue

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Many studies have discussed the importance of corporate social responsibility (CSR); however, the relationship between a company's spending on CSR and revenue remains to be explored. Two companies, Apple and Nike, were studied, and their revenues before and after the implementation of CSR programs were compared. This information helps us understand if consumers are attracted to companies that seem selfless and caring about their community and environment. It is important to study this correlation as it could motivate businesses to start being socially responsible or invest more money into CSR programs. A company's efforts to be ethical help their reputation as well as the environment and people. It may also influence consumers to buy products from companies that are socially responsible over others because they know a portion of the company's profits will go towards helping the community. This study aims to understand and identify a possible correlation between the spending on CSR and annual revenue of a company.

INTRODUCTION

Corporate social responsibility is defined as the responsibility a company holds in maintaining and managing its social, economic, or environmental impacts on local, national, or global communities. It involves incorporating and prioritizing goals that benefit society into those of the company (BDC, n.d.). Corporate social responsibility is composed of four main components: economic, legal, ethical, and discretionary (Sineriz, 2011).

Economic social responsibility requires a company to earn enough profit for it to pay its employees the right wages, pay taxes, and meet all other financial obligations that are required by the government. Legal social responsibility requires a company to be honest with its customers and employees about its processes, practices, and products. It also involves adhering to the laws and following proper regulatory practices or policies such as having inspections done and documenting necessary paperwork. Ethical social responsibility involves doing the right thing and being mindful of how the company's actions may affect the environment, employees, and customers. Discretionary social responsibility involves contributing to the community by using company resources. This includes helping charities by donating or offering employees volunteering opportunities for non-profit organizations or causes. Corporate social responsibility "shows that you care about your impact on the world, which appeals to consumers who want to feel good about the products they buy" (Sineriz, 2011, para. 7).

According to Accenture Strategy's latest global survey, "57% of consumers [in Canada] say their purchasing consideration is driven by a company's ethical values" (Barton et al., 2018, "Canada", para. 4).

Globally, 91% of consumers act responsibly and address issues related to society and the environment while 84% seek out responsible products whenever possible (Cone Communications, 2015). Companies are expected to act responsibly and those that do are praised by the media and consumers. Additionally, consumers may boycott, or avoid, companies that act irresponsibly. "Boycotts are one of the preferred tools for consumers to make their feelings about corporate power known, with 90% of consumers willing to boycott a company if they learned of irresponsible or deceptive business practices" (Ethical Hour, 2017, para. 11). However, it is not common knowledge if being socially responsible increases a company's sales or worth. Knowing if there is a correlation between the amount of money a company spends to be socially responsible and their revenue is important because it allows us to see if CSR has an effect on consumers' buying decisions, which can increase or decrease the company's revenue. If it is proven that a larger spending on CSR tends to correlate with a larger revenue, businesses will have a greater incentive to invest more money into CSR programs to help communities and the environment.

This report aims to study the spending on CSR and the correlation it may have with a company's revenue. Apple and Nike were chosen to be analyzed because they are both well-known and established companies. In addition, Apple is a technology company while Nike is a footwear company. Using two different businesses that target different audiences can show that CSR initiatives can affect a variety of brands and industries.

METHODS

Data concerning the annual revenue six years before and after the implementation of CSR programs for Apple and Nike were collected. The data were found and cross-referenced using CSR reports, company websites, statements, various online sources, and the media. The data related to the spending on CSR mostly concern publicized donations to various charities and causes due to the availability of data concerning the other types of CSR. In the case of Apple, which launched their CSR programs in 2005, data about the company's revenue and CSR between 1999 and 2012 were collected. Nike implemented its CSR programs in 1998, so data concerning the six years before and after that were collected as well.

The means and medians were calculated for the annual revenues before and after the implementation of CSR programs. The standard deviation was calculated to show the variation or extent of deviation from the mean. Using the standard deviation and mean, the skewness was calculated. The interquartile ranges were calculated to describe the distribution of the data, and box plots were made. Then, the upper and lower fences were identified along with any outliers. No outliers were removed or modified in this study. The box plots were also used for error checking. Because the data related to annual revenue are continuous and numeric, the Wilcoxon paired difference signed rank tests were done to compare the median annual revenues of Apple and Nike before and after CSR implementation. They were also compared using graphs to identify a noticeable increase after CSR implementation.

Table 1. Median revenue before and after CSR Implementation

Company	Median Revenue Prior to CSR Implementation (millions USD)	Median Revenue After CSR Implementation (millions USD)	P-Values from the Wilcoxon Paired Difference Signed Rank Tests
APPLE	$6,207.00	$42,905.00	0.01563*
NIKE	$4,760.80	$9,893.00	0.01107*

The information concerning the annual revenues of each company was displayed in histograms to determine if each company's revenue increased after CSR implementation. The information concerning the spending on CSR was put into line graphs, showing its percent increase from the first year after CSR was implemented to the last year covered by this study. The same was done for the annual revenues of each company. The line graphs were then combined. The resulting double line graphs were used to compare the percent increase of Apple and Nike's annual revenues to their spending on CSR.

The standard deviation and box plots were calculated and made using Microsoft Excel 2016. The histograms and line graphs were made on Meta-chart, an online graphing tool. The p-values were found using RStudio, R version 3.6.3 to conduct the Wilcoxon paired difference signed rank tests.
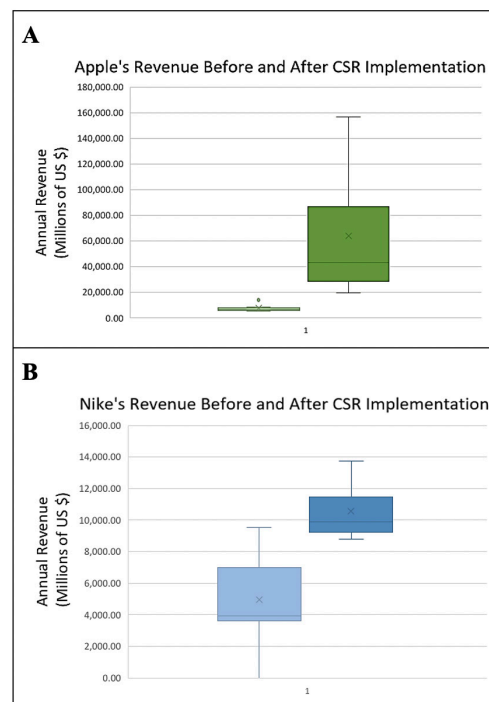
RESULTS

Figure 1. (A) Box plots for Apple's annual revenue showing one outlier and **(B)** for Nike's revenue showing no outliers. Box plots on the left represent the revenues before CSR implementation, and those on the right represent the revenues after.

Non-parametric statistical approaches were taken to analyze the revenues as the data were non-normally distributed (mean > median). One outlier was found (**Figure 1A**). The values from the skewness calculations were also closer to the upper values, so the data are left, or negatively, skewed.

The median annual revenue increased significantly for Apple and Nike after they launched CSR programs (**Table 1**). The p-values (p = 0.01563 and p = 0.01107, respectively) were lower than the alpha value, which was 0.05. This means there is less than a 5% chance the relationship between spending on CSR and revenue was due to chance. It also means Apple and Nike's revenues increased more rapidly after CSR implementation than they would have in the absence of CSR programs. Therefore, we were able to reject the null hypothesis, which proposed their revenues were not affected by or associated with the implementation of CSR programs.
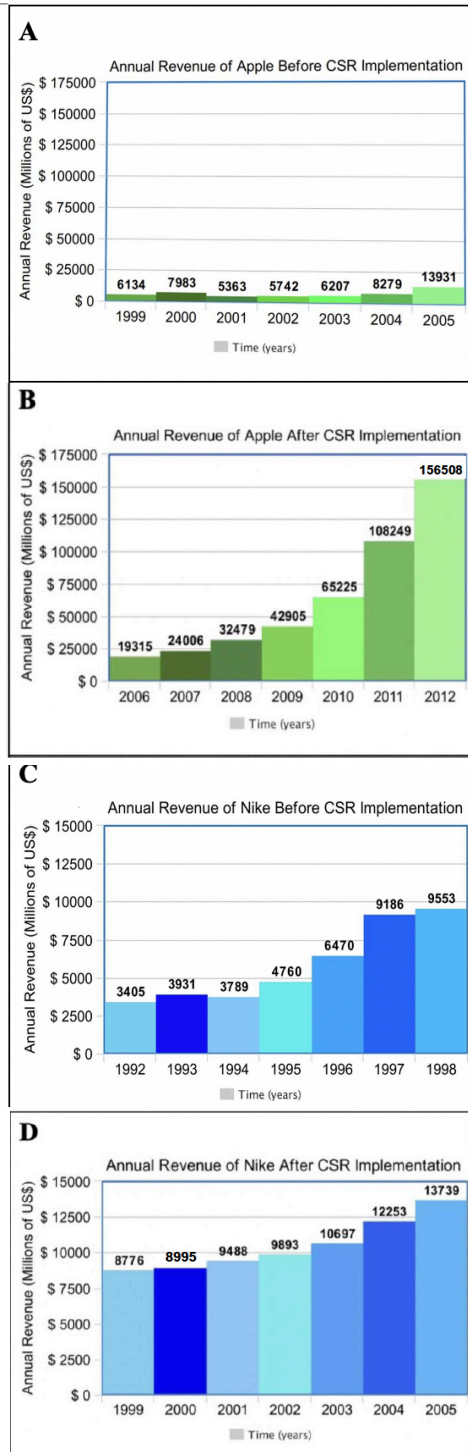
Figure 2. Apple's annual revenues before CSR implementation **(A)** and after **(B).** Nike's annual revenues before CSR implementation **(C)** and after **(D).**

The histograms in Figure 2 represent the annual revenues for Apple and Nike before and after CSR programs were launched. Figure 2B shows Apple's revenue grew exponentially after CSR programs were implemented compared to the minimal growth experienced before its implementation in Figure 2A. Figure 2D shows Nike's revenue generally followed an increasing trend after CSR programs were implemented.
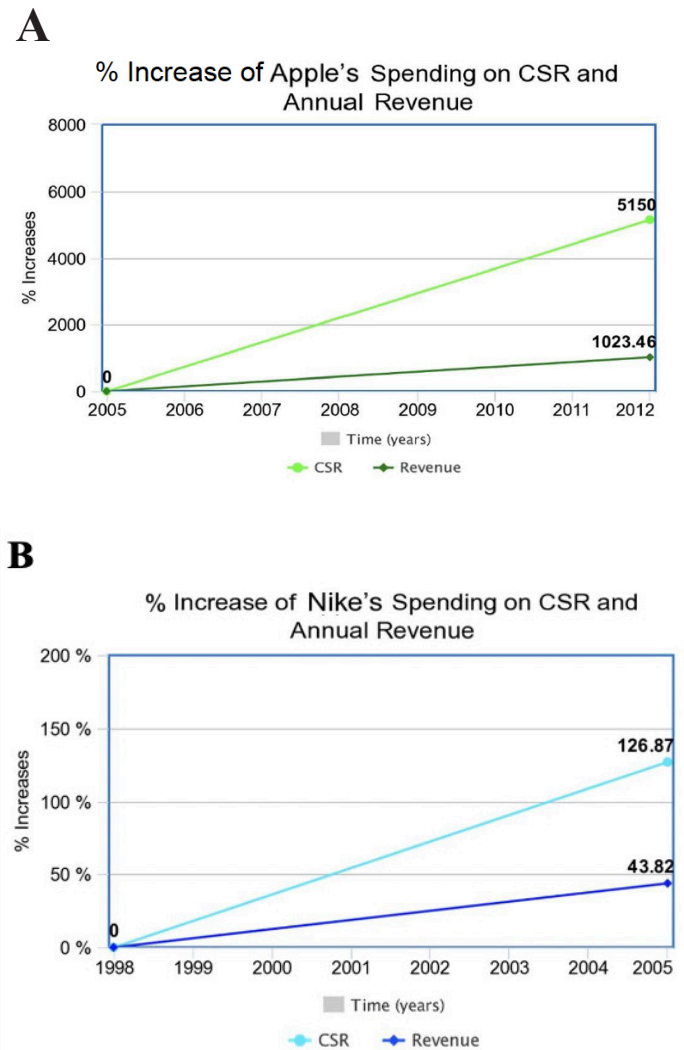

Figure 3. Percent increase for Apple's annual revenue after CSR implementation (dark green) and spending on CSR (light green) (A). Percent increase for Nike's annual revenue after CSR implementation (dark blue) and spending on CSR (light blue) **(B).**

Figure 3A compares the percent increase for the annual revenue and publicized spending on CSR for Apple after the implementation of CSR programs. The light green line shows the percent increase of the spending on CSR. Apple spent 5150% more on CSR in 2012 than it did in 2005, when CSR programs were first launched. The dark green line shows the percent increase of annual revenue. Apple's annual revenue was 1023% higher in 2012 than it was in 2005. This graph shows the spending on CSR and annual revenue both increased over time for Apple.

Figure 3B compares the percent increase for the annual revenue and publicized spending on CSR for Nike after the implementation of CSR programs. The light blue line shows the percent increase of the spending on CSR. Nike spent 127% more on CSR in 2005 than it did in 1998, when CSR programs were first launched. The dark blue line shows the percent increase of annual revenue. Nike's annual revenue was 44% higher in 2005 than it was in 1998. This graph shows the spending on CSR and annual revenue both increased over time for Nike.

DISCUSSION

This study aimed to identify if a correlation between a company's revenue and spending on CSR exists.

The median annual revenue was significantly larger for Apple and Nike after the implementation of CSR programs. This shows the CSR initiatives of Apple and Nike may have had a positive effect on their revenues, whicg increased after CSR implementation. The outlier found in the box plots concerns the annual revenue for Apple in 2005, the year Apple launched its CSR programs. Compared to the years before it, this year experienced the most growth. 2005 was included as a part of the years before CSR programs were implemented because a full year had not yet passed after CSR were first launched. The histograms show Apple's and Nike's revenues were greater and continually increased after CSR implementation. In addition, the double line graphs show their revenues increased positively with their spending on CSR.

We theorize the revenues increased after CSR programs were implemented because the action of spending more money on the public may have attracted more customers. The media also publicizes many of these companies' efforts, which could influence consumers' buying behaviours. CSR shows a business can take action to help wider social issues, appealing to customers who share the same values as them. Being socially responsible allows companies to connect with their consumers, build positive relationships, and show they care about their community and customers rather than just the profits they generate. The amount of money companies spend on CSR comes from the profits they make. Therefore, consumers may feel more inclined to spend their money or time on socially responsible companies over others that offer similar products because they know a higher revenue correlates with a larger spending on CSR. According to our findings, the spending on CSR and revenue impact each other.

As we saw, companies spent more money on CSR programs as they earned more revenue. The fact that a company is being more socially responsible may have attracted more customers as well. In conclusion, there is a correlation between the spending on CSR and the annual revenue of a company; however, the direct impact of CSR on the revenue of a company was not explored or determined by this study. There are other factors that could have contributed to the increasing revenues such as globalization and technological advancement, but it is believed that CSR contributed to at least a fraction of the increasing revenue, helped to maintain it, or prevented it from decreasing.

The limitations of this study included the availability of data concerning the spending on CSR by each company. We could only find information that was publicized such as donations made by the companies to specific causes or charities. However, consumers would only know about the CSR initiatives that were publicized; publicized CSR contributions would be the ones that affect consumers' buying behaviours. Although only publicized spending on CSR was used, the data are still enough to determine the general relationship between the two variables: annual revenue and spending on CSR. They both increased together and the spending on CSR could only be higher if you include the additional amount Apple and Nike spent that was not accounted for in this study. Any other increases to the spending on CSR by each company would only strengthen the observation of the spending on CSR and annual revenue increasing together.

This information on the correlation between CSR and revenue can help people in the future as it shows businesses that being socially responsible and contributing to the environment could benefit them as well. This finding could motivate businesses to start being socially responsible or invest more money into CSR programs. The information can also help consumers and companies make decisions. Consumers may choose to buy products from socially responsible companies if they know companies are likely to increase their spending on CSR when they earn more money. Moreover, investors may choose to invest in companies that are socially responsible because they anticipate the companies revenues to grow.

Because Apple and Nike's annual revenues increased after CSR implementation with their spending on CSR, it is concluded that a correlation between the spending on CSR and annual revenue of a company is likely to exist. Further research can be done to find a direct relationship between CSR and revenue. More research could also be done on the effects of publicized CSR contributions on consumers' buying behaviour and if it makes them more likely to support a socially responsible company. Lastly, research can be done to determine if CSR gives companies a competitive edge as there are many companies that provide similar products or services nowadays. Future studies should consider that not many companies release information regarding their CSR initiatives or spending.

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