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Advertising and Consumer Spending in the Digital Age

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Advertising and Consumer Spending In the Digital Age

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Abstract

Advertising is a major component of today's world. With so much media content and information available at our disposal, it is not hard to understand that companies' see this digital space as an opportunity to generate sales. In this age of brevity and fragmented media outlets, the question is raised if increased advertising actually causes consumers to spend more. This research paper will examine the effect of media spending on a company's net sales and explore if advertising is effective in today's age.

The methodology for this paper involves the examination of the six leading companies: Johnson & Johnson, McDonalds Corp., PepsiCo Inc., Procter & Gamble Co., Wal-Mart Stores Inc., and Walt Disney Co. over a time period of 18 years from 1994 to 2011. Data on each of these six companies' total media spending along with the personal consumption expenditure, unemployment rate, growth in GDP, and average credit card interest rates is compared to their net sales. This is done to determine which variables have a significant impact on a company's net sales, looking specifically at media spending.

To examine each of the variables' effect on a company, a correlation matrix and regression test is to see the significance of each variable in comparison to net sales. In the process, it was found that only Johnson & Johnson, McDonalds, and Wal-Mart showed that media spending significantly affecting their net sales. However, personal consumption expenditure was shown to have a significant effect for every company. This indicates that advertising might not be as effective as believed.

In order to further understand why advertising has an insignificant effect on PepsiCo, Procter & Gamble, and Walt Disney, each company's market structure and industry was reviewed. For PepsiCo, it was found that their duopoly market structure in the soft drinks industry explains why advertising might not have a huge impact on their performance. As PepsiCo's only main competitor in the market is Coca-Cola, consumers have only these two corporations' products to choose from. Also, their dominance in the market makes it difficult for there to be any substitutes available as other competitors find it very difficult to enter.

For Procter & Gamble, only Colgate-Palmolive, Unilever, and Arm & Hammer share dominant control in the household care and consumer goods market. P&G's negotiations with suppliers and warehouses also makes it difficult for competitors to enter as many retail and drugstores chains dedicate shelf-space to P&G's products, which contain over 300 brands. Their generally inexpensive products also give little reason for consumers to switch to other substitutes.

Lastly for Walt Disney, their oligopoly market structure in addition to their strong brand image makes it difficult for there to be any substitutes or competitors to enter into the media and entertainment market that they dominate.

While advertising might not have a direct impact on a company's net sales, it is used and seen as way for companies to remain competitive against one another. It can be seen as a defense mechanism to ensure that they can keep with their competitor and remain relevant in the advertising space.

A suggestion for companies to benefit from advertising is to examine a consumer's purchasing journey (what leads consumers to their purchase decision) and tailor their marketing tactics to fit it. Further research could explore consumers' purchasing journey and examine if marketing and advertising tactics pinpointed at a certain point in the decision making will influence consumers to buy.

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I. Introduction

As the digital age continues to develop, we have found that the amount of advertising consumers are exposed to continues to rise. Marketers and advertisers are constantly bombarding consumers with paid advertisements on magazines, newspapers, billboards, television commercials, radio spots, web advertisements, etc. in order to have consumers express interest or acknowledgement of their product or brand.

In this new digital age, the rise of technology and the internet has impacted and changed the way people live their daily lives and the way information is consumed. The increasing influx of bombarding ads on billboards, television screens, and on the internet, all fight to gain a consumer's attention. As a result, people are only able to retain fragments, if any at all, of an ad.

Companies see advertising as a key component to their company's reputation and their potential to generate sales. Each company has a set marketing and advertising team that develops their marketing plan and budgets year to year. By examining six leading companies from different industries, a better understanding of the effect of advertising is hoped to be accomplished. The companies examined are Johnson & Johnson, McDonalds Corporation, PepsiCo Inc., Procter & Gamble Co., Wal-Mart Stores Inc., and Walt Disney Co.

Johnson & Johnson is an American multinational pharmaceutical, medical device, and consumer packaged goods manufacturer. Their consumer products include Johnson's baby care products, Band-Aid, Neutrogena, Neosporin, Listerine, Tylenol, and Visine. They also provide medical devices such as self-measured glucose monitors, insulin delivery devices, and surgical instruments. Their products are served worldwide.

McDonalds Corporation is the world's largest chain of fast food restaurants, which offer their fast food products to over 119 countries through their 34,000 restaurants. Their worldwide restaurants also adapt to each countries' customs and personal preferences as they offer vegetarian food options in India.

PepsiCo Inc. is a multinational food and beverage corporation that offers grain-based snack foods and a variety of beverages. Their brands include Pepsi, Frito Lay, Tropicana, Quaker, and Gatorade and their products are distributed across more than 200 countries. They are considered to be the largest food and beverage business in North America and the second largest in the world.

Procter & Gamble is a consumer goods company, which produces beauty, grooming, and household care products, such as the Swiffer, Mr. Clean, Charmin, Vicks, Duracell, Tide, Crest, Gillette, Oral-B, Herbal Essences, and Olay. They market their products in over 180 countries and are constantly ranked in the top 10 percent in media spending for advertising.

Wal-Mart Stores, Inc. is an American multinational retailer corporation that runs as a large discount department and warehouse store. They offer a wide variety of products in electronics, entertainment, apparel, home improvement and other categories. Their company is the world's third largest public corporation and has over 8,500 stores in 15 different countries operating under 69 different banner names.

The Walt Disney Company is a diversified multinational mass media corporation with divisions in theater, radio, music, publishing, and online media. They are also best known for their film studio, theme parks, and merchandise. While they are typically associated as a family-

oriented brand, they have created new divisions to appeal to a more mature audience as well.

Walt Disney is considered to be the largest media conglomerate in the world.

Each of these companies will be examined for a period of 18 years from 1994 to 2011. 1994 is the year when the first online advertisement appeared and was the beginning of the online advertising world. It was determined that this is the best period to start examining as this was the beginning of the digital age we live in today.

A review of literature will explore changing consumer purchasing behavior in the digital age and how marketers are responding to this change. A statistical analysis will also take place, which involves analyzing the impact of media spending, personal consumption expenditure, unemployment rate, growth in GDP, and average credit card interest rates on each of the six companies' net sales. Through this, a clearer understanding of the effect of advertising is hoped to be gained.

II. Literature Review

This literature review will focus on the different changes and tactics marketers develop to not only attract a consumer's familiarity with a product, but also to influence the consumer to purchase and further promote the product. This will examine the viewpoints on how consumer spending has changed in the digital age.

Nelson and Ellison [September 2005] wrote that Procter & Gamble Co. (P&G), a multinational consumer goods company, said the “first moment of truth” for shoppers to make up their mind about a product, is in the three to seven seconds when someone notices an item on a store shelf. This statement is significant in that it shows how companies analyze consumer buying behavior. It is noted that due to the response of fragmented television and print ads, P&G has looked to increase its advertising in stores, where they believe consumers are most likely to be influenced. After popularizing the concept of mass-market advertising a century ago and spending billions of dollars on traditional advertising, P&G has decided to grow and refine their in-store marketing approach in order to try a new medium to attract customers.

“Stewart Stockdale, chief marketing officer of mall operator Simon Property Group cites research it commissioned from Arbitron Inc., a media-research firm, showing that shoppers are more likely to recall an ad in a mall than one seen at home.¹” The statement shows the changing medium in which advertisers need to adapt to in order to develop new tactics to appeal to consumers. Companies are scheduled to spend about \$200 billion for standard advertising on TV, print, and the internet, an increase from the \$188 billion spent in 2004, showing the

¹ Nelson and Ellison, September 2005

significant interest and demand of corporations wanting to appeal to consumers through various mediums [Nelson and Ellison, September 2005].

It sets the stage for ad agencies to expand their work to not only television and print ads, but also to designing in-store television commercials, special shelf displays and packaging. Wal-Mart Stores Inc.'s in-store TV network is an example of one method used to appeal to shoppers in this digital age. Their in-store TV network is seen by 130 million shoppers a month according to rating data from Nielsen Media Research. Wal-Mart is even taking this a bit further by selling advertising time on their in-store television network.

In-store advertising has been shown significant interest. “Veronis Suhler Stevenson Partners LLC, an investment bank that produces forecasts for the communication industry, says companies in the U.S. are expected to spend about \$18.6 billion on in-store marketing and in-store ads this year, up from \$17.6 billion last year.²” The Grey Global Group, a unit of WPP – a British multinational advertising and public relations company, includes a retail strategy in almost every client pitch they perform.

In Lohse, Bellman, & Johnson's (Winter 2000) study of online consumer purchasing behavior, the use Wharton Virtual Test Market (WVTM) was conducted to test customer's reactions to new strategies and products, in order to gather data to help companies decide their online retail strategies. These strategies include website design, online advertising, market segmentation, product variety, inventory holding, and distribution. Two WVTMs were conducted.

² Nelson and Ellison, September 2005

In the first WVTM (WVTM1) (1997), responses from 9,738 panelists were received to help identify and be used as a basis to identify factors that predict whether a person bought goods/services online and if they did, how much was spent. Through the use of logit and regression analysis of the data, the two major variables that determine online buying and spending behavior were determined to be “time starvation” and a “wired” lifestyle. “Time starvation” refers to the individual being more time-constricted due to work and various other factors. Therefore, the individual has fewer hours available for shopping. Shopping on the internet is seen as a way to save time. A “wired” lifestyle refers to people who have been accustomed to the internet for years at home, regularly at work, etc. and believe that the internet has improved their productivity level. Therefore, shopping on the internet for these individuals is seen as a way of being productive.

For the second WVTM (WVTM2) (1998), out of the original 9,738 participants from the first WVTM1 panel, only 2,549 participants provided valid responses. In order to explore potential nonresponse bias problems, the 9,738 WVTM1 participants were divided into two groups. One group is the 2,549 panelists (26%) who stayed in the panel and complete the WVTM2 survey, the other group is the 7,189 participants (74%) who dropped out of the panel for various reasons. It was found that there was no significant difference in the percentage of people who chose to buy online or in their mean annual online expenditures between respondents and non-respondents.

Their results have found that those who buy online are divided into four categories: 1) “Never Buy” (those who have not made a purchase in 1997 and 1998), 2) “Dropouts” (those who made a purchase in 1997, but not in 1998), 3) “Newbies” (those who did not make a purchase in

1997, but did in 1998), and “Steadfast buyers,” (those who made a purchase in both 1997 and 1998).

It was found that the “Never Buy” and “Steadfast buyers” participants have a lower income compare to the two other categories that do make online purchases. Another point found was that the “Never Buy” and “Steadfast buyers” participants do work fewer hours per week, been on the internet for a shorter amount of time, and spend fewer hours on the internet. They also tend to be more concerned about their online privacy. Even though the “Never Buy” participants have not made an online purchase, it was found that the number of hours spent online was increasing each week. The “dropouts” participants have been decreasing the number of hours spent online and also have the highest number of spam – which resulted in their increase of paper catalog orders by 20%. This is believed to have occurred due to a possible bad shopping experience with online retailers. “Newbies” are decreasing their paper catalog orders and are increasing the amount of time they spend on the internet per week, which indicates they might make more future purchases.

It was interesting finding that the longer individuals spend time online; the greater probability there is of making a purchase. The amount of internet usage for product information and the number of emails received per day has the largest effect on buying behavior. While this research conducted occurred in 1997 and 1998 when the internet was first beginning to expand, this still provides great insight into the changing behavior over time for consumers. It seems that the most important factor in the transition from paper catalogs to online searching is the amount of familiarity the person has with the internet, as those who are more familiar with it, tend to trust and become more willing to purchase an item from the site. The reliability and trustworthiness of the site is dependent on whether the consumer will continue to purchase from

it in the future. However, since the paper is written more than a decade ago, this paper does not cover what makes certain sites more attractive and reliable for consumers than others, in other words what makes a consumer purchase from a particular company/website and not another.

Kotha, Rajgopal, and Venkatachalam [April 2004] examined whether having a superior online buying experience will offer solely based internet firms, “e-commerce firms,” a long-run competitive advantage. Through examining a sample of 46 solely based internet firms over four quarters, they were able to identify the factors they believe lead an e-commerce firm to success. They started with the fourth quarter of 1999 and examined the association between the third-party quality ratings of online buying experience and their competitive advantages.

They tested the quality of online buying experience with the following five factors: 1) website usability, 2) customer confidence in the web business, 3) selection of goods and services, 4) the effectiveness of relationship services, such as virtual community building and site personalization, and lastly, 5) price leadership, which include the costs of services, purchases, and shipping and handling fees. Those who offer these services at a lower price tend to score higher in the price leadership section.

[Kotha, Rajgopal, and Venkatachalam, April 2004] It was found that there is a positive association between the competitive advantage an e-commerce firm has and the quality of their online buying experience. While improving online buying experiences does present a long-term competitive advantage for solely based internet firms, their results show that customer confidence in the firm and their relationship services hold more weight. Website usability and product selection is not enough to provide a long-run competitive edge.

In Choi and Rifon's [Fall 2002] study on the effect of banner advertisements on websites, it was found that popular websites that sell high price material and reach many Internet users is not an ideal location for placing banner ads, especially if the website content is too general.

Banner advertisements are a form of advertising on the internet that embeds an advertisement into a web page in order to attract traffic to the website through the link. If the website content is too general, it would fail to create the relevant perception needed to create the desired brand attitude, desire purchasing intent, and lowers the effectiveness of the ad. The consumer judgment on how creditable the website is and the relevance of the content between the banner ad and website should be considered for effectiveness of the ad.

Kotha, Rajgopal, and Venkatachalam's [April 2004] journal article provides great insight into the growing number of internet-based firms and what consumers look for in a positive experience to continue to purchase from the site, and therefore, promoting the company's long-run competitive edge over other e-commerce firms. It is important to acknowledge that through their studies, it appears that brand recognition of the company and their service is a major factor in determining whether or not the company will have long-term success. However, the ways consumers have engaged with brands have changed as the internet developed.

Edelman [December 2010] explains the changing structure of how consumers engage with brands due to the power of the internet. For years, the traditional structure marketers target and use paid-media push marketing would be at target points in "The Funnel Metaphor." The "Funnel Metaphor" assumes that consumers start with a large number of potential brands as possible choices in their mind and then through the process of elimination, consumers would whittle it down to eventually reach the one they decide to buy. Marketers would then target

consumers in building their awareness of a brand, drive consideration, and then inspire them to purchase the product.

However due to changing mediums, consumers no longer decide purchases through the funnel method. As cited in Edelman's article, David Court and three of his coauthors in the June 2009 issue of McKinsey Quarterly introduced the new method of the Consumer Decision Journey (CDJ). The CDJ takes a more repeated approach through their four stages, which are consider, evaluate, buy, and enjoy, advocate, bond. The difference between the funnel approach and the CDJ is that instead of narrowing down their choices, consumers will continue to add and remove brands under consideration during an extended evaluation period.

Another major difference between the two methods is what happens after the purchase. During the funnel metaphor, the association the buyer has with the brand purchase is mostly associated with the use of the product/service itself. In the CDJ, buyers have an open-ended relationship with the brand and share their experiences online. If the consumer's bond with the brand reaches a certain point, then the buyer will repurchase from the brand again without having to go through the earlier cycles of the journey [Edelman, December 2010]. This research identifies acknowledgement by marketers and advertisers on the changes in behavior the internet has created and the changes they are addressing in order to further influence consumers to purchase their products.

Fulgoni and Morn [December 2008] from comScore, an Internet analytics company that provides marketing data and analytics to companies, reveal through their research how online display ads work in impacting consumer behavior. They found that even when the number of "clicks" on an ad is minimal, there are still latency and branding effects involved.

III. Model

The model formed for this research involves performing a correlation matrix and regression analysis for each of the six companies to determine which variables significantly affects a company's net sales. A correlation matrix reveals the strength of the relationship between two variables and can also show the direction of the correlation; a negative correlation shows an inverse relationship is present between the variables and a positive correlation shows a direct relationship is present. The use of a correlation matrix can show if any of the independent variables are too highly correlated with one another, which can disrupt the data results. It can also show if any variables are not significant enough to be considered important to use in comparison to the other variables.

A regression analysis allows you to estimate the effect of some explanatory variable on the dependent variable and reveals to us which of the variables significantly impact the company's net sales and by how much. The t-statistic shows whether the independent variable (X) is significant enough to affect the dependent variable (Y). If the t-stat in the regression result is equal or above the t-critical value, then the variable is considered significant. For this research the t-critical value is 1.74, with a one-tailed t-test conducted at 17 degrees of freedom. Coefficient values tell us how much the dependent variable will go up by if an independent variable is increases.

There are also two test statistics that determine how well the model explains the data. The two test statistics are R-square (R^2) and the F-statistic. The R^2 statistic is an estimate of the proportion of the variation in the dependent variable in the model. The higher the proportion is, the better the model explains the variation in the dependent variable. For a time-series regression,

an R^2 statistic of 0.8 or higher is considered to be significant. The F-statistic tests the equation as a whole and so whether we can accept the null hypothesis that the equation is insignificant or reject it and conclude that it is significant. Also, if the F-statistic is higher than the critical F value, then it is concluded that all coefficients are statistically significant in the equation.

The net sales of a company is used as the dependent variable (Y) to determine which independent variables (X) most significantly impacts it. Net sales is the amount of sales generated by a company after the deduction of returns, allowances for any damaged or missing goods, and any other discounts used. The independent variables are media spending, personal consumption expenditure, unemployment rate, growth in GDP, and average credit card interest rates.

Media spending consists of advertising expenditures in magazines, newspapers, outdoor advertising, network TV, spot TV, cable TV, syndication, network radio, and national spot radio. Personal consumption expenditure measures the expenditure of consumers on goods and services. It also indicates how much of consumers' disposal income is used for purchasing. The unemployment rate and growth in GDP will help take into account the state of the economy and average credit card interest rates takes into account if a higher interest rate charged for overdue payments will result in less spending by the consumer.

The formula created for this model is:

$$\text{Net Sales} = \text{Constant} + \beta_1 (\text{Media Spending}) + \beta_2 (\text{Personal Consumption Expenditure}) + \beta_3 (\text{Unemployment Rate}) + \beta_4 (\text{Growth in GDP}) + \beta_5 (\text{Average Credit Card Interest Rates})$$

The formula is tested on each of the six companies: Johnson & Johnson, McDonalds Corp., PepsiCo Inc., Procter & Gamble Co., Wal-Mart Stores Inc., and Walt Disney Co. Through an examination of these regressions, we can determine which variables have the most significant impact on net sales for each of the companies.

IV. Data

The data gathered for this research paper are net sales, media spending, personal consumption expenditure, nominal GDP, growth in GDP, unemployment rate, and average credit card interest rates.

The data for net sales was gathered from each of the companies' annual reports, which is available on their website under the *Investors* and *Financial Reporting* section. For McDonalds, PepsiCo, and Wal-Mart, their financial information included the net sales from 1994 to 2011, but for Johnson & Johnson, Procter & Gamble, and Walt Disney, their website did not provide all of the data needed. Therefore, the rest of the net sales for those companies were obtained from LexisNexis Academic, where the companies' Form 10-K was available, which included the financial information.

The data for media spending was collected from Ad \$ Summary, which provided data on specific companies' advertising expenditures as a whole from 11 media allocations. This data was recorded for each of the companies from 1994 to 2011.

Personal consumption expenditure and nominal GDP was gathered from Whitehouse.gov, which provided the statistical data from the Bureau of Economic Analysis – Department of Commerce. It was decided that real personal consumption expenditure and real GDP would not be used in the empirical model due to the complications that may arise. Real data

takes into account inflation and provides data that subtracts the expected inflation rate during the time period. It is better to use nominal data, which provides the actual market prices that existed during the specific time period. Growth in GDP was calculated from the nominal GDP data by using percent change.

The data for net sales, media spending, and personal consumption expenditure is then calculated to use the natural log values of the dataset. Taking the natural log of a time series dataset allows you to calculate the continuously compounded return (or growth rate) of the time series as the difference between two points of the time series. It provides an estimate of the elasticity of the effect of a specific variable on the dependent variable.

The data for the unemployment rate was gathered from the Bureau of Labor Statistics – U.S. Department of Labor and average credit card interest rates were collected from the Board of Governors of the Federal Reserve System.

The derived data set is located in Appendix I.

V. Empirical Results

In an initial correlation matrix test, it was found that nominal GDP and personal consumption expenditure are highly correlated with one another, which means that the changes in one independent variable can linearly predict changes in another. Therefore, instead of using nominal GDP, the growth of GDP is used in the model.

In Johnson & Johnson's correlation matrix, it was found that personal consumption expenditure was highly correlated with Johnson & Johnson's net sales. Johnson & Johnson's regression showed that media spending and personal consumption expenditure are significant at

the 5% significance level using a one-tailed test with a t-critical value of 1.74. The coefficient indicates that if media spending increases by 10%, net sales would increase by 2.5%. If personal consumption increases by 10%, net sales would increase by 14.6%. Both variables also have a positive relationship with the company's net sales, so when one of the variable increases, the other will increase as well. In addition, the critical F value (3.18) is greatly exceeded by the F-statistic, concluding that the coefficients are highly significant. (Appendix II)

The second equation tests the effect media spending and personal consumption have on net sales without any insignificant variables present. The results show that both media spending and personal consumption are significant with t-stat values above the t-critical value of 1.74 and the F-statistic higher than the critical F value of 3.63.

<i>Johnson & Johnson</i>	Intercept -1.03	Media Spending [In Millions]	PCE [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card IR [Percentage]	Adjusted R2	F-statistic
Full Equation <i>Net Sales 1</i>	<i>Coefficient</i> <i>T-stat</i>	0.25 (4.08)	1.46 (18.25)	0.01 (1.01)	-0.53 (-1.03)	-0.002 (-0.14)	0.994	578.93
Significant Equation <i>Net Sales 2</i>	Intercept -0.87	0.20 (3.72)	1.56 (26.12)	X	X	X	0.994	1371.11
Net Sales 1 = LN[-1.03 + 0.25 (Media Spending) + 1.46 (PCE)] + 0.01 (UR) + -0.53 (Growth in GDP) + -0.002 (Avg. Credit Card IR)								
Net Sales 2 = LN[-0.87 + 0.20 (Media Spending) + 1.56 (PCE)]								

In McDonalds' correlation matrix, it was found that personal consumption expenditure is highly correlated with their net sales. McDonalds' regression results show that their media spending and the personal consumption expenditure are significant at the 5% significance level. The coefficient indicates that if their media spending increases by 10%, net sales would increase by 2.3%. If personal consumption increases by 10%, net sales would increase by 12.1%. Both variables also have a positive relationship with the company's net sales. In addition, the F-statistic determined that all coefficients are statistically significant. (Appendix III)

The second equation tests the effect media spending and personal consumption has on net sales without any insignificant variables present. The results show that both media spending and personal consumption are significant with t-stat values above the t-critical value of 1.74 and the F-statistic higher than the critical F value of 3.63.

<i>McDonalds</i>	Intercept -1.29	Media Spending [In Millions]	PCE [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]	Adjusted R2	F-statistic
Full Equation <i>Net Sales 1</i>	<i>Coefficient</i> <i>T-stat</i>	0.23 (2.82)	1.21 (21.96)	0.003 (0.58)	0.14 (0.32)	0.01 (0.89)	0.992	424.14
Significant Equation <i>Net Sales 2</i>	Intercept -1.13	0.24 (3.20)	1.19 (30.73)	X	X	X	0.993	1212.35
Net Sales 1 = LN[-1.29 + 0.23 (Media Spending) + 1.21 (PCE)] + 0.003 (UR) + 0.14 (Growth in GDP) + 0.01 (Average Credit Card IR)								
Net Sales 2 = LN[-1.13 + 0.24 (Media Spending) + 1.19 (PCE)]								

PepsiCo's correlation testing showed that no variables were highly correlated with one another. In PepsiCo's regression results, personal consumption expenditure, the unemployment rate, and average credit card interest rates are significant at the 5% significance level. If personal consumption expenditure goes up by 10%, then PepsiCo's net sales would increase by 8.2%. The same applies for the unemployment rate, in which net sales would increase by 1.4%. If average credit card interest rates increase by 10%, then PepsiCo's net sales would increase by 1.1%. All variables also have a positive relationship with the company's net sales. The F-statistic is also greater than the critical F value of 3.18, which determine that all coefficients are statistically significant. (Appendix IV)

In second equation, a regression was also conducted with only the significant variables from the previous equation used with media spending and personal consumption expenditure. This is done to determine if media spending becomes significant once the insignificant variables were excluded, which in this case is growth in GDP. The results show that media spending did not become significant as the t-stat value did not equal or exceed the t-critical value of 1.74. The F-statistic for this equation is still greater than the critical F value of 3.29, showing that all coefficients are statistically significant and that media spending does not significantly impact PepsiCo's net sales.

<i>PepsiCo Inc.</i>	Intercept -1.97	Media Spending [In Millions]	PCE [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]	Adjusted R2	F-statistic
Full Equation <i>Net Sales 1</i>	<i>Coefficient</i> <i>T-stat</i>	0.19 (1.47)	0.82 (3.80)	0.14 (4.62)	2.44 (1.07)	0.11 (1.96)	0.78	13.21
Significant Equation <i>Net Sales 2</i>	Intercept -1.78	0.21 (1.57)	0.78 (3.65)	0.12 (4.69)	X	0.11 (1.96)	0.78	16.04
Net Sales 1 = LN[-1.97 + 0.19 (Media Spending) + 0.82 (PCE)] + 0.14 (UR) + 2.44 (Growth in GDP) + 0.11 (Average Credit Card IR) Net Sales 2 = LN[-1.78 + 0.21 (Media Spending) + 0.78 (PCE)] + 0.12 (UR) + 0.11 (Average Credit Card IR)								

For Procter & Gamble’s correlation testing, it was found that personal consumption expenditure has a high correlation with P&G’s net sales. In P&G’s regression test, it was found that personal consumption expenditure and average credit card interest rates are significant at the 5% significance level. If personal consumption expenditure goes up by 10%, then Pepsico’s net sales would increase by 11.5%. If credit card interest rates increase by 10%, then their net sales would increase by 1.0%. Both variables have a positive relationship with the company’s net sales. In addition, the F-statistic determined that all coefficients are statistically significant. (Appendix V)

In the second equation, a regression was also conducted for media spending, personal consumption expenditure, and average credit card interest rates to determine if media spending becomes significant without the presence of any insignificant variables. The results show that media spending did not become significant as the t-stat value did not equal or exceed the t-critical value of 1.74. The t-stat of media spending actually declined. The F-statistic for this equation is still greater than the critical F value of 3.63, showing that all coefficients are statistically significant and that media spending does not significantly impact P&G’s net sales.

Procter & Gamble Co.	Intercept -2.05	Media Spending [In Millions]	PCE [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]	Adjusted R2	F-statistic
Full Equation <i>Net Sales 1</i>	<i>Coefficient</i> <i>T-stat</i>	0.27 (1.72)	1.15 (5.48)	0.03 (1.70)	-1.08 (-0.87)	0.10 (3.66)	0.95	65.11
Significant Equation <i>Net Sales 2</i>	Intercept -1.41	0.13 (0.84)	1.40 (6.90)	X	X	0.10 (3.16)	0.93	80.93
Net Sales 1 = LN[-2.05 + 0.27 (Media Spending) + 1.15 (PCE)] + 0.03 (UR) + -1.08 (Growth in GDP) + 0.10 (Average Credit Card IR) Net Sales 2 = LN[-1.41 + 0.13 (Media Spending) + 1.40 (PCE)] + 0.10 (Average Credit Card IR)								

For Wal-Mart's correlation testing, it showed that their media spending and personal consumption expenditure are highly correlated with their net sales. Wal-Mart's regression test showed that only personal consumption expenditure was significant at the 5% significant level. Therefore, when personal consumption expenditure increases by 10%, Wal-Mart's net sales increase by 20.8%, which shows a positive relationship. The F-statistic also shows that all coefficients are statistically significant. (Appendix VI)

In second equation, a regression was conducted for only media spending and personal consumption expenditure as no other variables are significant. The results show that media spending does become significant with a t-stat of 2.06 exceeding the t-critical value of 1.74. The F-statistic for this equation is still greater than the critical F value of 4.45, showing that all coefficients are statistically significant and that media spending does impact P&G's net sales, when other variables are eliminated.

Wal-Mart Stores Inc.	Intercept 1.13	Media Spending [In Millions]	PCE [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]	Adjusted R2	F-statistic
Full Equation <i>Net Sales 1</i>	<i>Coefficient</i> <i>T-stat</i>	0.04 (0.67)	2.08 (18.49)	0.003 (0.37)	-0.75 (-1.08)	-0.02 (-1.15)	0.996	755.31
Significant Equation <i>Net Sales 2</i>	Intercept 0.62	0.09 (2.06)	2.05 (20.03)	X	X	X	0.995	1858.26
Net Sales 1 = LN[1.13 + 0.04 (Media Spending) + 2.08 (PCE)] + 0.003 (UR) + -0.75 (Growth in GDP) + -0.02 (Average Credit Card IR)								
Net Sales 2 = LN[0.62 + 0.09 (Media Spending) + 2.05 (PCE)]								

Walt Disney’s correlation test indicated that personal consumption expenditure shows a high correlation with their net sales. In Walt Disney’s regression test, only personal consumption expenditure was significant with a t-stat of 4.97. If personal consumption expenditure increases by 10%, Walt Disney’s net sales would increase by 12.9%, which shows a positive relationship. The F-statistic also shows that all coefficients are statistically significant. (Appendix VII)

In second equation, a regression for only media spending and personal consumption expenditure was conducted as no other variables are significant. Media spending did not become significant with a t-stat of only 1.52. The F-statistic is greater than the critical F value of 4.45, showing that all coefficients are statistically significant and that media spending does not significantly impact Walt Disney’s net sales.

Walt Disney Co.	Intercept -1.22	Media Spending [In Millions]	PCE [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]	Adjusted R2	F-statistic
Full Equation <i>Net Sales 1</i>	<i>Coefficient</i> <i>T-stat</i>	0.23 (0.79)	1.29 (4.97)	-0.01 (-0.26)	0.31 (0.15)	0.02 (0.39)	0.85	20.16
Significant Equation <i>Net Sales 2</i>	Intercept -0.86	0.26 (1.52)	1.17 (7.32)	X	X	X	0.87	60.16
Net Sales 1 = LN[-1.22 + 0.23 (Media Spending) + 1.29 (PCE)] + -0.01 (UR) + 0.31 (Growth in GDP) + 0.02 (Average Credit Card IR) Net Sales 2 = LN[-0.86 + 0.26 (Media Spending) + 1.17 (PCE)]								

VI. Empirical Results Interpretation

The results showed an insight into how effective advertising is for each company and how each company's industry preferences and market structure has an impact on consumer purchasing as well. The regression results indicated that only Johnson & Johnson, McDonalds, and Wal-Mart showed that media spending significantly affected their net sales. Significant results failed to show for PepsiCo, Procter & Gamble, and Walt Disney. However, every company did show that the personal consumption expenditure significantly affects their net sales. This indicates that increased advertising may be ineffective as consumers respond more to the changes in the price of goods and services.

An examination of the market structure and industry behavior of the companies that did show significant results for media spending will better help us understand why advertising is effective for Johnson & Johnson, McDonalds, and Wal-Mart.

Johnson & Johnson's market structure is an oligopoly as they dominate the healthcare industry. The company is organized into three major groups within the industry: consumer products, medical devices, and pharmaceutical drugs. While Johnson & Johnson's products have patents on their products, other healthcare companies including those that produce generic products also possess patents and find ways around the existing ones to be able to produce their own version of the product. This is why shelves at retail stores often possess both name brand and generic brands of the same product. However, despite there being a large amount of substitutes available in the drug industry, Johnson & Johnson is still able to dominate the market. Besides the fact that all competitors in the pharmaceutical, healthcare, and medical industry are in some way affiliated and interdependent with one another, Johnson & Johnson also possesses

the ability to separate themselves from their competitors through their brand name. Johnson & Johnson spends a large amount of money on advertising their products and to create the perception that their brand products are more effective and reliable compared to generic retail products. Advertising has helped them create and maintain this image.

McDonalds' market structure is an oligopoly as they are one of the leading companies in the fast food industry in the U.S. and internationally. Their competitors include other fast-food chain companies, such as Burger King, Wendy's, and KFC. The company's ability to be able to charge low prices for a wide selection of products and operate at efficient economies of scale, makes it difficult for competitors to enter the market successfully. McDonalds' advertising also plays a large role in the image they produce. As McDonalds' products are fast food, there are a wide variety of possible substitutes for their products. Other fast food chains, such as Burger King, KFC, Popeye's, take-out stores, frozen food products, etc. provide many options for consumers to attain convenient, low-priced food options. Since there is an availability of many close substitutes for their products, McDonalds' demand curve is elastic, making advertising more necessary for their business operations.

Wal-Mart's market structure is oligopolistic, as their main competitors in the discount retail industry include K-Mart and Target. Wal-Mart also focuses on driving other competitors out of the market by maintaining their products are the lowest price out of all the other firms. They also use effective inventory management, low wages for employees, pressure on suppliers to reduce costs, and other methods to keep their average cost down compared to other competitors in the market. Their advertising has consistently focused on comparing their prices against their competitors. They also offer perks, such as their low-price guarantee, which says that Wal-Mart will match the price of any competitor's advertised product that is lower. This is

done to maintain their competitive position and establish their brand as the lowest-priced discount retail store in the industry. In addition, Wal-Mart has also created their own in-store TV network to further advertise their products and sell advertising time on it as well, indicating that the firm is aware that advertising is very effective in maintaining their sales.

We now turn to the firms: PepsiCo, Procter & Gamble, and Walt Disney, where media spending is not significant.

PepsiCo Inc.'s market structure is a duopoly, as only PepsiCo and Coca-Cola hold dominant control of the soft drink market. This is a possible explanation for why advertising does not have a significant effect on their net sales. It is also very difficult for other types of soft drink producers to enter this market, especially since there are strong barriers to enter, creating a low amount of substitutes and competitors for PepsiCo and Coca-Cola products.

Both PepsiCo and Coke have franchise agreements with their existing bottlers, which prohibits bottlers from taking on another competitive brand that offers similar products. It would also be very difficult for the competing firm to find a bottler willing to produce their products as both PepsiCo and Coke bought a significant percent of bottling companies. In addition, retailers get significant margins of 15-20% on the soft drinks they offer shelf-space to, making it difficult for new companies to convince retailers to carry or substitute their new products for Pepsi and Coke. PepsiCo has also differentiated their products over time by adding a food division after a merger with Quaker Oats, in addition to including partnerships with Starbucks, Unilever's Lipton, and Dole in retail stores, which further expands their market share.

Another reason why increased advertising spending is ineffective is because of PepsiCo's established strong brand image and consumer loyalty base. Consumers who develop brand

loyalty to Pepsi would not switch to another competitor's products, even if the other product is significantly cheaper.

Procter & Gamble's market structure is an oligopoly as only Colgate-Palmolive, Unilever, and Arm & Hammer share dominant control in the consumer goods industry. The company focuses on producing beauty & grooming and household care products. P&G also engages in negotiations with suppliers and warehouses to make their products more widely available and distributed. A significant amount of shelf-space is also dedicated to P&G's products as the company itself owns over 300 brands in consumer care products, leaving a limited amount of substitutes available as the majority of differing brands at retail stores are owned by P&G. Another possible reason why increased advertising spending is ineffective for P&G is that the majority of its products are relatively inexpensive, which indicates an inelastic demand curve. This means that the demand for their products will stay relatively constant.

Walt Disney's market structure is also an oligopoly in that its main competitors are Viacom, CBS Corporation, Hearst Corporation, Time Warner, and News Corporation in the media and entertainment industry. Their strong established brand image allows there to be few competitors due to their diversified barriers to entry and explains why while increased spending on advertising is beneficial for the company to remain competitive, it does not create a significant impact on their net sales. As a large entertainment and media company, it is difficult for new production companies to develop and prosper due to the long developmental period it takes for viewers to become accustomed to the organization. Disney also holds patents, trademarks, and copyrights that prevent other companies from copying their production and ideas, keeping Disney as a brand name. In addition, Disney's wide product differentiation, which

offers a wide array of movies, shows, theme parks, music, and merchandise, makes it seem that there are very few close substitutes for the company.

VII. Conclusion

In the digital age, consumers are constantly being exposed to fragmented media through various mediums – radio, television, websites, email, etc. and as a result, their thinking and purchasing patterns have changed. This change has affected the way consumers perceive advertising.

When looking at the effect advertising has on the performance of a company, it is important to consider the company's market structure and demand of their products as well. The fewer amount of firms there are in the market, the less competition there is. This allows the company to hold a dominant share in the market, causing advertising to become less effective than if there were a large amount of competitors. In addition, it is also important to consider if there are any close substitutes available for the product. Fewer substitutes available means a consumer has fewer options to choose from and creates an inelastic demand for the product by that company. Products that only take up a small portion of the consumer's budget creates an inelastic demand for the product as well.

In the case of oligopolies, there are only a few firms dominating the market and while spending more of their budget on advertising might not lead to a significant increase in their net sales, it is used as a defense mechanism to ensure that their net sales does not fall below their competitor. Advertising is seen as mechanism to keep the firm competitive.

For example, in PepsiCo's situation, both Coke and Pepsi hold dominate control over the soft drink industry and have established brand images with a strong customer loyalty base. Both

firms maintain a certain amount of advertising expenditure that should be met every year. It is very unlikely that Pepsi would decrease their advertising expenditure if their competitor Coke decides to increase their advertising budget. In fact, what may actually happen as a result is that Pepsi would decide to advertise more to match their competitor in order to remain competitive. Therefore, both Pepsi and Coke maintain a certain amount advertising expenditure as a way to maintain competition and defend themselves from the other company.

The regression results also have shown that personal consumption expenditure is more effective than media spending when it comes to affecting a company's net sales. This illustrates that since advertising is not as effective as perceived by companies, spending more on advertising actually can be seen as inefficient and a waste of the company's budget. In addition, the amount of income an individual has available for spending is more effective on the amount of sales a company makes.

Companies should take into consideration the changing landscape and perception of advertising in today's world. Increased advertising spending without any consideration of a consumer's preferences and habits can create ineffective results. As discussed in the literature review, promoting a brand online and understanding the changing structure of how consumers perceive brands and decide purchases will help better improve a company's ability to tailor marketing and advertising techniques to influence consumers' purchasing behavior.

Appendix I. – Johnson & Johnson, McDonalds Corp. PepsiCo Inc., Procter & Gamble Co., Wal-Mart Stores Inc., and Walt Disney Co.’s Natural Log Data Set

Johnson & Johnson’s natural log data set of Net Sales, Media Spending, Personal Consumption Expenditure, Unemployment Rate, Growth in GDP, and Average Credit Card Interest Rates from 1994 - 2011

YEARS	Johnson & Johnson Net Sales [In Billions]	Johnson & Johnson Media Spending [In Millions]	Personal Consumption Expenditure [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]
1994	2.76	6.16	1.56	6.1	6.3%	15.77
1995	2.94	6.39	1.61	5.6	4.5%	15.79
1996	3.07	6.73	1.66	5.4	5.8%	15.5
1997	3.13	6.60	1.72	4.9	6.3%	15.57
1998	3.18	6.49	1.78	4.5	5.5%	15.59
1999	3.31	6.73	1.85	4.2	6.4%	14.81
2000	3.37	6.71	1.92	4	6.4%	14.91
2001	3.48	6.71	1.97	4.7	3.4%	14.44
2002	3.59	6.91	2.01	5.8	3.4%	13.09
2003	3.73	7.02	2.05	6	4.7%	12.92
2004	3.86	7.08	2.11	5.5	6.4%	13.21
2005	3.92	7.36	2.17	5.1	6.5%	14.54
2006	3.98	7.13	2.23	4.6	6.0%	14.73
2007	4.11	7.12	2.28	4.6	4.9%	14.68
2008	4.15	7.12	2.31	5.8	1.9%	13.57
2009	4.13	7.03	2.29	9.3	-2.4%	14.31
2010	4.12	6.97	2.33	9.6	4.2%	14.26
2011	4.17	6.83	2.37	8.9	3.9%	13.09

McDonalds Corp.’s natural log data set of Net Sales, Media Spending, Personal Consumption Expenditure, Unemployment Rate, Growth in GDP, and Average Credit Card Interest Rates from 1994 - 2011

YEARS	McDonalds Corp. Net Sales [In Billions]	McDonalds Corp. Media Spending [In Millions]	Personal Consumption Expenditure [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]
1994	2.12	6.05	1.56	6.1	6.3%	15.77
1995	2.28	6.20	1.61	5.6	4.5%	15.79
1996	2.37	6.40	1.66	5.4	5.8%	15.50
1997	2.43	6.36	1.72	4.9	6.3%	15.57
1998	2.52	6.35	1.78	4.5	5.5%	15.59
1999	2.58	6.44	1.85	4.2	6.4%	14.81
2000	2.66	6.56	1.92	4.0	6.4%	14.91
2001	2.70	6.50	1.97	4.7	3.4%	14.44
2002	2.74	6.35	2.01	5.8	3.4%	13.09
2003	2.78	6.36	2.05	6.0	4.7%	12.92
2004	2.88	6.35	2.11	5.5	6.4%	13.21
2005	2.95	6.41	2.17	5.1	6.5%	14.54
2006	3.04	6.45	2.23	4.6	6.0%	14.73
2007	3.13	6.47	2.28	4.6	4.9%	14.68
2008	3.16	6.48	2.31	5.8	1.9%	13.57
2009	3.12	6.55	2.29	9.3	-2.4%	14.31
2010	3.18	6.56	2.33	9.6	4.2%	14.26
2011	3.30	6.65	2.37	8.9	3.9%	13.09

PepsiCo Inc.’s natural log data set of Net Sales, Media Spending, Personal Consumption Expenditure, Unemployment Rate, Growth in GDP, and Average Credit Card Interest Rates from 1994 - 2011

YEARS	PepsiCo Inc. Net Sales [In Billions]	PepsiCo Inc. Media Spending [In Millions]	Personal Consumption Expenditure [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]
1994	3.34	6.51	1.56	6.1	6.3%	15.77
1995	3.41	6.59	1.61	5.6	4.5%	15.79
1996	3.45	6.64	1.66	5.4	5.8%	15.50
1997	3.04	6.68	1.72	4.9	6.3%	15.57
1998	3.11	5.83	1.78	4.5	5.5%	15.59
1999	3.01	5.87	1.85	4.2	6.4%	14.81
2000	3.11	6.03	1.92	4.0	6.4%	14.91
2001	3.16	6.50	1.97	4.7	3.4%	14.44
2002	3.22	6.58	2.01	5.8	3.4%	13.09
2003	3.29	6.66	2.05	6.0	4.7%	12.92
2004	3.38	6.66	2.11	5.5	6.4%	13.21
2005	3.48	6.89	2.17	5.1	6.5%	14.54
2006	3.56	6.74	2.23	4.6	6.0%	14.73
2007	3.68	6.66	2.28	4.6	4.9%	14.68
2008	3.77	6.55	2.31	5.8	1.9%	13.57
2009	3.77	6.29	2.29	9.3	-2.4%	14.31
2010	4.06	6.24	2.33	9.6	4.2%	14.26
2011	4.20	6.37	2.37	8.9	3.9%	13.09

Procter & Gamble Co.’s natural log data set of Net Sales, Media Spending, Personal Consumption Expenditure, Unemployment Rate, Growth in GDP, and Average Credit Card Interest Rates from 1994 - 2011

YEARS	Procter & Gamble Co. Net Sales [In Billions]	Procter & Gamble Co. Media Spending [In Millions]	Personal Consumption Expenditure [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]
1994	3.41	7.29	1.56	6.1	6.3%	15.77
1995	3.51	7.32	1.61	5.6	4.5%	15.79
1996	3.56	7.31	1.66	5.4	5.8%	15.50
1997	3.58	7.44	1.72	4.9	6.3%	15.57
1998	3.61	7.45	1.78	4.5	5.5%	15.59
1999	3.64	7.43	1.85	4.2	6.4%	14.81
2000	3.69	7.33	1.92	4.0	6.4%	14.91
2001	3.67	7.32	1.97	4.7	3.4%	14.44
2002	3.69	7.61	2.01	5.8	3.4%	13.09
2003	3.77	7.83	2.05	6.0	4.7%	12.92
2004	3.94	7.92	2.11	5.5	6.4%	13.21
2005	4.04	8.01	2.17	5.1	6.5%	14.54
2006	4.22	8.05	2.23	4.6	6.0%	14.73
2007	4.34	8.10	2.28	4.6	4.9%	14.68
2008	4.42	7.97	2.31	5.8	1.9%	13.57
2009	4.34	7.79	2.29	9.3	-2.4%	14.31
2010	4.37	7.94	2.33	9.6	4.2%	14.26
2011	4.41	7.88	2.37	8.9	3.9%	13.09

Wal-Mart Stores, Inc.’s natural log data set of Net Sales, Media Spending, Personal Consumption Expenditure, Unemployment Rate, Growth in GDP, and Average Credit Card Interest Rates from 1994 - 2011

YEARS	Wal-Mart Stores Inc. Net Sales [In Billions]	Wal-Mart Stores Inc. Media Spending [In Millions]	Personal Consumption Expenditure [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]
1994	4.21	4.86	1.56	6.1	6.3%	15.77
1995	4.41	4.96	1.61	5.6	4.5%	15.79
1996	4.54	4.98	1.66	5.4	5.8%	15.50
1997	4.65	5.15	1.72	4.9	6.3%	15.57
1998	4.72	5.48	1.78	4.5	5.5%	15.59
1999	4.87	5.72	1.85	4.2	6.4%	14.81
2000	5.05	5.85	1.92	4.0	6.4%	14.91
2001	5.20	5.84	1.97	4.7	3.4%	14.44
2002	5.32	5.98	2.01	5.8	3.4%	13.09
2003	5.44	6.06	2.05	6.0	4.7%	12.92
2004	5.55	6.18	2.11	5.5	6.4%	13.21
2005	5.65	6.17	2.17	5.1	6.5%	14.54
2006	5.74	6.01	2.23	4.6	6.0%	14.73
2007	5.84	6.07	2.28	4.6	4.9%	14.68
2008	5.92	6.63	2.31	5.8	1.9%	13.57
2009	5.99	6.95	2.29	9.3	-2.4%	14.31
2010	6.00	6.62	2.33	9.6	4.2%	14.26
2011	6.04	6.28	2.37	8.9	3.9%	13.09

Walt Disney Co.'s natural log data set of Net Sales, Media Spending, Personal Consumption Expenditure, Unemployment Rate, Growth in GDP, and Average Credit Card Interest Rates from 1994 - 2011

YEARS	Walt Disney Co. Net Sales [In Billions]	Walt Disney Co. Media Spending [In Millions]	Personal Consumption Expenditure [In Trillions]	Unemployment Rate [Percentage]	Growth in GDP [Percentage]	Average Credit Card Interest Rates [Percentage]
1994	2.31	6.17	1.56	6.1	6.3%	15.77
1995	2.50	6.52	1.61	5.6	4.5%	15.79
1996	2.93	6.64	1.66	5.4	5.8%	15.50
1997	3.11	6.61	1.72	4.9	6.3%	15.57
1998	3.13	6.69	1.78	4.5	5.5%	15.59
1999	3.15	6.57	1.85	4.2	6.4%	14.81
2000	3.24	6.92	1.92	4.0	6.4%	14.91
2001	3.23	6.91	1.97	4.7	3.4%	14.44
2002	3.23	6.97	2.01	5.8	3.4%	13.09
2003	3.30	7.14	2.05	6.0	4.7%	12.92
2004	3.43	7.11	2.11	5.5	6.4%	13.21
2005	3.45	7.07	2.17	5.1	6.5%	14.54
2006	3.52	7.03	2.23	4.6	6.0%	14.73
2007	3.57	7.00	2.28	4.6	4.9%	14.68
2008	3.63	6.93	2.31	5.8	1.9%	13.57
2009	3.59	6.83	2.29	9.3	-2.4%	14.31
2010	3.64	6.73	2.33	9.6	4.2%	14.26
2011	3.71	6.70	2.37	8.9	3.9%	13.09

Appendix II. – Johnson & Johnson’s Correlation Matrix & Regression

Johnson & Johnson’s Correlation Matrix

	<i>Johnson & Johnson Net Sales [In Billions]</i>	<i>Johnson & Johnson Media Spending [In Millions]</i>	<i>Personal Consumption Expenditure [In Trillions]</i>	<i>Unemployment Rate [Percentage]</i>	<i>Growth in GDP [Percentage]</i>	<i>Average Credit Card Interest Rates [Percentage]</i>
Johnson & Johnson Net Sales [In Billions]	1					
Johnson & Johnson Media Spending [In Millions]	0.86	1				
Personal Consumption Expenditure [In Trillions]	0.99	0.83	1			
Unemployment Rate [Percentage]	0.46	0.14	0.48	1		
Growth in GDP [Percentage]	-0.45	-0.22	-0.45	-0.62	1	
Average Credit Card Interest Rates [Percentage]	-0.71	-0.62	-0.70	-0.36	0.33	1

Johnson & Johnson's Regression I

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.998							
R Square	0.996							
Adjusted R Square	0.994							
Standard Error	0.04							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	5	3.74	0.75	578.93	0.00			
Residual	12	0.02	0.001					
Total	17	3.76						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.03	0.43	-2.40	0.03	-1.96	-0.10	-1.96	-0.10
Johnson & Johnson Media Spending [In Millions]	0.25	0.06	4.08	0.002	0.12	0.38	0.12	0.38
Personal Consumption Expenditure [In Trillions]	1.46	0.08	18.25	0.00	1.29	1.64	1.29	1.64
Unemployment Rate [Percentage]	0.01	0.01	1.01	0.33	-0.01	0.02	-0.01	0.02
Growth in GDP [Percentage]	-0.53	0.51	-1.03	0.32	-1.65	0.59	-1.65	0.59
Average Credit Card Interest Rates [Percentage]	-0.002	0.01	-0.14	0.89	-0.03	0.03	-0.03	0.03

Johnson & Johnson's Regression II

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.997							
R Square	0.995							
Adjusted R Square	0.994							
Standard Error	0.04							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	2	3.74	1.87	1371.11	1.04E-17			
Residual	15	0.02	0.00					
Total	17	3.76						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.87	0.27	-3.22	0.01	-1.44	-0.29	-1.44	-0.29
Johnson & Johnson Media Spending [In Millions]	0.20	0.05	3.72	0.002	0.08	0.31	0.08	0.31
Personal Consumption Expenditure [In Trillions]	1.56	0.06	26.12	0.00	1.43	1.69	1.43	1.69

Appendix III. – McDonalds Corp.’s Correlation Matrix & Regression

McDonalds’ Correlation Matrix

	<i>McDonalds Corp. Net Sales [In Billions]</i>	<i>McDonalds Corp. Media Spending [In Millions]</i>	<i>Personal Consumption Expenditure [In Trillions]</i>	<i>Unemployment Rate [Percentage]</i>	<i>Growth in GDP [Percentage]</i>	<i>Average Credit Card Interest Rates [Percentage]</i>
McDonalds Corp. Net Sales [In Billions]	1					
McDonalds Corp. Media Spending [In Millions]	0.78	1				
Personal Consumption Expenditure [In Trillions]	0.99	0.74	1			
Unemployment Rate [Percentage]	0.48	0.33	0.48	1		
Growth in GDP [Percentage]	-0.45	-0.36	-0.45	-0.62	1	
Average Credit Card Interest Rates [Percentage]	-0.67	-0.43	-0.70	-0.36	0.33	1

McDonalds' Regression I

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.997							
R Square	0.994							
Adjusted R Square	0.992							
Standard Error	0.03							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	5	2.01	0.40	424.14	0.00			
Residual	12	0.01	0.001					
Total	17	2.02						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.29	0.48	-2.69	0.02	-2.33	-0.25	-2.33	-0.25
McDonalds Corp. Media Spending [In Millions]	0.23	0.08	2.82	0.02	0.05	0.40	0.05	0.40
Personal Consumption Expenditure [In Trillions]	1.21	0.06	21.96	0.00	1.09	1.33	1.09	1.33
Unemployment Rate [Percentage]	0.003	0.01	0.58	0.57	-0.01	0.02	-0.01	0.02
Growth in GDP [Percentage]	0.14	0.44	0.32	0.75	-0.82	1.10	-0.82	1.10
Average Credit Card Interest Rates [Percentage]	0.01	0.01	0.89	0.39	-0.01	0.03	-0.01	0.03

McDonalds' Regression II

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.997							
R Square	0.994							
Adjusted R Square	0.993							
Standard Error	0.03							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	2	2.01	1.00	1212.35	2.60E-17			
Residual	15	0.01	0.001					
Total	17	2.02						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.13	0.42	-2.69	0.02	-2.02	-0.23	-2.02	-0.23
McDonalds Corp. Media Spending [In Millions]	0.24	0.07	3.20	0.01	0.08	0.39	0.08	0.39
Personal Consumption Expenditure [In Trillions]	1.19	0.04	30.73	0.00	1.11	1.27	1.11	1.27

Appendix IV. – PepsiCo Inc.’s Correlation Matrix & Regression

PepsiCo’s Correlation Matrix

	<i>Pepsico Inc. Net Sales [In Billions]</i>	<i>Pepsico Inc. Media Spending [In Millions]</i>	<i>Personal Consumption Expenditure [In Trillions]</i>	<i>Unemployment Rate [Percentage]</i>	<i>Growth in GDP [Percentage]</i>	<i>Average Credit Card Interest Rates [Percentage]</i>
Pepsico Inc. Net Sales [In Billions]	1					
Pepsico Inc. Media Spending [In Millions]	0.18	1				
Personal Consumption Expenditure [In Trillions]	0.71	0.12	1			
Unemployment Rate [Percentage]	0.78	-0.04	0.48	1		
Growth in GDP [Percentage]	-0.44	0.07	-0.45	-0.62	1	
Average Credit Card Interest Rates [Percentage]	-0.37	-0.18	-0.70	-0.36	0.33	1

PepsiCo's Regression I

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.92							
R Square	0.85							
Adjusted R Square	0.78							
Standard Error	0.16							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	5	1.66	0.33	13.21	0.0002			
Residual	12	0.30	0.03					
Total	17	1.96						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.97	1.49	-1.32	0.21	-5.22	1.29	-5.22	1.29
Pepsico Inc. Media Spending [In Millions]	0.19	0.13	1.47	0.17	-0.09	0.48	-0.09	0.48
Personal Consumption Expenditure [In Trillions]	0.82	0.22	3.80	0.003	0.35	1.29	0.35	1.29
Unemployment Rate [Percentage]	0.14	0.03	4.62	0.001	0.07	0.20	0.07	0.20
Growth in GDP [Percentage]	2.44	2.28	1.07	0.30	-2.52	7.40	-2.52	7.40
Average Credit Card Interest Rates [Percentage]	0.11	0.06	1.96	0.07	-0.01	0.23	-0.01	0.23

PepsiCo's Regression II

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.91							
R Square	0.83							
Adjusted R Square	0.78							
Standard Error	0.16							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	4	1.63	0.41	16.04	6.02E-05			
Residual	13	0.33	0.03					
Total	17	1.96						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.78	1.49	-1.19	0.25	-5.01	1.44	-5.01	1.44
Pepsico Inc. Media Spending [In Millions]	0.21	0.13	1.57	0.14	-0.08	0.49	-0.08	0.49
Personal Consumption Expenditure [In Trillions]	0.78	0.21	3.65	0.003	0.32	1.25	0.32	1.25
Unemployment Rate [Percentage]	0.12	0.03	4.69	0.0004	0.07	0.18	0.07	0.18
Average Credit Card Interest Rates [Percentage]	0.11	0.06	1.96	0.07	-0.01	0.23	-0.01	0.23

Appendix V. – Procter & Gamble Co.’s Correlation Matrix & Regression

Procter & Gamble Co.’s Correlation Matrix

	<i>Procter & Gamble Co. Net Sales [In Billions]</i>	<i>Procter & Gamble Co. Media Spending [In Millions]</i>	<i>Personal Consumption Expenditure [In Trillions]</i>	<i>Unemployment Rate [Percentage]</i>	<i>Growth in GDP [Percentage]</i>	<i>Average Credit Card Interest Rates [Percentage]</i>
Procter & Gamble Co. Net Sales [In Billions]	1					
Procter & Gamble Co. Media Spending [In Millions]	0.87	1				
Personal Consumption Expenditure [In Trillions]	0.95	0.88	1			
Unemployment Rate [Percentage]	0.54	0.32	0.48	1		
Growth in GDP [Percentage]	-0.48	-0.21	-0.45	-0.62	1	
Average Credit Card Interest Rates [Percentage]	-0.52	-0.59	-0.70	-0.36	0.33	1

Procter & Gamble's Regression I

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.98							
R Square	0.96							
Adjusted R Square	0.95							
Standard Error	0.08							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	5	2.11	0.42	65.11	2.8E-08			
Residual	12	0.08	0.006					
Total	17	2.18						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-2.05	0.97	-2.11	0.06	-4.16	0.07	-4.16	0.07
Procter & Gamble Co. Media Spending [In Millions]	0.27	0.15	1.72	0.11	-0.07	0.60	-0.07	0.60
Personal Consumption Expenditure [In Trillions]	1.15	0.21	5.48	0.0001	0.69	1.61	0.69	1.61
Unemployment Rate [Percentage]	0.03	0.02	1.70	0.12	-0.01	0.06	-0.01	0.06
Growth in GDP [Percentage]	-1.08	1.25	-0.87	0.40	-3.80	1.64	-3.80	1.64
Average Credit Card Interest Rates [Percentage]	0.10	0.03	3.66	0.003	0.04	0.16	0.04	0.16

Procter & Gamble's Regression II

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.97							
R Square	0.95							
Adjusted R Square	0.93							
Standard Error	0.09							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	3	2.06	0.69	80.93	4.39E-09			
Residual	14	0.12	0.01					
Total	17	2.18						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.41	1.07	-1.32	0.21	-3.70	0.88	-3.70	0.88
Procter & Gamble Co. Media Spending [In Millions]	0.13	0.16	0.84	0.42	-0.21	0.47	-0.21	0.47
Personal Consumption Expenditure [In Trillions]	1.40	0.20	6.90	0.00	0.96	1.83	0.96	1.83
Average Credit Card Interest Rates [Percentage]	0.10	0.03	3.16	0.01	0.03	0.17	0.03	0.17

Appendix VI. – Wal-Mart Stores Inc.’s Correlation Matrix & Regression

Wal-Mart’s Correlation Matrix

	<i>Wal-Mart Stores Inc. Net Sales [In Billions]</i>	<i>Wal-Mart Stores Inc. Media Spending [In Millions]</i>	<i>Personal Consumption Expenditure [In Trillions]</i>	<i>Unemployment Rate [Percentage]</i>	<i>Growth in GDP [Percentage]</i>	<i>Average Credit Card Interest Rates [Percentage]</i>
Wal-Mart Stores Inc. Net Sales [In Billions]	1					
Wal-Mart Stores Inc. Media Spending [In Millions]	0.94	1				
Personal Consumption Expenditure [In Trillions]	0.997	0.93	1			
Unemployment Rate [Percentage]	0.49	0.51	0.48	1		
Growth in GDP [Percentage]	-0.48	-0.60	-0.45	-0.62	1	
Average Credit Card Interest Rates [Percentage]	-0.71	-0.71	-0.70	-0.36	0.33	1

Wal-Mart's Regression I

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.998							
R Square	0.997							
Adjusted R Square	0.996							
Standard Error	0.04							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	5	6.15	1.23	755.31	1.47E-14			
Residual	12	0.02	0.002					
Total	17	6.17						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1.13	0.37	3.09	0.01	0.33	1.93	0.33	1.93
Wal-Mart Stores Inc. Media Spending [In Millions]	0.04	0.06	0.67	0.51	-0.09	0.16	-0.09	0.16
Personal Consumption Expenditure [In Trillions]	2.08	0.11	18.49	0.00	1.84	2.33	1.84	2.33
Unemployment Rate [Percentage]	0.003	0.01	0.37	0.72	-0.01	0.02	-0.01	0.02
Growth in GDP [Percentage]	-0.75	0.69	-1.08	0.30	-2.26	0.76	-2.26	0.76
Average Credit Card Interest Rates [Percentage]	-0.02	0.01	-1.15	0.27	-0.05	0.02	-0.05	0.02

Wal-Mart's Regression II

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.998							
R Square	0.996							
Adjusted R Square	0.995							
Standard Error	0.04							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	2	6.15	3.07	1858.26	1.08E-18			
Residual	15	0.02	0.002					
Total	17	6.17						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.62	0.11	5.78	0.00	0.39	0.85	0.39	0.85
Walmart Stores Inc. Media Spending [In Millions]	0.09	0.05	2.06	0.06	-0.003	0.19	-0.003	0.19
Personal Consumption Expenditure [In Trillions]	2.05	0.10	20.03	0.00	1.83	2.26	1.83	2.26

Appendix VII. – Walt Disney Co.’s Correlation Matrix & Regression

Walt Disney’s Correlation Matrix

	<i>Walt Disney Co. Net Sales [In Billions]</i>	<i>Walt Disney Co. Media Spending [In Millions]</i>	<i>Personal Consumption Expenditure [In Trillions]</i>	<i>Unemployment Rate [Percentage]</i>	<i>Growth in GDP [Percentage]</i>	<i>Average Credit Card Interest Rates [Percentage]</i>
Walt Disney Co. Net Sales [In Billions]	1					
Walt Disney Co. Media Spending [In Millions]	0.70	1				
Personal Consumption Expenditure [In Trillions]	0.93	0.65	1			
Unemployment Rate [Percentage]	0.33	-0.13	0.48	1		
Growth in GDP [Percentage]	-0.36	-0.12	-0.45	-0.62	1	
Average Credit Card Interest Rates [Percentage]	-0.65	-0.66	-0.70	-0.36	0.33	1

Walt Disney's Regression I

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.95							
R Square	0.89							
Adjusted R Square	0.85							
Standard Error	0.15							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	5	2.20	0.44	20.16	0.00002			
Residual	12	0.26	0.02					
Total	17	2.46						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.22	2.58	-0.47	0.65	-6.85	4.41	-6.85	4.41
Walt Disney Co. Media Spending [In Millions]	0.23	0.30	0.79	0.45	-0.41	0.88	-0.41	0.88
Personal Consumption Expenditure [In Trillions]	1.29	0.26	4.97	0.0003	0.72	1.85	0.72	1.85
Unemployment Rate [Percentage]	-0.01	0.04	-0.26	0.80	-0.10	0.08	-0.10	0.08
Growth in GDP [Percentage]	0.31	2.14	0.15	0.89	-4.35	4.97	-4.35	4.97
Average Credit Card Interest Rates [Percentage]	0.02	0.06	0.39	0.71	-0.11	0.16	-0.11	0.16

Walt Disney's Regression II

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.94							
R Square	0.89							
Adjusted R Square	0.87							
Standard Error	0.13							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	2	2.19	1.09	60.16	6.85E-08			
Residual	15	0.27	0.02					
Total	17	2.46						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.86	0.99	-0.87	0.40	-2.97	1.25	-2.97	1.25
Walt Disney Co. Media Spending [In Millions]	0.26	0.17	1.52	0.15	-0.11	0.63	-0.11	0.63
Personal Consumption Expenditure [In Trillions]	1.17	0.16	7.32	0.00	0.83	1.51	0.83	1.51

Bibliography

Ad \$ Summary Company Rankings. *Multi-Media Service*. (1994-2011). CMR and Magazine Publishers of America.

Bureau of Labor Statistics. *Labor Force Statistics from Current Population Survey*. 2012. http://data.bls.gov/timeseries/LNU04000000?years_option=all_years&periods_option=specific_periods&periods=Annual+Data. U.S. Department of Labor

Board of Governors of the Federal Reserve System. *Table 2. Average most common interest rate on credit card plans, 1974-August 1994, and the interest rate assessed on accounts incurring interest charges, November 1994-2010 (Percent)*.

<http://www.federalreserve.gov/publications/other-reports/credit-card-profitability-2012-recent-trends-in-credit-card-pricing.htm>. 1994-2011

Choi, Sejung Marina & Rifon, Nora J. *Antecedents and Consequences of Web Advertising Credibility: A Study of Consumer Response to Banner Ads*. Fall 2002. *Journal of Interactive Advertising*, Vol. 3, No 1.

Court, David. *McKinsey Quarterly*. June 2009

Edelman, David C. *Branding in the Digital Age*. December 2010. *Harvard Business Review*.

Fulgoni, Gian M. & Morn, Marie Pauline. *How Online Advertising Works: Whither the Click?* December 2008. comScore

Johnson & Johnson Annual Report & Proxy Statements. Pg. 72. 2011. PDF. <http://www.investor.jnj.com/annual-reports.cfm>

Johnson & Johnson, EDGAR Online, Form Type 10-K. 1994-2000. *LexisNexis Academic*

Kotha, Suresh & Rajgopal, Shivaram & Venkatachalam, Mohan. *The Role of Online Buying Experience as a Competitive Advantage: Evidence from Third-Party Ratings for E-Commerce Firms*. April 2004. The University of Chicago Press.

Lohse, Gerald L. & Bellman, Steven, & Johnson, Eric J. *Consumer Buying Behavior on the Internet: Findings from Panel Data*. Winter 2000. *Journal of Interactive Marketing*.

McDonalds Annual Reports. Pg. 2. 2002. PDF. http://www.aboutmcdonalds.com/mcd/investors/annual_reports.html

McDonalds Annual Reports. Pg. 21. 2008. PDF. http://www.aboutmcdonalds.com/mcd/investors/annual_reports.html

McDonalds Annual Reports. Pg. 7. 2011. PDF. http://www.aboutmcdonalds.com/mcd/investors/annual_reports.html

Nelson, Emily & Ellison, Sarah. *In a Shift, Marketers Beef Up Ad Spending Inside Stores*. 21 September 2005. The Wall Street Journal.

Pepsico Inc. Annual Reports. 1996-2011. PDF. <http://www.pepsico.com/investors/annual-reports.html>

Procter & Gamble Company Annual Reports. 1999-2011. PDF. http://www.pg.com/en_US/investors/financial_reporting/annual_reports.shtml

Procter & Gamble Company, EDGAR Online, Form Type 10-K. 1994-2000. *LexisNexis Academic*

Wal-Mart Corporate Annual Reports. 1994-2011. PDF. <http://stock.walmart.com/annual-reports>

Walt Disney Company Annual Reports. 1995-2011. PDF. <http://thewaltdisneycompany.com/investors/financial-information/annual-report>

Walt Disney Company, EDGAR Online, Form Type 10-K. 1994. *LexisNexis Academic*

Whitehouse.gov. *Appendix B: Statistical Tables Relating to Income, Employment, and Production*. http://www.whitehouse.gov/sites/default/files/microsites/ERP_2012_App_B.pdf. 27 January 2012. Department of Commerce – Bureau of Economic Analysis