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# Effects of Political Consumerism on Consumer Behavior in the U. S. Automobile Market

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**Abstract**

The effects of political consumerism on consumer behavior is not clearly established in the automobile industry despite its growing significance in the United States. Therefore, this paper seeks to illustrate the increasing role of political consumerism in the car industry. To accomplish this goal, the relationship between political affiliations, consumer ratings of vehicles, car preference and purchasing decisions are explored. To this end, a random sample of 104 undergraduate students at Holy Cross College, Notre Dame, Indiana, USA were selected. By using MANOVA and OLS regression statistical models, the paper illustrates that political ideology significantly predicts consumer behavior of this cohort. Specifically, Republicans prefer to buy Ford, rate Ford vehicles higher than Democrats and generally own domestic vehicles. On the other hand, Democrats prefer to buy Toyota, rate Toyota vehicles higher than Republicans and generally own foreign vehicles. However, there is no significant statistical difference between Democrats and Republicans in regards to their perception of the performance of Toyota and Ford cars. Further, personal (student) income reinforces the influence of political ideology on consumer behavior.

**Keywords**: consumer preferences, consumer behavior, consumer purchasing decisions, political consumerism, U. S. automobile industry, Toyota, Ford.

## I. INTRODUCTION

This study seeks to answer the following fundamental question: does political consumerism influence the consumer purchasing decision of buying domestic and foreign cars in the United States? To answer this question this study looks into the U. S. automobile industry. The automobile industrial sector is a major sector in the United States. For instance, the automobile industry accounts for 10.3%, 6.3% and 4.7% of the GDP of Michigan, Indiana and Ohio respectively (Thompson & Merchant, 2010).

The revenue generated by the domestic U. S. automobile industry is highly dependent on the level of competition with Japanese automakers (e.g. Toyota and Honda) (Thompson & Merchant, 2010). For instance, according to Thompson and Merchant, from the year 2000 to 2008 the global revenue of General Motors dropped from $184 billion to $122 billion whereas Toyota saw its global revenue increase from $100 billion (1998) to $214 billion (2008). Given that American and Japanese automobiles are at par in terms of quality and pricing considerations, Japanese

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automakers mastery of lean manufacturing is considered to be a key determinant for this revenue differential between these two global competitors (Mejza et al., 2013).

In the United States, the biggest car manufacturers have the following market share: General Motors (15.6%), Ford (15.8%), Toyota (14.4%) and Chrysler (12.5%) (The Wall Street Journal, 2017, June 1). This data shows that American automakers have a competitive advantage over Japanese automakers in the United States while this is not the case globally. The question that arises at this point is then the following: What drives competitive advantage in the United States? One of the drivers of consumer vehicle buying decision, we argue, is political ideology.

In the United States, there are essentially two major types of political ideologies, which are fundamentally conceptualized within the liberal/conservative paradigm (Jost et al., 2008). The Democrat Party primarily champions the liberal ideology while the Republican Party is essentially conservative. Specifically, a 2014 research shows that 92% of Republicans are more conservative than the median Democrat while 94% of Democrats are more liberal than the median Republican (Pew Research Center, 2014). This illustrates that there is increasing polarization between these two groups. Therefore, this study uses membership to the Democrat and Republican Party as a proxy to liberal and conservative ideological tendencies respectively.

There are numerous nation-wide surveys (e.g., C. N. W. marketing research survey, R. L. Polk & Co. survey and strategic vision survey) that show that political ideology plays a role in car buying decisions in the U. S. automobile market. For instance, Republicans would generally prefer to purchase domestic (American) cars while Democrats on average prefer to buy foreign cars. However, these studies do not provide the explanation on why this is the case. This paper attempts to bridge this gap by proposing political consumerism, which is utilizing product and service market purchases to voice socio-political issues and concerns (Zhang, 2015), as an explanation for this phenomena. The significance of political consumerism cannot be overemphasized given that the rise of nationalism and anti-globalization sentiments is likely going to result in political consumerism having more important role in consumer purchasing decisions in the automobile industry.

Our results reveal that Republicans prefer to buy Ford vehicles while Democrats desire to purchase Toyota vehicles. These buying preferences mirror actual purchasing decisions. That is, Republicans are more likely to own an American car than Democrats. In addition, personal income is a predictor of car ownership where increased earning is associated with the ownership of Toyota for Democrats and Ford for Republicans. Political ideology is also a major predictor of attitude (rating) towards Toyota and Ford vehicles. In this case, Democrats view Toyota favorably while Republicans view Ford more positively. However, it is interesting to note, both groups do not think there is any significant difference in performance (measured in terms of quality, engine performance, durability, etc.) between these two vehicle types. These findings lend credence to our hypothesis that political consumerism is at play here.

This paper is structured as follows. The following section is literature review, which is followed by the research gap section. Sections 4 and 5 cover data collection procedure and measurement of variables components respectively. Section 6 and 7 discuss the methodology and results of the study. Sections 8, 9 and 10 cover the discussions, conclusion and recommendations of the research. Finally, section 11 discusses the implications of the study.

## II. LITERATURE REVIEW

### 2.1. The Automobile Industry

The U. S. automotive industry contributes approximately 3% to the U. S. GDP and is a major source of employment (AAPC, 2016). In addition, the industry invests heavily in research and development, and significantly contributes to the revenue of the industry suppliers including the steel industry (AAPC, 2016). U. S. automobile companies buy their supplies from the same group of suppliers and these suppliers roughly charge the same prices for their goods (Kallstrom, 2015), which partially explains why the prices of vehicles from different companies are comparable. One of the largest suppliers in the U. S. is Johnson Controls (JCI), which provides batteries and other components to Toyota, Volkswagen, and Ford (Kallstrom, 2015).

The bargaining power of buyers (through their income/purchasing power) is relatively high in the automobile industry because consumers are able to negotiate prices with car dealerships (Pratap, 2017). Pratap also notes that buyers can simply switch to a new brand that offers a better deal, which forces the overall price of automobiles to shift downwards.

Non-price competition is major factor that heavily affects the pricing strategies of most automobile companies (Kimmons, 2017). In order for automobile companies to be efficient and thereby attract a large consumer base, they must focus on product differentiation, innovation, quality of service, and branding (Kimmons, 2017).

A major form of non-price competition in this industry is advertising (Kallstrom, 2015). Some automobile companies are the largest advertisers in the U. S. For instance, General Motors (GM) is the 3rd largest advertiser spending 3.5 billion dollars, or 3.5% of its total revenue on advertising alone while Ford is the 6th largest advertiser in the U. S. spending around 2.75 billion (Fuller, 2017). Television, the largest media platform for automobile advertising, totaled 4.84 Billion dollars for just the automobile industry (Fuller, 2017). Thus, most automobile companies spend a large amount of their revenue on advertising and building brand loyalty. Further, the prices of vehicles of similar capacity (engine capacity, size of vehicle, etc.) from different car manufacturers are generally comparable (Mejza et al., 2013) due to the companies' shared technology, production processes, and resources. Thus, profit margins between companies mainly vary due to consumers' loyalty to a particular brand and model of car.

A question that arises at this point is if consumer loyalty is a key component to competition in this industry, what drives consumer loyalty besides features of a product, quality of service and branding? It seems an additional significant factor, which is not explored adequately, is political affiliation of car buyers. As cited in The New York Times (2005), a C. N. W. Marketing Research study, based on 163,000 new car buyers, note that Republicans tend to buy more American cars than Democrats while Democrats are likely to buy foreign cars than Republicans. A Strategy Vision survey consisting of 300,000 respondents, as cited in Hammond (2012), also present similar findings. Similarly, a study by R. L. Polk & Co., as cited in The Washington Times (2009), reports that in states where Democrats won 75% of the elections, imports are 60% of the car market while in Republican states domestic car purchases are approximately 74% of the market. These characteristics hold true for 36 U. S. states. According to The New York Times (2005, April 1), these differences can be explained by geography. The explanation given here is as follows (The New York Times, 2005, April 1): Democrats tend to be concentrated in port cities with higher links to Europe and Asia, which makes them more receptive to foreign car companies. On the other

hand, Republicans are more likely to be living inland where there is room for bigger vehicles and there is a tradition of loyalty to American vehicles. Another plausible explanation is that Democrats (liberals) have a higher preference for change than Republicans (conservatives) who have a higher preference for maintaining the status-quo (Jost et al., 2008).

This relationship goes beyond the car industry. For instance, Khan et al. (2013), utilizing a comprehensive database representing 47% of the U. S. population, find that conservatives prefer national brands and conservative markets are characterized by lower penetration of new supermarket products.

Based on the above discussion, we develop the following hypotheses:

**$H_1$**: Democrats have a higher preference to purchase foreign vehicles than Republicans while Republicans have a greater preference to buy domestic vehicles than Democrats.

**$H_2$**: Democrats own a higher percentage of foreign cars than Republicans while Republicans own a higher percentage of domestic cars than Democrats.

Given that purchasing power is a major determinant for purchasing a vehicle, we also hypothesize that:

**$H_3$**: there is a positive relationship between income and foreign car ownership for Democrats while there is a positive association between income and domestic car ownership for Republicans.

The various surveys mentioned above show that buying behavior and preferences of car buyers are related to political affiliations. However, they do not provide explanations on why the correlation exists. We argue that the relationship between political affiliation and consumer buying behavior can be explained by the concept known as political consumerism.

### 2.2. Political Consumerism

Political consumerism is using product and service purchases from the market to voice socio-political issues and concerns (Zhang, 2015). It is expressed in the form of buycotts or boycotts (Micheletti et al., 2004). Boycotting is punishing companies by refusing to buy their products while buycotting is rewarding companies by buying their products (Copeland, 2014). It is estimated that Americans who make buying decisions in light of their political, ethical, moral and environmental concerns is estimated to be up to 44 per cent (Newman & Bartels, 2011).

Baek (2010) provides the following four reasons for the increasing significance of political consumerism in determining market-buying behavior. First, policy issues are no longer the sole domain of governments and national institutions. Citizens, as consumers, are increasingly realizing that political consumerism as a form of political engagement is an effective mechanism to pressure the government to address social and political concerns. Second, globalization has minimized the effectiveness of governments to deal with policy disagreements as national problems are often transformed into international problems. For instance, using sweatshops to produce and export products to the United States makes the problem of sweatshops not only a problem to the exporting country, but also to the United States. To deal with such a complex issue, the use of boycotts is an effective strategy to penalize companies that use sweatshops. Third, appealing to racial, gender and religious identity is gaining importance in today's politics. This naturally encourages the use of boycotts and buycotts. Fourth, consumers/citizens no longer believe in the ability of the government

to solve social and political concerns. Therefore, consumers are relying more heavily on boycotting and boycotting to solve their social and political problems.

Based on the above discussion, we hypothesize that if U. S. car buyers apply political consumerism (buycotting and boycotting) in their vehicle purchasing decisions, the following hypothesis should be rejected:

**$H_4$**: there is a significant difference between Democrats and Republicans in terms of their perception of the performance of domestic versus foreign vehicles.

Following hypothesis four, if political consumerism is at play then the following hypothesis must be true:

**$H_5$**: Democrats give a higher rating to foreign vehicles than Republicans while Republicans rate domestic vehicles higher than Democrats.

## III. RESEARCH GAP

The major contributions of this paper are as follows: a) this study contributes to the dialogue that attempts to explain why consumers engage in political consumerism. Nation-wide surveys targeting at least half a million U. S. residents have essentially established that Democrats have a higher preference to foreign vehicles while Republicans are inclined towards buying domestic vehicles. However, these surveys have not provided the reason why this is the case. This study offers political consumerism as a partial but significant explanation of consumer behavior in the U. S. automobile industry. This is an original research effort that attempts to do so and b) this research applies an inter-disciplinary approach that merges the fields of political science (political consumerism) and business (consumer behavior) in the U. S. automobile industry (an industry that significantly contributes to the U. S. economy).

## IV. DATA COLLECTION

The target population of this study was undergraduate students from Holy Cross College, Notre Dame, United States. To obtain the appropriate sample size from this group, the Yamane (1967, p. 886) formula [*i.e.* $N/(1+N(e)^2]$ was used (population size (N)= 500 and margin of error (e)= .1). Therefore, at 5% confidence level, we obtained an initial sample threshold of 84 sample units. A random sample of 123 respondents were collected with valid responses from 104 respondents.

The sampling of undergraduate students is validated given that this group of consumers are relevant for the survival, performance and growth of the automobile industry in Notre Dame and the United States in general. Despite the significance of this group, very little is known about their buying behavior implying the under-exploitation of this market segment (Udo-Imeh, 2015). In addition, Ford and Toyota companies were selected as representatives of domestic and foreign cars respectively given their significant market share in the U. S. (see The Wall Street Journal, 2017, June 1).

## V. MEASUREMENT OF VARIABLES

### 5.1. Dependent Variables

The first dependent variable is a dummy variable that measures the car purchase preference of the respondents. The options were purchase of a Toyota or a Ford. Ford and Toyota purchase preferences were coded 0 and 1 respectively. The second dependent variable is consumer ratings (capturing attitude) of Ford and Toyota. This is measured in a 7-point Likert scale (ordinal scale). The third dependent variable measures consumer perception on the performance of Toyota and Ford motor

vehicles. Again, a 7-point Likert scale was used to measure perception on performance using the following indicators: quality, safety, value, reliability, design, engine performance, operational cost, maintenance costs and affordability. This yielded a minimum of 8 and maximum of 56 scale aggregate points. The fourth dependent variable is car ownership, which is a dummy variable. Ownership of foreign car (Toyota or any other foreign car) and domestic vehicle (Ford or any other domestic car) are coded as 0 and 1 respectively.

### 5.2. Independent Variables

The independent variable is political party affiliation. Democrat Party and Republican Party affiliation were assigned a code of 0 and 1 respectively. A second independent variable is income, which is measured in ratio scale and is a continuous variable.

## VI. METHODOLOGY

### 6.1. Methodology

The Ordinary Least Square (OLS) model is used in this study. At the basic level, the model estimates the relationship between a response variable (Y) and an explanatory variable (X) by using a line of best-fit, where Y is predicted by X. The relationship is mathematically denoted as:

$$\mathbf{Y = \alpha + \beta_x.}$$

The OLS regression model can include multiple explanatory variables such that:

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3.}$$

The interpretation of the parameters ($\alpha$ and $\beta$) from the above model is fundamentally the same as for the simple regression model above. $\alpha$ is a constant that indicates the value of Y when all vales of the explanatory variables are zero. Each $\beta$ parameter indicates the average change in Y that is associated with a unit change in X, while controlling for the other explanatory variables in the model.

The overall effect of all three explanatory variables on Y can be assessed by calculating the F-statistic and R-square values. F-statistic is the ratio of the mean regression sum of squares divided by the mean error sum of squares. A high and significant F-value means that the data does not support the null hypothesis. The R-squared measures the degree to which the data are close to the fitted regression line. An R-squared value that is 1 or close to 1 is an indicator that the OLS model is an accurate predicative model.

This study also uses MANOVA (multivariate analysis of variance). This multivariate analysis is used to analyze data that involves more than one dependent variable at a time. This method allows testing of a hypothesis to determine the effect of one or more independent variables on two or more dependent variables. In this case, ratios are formed to represent the between-group and within-group variation by using covariance matrices. Specifically, MANOVA employs the sum of squares and cross products (SSCP) matrix to identify both the systematic variation that exist for each dependent variable and the correlation between the dependent variables that is due to the model. The most frequently used multivariate strength of effect index is Wilks' lambda (essentially, Wilks' lambda is MANOVA's equivalent of the F-test in regression analysis). Subtracting the Wilks' lambda value from 1.00 provides an estimate of the variance that is due to the predictor variable.

One primary reason for using MANOVA is to minimize type I error (Meyers et al., 2017). That is, the chance of rejecting the null hypothesis when it is true.

As noted in Meyers et al. (2017) type I error is minimized in MANOVA as it allows a single test of differences between groups.

This study also applies the pairwise T-test to test whether the means of two groups (Republicans and Democrats) are statistically different. Given that multiple dependent variables are used, there is a risk of alpha level inflation. To compensate for this, following Meyers et al. (2017), we apply a Boneferroni correction to the alpha level.

## VII. RESULTS

### 7.1. Descriptive Statistics

The socio-economic characteristics of the respondents is described below in Table 1.

**Table 1**
**Socio-Economic Characteristics (n= 104)**

| Socio-Economic Characteristics | Percentage |
|---|---|
| **Gender:** | |
| - Male | 69.7% |
| - Female | 30.3% |
| **College Educational Level:** | |
| - Freshman | 43.4% |
| - Sophomore | 24.2% |
| - Junior | 20.2% |
| - Senior | 12.2% |
| **Ethnicity:** | |
| - African American | 5.1% |
| - Asian | 4.1% |
| - Hispanic | 19.4% |
| - White | 65.3% |
| - Did not specify | 6.5% |
| **Age:** | |
| - 17 years old | 1.9% |
| - 18-19 years old | 56.7% |
| - 20-21 years old | 31.7% |
| - 22-23 years old | 8.7% |
| - 24 years old | 1% |
| **Annual Income:** | |
| - Mean family (parents) household income | $ 94,702.94 (SD=58,085.2) |
| - Mean personal (student) income | $ 3,959.93 (SD=6,592.48) |

There were 69.7% males and 30.3% females. Further, there were 5.1% African Americans, 4.1% Asians, 19.4% Hispanic, 65.3% white and 6.5% did not specify. The age range of the sample was 17-24 with a high concentration (89%) on the 18-21 age group. There were 43.4% freshmen, 24.2% sophomores, 20.2% juniors and 12.1% seniors. The mean annual household (family) income was 94,702.94 USD (SD= 58,085.2), indicating a high deviation in household income between households. The mean annual personal income (student income) was 3,959.93 (SD= 6,592.48),

indicating a high deviation in personal income. Further, Table 2 provides a breakdown of respondents by their state of residence.

**Table 2**
**Residential Distribution of Respondents by State (n= 104)**

| | State | Percentage |
|---|---|---|
| 1. | **Arizona** | 1% |
| 2. | **California** | 3% |
| 3. | **Colorado** | 2% |
| 4. | **Connecticut** | 3% |
| 5. | **Delaware** | 1% |
| 6. | **Florida** | 2% |
| 7. | **Illinois** | 10.5% |
| 8. | **Indiana** | 55% |
| 9. | **Kentucky** | 1% |
| 10. | **Louisiana** | 1% |
| 11. | **Maryland** | 1% |
| 12. | **Massachusetts** | 2% |
| 13. | **Michigan** | 5% |
| 14. | **New Jersey** | 1% |
| 15. | **New York** | 1% |
| 16. | **Ohio** | 3% |
| 17. | **Texas** | 3% |
| 18. | **Virginia** | 2% |
| 19. | **West Virginia** | 1% |
| | **Total** | **100%** |

Table 2 illustrates that approximately 75% of the respondents are from Indiana and neighboring states. The remaining respondents are evenly distributed across various states. Residents from 19 states are represented in this sample. Table 3 below shows the distribution of car ownership by country of origin.

**Table 3**
**Car Purchased by Country of Origin (n= 104)**

| Car Ownership | Percentage |
|---|---|
| **American (Domestic) Vehicle** | 43.2% |
| **Japanese (Foreign) Vehicle** | 29.2% |
| **Unspecified** | 13.5% |
| **Total** | **100%** |

Table 3 shows that 43.2% owned a domestic (American) car while 29.2% owned a foreign car (Japanese or any other foreign car), and the remaining 13.5% did not specify. Furthermore, Table 4 below categorizes respondents by their political affiliation.

**Table 4**
**Political Party Affiliation (n= 104)**

| Political Party | Percentage |
|---|---|
| **Democrat** | 36% |
| **Republican** | 56% |
| **Not Specified** | 8% |
| **Total** | **100%** |

Table 4 demonstrates that 36% and 56% identify themselves as Democrats and Republicans respectively while 8% did not specify their political orientation.

### 7.2. Key Findings

The initial statistical analysis to consider is a test of equality of covariance and variance before proceeding to MANOVA. As noted in Meyers et al. (2017), in MANOVA we assume that the variances and correlations (covariances) of the response variable are comparable across different predictor variables. The results on appendix II shows that the assumptions are not violated. That is, Box's test of the equality of the variance-covariance matrices was found to be not significant (Box's M= 3.241, F(3,254170.561426978)= 1.052, p= .368), suggesting that the matrices are equal. Furthermore, the multivariate effect of political affiliation was significant at 1-Wilk's lambda= .081. It therefore appears that political party affiliation accounted for approximately 8% of the multivariate variance.

The respondents were asked to rate Toyota and Ford vehicles. This question rated the negative/positive attitude respondents have towards Toyota and Ford vehicles. The difference between means of the ratings of Toyota and Ford vehicles were tested using a T-test, and the results are summarized in Table 5.

**Table 5**

**T-test on the Difference between Means of the Ratings of Toyota and Ford Vehicles in Two Groups (Democrats/Republicans)**

**Estimated Marginal Means**

| Dependent Variable | | Mean | Std. Error | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower Bound | Upper Bound |
| **Evaluation of Toyota Cars** | Democrat | 5.056 | .286 | 4.488 | 5.623 |
| | Republican | 4.357 | .229 | 3.902 | 4.812 |
| **Evaluation of Ford Cars** | Democrat | 4.889 | .256 | 4.381 | 5.397 |
| | Republican | 5.661 | .205 | 5.253 | 6.068 |

**Pairwise Comparisons**

| Dependent Variable | | | Mean Difference (I-J) | Std. Error | Sig.[b] | 95% Confidence Interval for Difference[b] | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| **Rating of Toyota Cars** | Democrat | Republican | .698 | .366 | .060 | -.029 | 1.426 |
| | Republican | Democrat | -.698 | .366 | .060 | -1.426 | .029 |
| **Rating of Ford Cars** | Democrat | Republican | -.772* | .328 | .021 | -1.423 | -.120 |
| | Republican | Democrat | .772* | .328 | .021 | .120 | 1.423 |

Based on Estimated Marginal Means

*. The Mean Difference is Significant at the .05 level.

b. Adjustment for Multiple Comparisons: Bonferroni.

Table 5 reveals that Republicans have a more favorable rating towards Ford car models (M= 5.661, SE= .205, 95% CI= 5.253, 6.068) than Democrats (M= 4.889, SE= .256, 95% CI= 4.381, 5.397). Further, Republicans have a less favorable rating to Toyota car models (M= 4.357, SE= .229, 95% CI= 3.902, 4.812) than Democrats (M= 5.056, SE= .286, 95% CI= 4.488, 5.623).

The ratings fundamentally captured the negative/positive attitude of the respondents towards the different car models. The next question is: are the differences in ratings due to differences in the perceived performance of Toyota and Ford cars given that logically consumers should rate any given product higher if they believe that it is of higher quality? To answer this question, we developed key performance indicators for Toyota and Ford (See questionnaire in appendix I) and conducted a MANOVA test on the absolute difference between the means (perceived

performance of Toyota versus Ford vehicles) in the two groups (Democrat and Republican). The MANOVA results are summarized in Table 6.

**Table 6**

**MANOVA on Difference in Means (Perceived Performance of Toyota versus Ford Vehicles) between Groups (Political Party Affiliation)**

**Univariate Tests**

| Dependent Variable | | Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|
| **Perceived Performance of Toyota** | Contrast | 3.115 | 1 | 3.115 | .033 | .856 | .000 |
| | Error | 8120.703 | 86 | 94.427 | | | |
| **Perceived Performance of Ford** | Contrast | 107.159 | 1 | 107.159 | 1.515 | .222 | .017 |
| | Error | 6082.432 | 86 | 70.726 | | | |

The F tests the effect of political affiliation. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Table 6 shows that there was no significant difference between the Democrat and Republican groups on their perceived performance of Toyota ($F(1,86)= .033$, $p= .856$)) and Ford vehicles ($F(1,86)= 1.515$, $p= .222$)). This is a significant indicator that the differences in ratings for the Toyota and Ford models is based on other reasons besides perceived vehicle performance of these two car models. At this point, it seems very likely that ratings are based on political ideological differences. To confirm this, we conducted OLS regression analysis on the relationship between political affiliation and car purchase preference.

**Table 7**

**Regression Results on the Relationship Between Political Affiliation and Preferred Car of Choice (Domestic vs Foreign Car)**

**Model Summary**

| Model | R | R Square | Adj. R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .227[a] | .052 | .042 | .35116 | .052 | 5.559 | 1 | 102 | .020 |

a. Predictors: (Constant), Political affiliation

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | |
|---|---|---|---|---|---|---|
| 1 | Regression | .685 | 1 | .685 | 5.559 | Sig.= .020[b] |
| | Residual | 12.578 | 102 | .123 | | |
| | Total | 13.263 | 103 | | | |

a. Dependent Variable: Car-Purchase Preference (binary)
b. Predictors: (Constant), Political affiliation

**Pairwise Comparisons**

| Dependent Variable: | | Car-Purchase Preference (binary) | | | | |
|---|---|---|---|---|---|---|
| (I) Political Party Affiliation | | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval for Difference | |
| | | | | | Lower Bound | Upper Bound |
| Republican | Democrat | .299* | .125 | .020 | .048 | .551 |

Based on Estimated Marginal Means
*. The Mean Difference is Significant at the .05 level.

Table 7 does indeed show that political party affiliation significantly predicted car purchase preference, F(1,102)= 5.559, p= .02, $R^2$= .227, adjusted $R^2$= .052. Specifically, Republicans preferred to purchase a Ford car model at .299 points higher (B= .299, SE= .125, p= .020) than Democrats.

The results clearly show that car purchase preferences are aligned to political affiliations. The next question is: are actual car purchases also affected by political affiliations? Furthermore, given that car purchase decisions are also influenced by annual income of the respondents, is income also a predictor car ownership? To answer these questions affiliation to a political party and annual income of the students, as well as their interactions, were used as predictors of car ownership (domestic or foreign car ownership).

**Table 8**
**Regression Results on the Relationship Between Political Affiliation, Income and Car Ownership**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .343[a] | .118 | .075 | .50930 |

a. Predictors: (Constant), Political Affiliation x Annual Income, Political Affiliation, Annual Income

**ANOVA[a]**

| | Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2.116 | 3 | .705 | 2.719 | .052[b] |
| | Residual | 15.823 | 61 | .259 | | |
| | Total | 17.938 | 64 | | | |

a. Dependent Variable: Car Ownership (binary)
b. Predictors: (Constant), Political Affiliation x Student Annual Income, Political Affiliation, Student Annual Income

**Coefficients[a]**

| | Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .662 | .121 | | 5.469 | .000 |
| | Annual Income | -3.124E-05 | .000 | -.401 | -1.719 | .091 |
| | Political Affiliation | -.389 | .154 | -.367 | -2.531 | .014 |
| | Political Affiliation x Student Annual Income | 5.052E-05 | .000 | .589 | 2.383 | .020 |

a. Dependent Variable: Car Ownership (binary)

Table 8 shows that affiliation to a political party, annual income and the affiliation to a political party x annual income interaction significantly predicted car ownership, F(3,61)= 2.719, p= .052, $R^2$= .343, adjusted $R^2$= .118. Republicans (Beta= -.367, p= .014) reported foreign car ownership score that is .367 points lower than Democrats. Furthermore, for Republicans, a one standard deviation increase in annual income would result in a .401 decrease in standard deviation of foreign car ownership (Beta= -.401, p= .091). On the other hand, for Democrats, a one standard deviation

increase in annual personal income causes a .248 increase in standard deviation of foreign car ownership (Beta= .248, p= .083).

For Republicans, the interaction effect (political party affiliation x annual income) shows that a one standard deviation increase of the interaction causes a .589 increase in foreign car ownership (Beta= .589, p= .020). The interaction effect for the Democrat group (political party affiliation x annual personal income) shows that a one standard deviation increase of the interaction effect causes the standard deviation of foreign car ownership to decrease by .386 (Beta= -.386, p= .020).

## VIII. DISCUSSION

This paper extends the discussion on the relationship between political ideology and consumer behavior by comparing two car types (domestic/Ford vs foreign/Toyota). Generally, the results show that liberals and conservatives differ in their consumer behavior. This is in line with the findings of other nation-wide studies (for instance, Hammond, 2012; Khan et al., 2013). Specifically, Republicans rate Ford motor vehicles higher than Democrats. Therefore, the hypothesis that Republicans rate domestic vehicles higher than foreign vehicle while Democrats rate foreign vehicles higher than domestic vehicles is accepted. Further, Republicans and Democrats prefer to buy Ford and Toyota respectively. This finding gives credence to the assertion that conservatives prefer national brands (for instance, Khan et al., 2013; The New York Times, 2005, April 1). Therefore, the hypothesis that Republicans give higher preference to purchasing domestic cars than foreign cars while Democrats prefer to buy foreign cars is accepted.

Considering income, Republicans significantly own domestic cars while Democrats considerably own foreign cars. Further, although marginally significant ($p<.10$), increased income is associated with the purchase of car vehicles that conforms to a person's political ideology (i.e., a Democrat owns a Toyota rather than a Ford). However, this relationship does not hold true when examining the relationship between the interaction effect (annual income x political party affiliation) and car ownership. Therefore, the hypothesis that there is a positive association between domestic car ownership and personal income for Republicans while there is a positive relationship between foreign car ownership and personal income for Democrats is accepted.

On average, Republicans own more domestic cars than Democrats while Democrats own more foreign cars than Republicans. Thus, the hypothesis that Democrats own a higher percentage of foreign cars than Republicans while Republicans own a higher percentage of domestic cars than Democrats is accepted.

There is no significant difference between the two groups concerning their perception of the performance of Toyota and Ford motor vehicles. That is, both groups view Toyota and Ford vehicles of having similar performance capabilities. In this case, the hypothesis that there is a significant difference in perception on the performance of domestic and foreign cars between Democrats and Republicans is rejected.

## IX. CONCLUSIONS

This study contributes to the literature by providing some evidence that political consumerism plays a role in consumer purchasing decisions. Essentially, we distinctively illustrate that political ideology can predict the type of car owned, car preference and attitude towards foreign and domestic car models. However, this study shows that Democrats and Republicans in this study have similar perception towards

the performance of domestic and foreign cars, indicating that political consumerism is the most likely additional explanation for car purchase decisions. Finally, annual personal income was the only moderating variables that significantly predicted car ownership.

## X. RECOMMENDATIONS

The emerging trends in consumer behavior, which have been observed by not only this study but also by various national surveys, clearly show that political ideology is playing an increasingly important role in car purchase decisions. Thus, it is recommended that car manufacturers conduct further research in this area in order to enhance their competitive advantage. As discussed earlier, the automobile industry spends enormous amounts of money on advertising. Focused advertising campaigns can be developed by exploring further the emerging but significant role of political consumerism in the U. S. market. For instance, in advertising, companies such as U. S. Toyota can emphasize on their contribution to the U. S. GDP and employment while U. S. Ford can underscore their American roots. The results suggest that the increasing polarization of political views and ideologies could have a growing effect on consumer behavior in the U. S. market in the future. This is principally true in the U. S. automobile industry where global vehicle trade is becoming increasingly politicized.

## XI. IMPLICATIONS OF THE STUDY

Political and social concerns change over time. During the 1990s, the emerging trend was globalization. Governments and societies strongly advocated for regional and international integration of markets and economies. In this environment multinational companies thrived by achieving economies of scale and tapping into new markets, among other things. Currently, there is a reverse trend in the form of the rise of nationalism, which is observed mainly in the U. S. and many other countries including some European countries. This changing dynamics is not conducive to the growth of multinational firms as they rely heavily on international integration to remain competitive. Therefore, it is very likely that the line that divides politics and business is going to be even more blurred as multinational firms fight to survive in the current climate.

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**Appendix I**

**Questionnaire**

General Instructions: please answer all questions. All answers will be kept confidential and participation is voluntary.

**Section One: Demographic Information**

**Gender:**
__ Male
__ Female
__ Prefer not to answer

**Marital Status:**
__ Single
__ Married
__ Divorced

**Ethnicity:**
__ African American/Black
__ Asian
__ Hispanic/Latino
__ Native American/American Indian
__ Pacific Islander
__ White
__ Not Listed (specify)

**Age: ____**

**Academic Year:**
__ Freshman
__ Sophomore
__ Junior
__ Senior

On the space provided below, please indicate your total annual family (parents) Income:
_____

On the space provided below, please indicate your total annual personal income:
_____

**Section Two: Domestic Versus Foreign Car Manufacturers in the United States**

**Question 1**

**What type of car do you own? Please indicate in the space provided.**
__ Domestic (USA car, e.g. Ford)
__ Foreign (e.g., Toyota, Honda, Mazda)

**Question 2**

**Please indicate in the space provided which type of car would you prefer to buy?**
Toyota _____
Ford _____

**Question 3**

**General Rating of Toyota and Ford Car Models**

- Please indicate your rating of Toyota car models by circling the appropriate number below. Your general rating of Toyota cars is:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Negative | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Positive |

- Please indicate your rating of Ford car models by circling the appropriate number below. Your general rating of Ford cars is:

| Negative | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Positive |
|---|---|---|---|---|---|---|---|---|

**Question 4**
**Perceived Performance of Toyota and Ford Vehicles.**
**Which characteristics do you value?**
**Circle the appropriate number based on your beliefs:**

- **Toyota car quality**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota car safety**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota car value**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota car reliability**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota car design**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota car engine performance**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota operational and maintenance costs**
  Least important 1 2 3 4 5 6 7 Most important
- **Toyota affordability**
  Least important 1 2 3 4 5 6 7 Most important

- **Ford car quality**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford car safety**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford car value**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford car reliability**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford car design**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford car engine performance**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford operational and maintenance costs**
  Least important 1 2 3 4 5 6 7 Most important
- **Ford affordability**
  Least important 1 2 3 4 5 6 7 Most important

## Appendix II

**Box's Test of Equality of Covariance Matrices[a]**

| | |
|---|---|
| **Box's M** | 3.241 |
| **F** | 1.052 |
| **df1** | 3 |
| **df2** | 254170.561 |
| **Sig.** | .368 |

[a] Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.