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## Article

The influence of industry-specific personal characteristics on consumer reactions to domestic vs. foreign comparative advertising in the American automobile market

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(1) Domestic Noncomparative

**For Chevrolet,  
beauty is not just  
skin deep.**




**The  
2016  
Malibu** *The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.*

[www.Chevrolet.com](http://www.Chevrolet.com)

(3) Foreign Noncomparative

**For Hyundai,  
beauty is not just  
skin deep.**




**The  
2016  
Sonata** *The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.*

**Proudly Made in Montgomery,  
Alabama.**

[www.hyundai.com](http://www.hyundai.com)

(2) Domestic Comparative

**For Lincoln MKX,  
unlike Acura RDX,  
beauty is not just  
skin deep.**




**The  
2016  
MKX** *The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.*

**Proudly Made in America.**

[www.lincoln.com](http://www.lincoln.com)

(4) Foreign Comparative

**For Acura RDX,  
unlike Lincoln MKX,  
beauty is not just  
skin deep.**



**The  
2016  
RDX** *The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.*

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## MARKETING | RESEARCH ARTICLE

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## MARKETING | RESEARCH ARTICLE

# The influence of industry-specific personal characteristics on consumer reactions to domestic vs. foreign comparative advertising in the American automobile market

William T. Neese<sup>1\*</sup>, William Foxx<sup>2</sup> and Dianne B. Eppler<sup>3</sup>

**Abstract:** Many US households depend on jobs generated by foreign automobile production and marketing. Foreign vs. domestic comparative advertising influences consumer ethnocentric reactions, but what effect does it have on employees of these foreign automobile brands? We replicate and extend Neese and Haynie by analyzing industry-specific Cognitive (knowledge), Affective (judgment), and Conative (employment status) covariates. Hierarchy of Effects and CETSCALE means vary significantly across treatments when these covariates are included in a MANCOVA. Regression analysis demonstrates that Attitude toward the Brand, Attitude toward the Ad, and Conative predict Purchase Intentions for participants processing foreign comparative advertising.

**Subjects:** Consumer Psychology; Economics, Finance, Business & Industry; Marketing; Consumer Behaviour; International Marketing; Marketing Communications

**Keywords:** comparative advertising; consumer ethnocentrism; foreign vs. domestic; employment; US automobile industry



William T. Neese

### ABOUT THE AUTHORS

This study's lead author—William T. Neese, DBA,—has conducted advertising research since the early 1990s. His dissertation explored “Verbal Strategies for Indirect Comparative Advertising” and was published in the *Journal of Advertising Research*, 34 (2): 56–69 with his dissertation chair Ronald D Taylor, PhD, as coauthor (1994). Neese has studied consumer ethnocentrism for decades, resulting in articles such as Neese, William T and G Tomas M Hult (2002), “Local Retail Segmentation Using the CETSCALE: A Test of Comparative Advertising Effectiveness in the Domestic versus Imported Luxury Sedan Market,” *Journal of Promotion Management*, 8 (2): 135–161. Recent work in this field includes Neese, William T and Jeffrey J Haynie (2015), “The Influence of Comparative Advertising on Consumer Ethnocentrism in the American Automobile Market,” *Journal of Marketing Theory and Practice*, 23 (3): 321–337. The article presented here replicates and extends his 2015 work in the *Journal of Marketing Theory and Practice*.

### PUBLIC INTEREST STATEMENT

The global automobile industry affects millions of people across many nations as consumers and employees. Globalization of this massive industry has created a situation where the notion of what a foreign versus domestically produced automobile is has become mixed, because some so-called “American” automobiles like Ford are produced in Mexico and Korean cars like Hyundai are manufactured in the United States. Automobile component parts are manufactured in and shipped to multiple countries for assembly. Advertising where one brand directly compares itself to competing brands is encouraged in the United States by the Federal Trade Commission, and that marketing tactic can stimulate consumers to strongly consider whether foreign or domestic cars are superior. This study demonstrates how knowledge of the automobile industry, opinions about “foreign” automobile manufacturing in the US, and employment in the industry influences the effectiveness of advertising containing images and information about both foreign and domestic automobile brands.

## 1. Introduction

Automobile production began in the very late 1800s in the US, and the industry has been growing and changing since its inception as a result of tax incentives offered by various state governments, geographical advantages improving the efficiency of distribution channels, the availability of venture capital, and a host of labor relationship issues such as local wage rates, orientation toward unions, and the skill-level of local workers (Rubenstein, 2002). “Between 1903 and 1924, inclusive, a total of 180 companies engaged in the manufacture of automobiles” (Epstein, 1927, p. 157). The long-term economic importance of automobile production to Detroit is detailed by Phillips and Radfnovsky (2009), who track the adjusted declining value of one house in that city from construction in 1917 to the recession in 2009, correlated with the crisis in local automobile manufacturing production. Despite this economic downturn, innovation in the Detroit automobile industry has thrived among local employees (Hannigan, Cano-Kollmann, & Mudambi, 2015), and the industry appears to have weathered the proverbial storm. BMI Research (2017) currently categorizes the US automobile industry as low risk, high reward.

The competitive environment impacting the US automobile industry has dramatically changed over the past few decades. Domestic automobile producers have lost market share to foreign manufacturers producing and marketing substantially more vehicles in the US. BMI Research (2015, p. 8) cites the rise of automobile production hubs in US geographical regions outside of Michigan as a strength that “is attracting investment ... increasingly for exports as much as domestic consumption.” For example, Behrmann (2015) reports that Volvo plans to invest \$500 million by 2018 to build that company’s first manufacturing facility in America. According to Schill (2008), “While Michigan and Ohio have lost more than 43,000 auto jobs since 2001, Indiana actually added almost 3,000 over the same time period and Alabama more than doubled its auto industry, adding 8,600 jobs” (newgeography.com). According to U.S. News & World Report (2017), in 2016 Alabama produced one of the largest amounts of automobile exports for any US state, totaling \$7.9 billion out of a record setting \$20 billion. Automobile products made in Alabama were shipped to 86 foreign countries, with over \$1 billion Honda exports going to 45 countries (e.g. Canada, Mexico, Central and South America, South Korea, and the Middle East). Luxury SUVs such as the Acura MDX are particularly popular.

The significance of the automotive industry in the US helps validate both the relevance and generalizability of our study. The Alliance of Automobile Manufacturers (known as the Auto Alliance for short) states: “The greater automobile industry extends well beyond the iconic names of auto companies familiar to us all. Auto manufacturing depends on thousands of companies supplying parts, components and materials, as well as a vast retail and vehicle maintenance network of dealers. No other industry in America has such an expansive reach to every state, delivering economic benefits and creating jobs in so many different sectors” (<https://autoalliance.org/economy/>). The Alliance of Automobile Manufacturers provides the following facts describing the economic impact of the US automobile industry:

- Record sales in 2016 at 17.46 million units;
- 13 automakers and 44 assembly plants in 14 states;
- \$953 billion total economic impact;
- 7.25 million jobs from coast to coast;
- Almost \$500 billion in annual compensation for employees;
- People in auto-related jobs generate more than \$205 billion in tax revenues annually;
- In 23 states, the automobile industry generates 14–20 percent of state tax revenue;
- \$99 billion in cars and parts were exported from US ports in 2015.

## 2. Globalization and automobile industry employment

Globalization is not a new trend for the world-wide automobile industry (Belis-Bergouignan, Bordenave, & Lung, 2000; Schulze, MacDuffie, & Taube, 2015), nor is it likely to decrease anytime in the near future. “More workers in the global auto industry are relying on Chinese companies to sign their paychecks these days ... reflecting Beijing’s goal of eventually dominating the world’s car business” (Moss, 2017, <https://www.wsj.com/articles/china-aims-to-take-over-car-industry-one-part-at-a-time-1500370204>). Currently, all of the major countries in the world in terms of the size of their economies (known as the Group of 20, or G20) except Saudi Arabia manufacture automobiles (Alliance of Automobile Manufacturers, 2017). Technological developments in transportation, communication, and information technology have facilitated overseas transactions, and the reduction of trade and investment barriers have enabled automobile firms to outsource much of the production process across a variety of nations to achieve cost efficiencies (Nishitateno, 2015). However, this trend has not been without obstacles. Discussing the US–Korea Free Trade Agreement, Korean Ambassador Han Duk-soo stated that the greatest barrier for the agreement to be ratified was coming from the US automobile industry (Badami, 2010). According to Ambassador Han, if the US–Korea Free Trade Agreement was not approved, “the US Chamber of Commerce calculates that 345,000 jobs will be lost in the US” (Badami, 2010, p. 217). With vehicle exports produced by Korean firms operating in the US totaling \$2.2 billion in 2016, a significant portion of these lost jobs would have been automotive-related. The US–Korean Free Trade Agreement did enter into force on 15 March 2012 (<https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta>).

### 2.1 Automobile industry employment

Globalization patterns directly impact employment gains and losses (Hunter & Katz, 2012), and that impact can be quite significant in an industry as large as the automobile industry. According to figures provided by Belitz (2000), in 1997 there were 5,500 persons employed by Great Britain, Germany, Japan, Switzerland, France, and the Netherlands conducting *only* Research and Development (R&D) related to “Automobile Construction” and “Other Vehicle Construction” in the US, a number that has almost certainly increased given recent trends. BMW created 2,000 jobs when it opened its production facility in Spartanburg, South Carolina, and Mercedes created 1,500 jobs by opening its plant in Tuscaloosa, Alabama (Pries, 2003). Today, the BMW plant in Spartanburg has 9,000 employees (<https://www.bmwusfactory.com/community/corporate-sponsorships/economic-impact/>) and the Tuscaloosa Mercedes plant employs 3,600 (<https://www.mbusi.com/about/mbusi-corporate-info/facts-figures>). According to Pries (2003), BMW made a conscientious effort to embed itself in the local community by acting like a “normal” South Carolina company. As a result of this managerial orientation and stimulated by financial incentives, “about two thirds of all employees drive a BMW car” (Pries, 2003, p. 86).

## 3. Consumer ethnocentrism and the impact of advertising on employees

Foreign brands are being imported into the US or produced domestically in multiple industries, so US consumers today are routinely exposed to non-American brand names through multichannel marketing efforts. Rigorous political debate has often erupted over the desirability of global trade that benefits consumers through enhanced choices vs. loss of domestic jobs in the US as one detrimental effect. Consumer ethnocentrism reflects how appropriate a consumer believes or feels it is to purchase foreign products instead of those produced domestically (Sharma, 2015). Preservation of employment opportunities for fellow citizens and their county’s economic well-being is an important dimension of consumer ethnocentrism, which is known to influence purchase decisions when consumers believe products produced in their own country are superior for whatever reason to those made in other global regions (Josiassen, 2011; Steenkamp & de Jong, 2010). Consumer ethnocentricity measured using Shimp and Sharma’s (1987) CETSCALE is significantly correlated in the exact same pattern with the level of automobile industry employment across US Census Bureau geographical regions (Neese, Thompson, & Garrott, 2017). As employment in the automobile industry increases for a geographical region, the importance of buying American-made automobiles to local residents increases correspondingly as illustrated through their ethnocentric tendencies (Neese et al., 2017).



### 3.1 The impact of advertising on employees

According to Gilly and Wolfinbarger (1998, p. 69), “Marketing decision makers often do not consider an important internal or ‘second audience’ for their advertisements: employees. Yet employees do notice their employer’s advertisements, evaluate them, and are affected by them.” Advertising can improve corporate image and make that firm more attractive as a potential employer (Cable, Aiman-Smith, Mulvey, & Edwards, 2000; Rosengren & Bondesson, 2014). Employee attitudes toward their company’s advertising campaign are significantly related to job involvement and job satisfaction (Acito, 1980). Companies can enhance role congruence and role clarity by accurately emphasizing the importance of employees in advertising (Wolfinbarger & Gilly, 1991). Social Identity Theory (Ashforth & Mael, 1989) and Affective Self-Affinity Theory (Aspara, Rami, Henrikki, Moisander, & Parvinen, 2008) have been used to model the positive outcomes that materialize when employees identify with activities promoted by their companies that are congruent with their personal beliefs, feelings, and behavior.

Employees who evaluate their firm’s advertising as effective and congruent with their personal value systems take pride in their organization’s ad campaign, which translates into enhanced customer focus (Celsi & Gilly, 2010). According to the most recent article we found regarding this topic (Aspara et al., 2008), very little research attention has been paid to the common threads that are related to both the employee’s self-identity and also associated with his or her company. To address this deficiency, we use the model set forth in Sharma (2015) and empirically test how three multi-item covariates moderate ethnocentric and Hierarchy of Effects outcomes: (1) cognitive, or knowledge of the US automotive industry, (2) affective, or judgments about the desirability of producing and marketing foreign car brands in America, and (3) conative, or employment with a foreign automobile firm competing with American automobile brands. These variables were measured immediately post-exposure to one of four different categories of advertising: Foreign vs. Domestic sponsors by Comparative vs. Noncomparative advertising content.

### 4. Focus for this exploratory study

The traditional “Big-3” domestic automobile brands (i.e. Chrysler, General Motors, and Ford) are confronted with the reality that contemporary US consumers are more familiar with and comfortable purchasing automobile brands with company names from other areas of the world. American consumers today expect to buy whatever car or truck brand they wish without feeling guilty that their purchase deprived a neighbor of a job, and foreign companies directly investing in domestic automobile production capacity make this possible. Many US citizens are employed locally by global firms in the automobile industry, which includes Original Equipment Manufacturers (OEMs), marketing specialists, retail salespeople, and automotive technicians working for dealerships that sell and repair German, Japanese, Korean, or other foreign automobile brands. The global nature of the modern automotive industry has created a mixed concept of what an “American” automobile brand even is. When BMWs are produced in Spartanburg, South Carolina and Fords are manufactured in Mexico, the line between what is considered foreign vs. domestic may have been irrevocably redrawn. Nonetheless, there might well be lingering incongruence between consumption of foreign products and the economic well-being of the local community in the minds of Americans, and the “us vs. them/foreign vs. domestic” comparative advertising format is known to stimulate the inherently comparative nature of ethnocentrism. How does all this impact US citizens who are employed in various capacities by the American automobile industry?

Neese and Haynie (2015) empirically explored the ability of foreign vs. domestic brand comparisons to influence ethnocentric reactions to advertising, and report that ad content featuring US vehicle brands compared to foreign vehicle brands did significantly impact post-exposure ethnocentric reactions among consumers. Their article presents a detailed rationale of why comparative advertising should influence consumer ethnocentric reactions. Neese and Haynie (2015) captured consumer ethnocentrism using Shimp and Sharma’s (1987) 10-item CETSCALE and successfully modeled it as one measure in an array of dependent variables along with Hierarchy of Effects measures in a MANOVA. We replicate Neese and Haynie (2015) with minor improvements to the questionnaire

items used, the addition of subheadlines in select treatments, inclusion of an indirect comparison, and different brands featured in the test advertisements. These modifications are discussed in more detail in the Methodology section below. Otherwise, the test advertisements we feature remain essentially the same.

### 5. Research questions for this exploratory study

Neese and Haynie (2015) tested the following two research questions, which we include in the first part of the study presented here:

**Research Question 1:** Can immediate exposure to comparative advertising featuring both domestic and foreign products influence individual ethnocentric tendencies (CETSCALE) when considered in conjunction with the traditional Hierarchy of Effects model?

**Research Question 2:** Which (if any) advertising format results in consumer ethnocentric tendencies (CETSCALE) significantly influencing Purchase Intentions when considered in conjunction with the traditional Hierarchy of Effects model?

In addition, we propose and empirically examine the following two research questions in the extension part of our study:

**Research Question 3:** Do the Cognitive, Affective, and Conative covariates developed and tested in this analysis influence post-exposure ethnocentric tendencies (CETSCALE) when considered in conjunction with the traditional Hierarchy of Effects model, and if so, exactly how?

**Research Question 4:** Which (if any) advertising format results in one or all of the Cognitive, Affective, and Conative variables significantly influencing Purchase Intentions when considered as independent variables in conjunction with the CETSCALE and traditional Hierarchy of Effects measures?

### 6. Methodology

We conducted an online survey using a Qualtrics panel of US residents during which participants were exposed to a single test advertisement in a between-subjects design sponsored by either a US automobile brand or a foreign brand. Respondents completed the questionnaire items listed in Table 1 (adapted from Neese & Haynie, 2015) immediately after processing their test advertisement. The 10-item CETSCALE (CET) is identical to what Neese and Haynie (2015) used, whereas several of their Hierarchy of Effects items have been slightly modified in an effort to use more consistent wording. For example, we changed the Attitude toward the Ad (Aad) item “Boring-Interesting” to “Not Interesting-Interesting” here; the Brand Belief (Bblf) item “Unsafe-Safe” is “Not Safe-Safe” in our study; the Attitude toward the Brand (Ab) item “Common-Unique” was changed to “Not Unique-Unique” for this analysis, and the Purchase Intention (PI) item “Unfamiliar-Familiar” is currently “Not Familiar With-Familiar With.” The Hierarchy of Effects model is one of the most established and widely used measures of advertising effectiveness (Lavidge & Steiner, 1961; Ray, 1973), and is identified as superior for measuring the influence of comparative advertising by Wilkie and Farris (1975).

As previously discussed, the major extension we make to Neese and Haynie (2015) is the addition of three covariates to our model designed to capture Cognitive (knowledge), Affective (feelings), and Conative (occupational behavior) personal characteristics related to the US automobile industry. The content of the Cognitive items is based on information provided by the Alliance of Automobile Manufacturers. Other items were generated by the authors and vetted through consultation with knowledgeable peers. As previously referenced, the theoretical structure of these covariates is based on a recent study of consumer ethnocentricity by Sharma (2015). Personal characteristics are highly influential in shaping how employees respond toward their employer’s brands (King & Grace, 2012). The covariates listed in Table 2 were developed specifically to measure industry-specific knowledge, judgments regarding, and occupational behavior uniquely related to the US automobile industry for

**Table 1. Questionnaire items for five dependent variables**

Multi-item scale	Item description
Attitude toward the Ad (Aad) <sup>1</sup> (Cronbach's Alpha=.93)	(1) Not believable—believable
	(2) Not convincing—convincing
	(3) Not likable—likable
	(4) Not interesting—interesting
	(5) Not professional—professional
	(6) Not informative—informative
	(7) Offensive—not offensive
	(8) Irritating—not irritating
Brand beliefs (Bblf) <sup>1</sup> (Cronbach's Alpha=.91)	(1) Not beautiful—beautiful
	(2) Not safe—safe
	(3) Not aerodynamic—aerodynamic
	(4) Not roomy inside—roomy inside
	(5) Noisy—quiet
	(6) Dull finish—lustrous finish
Attitude toward the brand (Ab) <sup>1</sup> (Cronbach's Alpha=.92)	(1) Low quality—high quality
	(2) Not unique—unique
	(3) Not modern—modern
	(4) Not useful—useful
	(5) Not affordable—affordable
	(6) Not stylish—stylish
Purchase intentions (PI) <sup>1</sup> (Cronbach's Alpha=.93)	(1) Not desirable—desirable
	(2) Not familiar with—familiar with
	(3) Not worth test driving—worth test driving
	(4) Not worth buying—worth buying
	(5) Wrong choice for me—right choice for me
	(6) Do not want to learn more about—want to learn more about
CETSCALE (CET) <sup>2</sup> (Cronbach's Alpha=.93)	(1) Only those products that are not available in the US should be imported
	(2) American products first, last, and foremost
	(3) Purchasing foreign-made products is un-American
	(4) It is not right to purchase foreign products
	(5) A real American should always buy American-made products
	(6) We should buy products manufactured in America instead of letting other countries get rich off us
	(7) Americans should not buy foreign products, because that hurts American business and causes unemployment
	(8) It may cost me in the long run, but I prefer to support American products
	(9) We should buy from foreign countries only those products that we cannot obtain within our own country
	(10) American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work

<sup>1</sup>Seven-point Semantic Differential scale: 1=Least Positive; 7=Most Positive.

<sup>2</sup>Seven-point Likert scale: 1=Strongly Disagree; 7=Strongly Agree.



**Table 2. Questionnaire items for three covariates**

Multi-item scale	Item description
Cognitive <sup>1</sup> (Cronbach's Alpha=.81)	(1) US automobile production is now assembling parts made in foreign countries and shipped to the US
	(2) You are never going to get a car made 100 percent in one country anymore
	(3) Several foreign automobiles assembled in the US have the same percent of US component parts as GM, Ford, or Chrysler
	(4) Foreign automobile companies have built the majority of their US production facilities in the southeastern US
	(5) Today, the majority of automobiles produced in the US are not manufactured in Detroit, Michigan
	(6) Ford, GM, and Chrysler still make the largest number of passenger vehicles in the US, but Toyota, Honda, and Nissan are a close second
Affective <sup>1</sup> (Cronbach's Alpha=.81)	(1) If a Honda or a BMW is made by an American citizen working in the US, to me that is a good thing ( <i>Reverse Coded</i> )
	(2) The Japanese and German automobile factories located in the US have created hundreds of thousands of jobs for Americans, which I believe is a blessing for our economy ( <i>Reverse Coded</i> )
Conative <sup>1</sup> (Cronbach's Alpha=.96)	(1) I am employed by a dealership that sells or markets Ford, GM, or Chrysler automobile brands in the US
	(2) The dealership I work for sells both US and foreign automobile brands
	(3) I work for a traditional American automobile manufacturing company (i.e. Ford, GM, or Chrysler)
	(4) I am employed by a company that directly sells or markets German, Japanese, Korean, or some other foreign brand of automobile in the US ( <i>Reverse Coded</i> )
	(5) I work for a foreign company that creates products or services used to manufacture automobiles in the US ( <i>Reverse Coded</i> )

<sup>1</sup>Seven-Point Likert scale: 1=Strongly Disagree; 7=Strongly Agree.

each participant. These measures should significantly influence respondent reactions to the treatments including consumer ethnocentricity when analyzed using Multivariate Analysis of Covariance (MANCOVA).

### 6.1 Treatments

As in Neese and Haynie (2015), four different treatment categories are featured in this study: (1) noncomparative advertising sponsored by one domestic car or SUV brand,  $n = 231$  or 24.7% of the sample; (2) comparative advertising sponsored by one domestic car or SUV brand directly naming one foreign competitor or indirectly referencing “foreign” brands,  $n = 228$  or 24.3% of the sample; (3) noncomparative advertising sponsored by one foreign car or SUV brand,  $n = 240$  or 25.6% of the sample; and (4) comparative advertising sponsored by one foreign car or SUV brand directly naming one US competitor or indirectly referencing “US” brands,  $n = 238$  or 25.4% of the sample. Each category of test advertising is comprised of six slightly different versions representing the same overall creative strategy (see Table 3 for a complete description). As previously mentioned, one reason the magnitude of the US automobile industry is important in our study is to ensure that respondents are familiar with the brands featured in the test advertisements so the results presented here can be generalized from our sample to the US population at-large.

Neese and Haynie (2015) discuss why they structured their test advertisements in the manner they did. Their reasoning is followed in our study as well. However, our treatments are also unique to this study. First, we feature different automobile brands to verify their results with a broader selection of products while simultaneously replicating that study. The brands we chose are widely known and popular options for consumers in the US automobile market and fit nicely with the treatment structure we are replicating (e.g. the foreign brands we selected are manufactured or assembled in

**Table 3. Headlines and subheadlines comprising each treatment**


Headlines	Subheadlines
<i>(1) Domestic noncomparative</i>	
For Chevrolet, beauty is not just skin deep	None
For Chevrolet, beauty is not just skin deep	Proudly Made in America
For Chevrolet, beauty is not just skin deep	Proudly Made in Detroit, Michigan
For Lincoln, beauty is not just skin deep	None
For Lincoln, beauty is not just skin deep	Proudly Made in America
For Lincoln, beauty is not just skin deep	Proudly Made in Detroit, Michigan
<i>(2) Domestic comparative</i>	
For Chevrolet, unlike foreign brands, beauty is not just skin deep	None
For Chevrolet Malibu, unlike Hyundai Sonata, beauty is not just skin deep	None
For Chevrolet Malibu, unlike Hyundai Sonata, beauty is not just skin deep	Proudly Made in America
For Lincoln, unlike foreign brands, beauty is not just skin deep	None
For Lincoln MKX, unlike Acura RDX, beauty is not just skin deep	None
For Lincoln MKX, unlike Acura RDX, beauty is not just skin deep	Proudly Made in America
<i>(3) Foreign noncomparative</i>	
For Hyundai, beauty is not just skin deep	None
For Hyundai, beauty is not just skin deep	Proudly Made in America
For Hyundai, beauty is not just skin deep	Proudly Made in Montgomery, Alabama
For Acura, beauty is not just skin deep	None
For Acura, beauty is not just skin deep	Proudly Made in America
For Acura, beauty is not just skin deep	Proudly Made in East Liberty, Ohio
<i>(4) Foreign comparative</i>	
For Hyundai, unlike US brands, beauty is not just skin deep	None
For Hyundai Sonata, unlike Chevrolet Malibu, beauty is not just skin deep	None
For Hyundai Sonata, unlike Chevrolet Malibu, beauty is not just skin deep	Proudly Made in America
For Acura, unlike US brands, beauty is not just skin deep	None
For Acura RDX, unlike Lincoln MKX, beauty is not just skin deep	None
For Acura RDX, unlike Lincoln MKX, beauty is not just skin deep	Proudly Made in America

America). Figure 1 in our article presents one example each of the four treatment categories we deploy here that the reader can compare to Figure 1 in Neese and Haynie (2015) to evaluate similarities and differences for his or herself. Second, we add subheadlines to some of the test ads such as “Proudly Made in America” or “Proudly Made in Montgomery, Alabama” (see Table 3 for a complete description) to determine if any regional variations exist in response to our treatments. This feature was included in the spirit of extending Neese and Haynie (2015) to add to the literature. However, these subheadlines did not result in significant interaction effects with the headlines featured, so no additional discussion is warranted. Finally, an indirect comparative advertisement was added to the two comparative advertising categories to more completely represent all types of comparative advertising used by companies promoting their brands in the US automobile market. Indirect comparisons refer to the competitive group without naming a specific competitor’s brand name as is done in direct comparative advertising. Again, complete details of this dimension in our study are presented in Table 3. These modifications produce an array of ads that more accurately represent what actual consumers are exposed to in the marketplace. When recoded into one main treatment category, heightened validity for our results should be achieved that—when combined with our sample size—should improve generalizability as well.

Figure 1. Sample test advertisements.

(1) Domestic Noncomparative

**For Chevrolet,  
beauty is not just  
skin deep.**




<b>The 2016 Malibu</b>	<i>The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.</i>
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[www.Chevrolet.com](http://www.Chevrolet.com)

(3) Foreign Noncomparative

**For Hyundai,  
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<b>The 2016 Sonata</b>	<i>The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.</i>
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beauty is not just  
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<b>The 2016 MKX</b>	<i>The lustrous finish and sleek silhouette are what others see. The roomy leather interior, quiet ride, and numerous safety features are what you experience.</i>
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**6.2. Primary quantitative techniques used**

After an initial Exploratory Factor Analysis (EFA) determined the structure of item loadings and subsequent coefficient alpha scores calculated, construct validity and reliability is evaluated and reported using Confirmatory Factor Analysis (CFA). Multivariate Analysis of Variance (MANOVA) is used to determine an answer for Research Question 1, followed by Multivariate Analysis of Covariance (MANCOVA) to address Research Question 3; results are presented at the multivariate and univariate levels. Estimated marginal means and pairwise comparisons are included to illustrate treatment effects only for the MANCOVA. To examine Research Question 2, stepwise linear regression is used to determine how the Aad, Ab, Bblf, and CET independent variables predict PI for each of the four treatment categories. The between-subjects design enables respondents to be segmented into four groups based on the treatment condition to identify any influence that any one advertising format might have on consumer decision-making. To explore Research Question 4, an identical stepwise linear regression run is made to determine how Aad, Ab, Bblf, and CET predict PI across the four treatment categories, except Cognitive, Affective, and Conative are also included as independent variables in this analysis. Finally, each of the three covariates is recoded into a dummy variable by

removing all responses in the 4-range for the multi-item scale and recoding 1:00 to 3.99 as “1” (i.e. negative) and 5.00 to 7.00 as “2” (i.e. positive). The resulting three categorical variables are modeled as independent treatments in three separate MANOVA procedures to determine their unique impact on advertising effectiveness. To conserve space, results from these final tests are discussed at the appropriate point in the manuscript without including tables.

## 7. Results

A usable database of 937 responses resulted from our national Qualtrics panel survey of US residents. We designed four separate quotas to help approximate the population of the US and ensure an adequate sample for generalizability purposes, using the following 2010 Census Briefs: (1) C2010BR-01 for Population Distribution and Change: 2000 to 2010; (2) C2010BR-02 for Overview of Race and Hispanic Origin: 2010, and (3) C2010BR-03 for Age and Sex Composition: 2010. Our first quota helped ensure that this sample is proportioned according to how many US residents reside in each of the four major US Census Bureau geographical regions (i.e. 18.00 percent for the Northeast; 22.00 percent for the Midwest; 37.00 percent for the South, and 23.00 percent for the West). Our second quota required a minimum of 35 respondents for each of the 24 different test advertisements. We screened gender for the third quota to produce a sample with 49.00 percent males and 51.00 percent females. Fourth, we implemented a race quota to make certain our sample is 72.00 percent white, 13.00 percent black, 0.10 percent Native American, 5.00 percent Asian, 0.02 percent Hawaiian, 6.00 percent Other, and 3.00 percent Two or More Races. The reader should note that the “Hispanic” demographic is not included in the “Race” data provided by the US Census Bureau we cite above, but is instead included in a separate data-set. Due to quota limitations the use of both benchmarks was not feasible; we elected to use race to avoid duplication from Hispanics being of multiple races.

The Kruskal–Wallis nonparametric tests we conducted to determine if the distribution is the same across the four treatment categories for each of the demographic variables identified a potential confounding effect. Three demographic variables are not equally distributed across the four treatment categories: Gender (Sig. = .02); Race (Sig.  $\leq$  .01), and Marital Status (Sig. = .02). The specific items for these three demographic variables profile as follows: Male ( $n = 460$ ); 2 = Female ( $n = 477$ ); White ( $n = 679$ ); Black or African American ( $n = 118$ ); American Indian and Alaska Native ( $n = 8$ ); Asian ( $n = 45$ ); Native Hawaiian and Other Pacific Islander ( $n = 2$ ); Some Other Race ( $n = 58$ ); Two or More Races ( $n = 27$ ); Never Married ( $n = 338$ ); Married ( $n = 431$ ); Other ( $n = 168$ ). The screening process used to ensure sample representativeness is the most likely cause for this uneven distribution. As the total sample size is approached during the online survey, Qualtrics closes access for the groups that have already reached the established quota. This results in a scenario wherein only a few of the 24 individual test advertisements were still open to view by only those item categories for Gender, Race, and Marital Status that had yet to reach the quota threshold.

Despite this potential confound, four of the seven demographic variables are distributed equally: Age (Sig. = .08); Education (Sig. = .24); Total Household Income (Sig. = .52), and Occupation (Sig. = .24). In addition, Kruskal–Wallis nonparametric tests were conducted for Ownership with the following results: “I currently own, lease, or drive a foreign car brand like Honda, Toyota, or Mercedes” (Sig. = .58), and “I currently own, lease, or drive an American car brand like Ford, GM, or Chrysler” (Sig. = .15). Thus, ownership is distributed the same across the four treatment groups. Given the fact that four of the seven demographic variables and vehicle ownership are distributed the same across the four treatment categories, and sample Gender and Race percentages profile actual US population statistics very closely, we believe any possible problem associated with the uneven distribution previously discussed is minimal.

### 7.1. Scale reliability and validity

Principle component exploratory factor analysis (EFA) with a varimax rotation was used to identify factor loadings for the items detailed in Tables 1 and 2 that subsequently comprise the multi-item scales listed. Some of the original items generated for the three covariates were eliminated to

**Table 4. CFA model comparisons**

Model <sup>1,2</sup>	df	Change in df	$\chi^2$	$\chi^2$ Difference	CFI	SRMR	RMSEA	RMSEA
								90% CI
Model 1	1,052		5,402.13		.89	.06	.07	[.065, .068]
Model 2	202	850	630.18	4,771.95 <sup>3</sup>	.98	.04	.05	[.043, .052]
Model 3	209	843	1,018.67	388.49	.96	.05	.06	[.060, .068]
Model 4	215	837	4,841.50	4,211.32 <sup>3</sup>	.79	.11	.15	[.148, .155]
Model 5	220	832	7,515.49	6,885.32 <sup>3</sup>	.67	.15	.19	[.185, .192]
Model 6	224	828	8,338.39	7,708.21 <sup>3</sup>	.63	.15	.20	[.193, .200]
Model 7	227	825	8,662.17	8,031.99 <sup>3</sup>	.62	.15	.20	[.196, .203]
Model 8	229	823	7,581.57	6,951.39 <sup>3</sup>	.67	.17	.19	[.182, .189]
Model 9	230	822	11,243.48	10,613.3 <sup>3</sup>	.50	.18	.23	[.223, .230]

<sup>1</sup>Dependent factors = Aad, Bblf, Ab, PI, and CET. Covariate factors = Cognitive, Affective, and Conative.

<sup>2</sup>Model 1 = 8-factor without parcels (Aad, Bblf, Ab, PI, CET, Cognitive, Affective, and Conative); Model 2 = 8-factor with parcels (Aad, Bblf, Ab, PI, CET, Cognitive, Affective, and Conative); Model 3 = 7-factor with parcels (Cognitive and Affective combined); Model 4 = 6-factor with parcels (Cognitive, Affective, and Conative combined); Model 5 = 5-factor with parcels (CET and PI combined); Model 6 = 4-factor with parcels (CET, PI, and Ab combined); Model 7 = 3-factor with parcels (CET, PI, Ab, and Bblf combined); Model 8 = 2-factor with parcels (CET, PI, Ab, Bblf, and Aad combined); Model 9 = 1-factor with parcels (all dependent variables and covariates combined).

<sup>3</sup> $p < .001$ .

produce better multi-item scales from this process, most prominently for the Affective variable. Cronbach's Alpha scores for the resulting eight variables are as follows: Aad = .93; Bblf = .91; Ab = .92; PI = .93; CETSCALE = .93; Cognitive = .81; Affective = .81, and Conative = .96. Confirmatory factor analysis (CFA) is assessed using Amos, with the results presented in Table 4. The high number of parameter estimates in our data relative to responses indicates that parceling should be used, so we applied the item-to-construct balance technique described by Little, Cunningham, Golan, and Widaman (2002) wherein the highest and lowest loading items for a given scale are first averaged, then subsequent parcels are calculated by averaging the next highest and next lowest loadings until the parceled scale is complete.

The resulting eight factor structure (Model 2) comprised of the Aad, Bblf, Ab, PI, CET, Cognitive, Affective, and Conative variables results in an excellent fit with the data ( $\chi^2 = 630.18$ ;  $df = 202$ ; CFI = .98; SRMR = .04, and RMSEA = .05 with 90% CI = .04, .05). Although the seven factor model with Cognitive and Affective combined is not significantly different from the eight factor model, the fit is slightly worse and that structure does not conform to the theory underlying the creation of our three covariates. A total of seven additional models are tested (3 through 9), and all of them produced a less desirable fit with the data and are significantly different than the hypothesized model. Based on these results, the eight factor theoretical model derived from existing marketing literature is used for further analysis.

### 7.2. Tests of assumptions for MANOVA and MANCOVA

We first test the basic assumption of Multivariate Analysis of Variance (MANOVA) that the dependent measures are significantly correlated. If an identity matrix is found, MANOVA is not the appropriate quantitative technique for our analysis. Bartlett's Test of Sphericity results are as follows: Approx.  $\chi^2 = 3,261.32$ ;  $df = 14$ ; Sig.  $\leq .001$ . The same exam is performed for the Multivariate Analysis of Covariance (MANCOVA) model, with the following results: Approx.  $\chi^2 = 3105.71$ ;  $df = 14$ ; Sig.  $\leq .001$ . In both cases the null hypothesis is rejected as required for the analyses to proceed. An identity matrix does not exist among the five dependent variables, so this assumption has not been violated. This result replicates what Neese and Haynie (2015) found, that the CETSCALE is appropriately modeled as part of the dependent vector score along with Hierarchy of Effects measures (Aad, Bblf, Ab, and PI).



MANOVA (and MANCOVA) also assumes that homoscedasticity exists across the four treatment categories being analyzed. Box's Test of Equality of Covariance Matrices (Box's *M*) tests this assumption at the multivariate level, whereas Levene's Test of Equality of Error Variances tests this assumption at the univariate level. Nonsignificant results should be present in both tests for this assumption to be met. The Box's *M* results are as follows for both the MANOVA and the MANCOVA: Box's *M* = 127.32;  $F = 2.80$ ;  $\text{Sig.} \leq .001$ , which indicates that the assumption of homoscedasticity has not been achieved. However, "a violation of this assumption has minimal impact if the groups are of approximately equal size (i.e. Largest group size  $\div$  Smallest group size  $< 1.5$ )" (Hair, Black, Babin, & Anderson, 2010, p. 365). The largest group in our sample is 240 for the foreign noncomparative treatment. When divided by the smallest group of 228 for the domestic comparative treatment the result is .95 which is substantially less than 1.5. This helps alleviate any concern over the significant Box's *M* test.

Although statistical results are identical for both MANOVA and MANCOVA at the multivariate level, the Levene's test at the univariate level produced different results between the two models. For MANOVA the results are: Aad ( $F = 8.00$ ;  $\text{Sig.} \leq .001$ ); Bblf ( $F = 4.16$ ;  $\text{Sig.} \leq .01$ ); Ab ( $F = 2.67$ ;  $\text{Sig.} = .05$ ); PI ( $F = 1.77$ ;  $\text{Sig.} = .15$ ), and CET ( $F = 2.63$ ;  $\text{Sig.} = .05$ ). For MANCOVA the results are: Aad ( $F = 11.10$ ;  $\text{Sig.} \leq .001$ ); Bblf ( $F = 4.14$ ;  $\text{Sig.} \leq .01$ ); Ab ( $F = 2.26$ ;  $\text{Sig.} = .08$ ); PI ( $F = 1.99$ ;  $\text{Sig.} = .11$ ), and CET ( $F = 1.55$ ;  $\text{Sig.} = .20$ ). Having achieved the desired results from the Bartlett's Test of Sphericity, and based on the fact that our treatment groups are essentially the same size, we believe it is appropriate for us to proceed with MANOVA and MANCOVA to test for treatment effects. The multivariate outcome of these two significance tests for treatment effects is displayed in Table 5.

Results displayed in Table 5 for both the initial MANOVA and the subsequent MANCOVA are all significant at the  $<.001$  level. "One of the most important considerations in a successful MANOVA is the statistical power of the analysis" (Hair et al., 2010, p. 375). The power threshold desired for confidence in the analysis is .80 or above, and the 1.00 statistic is achieved in every multivariate test except one (Wilks' Lambda = .99 for the MANOVA). These highly significant and powerful results allow us to advance to the univariate level of analysis to determine the source(s) of significance for the two multivariate models. Univariate MANOVA results are necessary to determine an answer for Research Question 1, and univariate MANCOVA results are necessary to determine an answer for Research Question 3.

Table 6 displays all treatment effects for the individual variables factored into the MANOVA and MANCOVA multivariate vector scores. In the case of our MANOVA model, the four treatment categories resulted in significantly different means for Aad ( $<.001$ ), Bblf ( $<.01$ ), Ab (.02), and PI (.05), but the difference in means for CETSCALE responses is only significant at the .08 level which fails to meet our .05 threshold. However, when the covariates are included in our MANCOVA this result changes. All five dependent variables are significantly different across the four treatment conditions: Aad  $\leq .001$ ; Bblf  $\leq .01$ ; Ab = .01; PI = .04, and CETSCALE = .02. The Cognitive and Conative covariates significantly adjusted the CETSCALE mean at  $\text{Sig. of } F \leq .001$  in both cases. In addition, the Conative covariate adjusted the PI mean ( $\text{Sig. of } F \leq .001$ ), and the Cognitive covariate also influenced Aad ( $\text{Sig. of } F \leq .01$ ) and Bblf ( $\text{Sig. of } F = .05$ ) means. Finally, the Affective covariate significantly adjusted the cross-treatment means of Aad, Bblf, Ab, and PI ( $\text{Sig. of } F \leq .001$  for all four variables) but not for CETSCALE means ( $\text{Sig. of } F = .07$ ).

### 7.3. Stepwise linear regression

To find an answer for Research Questions 2 and 4 in the final stage of our analysis, the overall database was segmented by treatment category. One stepwise linear regression was conducted for each of the resulting four segments using PIN = .01 and POUT = .05 criteria. To replicate Neese and Haynie (2015) by addressing Research Question 2, this first set of regressions modeled PI as the dependent variable with Aad, Bblf, Ab, and CETSCALE as independent variables. These results are displayed in Table 7. To extend Neese and Haynie (2015) by exploring Research Question 4, a second set of four multiple regression runs was made featuring PI as the dependent variable and Aad, Bblf, Ab,

**Table 5. Multivariate tests without covariates (MANOVA)**

Effect	Test	Value	F	Hypth. df	Error df	Sig. of F	Power
Intercept	Pillai's trace	.96	5,019.11	5.00	929.00	<.001	1.00
	Wilks' lambda	.04	5,019.11	5.00	929.00	<.001	1.00
	Hotelling's trace	27.01	5,019.11	5.00	929.00	<.001	1.00
	Roy's largest root	27.01	5,019.11	5.00	929.00	<.001	1.00
Treatment	Pillai's trace	.06	3.55	15.00	2,793.00	<.001	1.00
	Wilks' lambda	.94	3.58	15.00	2,564.96	<.001	.99
	Hotelling's trace	.06	3.60	15.00	2,783.00	<.001	1.00
	Roy's largest root	.05	8.56	5.00	931.00	<.001	1.00
<i>Multivariate tests with covariates (MANCOVA)</i>							
Intercept	Pillai's trace	.25	61.92	5.00	926.00	<.001	1.00
	Wilks' lambda	.75	61.92	5.00	926.00	<.001	1.00
	Hotelling's trace	.33	61.92	5.00	926.00	<.001	1.00
	Roy's largest root	.33	61.92	5.00	926.00	<.001	1.00
Cognitive	Pillai's trace	.06	12.74	5.00	926.00	<.001	1.00
	Wilks' lambda	.94	12.74	5.00	926.00	<.001	1.00
	Hotelling's trace	.07	12.74	5.00	926.00	<.001	1.00
	Roy's largest root	.07	12.74	5.00	926.00	<.001	1.00
Affective	Pillai's trace	.05	9.37	5.00	926.00	<.001	1.00
	Wilks' lambda	.95	9.37	5.00	926.00	<.001	1.00
	Hotelling's trace	.05	9.37	5.00	926.00	<.001	1.00
	Roy's largest root	.05	9.37	5.00	926.00	<.001	1.00
Conative	Pillai's trace	.15	31.51	5.00	926.00	<.001	1.00
	Wilks' lambda	.86	31.51	5.00	926.00	<.001	1.00
	Hotelling's trace	.17	31.51	5.00	926.00	<.001	1.00
	Roy's largest root	.17	31.51	5.00	926.00	<.001	1.00
Treatment	Pillai's trace	.06	3.80	15.00	2,784.00	<.001	1.00
	Wilks' lambda	.94	3.83	15.00	2,556.68	<.001	1.00
	Hotelling's trace	.06	3.86	15.00	2,774.00	<.001	1.00
	Roy's largest root	.05	9.18	5.00	928.00	<.001	1.00

Cognitive, Affective, and Conative as the independent variables. Results of this exercise are presented in Table 8. Multicollinearity can negatively influence which of the independent variables are entered in the final equation plus potentially interfere with its predictive ability. Tolerance and Variance Inflation Factor (VIF) are two tests used to uncover the presence of multicollinearity. Tolerance statistics less than .20 and VIF statistics greater than 5.0 indicate multicollinearity for that variable. The Bblf variable in the noncomparative domestic treatment group exhibits problematic tolerance and VIF statistics, at .20 and 5.09, respectively, for the regression without covariates included, and .17 and 5.99 for the regression with covariates included. In both cases, this variable is not included in the resultant regression equation. Otherwise, there is no indication of multicollinearity in our models.

**8. Discussion**

To remind the reader, our replication of Neese and Haynie (2015) is undertaken to seek answers for the following two research questions: First, can exposure to comparative advertising featuring both domestic and foreign products immediately influence individual ethnocentric tendencies when considered in conjunction with the traditional Hierarchy of Effects model? Second, which advertising

**Table 6. Univariate tests without covariates (MANOVA)**

Source	Dependent variable	Type III sum of sq.	df	Mean square	F	Sig. of F	Power
Treatment	Aad	62.67	3	20.90	11.45	<.001	1.00
	Bblf	19.25	3	6.42	4.46	<.01	.88
	Ab	16.14	3	5.38	3.29	.02	.75
	PI	17.29	3	5.76	2.58	.05	.64
	CET	12.11	3	4.04	2.29	.08	.58
<i>Univariate tests with covariates (MANCOVA)</i>							
Corrected Model	Aad	187.41	6	31.24	18.42	<.001	1.00
	Bblf	109.43	6	18.24	13.54	<.001	1.00
	Ab	106.63	6	17.77	11.51	<.001	1.00
	PI	143.03	6	23.84	11.32	<.001	1.00
	CET	349.73	6	58.29	41.41	<.001	1.00
Cognitive	Aad	12.20	1	12.20	7.19	<.01	.76
	Bblf	5.24	1	5.24	3.89	.05	.50
	Ab	3.68	1	3.68	2.38	.12	.34
	PI	4.00	1	4.00	1.90	.17	.28
	CET	86.36	1	86.36	61.35	<.001	1.00
Affective	Aad	50.87	1	50.87	30.00	<.001	1.00
	Bblf	45.77	1	45.77	33.98	<.001	1.00
	Ab	46.02	1	46.02	29.80	<.001	1.00
	PI	46.09	1	46.09	21.88	<.001	1.00
	CET	4.72	1	4.72	3.35	.07	.45
Conative	Aad	1.30	1	1.30	.77	.38	.14
	Bblf	.40	1	.40	.30	.59	.09
	Ab	2.38	1	2.38	1.54	.21	.24
	PI	28.90	1	28.90	13.72	<.001	.96
	CET	175.79	1	175.79	124.88	<.001	1.00
Treatment	Aad	64.83	3	21.61	12.74	<.001	1.00
	Bblf	18.60	3	6.20	4.60	<.01	.89
	Ab	16.37	3	5.46	3.53	.01	.79
	PI	17.20	3	5.73	2.72	.04	.66
	CET	14.02	3	4.67	3.32	.02	.76

format (if any) results in consumer ethnocentric tendencies significantly influencing Purchase Intentions when considered in conjunction with the traditional Hierarchy of Effects model?

### 8.1. Replication

#### 8.1.1. Research question 1

MANOVA results presented in Table 5 are significant and allow the analysis to proceed to Table 6, which displays the Univariate Tests of Significance necessary to examine Research Question 1. In this test, mean Aad, Bblf, Ab, and PI responses are significantly different across the four treatment categories at the .05 level, but the difference in mean CETSCALE scores is not ( $p = .08$ ). Therefore, the MANOVA results presented here are not identical to what Neese and Haynie (2015) found. In their study, only Aad and CETSCALE means were significantly different across treatment conditions, whereas only CETSCALE means are not significant here. Perhaps this particular result is due to

**Table 7. Stepwise linear regression by treatment category without covariates.<sup>1,2</sup>**

Model		$\beta$	t	Sig.	Tolerance	VIF	Adj. R <sup>2</sup>
<i>Noncomparative domestic (n = 231)</i>							
Included	Ab	.55	7.65	<.001	.33	3.02	.60
	CET	.14	3.16	<.01	.91	1.11	
	Aad	.20	2.81	<.01	.34	2.95	
Excluded	Bblf	.07	.70	.48	.20	5.09	
<i>Comparative domestic (n = 228)</i>							
Included	Ab	.56	7.01	<.001	.26	3.90	.64
	Bblf	.27	3.40	<.01	.26	3.90	
Excluded	Aad	.16	2.15	.03	.30	3.37	
	CET	.08	2.00	.05	.90	1.11	
<i>Noncomparative foreign (n = 240)</i>							
Included	Ab	.42	5.90	<.001	.28	3.56	.65
	Bblf	.30	4.57	<.001	.33	3.04	
	Aad	.15	2.67	<.01	.45	2.24	
Excluded	CET	.07	1.73	.09	.93	1.07	
<i>Comparative foreign (n = 238)</i>							
Included	Ab	.65	12.34	<.001	.43	2.31	.71
	Aad	.24	4.57	<.001	.43	2.31	
Excluded	Bblf	.01	.11	.91	.24	4.10	
	CET	.04	1.02	.31	.97	1.03	

<sup>1</sup>Dependent variable = PI; Independent variables = Aad, Bblf, Ab, and CET.

<sup>2</sup>PIN = .01, POUT=.05.

sampling differences. Although both studies are based on samples that reasonably represent the US population, the current study’s sample is three times the size of Neese and Haynie (2015). In addition, the brace of advertisements that form each of the four treatment categories in the analysis presented here is more comprehensive.

**8.1.2. Research question 2**

Neese and Haynie (2015) report that the only treatment condition resulting in consumer ethnocentrism (CETSCALE) predicting Purchase Intentions in their study is the comparative version sponsored by a foreign automobile brand. Table 7 in our study demonstrates the opposite result; the only treatment condition in our current analysis wherein the CET variable is included in the regression model is for the domestic noncomparative version. The results from our analysis are consistent with Neese and Haynie (2015) in terms of Ab being included in all four stepwise regression models, but again deviate from the original study by including Aad to three of four predictive equations vs. being excluded in all four models in their study. As with Research Question 1, differences in the sample size and treatment content could account for the discrepancy between the two studies. As explained in the extension section next, however, we believe our total findings generally support Neese and Haynie (2015).

**8.2. Extension**

**8.2.1. Research question 3**

The answer to Research Question 3 is a resounding yes. This research question is the same as Research Question 1 but modified to include the covariates analyzed in the extension part of our study. Our multivariate MANCOVA results from Table 5 are significant at the < .001 level in every case, and the Power statistics are 1.00 in all cases as well. The Cognitive, Affective, and Conative

**Table 8. Stepwise linear regression by treatment category with covariates<sup>1,2</sup>**

Model		$\beta$	t	Sig.	Tolerance	VIF	Adj. R <sup>2</sup>
<i>Noncomparative domestic (n = 231)</i>							
Included	Ab	.67	10.59	<.001	.35	2.85	.68
	Aad	.19	3.06	<.01	.35	2.85	
Excluded	Bblf	.19	2.09	.04	.17	5.99	
	CET	.01	.36	.72	.89	1.13	
	Cognitive	-.02	-.60	.55	.98	1.02	
	Affective	-.04	-1.13	.26	.94	1.07	
Conative	.06	1.71	.09	.99	1.00		
<i>Comparative domestic (n = 228)</i>							
Included	Ab	.40	5.54	<.001	.26	3.91	.69
	Bblf	.32	4.50	<.001	.27	3.66	
	Aad	.17	2.63	<.01	.34	2.95	
Excluded	CET	.06	1.60	.11	.95	1.05	
	Cognitive	-.05	-1.37	.17	.92	1.08	
	Affective	<.01	.09	.93	.92	1.08	
	Conative	.06	1.56	.12	.99	1.01	
<i>Noncomparative foreign (n = 240)</i>							
Included	Ab	.54	7.59	<.001	.34	2.93	.58
	CET	.13	2.95	<.01	.90	1.11	
	Aad	.20	2.82	<.01	.34	2.95	
Excluded	Bblf	.12	1.40	.16	.25	4.09	
	Cognitive	.04	.87	.38	.94	1.07	
	Affective	.05	1.12	.26	.94	1.07	
	Conative	.07	1.56	.12	.82	1.21	
<i>Comparative foreign (n = 238)</i>							
Included	Ab	.67	13.38	<.001	.52	1.91	.69
	Aad	.20	4.00	<.001	.52	1.91	
	Conative	.13	3.45	<.01	.99	1.01	
Excluded	Bblf	.05	.68	.50	.28	3.52	
	CET	<.01	.02	.98	.81	1.24	
	Cognitive	.04	1.07	.29	.91	1.10	
	Affective	-.01	-.32	.75	.90	1.11	

<sup>1</sup>Dependent variable = PI; Independent variables = Aad, Bblf, Ab, CET, Cognitive, Affective, and Conative.

<sup>2</sup>PIN = .01, POUT = .05.

covariates significantly adjust post-exposure means for the overall dependent vector score, and that adjusted vector score varies significantly across the four treatment categories. As with the MANOVA results for the first research question, it is therefore appropriate to scrutinize the univariate MANCOVA statistics detailed in Table 6 to examine Research Question 3.

The Cognitive covariate significantly adjusts the means for Aad ( $p < .01$ ), Bblf ( $p = .05$ ), and CET ( $p < .001$ ). One plausible interpretation of these results is that industry knowledge (or lack thereof) could exert a stronger influence over peripheral issues related to advertising content and country-of-origin rather than attributes specifically attached to the brand itself. When neutral opinions are removed from the data (i.e. responses in the 4.0 to 4.99 range), respondents more in agreement with the Cognitive items listed in Table 2 report significantly higher CETSCALE means and thus are more



favorable toward domestic automobile brands. In addition, their attitude toward the foreign non-comparative advertising format is significantly more favorable. Removing the 4.0 to 4.99 respondents leaves 76 percent of the sample for subsequent analysis.

The Affective covariate influences Aad ( $p \leq .001$ ), Bblf ( $p \leq .001$ ), Ab ( $p \leq .001$ ), and PI ( $p \leq .001$ ), but not CET. This result is arguably surprising given the emotional aspect of the “us vs. them” ethnocentric dynamic. Looking at responses without the neutral scores (again, those who fall in the 4.0 to 4.99 range on the multi-item scale), the noncomparative advertising format sponsored by a foreign automobile brand is viewed in a significantly more positive light by respondents who agree with the Affective statements listed in Table 2. These respondents are more accepting of foreign automobile production in the US than their counterparts. Their Aad score is more positive toward this style of advertising content and they express higher buy-American sentiments than their counterparts exposed to the same treatment category. For the reader’s information, removing the 4.0 to 4.99 range leaves 61 percent of the sample for analysis.

The Conative covariate significantly influences Purchase Intention means ( $p \leq .001$ ) and CETSCALE means ( $p = .001$ ). The items that measure this construct identify survey participants employed in an automotive-related company in the US that produces or sells foreign or domestic brands—or both. Removing neutral responses as discussed above leaves 89 percent of the total sample for analysis. Unlike the results previously discussed for the Cognitive and Affective covariates, all four treatments produce significant differences in mean scores when employment in this industry is considered.

Participants exposed to Treatment 1 (domestic noncomparative) express more favorable Purchase Intentions toward the sponsoring brand when employed in the industry than those who are not. They are also significantly more buy-American. Participants exposed to Treatment 2 (domestic comparative) are also more buy-American when employed by a company affiliated with the US automobile industry. Results for Treatment 3 (foreign noncomparative) are identical to those for Treatment 1: both PI and CET means are significantly different between the respondents who work in the US automobile industry and those who do not. The former are more favorable toward domestic brands (i.e. more ethnocentric) and report stronger Purchase Intentions toward the sponsoring brand. On its face, this seems like an incongruent finding since the sponsoring brand is either a Hyundai (Korea) or an Acura (Japanese). However, both of these foreign brands are produced to some degree in the US. Finally, Treatment 4 (foreign comparative) results in significant differences in mean responses across all five dependent variables. Respondents with an employment connection to the US automobile industry like the ad more (Aad = 5.59 vs. 4.90), have more favorable Brand Beliefs (Bblf = 5.70 vs. 5.14), and have a more positive attitude toward the sponsoring brand (Ab = 5.70 vs. 5.06). They are also more willing to buy the brand (PI = 5.61 vs. 4.69), and are more supportive of automobile brands that are made in America (CET = 5.83 vs. 4.27). Arguably, this effect is due to a greater understanding of the competitive composition of the US automobile industry among respondents having more involvement with the industry through their employment.

#### 8.2.2. Research question 4

We replicated Neese and Haynie (2015) believing that industry-specific personal characteristics will interact with or even replace ethnocentric tendencies when included in the predictive model. Table 8 strongly confirms our belief and strongly supports an affirmative answer to Research Question 4. Importantly, the inclusion of Cognitive, Affective, and Conative variables in the stepwise regression analysis produces results that are much more consistent with those reported by Neese and Haynie (2015) in their original study. The CETSCALE variable is included in the predictive equation for the noncomparative format sponsored by a foreign brand, but none of the other three treatment conditions. The key finding of our extended replication results among respondents only exposed to the comparative advertising version sponsored by a foreign automobile brand: the Conative (i.e. industry employment) variable replaces consumer ethnocentrism (CET) in the regression equation. Referring back to the discussion of this covariate under Research Question 3, respondents who agree that they are somehow employed in the US automobile industry are significantly more likely to purchase the

sponsoring brand ( $p = 5.61$  vs.  $4.69$ ). They are also more supportive of the “Made in America” ethnocentric position ( $p = 5.83$  vs.  $4.27$ ).

### 8.3. Managerial implications

Regardless of any differences between these two studies, they both demonstrate that consumer ethnocentrism measured through the CETSCALE can significantly predict Purchase Intentions immediately following ad processing, and that the comparative vs. noncomparative format plays a role in that phenomenon. Manufacturers and marketers of foreign automobile brands in the US benefit when their employees become their customers. These individuals are more likely to purchase the products they make, sell, and service. They respond more positively to different advertising formats. It is highly plausible that they are opinion leaders in their respective social circles due to the expertise gained through their employment. This market segment should be at the forefront of these firms’ targeting efforts, not viewed as a marketing afterthought. Their personal characteristics play a role in their purchase decisions (particularly employment status), and these characteristics are highly likely to influence others in their purchase decisions regarding that particular industry.

### 8.4. Limitations and future research

One primary concern with any study that is limited to a single product type is generalizability. The automobile industry is ubiquitous in the US and that fact presents several advantages when conducting an advertising test such as this (e.g. respondent brand familiarity and product knowledge). The downside risk is that the results presented here may not generalize to other commercial and industrial scenarios. Along these same lines, although our treatment categories seek to adequately represent the brace of advertising formats and creative content used in practice, it is virtually impossible to include all possible versions in a study such as ours. One promising direction for a future study that is not included in this one is to feature visual comparisons using service employees as advertising spokespersons (Stephens & Faranda, 1993). Certified Technician vs. Non-Certified Competing Technician is one of many main effects that could be explored.

## 9. Conclusion

Replications in the marketing literature are not common. However, the equivocal results reported across many marketing sub-disciplines (e.g. advertising and consumer behavior) present an opportunity to enhance the ability of managers to feel confident in their empirical knowledge of the effectiveness of some particular marketing tactic. That is why this study was undertaken. We improved the sample by increasing its size using an online panel vs. the traditional mail survey used by Neese and Haynie (2015), and our results combined with what they found strengthen the validity and managerial applicability of both studies. Our data demonstrate both directly and indirectly that contemporary foreign automobile brands produced and marketed in the US are viewed as “Made in America” by employees and consumers alike. This is a tool that should be used by these brands to effectively promote themselves through their biggest champions: their employees.

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#### Cover image

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