

Cars! Why is the average European car more
expensive than an American one?

:By Stephan Laleye

Abstract

The purpose of this paper is to investigate the myriad causal effects that leave the end price quotes of European manufactured automobiles at a higher amount than that of American automobiles. Throughout this investigation, two underlying constituents that contribute to these price discrepancies come from the differences in fuel usage between European and American automobiles and the fluctuations in exchange rate currency values between the U.S. and the E.U. While in Europe diesel is the primary source of fuel for cars, gasoline is what powers the majority of automobiles within the United States. Economist Frank Verleger Jr. in his article states that the “dieselization” of the European automotive industry has developed the most elementary aspects of car engine efficiency in regards to fuel usage. A statement that is further expounded upon in Financial Advisor Joseph E. Gagnon and Economist Michael M. Knetter’s article comparing the smaller engines of E.U. auto brands with the larger engines found in American ones. The differences in these few key aspects with which auto manufacturers in the U.S. and E.U. predicate their car designs on provide for stark contrasts in overall quality, performance, and durability between American and European autos. These contrasts are then highlighted with the superior currency value in the euro further counterbalancing the end price quotes between American and European automobiles. Price quotes that are affected by “PTM” (Price To Market) tactics as economists Frank Verboven and Pinelopi Goldberg authored an article explaining domestic strength in European consumer markets allows Euro auto producers to price their items even higher in addition to exchange rate shifts. It is with these principle aspects and other stereotypical notions that this paper seeks to argue why European auto brands are priced much higher than American ones.

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This paper observes the myriad historical factors that contribute to the current price disparities between European and American automakers. The differences between the two groups are immense. The main question here being; “*Why are European cars on average more expensive than their American counterparts*”. There are many reasons as to why these price disparities exist, although no one reason accurately defines the given price disparities. From 1980 when the first Japanese cars were introduced into the international auto market till today, automakers from all over the world have competed to maintain the status quo in car design, handling, speed, and utility. Arguably, the countries to produce the most varieties of vehicles that are sold internationally are the U.S., Germany, and Japan. The reputations behind the vehicles sold from each of these countries are as follows, American cars are rustic, affordable, big, and difficult to maintain; German cars are stylish, handle nicely, expensive, reliable, of fine quality, and costly to maintain; lastly, Japanese cars are affordable, mundane (not including luxury brands), easy to maintain, and ubiquitous in presence. Though these reputations only allow for a peripheral understanding of each countries’ car products, the following biases help promote the very price differences that exist in the auto market today. These biases come from newspaper articles, academic journals, and magazine commentaries all expressing the worldly aesthetic of an American Dodge, the great mileage system of a Japanese Toyota Camry, or the sheer class and speed of the German BMW M3 series. Looking past superficial opinion, the reality behind European automakers pricing their products so highly are myriad in factor. In regards to the provided source material within this essay, one can conclude that the price disproportion lies principally on the European auto manufacturer’s currency strength, domestic market, fuel type, material quality, style, and precedent trial and error reviews from notable critics.

Exchange Rates

A prevalent component to global competition on car pricing is the fact that each major auto-producer across the globe must contend with existing exchange rates that fluctuate throughout time, causing import and export pricing to vary as well for different countries' automobiles. Economists Frank Verboven and Pinelopi Goldberg authored a journal article titled "*The evolution of price dispersion in the European car market*" written for the National Review of Economic Studies. In this article they look at price dispersions between car markets within Europe and the many differences that cause those dispersions to exist; the time in which they make these comparisons is from 1980 - 1993. Here exchange rates as well as discount pricing for domestic consumerism provides an incentive for European automakers to price their products as high as they do. For instance, a reason for higher prices of Italian cars is that "*the strong bias for domestic brands generates higher markups for domestic firms*", that being said, Italian cars are already the preferred product to Italian consumers, so Italian automakers, having domestic advantage, are at liberty to price their overseas product however much they want knowing they have a set domestic consumer market. When taking into account that the exchange rate markups between the Euro and the Dollar or the Euro and the Yen are both ultimately in favor of the Euro, the effects of exchange rates alone on internationally sold car parts from Europe to countries overseas presents a profitable market for European automakers. This journal further delves into pricing of European cars explaining "*Local currency price stability can be attributed either to the presence of a local component in marginal costs, or to mark-up adjustment that is correlated with exchange rate volatility...*". A BMW will be priced respective to the power of the Euro in relation to the dollar, the stronger the domestic economy, the more value the European car

manufacturer will add to their goods. This article also cites import quotas on American and Japanese cars, namely in the U.K. and Italy as reasoning for the cheaper price tags on those vehicles overall. Discount pricing is also a factor for a more expensive product exported overseas, *“In the U.K., higher prices are mainly attributed to better equipped cars and/or differences in the dealer discount practices.”*, if British citizens can get better deals on purchasing English automobiles instead of American or Japanese, that as well as consumer bias will prevail in British consumption of English or European cars rather than non-European ones.

Financial Advisor Joseph E. Gagnon and Economist Michael M. Knetter authored an article together back in April 1995 in which they drew similar conclusions in their analyses of price disparities within the global car-market when looking at exchange rates. Looking at bilateral unit export values from Germany, Japan, and the U.S., both men found that *“Japanese and German exporters adjust markups of price over cost to stabilize the foreign currency prices of exports (Gagnon, Knetter; 1)”*, likewise they found *“no such tendency in U.S. export industries (Gagnon, Knetter; 1)”*. Such findings indicate that European automakers are much more sensitive to exchange rate fluctuations and therefore price their exported products at rates that will still carry on their product’s value overseas, whereas this same intuition is absent in the American car industry selling its products overseas. Michael Knetter, who authored the aforementioned article with Gagnon, authored another article six years earlier about markup pricing in relation to exchange rate fluctuation, while working as an economist and contributor for the *American Economic Review*. Knetter’s article in 1989 compared price discrimination on products between the U.S. and Germany.

Economist Michael Knetter explained how marginal costs are much more severe for American exporters than their German counterparts. As is said in the article, *“Country-specific*

adjustment of export prices in conjunction with exchange-rate fluctuations is much more pronounced in the German export industries than in the United States... export price adjustment tends to mitigate the effects of exchange rate changes on foreign prices for German exports, while price adjustment exacerbates these effects for U.S. exports (Knetter, 1).” Taking this segment from the article into account, here Knetter provides a perfect explanation for why the end product of German goods tends to be much more pricey in the U.S. than the other way around. The constant Euro-Dollar fluctuation in exchange rates provides quick adjustments in auto-pricing for German cars exported and sold in the U.S. Since there is a big market for German vehicles in the U.S., and as a German product stabilizes in its own currency before its placement on the global market, German cars will always have an advantage over American cars in pricing; primarily due to the fact that the currency on which they are naturally sold at is stronger than the dollar.

Economists Verboven and Goldberg also discuss regulation pricing within EU borders from country to country as influences to exchange fluctuations that affect automobile final price quotes. Automakers pick what markets they want their products to go to and prohibit dealers from reselling those products unless prior approval is made. This makes for a competitive auto-market within E.U. borders, as is said in the article *“strong evidence on trade restrictions within the E.U. is given by Japanese market shares.”* In contrast to European auto manufacturers, Japanese auto manufacturers may only export so many of their products over to Europe, in which they may also lose more money as exchange rates favor the Euro over the Yen. They note how little impact the Japanese auto-industry has inside the Eurocentric auto market with *“the Japanese market share only slightly exceeding the assigned (import) quota.”* In consideration to the aforementioned evidence, a eurocentric automarket in line with exchange

rates favoring the Euro allows for considerable understanding as to why European automobiles overall may be marked at higher prices in comparison to American cars.

The “PYT” Method and Domestic Market

A type of intuition used by European and Japanese automakers when dealing with exchange rate volatility is called “*Price-to-Market*” or (PTM) for short. As both Gagnon and Knetter explained, “*PTM is pervasive in Japanese auto exports, present for some destinations and categories of German auto exports, and virtually absent from U.S. auto exports (Gagnon, Knetter; pg. 3)*”. With empirical results taken between the time slots 1973 - 1980, and then from 1981-1987; the market share of small car sales from Germany to the U.S. was at 0.18 percent for 1.5-2 litre engine cars with a 48 percent long term exchange rate adjustment, and at 0.19 percent for 2-3 litre engine cars with 13 percent long term exchange rate adjustment. However, the very same sales for American automobiles towards Germany came at just .10 percent for any car with an engine size 1-6 cylinders with a long term exchange rate adjustment of just 0.08 percent. Looking at these results empirically, when comparing summarily Germany’s 61 percent long term exchange rate adjustment for all overseas sales towards the U.S. in relation to the U.S. 8 percent exchange adjustment for overseas sales to Germany, it can be deduced that exchange rate markup prices are more prevalent for the Euro automaker than the American automaker.

Economist Yves Bourdet, in his article “*Exchange Rate Regimes and Import Pricing: The Case of the Swedish Car Market*” gives more insight into the “PTM” method by explaining how high labour costs in Europe and long term employment arrangements with workers and their respective car manufacturing firms are main attributes for European automakers choosing the

PTM method as a means of curbing financial loss through exchange rate fluctuations. As Bourdet exclaims, *“the higher the degree of competition in the importing country, the more difficult for firms to raise prices without losing too many customers and the more likely for firms to engage in pricing to market behavior when the exchange rate of the importing country depreciates (Bourdet, 82)”* Bourdet moreover explains a car manufacturer’s uncertainty in exchange rate fluctuations as a reason to why the (PTM) method is used by that manufacturer in an effort to stabilize the local currency value of his product.

Bourdet states, *“the higher the degree of uncertainty concerning future changes in exchange rate... the more likely (firms) use markup adjustment to stabilize local currency prices (Bourdet, 82)”*. Principally, these articles not only provide evidence on the causal effect of exchange rate fluctuations inspiring European automakers to price their automobiles at a higher rate than their American counterparts, but also these articles showcase the sensitive nature of the European automarket. European manufactured car products often remain the same in final price quote in order to satisfy a plausible net revenue return to the manufacturer. This article principally explains how exchange-rate volatility in relation to the tenuous nature of consumer demand for an auto manufacturer’s product provides for a compelling argument as to why the “PMT” method results in a much more extraordinary price tag placed on the cars manufactured and sold within and outside of Europe. Price tags that surpass those of the American or Japanese competitor.

However, the Price-to-Market method is not the only pricing strategy European automakers use for pricing their products domestically. Economist Robin D. Hocking, offers a similar argument looking at auto trade agreements between E.U. member states Britain, France, West Germany (as this article was written in the 80s), and Italy. All countries produce and sell

automobiles overseas with the exception being France whose products are more infamous than they are renowned. Hocking's journal offers the argument that "*Producers of these goods are likely to have a more extensive sales and service network in their home market than abroad. (Hocking, 1)*": Hocking's reference to "these goods" are the marketable automobiles manufactured in Europe and sold domestically and abroad. With European automakers having command of their respective countries' consumer populations, these manufacturers have a reliable market in which they can buy and sell their products without fearing too much foreign competition; add to that these automakers who already benefit from a loyal domestic consumer base also make cars that are coveted globally, thusly these companies have a foreign market demand that they can meet with the prices they choose to sell their products at aside from their domestic market.

Hocking's article's main argument has little to do with the global car market and rather focuses on import export quotas and risk adversity between the German, British, Italian, and French car markets. The article examines the cross border sales of a select group of cars from each country between the years 1973 – 76. Hocking here argues "*If producers embrace the whole of the market for large models then this producer gains the largest expansion of his market. Along with other producers he would take advantage of opportunities which occur over time to produce new models for this sector (Hocking, 1)*". That being said, Mercedes, BMW, Fiat, and Land Rover which are German, Italian, and British in origin respectively all were deemed "large models" and products that could massively expand into other E.U. countries and potentially foreign markets just as well. Though this source makes no direct comparisons to the U.S. or Japan. Hocking's recollection of biased domestic consumerism through the lens of the European auto manufacturer allows for an understanding as to why European car products are

held in such high regards. European cars sold overseas are the brands that have done exceedingly well in Europe and have garnered a name for themselves globally. With regards to domestic popularity for any given car that is celebrated all over the E.U., that car brand will most likely be revered globally as well. This works to the advantage of the automaker as they now have a global consumer population and can raise the prices of their products overseas as demand for such products soar. For that reason, this article strengthens an understanding as to why European cars are priced much higher than Japanese or American cars.

Economist Michael Knetter compares the strength of the German domestic automarket with American one through examining specific American car models exported to Germany and specific German car models exported to the U.S. Knetter's findings with this data experiment in his article leads him to this conclusive theory, *"The United States is a large market, so German exporters may be more concerned with market share in the United States... from the perspective of U.S. producers, export markets are small relative to the domestic market so there may be less concern with market share in export markets and more incentive for opportunistic behavior... The United States is a major export market for German autos"*. The results from Knetter's experiment are telling in many ways, aside from the fact that American exports suffer from having a weaker currency, the overall market availability is much less so for American products to Germany than for German products to America. The American consumer population is four times as large and much more diverse than Germany's consumer population. Consequently, Germany has a much more broad access to American consumerism and can profit off of selling their products over to Americans who are willing to buy. As was stated, the U.S. is a major money maker for German auto manufacturers, in essence BMW, Audi, VW, Mercedes, and Porsche all enjoy a much broader consumer demand group as well as stronger a domestic

currency system which braces their value even more. In conclusion, these articles provide the exact insightful look behind the price disparities between European and American car products and notably between German and American automobiles. These articles provided by Bourdet and Knetter provide just the right amount of information to support a component of the main argument being that a strong domestic consumer base can encourage discriminatory pricing methods for auto manufacturers seeking profit. European cars are on average more expensive than their Japanese or American counterparts, this is also taking into account that German autos are the most sold cars outside of Europe out of any E.U. member. Cars that often are priced higher outside of than within Germany.

“European Car Sales Analyses from July 2019 - July 2020”

	Brand Name	Market Share (2020)	Market Share(2019)	YTD Rank	2020 Units Sold	2019 Units Sold	Loss (%)
1	Volkswagen	11.6%	11.8%	1	722,474	1,077,725	-33.0%
2	Renault	7.0%	5.4%	2	447,974	653,491	-31.5%
3	Peugeot	6.5%	6.1%	3	405,199	607,933	-33.3%
4	Ford	6.3%	6.4%	4	379,265	907,905	-37.6%
5	Mercedes - Benz	6.0%	5.7%	5	375,280	528,961	-29.1%
6	BMW	5.7%	4.7%	6	359,874	488,318	-26.3%
7	Skoda	5.7%	5.1%	7	349,693	451,733	-22.6%
8	Toyota	5.1%	4.9%	8	340,877	444,766	-23.4%
9	Audi	5.1%	5.3%	9	328,373	475,039	-30.9%
10	Fiat	3.9%	3.8%	10	251,473	415,383	-39.5%
11	Kia	3.8%	3.2%	11	232,866	303,241	-23.2%

12	Hyundai	3.7%	3.8%	12	219,270	325,393	-32.6%
13	Opel / Vauxhall	3.7%	5.5%	13	262,964	536,936	-51.0%
14	Dacia	3.6%	3.7%	14	209,379	353,539	-40.8%
15	Citroen	3.6%	4.2%	15	251,413	403,896	-37.8%
16	Seat	3.3%	3.9%	16	209,097	317,881	-34.2%
17	Nissan	2.3%	2.4%	17	155,814	248,684	-37.3%
18	Volvo	2.3%	2.0%	18	154,982	199,569	-22.3%
19	Mini	1.5%	1.2%	19	89,693	123,744	-27.5%
20	Suzuki	1.3%	1.9%	20	86,589	159,455	-45.7%

Table from "July 2020 Brands" <https://carsalesbase.com/european-car-sales-analysis-july-2020-brands/>

This table was taken from the global car sales database shows the most popular car models that sold in Europe within the last two years. It is worth noting that out of the top ten car manufacturers to sell their products throughout the E.U., eight of the ten are European auto-manufacturers. This again shows how content E.U. citizens are with E.U. manufactured car products. The overall market share also favors the European automaker out of the first 20 top car brands with a whopping 69.5% market share in comparison to the foreign auto manufacturers at only having 22.5% of the E.U. 's car market shares. Overall this table provides some understanding as to how European automakers who have sound domestic consumer bases can price their items at higher rates overseas.

Here, provided below are the U.S Quarterly Sales for top 35 most popular auto brands in the U.S. between July 2019 and July 2020.

“US Quarterly Car Brand Sales Numbers”

Brand Name	Quarter 3 2020	Quarter 3 2019	Change
Acura	39,664	39,046	1.6
Alfa Romeo	5,056	4,310	17.3
Audi	47,896	57,031	-16.0
BMW	68,439	75,987	-9.9
Buick	49,170	50,614	-2.9
Cadillac	32,966	39,962	-17.5
Chevrolet	449,134	505,913	-11.2
Chrysler	31,869	29,544	7.9
Dodge	71,935	104,146	-30.9
Fiat	1,102	2,361	-53.3
Ford	521,530	548,070	-4.8
Genesis	3,745	4,902	-23.6
GMC	132,746	140,790	-5.7
Honda	338,769	390,168	-13.2
Hyundai	170,828	173,028	-1.3

Infiniti	17,368	24,876	-30.2
Jaguar	4,700	6,150	-23.6
Jeep	222,211	245,474	-9.5
Kia	165,013	158,754	3.9
Land Rover	15,899	20,516	-22.5
Lexus	75,285	73,816	2.0
Lincoln	27,555	27,937	-1.4
Mazda	74,411	69,612	6.9
Mercedes-Benz	84,628	89,636	-5.6
Mini	8,974	10,243	-12.4
Mitsubishi	24,857	24,474	1.6
Nissan	221,754	302,478	-26.7
Porsche	15,548	14,805	5.0
Ram	175,174	179,200	-2.2
Smart	0	130	-100.0
Subaru	169,446	185,804	-8.8
Tesla	139,300	54,700	154.7
Toyota	483,164	553,378	-12.7

Volkswagen	84,514	93,547	-9.7
Volvo	30,349	27,305	11.1

Table from “US Quarterly Car Brand Sales Numbers”

<https://www.goodcarbadcar.net/2020-us-vehicle-sales-figures-by-brand/>

The table shown above provides valuable insight into the consumer preferences prevalent for automobile consumption within the United States. This time around none of the top ten car manufacturers to have their car products sold are European, rather they are a mixture of car products from developers in the U.S., Japan, and South Korea. Ranked from most sales to least sales for the top ten most sold auto products by manufacturer brand, there is Ford at first, followed by Toyota at second, Chevrolet at third, Honda at fourth, Jeep at fifth, Nissan at 6th, Ram at 7th, Hyundai eighth, Subaru at ninth, and Kia at tenth. What is telling is that all cars mentioned here are ubiquitous all over the U.S. This indicates unlike the European consumer profile, most Americans want a car that can simply get to and from wherever. None of the cars listed are considered to be luxury brands or sports vehicles, rather they are family cars and beginner cars for those new to driving. It therefore must be taken into consideration that based upon what cars manufacturers do well in the U.S., the expected price quotes of American cars, especially Japanese and Korean cars, will be lower overall than their European counterparts, especially when taking car quality into account as none of the cars listed above were of fine quality or luxury made.

Fuel Usage

Economist Philip K. Verleger Jr. in a written article from 2011 attributes the EU's usage of diesel over gasoline as means for much better car performance in the long run. Verleger Jr. makes the case that *“The European dieselization policy has been motivated by the greater efficiency of diesel engines. It is widely acknowledged that diesels get more miles per gallon. The shift to diesel has been assisted by the development of better, cleaner, and more efficient diesel engines for cars, primarily by European and Japanese automakers (Verleger, 72).”* Therefore, in line with better product efficiency, it would make sense that a European automaker would price their item at a higher rate if the fuel that is used for their vehicles is not only more expensive but also more efficient. Verleger points out later in his article *“[The EU] imposed high taxes on gasoline and engine displacement, and refiners correspondingly produced high octane gasoline to fuel small, very efficient engines... Today, governments provide very large incentives for consumers to buy diesel-powered vehicles. Taxes on diesel fuel are also lower than gasoline taxes. Taxes on diesel cars are also lower. As a result, three out of four vehicles sold in Europe are now powered by diesel engines (Verleger, 76)”* That being so, it is without surprise that aside from those large incentives EU citizens enjoy by buying EU manufactured automobiles, European automakers would also price their items higher due to their meticulous concentration on specific detail regarding energy consumption. With smaller automobile engines for European brand cars, the cost and effort to produce these types of engines are balanced by the end price quote attached to the product. Seemingly, more attention is put into engine longevity for European automobiles, and therefore such painstaking to meet that requirement justifies that price discrepancy between European and American auto products. The smaller engines for European cars however are in line with another sentiment prevalent all over the EU in general.

In 2012, a study on the effects of fuel and kilometre taxes in regards to car consumption in the E.U. was conducted by Belgian economists Bruno De Borger and Jan Rouwendal. They found that with better fuel technology, the taxation for fuel consumption heightened with higher taxes on fuel, thus leading consumers to purchase lower quality cars with the opposite being true for cars that had higher kilometer based taxation rates. As was recorded in their article, both economists found *“For quality characteristics that raise variable user costs (for example, engine size, acceleration, speed) we obtained the opposite effects: under plausible assumptions, higher fuel taxes induce households to demand cars of lower quality; higher kilometre taxes raise the demand for quality. Furthermore, the different demand impulses of fuel taxes and kilometre charges also imply very different adjustments on the car market. We found that fuel taxes raise the annual cost of owning very fuel-efficient cars, while reducing ownership costs of cars of low fuel efficiency (De Borger, Rouwendal, 365).”* The importance of these economists’ findings must be taken into account from an E.U. citizen’s perspective. A European citizen will more than likely encounter these high taxation rates as the majority of automobiles in Europe run on diesel, a higher grade of fuel than gasoline, therefore the taxes for their car’s are much higher than that of an American’s auto consumption taxes. In alignment with higher tax rates for their products, European automakers will likely raise their products’ final price quotes in an effort to offset consumer insecurity for tax rates on automobiles in the E.U.

K. Sudhir, an economist who wrote *“Competitive pricing behavior in the auto market: A structural analysis”* for NYU’s *Marketing Science* journal delves into the competitive pricing behavior of the American car market. Sudhir analyzes American firms taking a game-theoretic approach in the 1980s and 1990s upon developing new products. For instance, smaller cars became the aim type of product for American automakers after it was found *“fuel efficiency*

could be relevant” and the “The greater share of Japanese cars in the smaller car segment explains the greater reliability of those cars”. American automakers decided to create and sell products based on the reviews and efficiencies witnessed by American consumers who experienced and/or knew about the reliability of Japanese car products. Sudhir’s paper deals with charts containing statistical analyses within the U.S. in regards to how American automakers cope and develop new ways to convince their own domestic consumers of their products’ fuel efficiency. The main reliable piece of information taken from this source that helps argue superior pricing in European cars against all competition is Sudhir’s statements on results regarding American’s thought on both Japanese and European cars, *“Because Japanese and European cars score higher on reliability, the results are still consistent with intuition. Costs. Our cost equation estimates are also in line with expectations. It costs more to produce reliable cars, larger cars and cars with higher horsepower. It is cheaper to produce fuel-efficient cars.”* The significance behind this statement lies in cost cutting tactics used by American automakers when developing cars. European cars tend to be smaller and use quite a bit of gas considering many Italian, British, and German cars can go up to speeds far beyond the average road car. That being said, because European cars cost more to produce, their quality is of a higher degree than that of other cars, and they utilize more fuel efficient policies, the price tag of a European car will be much higher than your average American or Japanese car.

“COO” Biases and Car Quality

A prevalent factor that causes consumer bias when purchasing a good is their advanced knowledge on the quality of the good based upon what country that specific good may come

from. This sort of biased behavior is known as the “Country of Origin” argument. For example a European consumer will more likely invest in purchasing a German car rather than a French car as German manufactured car products have better reputation than french ones. An article written in 2016 by two Greek economic and marketing professors hypothesized that heterogeneity pricing arises from precedent consumer experiences. Their experiment bases itself upon the claim “... *that country-of-origin (COO) serves as an extrinsic informational cue for consumers’ perceptions and evaluations of a product. A brand’s or a product’s COO acts as a signal of product quality, influences consumers’ perceptions of risk and value, and directly affects the likelihood of purchase (Saridakis, Baltas, 78).*” Such sentiments have clearly echoed within the marketing doctrine of many auto corporations throughout the world, for example Volkswagen utilized “*The Power of German Engineering*” as a way to legitimize their auto products to their consumer base. As these professors have indicated, “*In Europe, there are about 50 brands which originate from 12 countries. Even a casual look at the car market reveals that prices differ in a systematic fashion among car models based on their brand’s origin. This pattern may suggest implicit price premiums that are largely independent of technical characteristics and derived from unmeasured heterogeneity (Saridakis, Baltas, 78).*” Cars from developers such as BMW, Mercedes, Aston Martin, Bentley, Ferrari, Jaguar, and more all have mechanical product outliers that may not handle as well as their brand name implies, yet because those products are part of that brand, they are priced at those high rates anyway.

A lot of attention is paid in particular towards the consumer and their cognitive experience with the highly regarded automobile, whether through a firsthand account or through a media outlet to which they witness that car product’s amazing qualities. For many, it is thought that the country itself may ascertain a consumer’s evaluations and perceptions of that car product

before they even bear witness to what it is that the car manufacturer is proposing. Looking at facets of an automobile such as speed, engine size, tire grip, and handling; these two professors measure the prevalence of COO effects in judging final price quotes of auto products in a myriad of countries. One finding from the Greek professors' study that can easily explain price discrepancy between American and European automobiles are the price premiums attributed to the aforementioned facets of an automobile measured through a COO lens. For American cars, it must be noted that pricing methods for those automobiles focus more on interior gadgets that provide for a more prepared experience, as discovered "... *our findings suggest that safety features (e.g., airbags and ESP-TCS systems) command higher price premiums in mainstream, mass car type segments (such as hatchbacks and sedans), while the respective coefficients are insignificant in high-end, sport-car type segments (such as coupe and convertible) (Saridakis, Baltas, 83).*" These findings can be seen in Ford and Chevrolet advertisements which boast practicality in the various instruments found inside the car. These findings are in perfect contrast to features that are more prominent in Euro based automobiles: "*features related to comfort and luxury (e.g alloy wheels and leather seats) command higher price premiums in high-end sport car type segments (such as coupe and convertible)...(Saridakis, Baltas, 84).*" When comparing these sets of features, it comes with no surprise that the material used to make the physical body of the car as well as the engine would cost more for a European car rather than an American car. That being said, the years of trial and error have explicitly left their mark on the minds of many current and past consumers of these automobiles, hence alleged car quality usurping part of the meaning for a brand name experience.

Overall, Saridakis and Baltas found that the COO pricing method was much more prevalent in countries with a history of auto manufacturing. Out of an experimental group of

twelve, the top four countries to use COO as a means of pricing their car products were the U.K. at top with a 9.4 aggregate coefficient, followed by Sweden with a 9.13 aggregate coefficient, then the U.S. with a 9.12 aggregate coefficient, and finally Germany at last place in the top four countries utilizing the COO method with a 9.06 aggregate coefficient. With those numbers in mind, it can very well be said that car pricing in Europe is heavily influenced by favorable experiences from former and current customers. As is the case with many European auto manufacturers whose iconic slogans and symbols are recognized globally, it can be inferred that through brand name alone, a European car manufacturer may use that reasoning to justify the end price quotes for their automobiles. Since three of the top four car manufacturing countries to use the COO method were in Europe, it is without a doubt that brand name makes up for partial argument as to why European car products are priced higher than their American counterparts.

Though “Country of Origin” may designate a compelling argument for why European auto manufacturers mark their auto products at higher prices than American cars, however COO coincides with car quality. As is true with any other good, the higher the quality the higher the price. Maurice Olley, a renowned engineer known for his contributions to car companies such as Chevrolet, Rolls-Royce, and General Motors provides some key characteristics European car manufacturers use when creating their products. Olley defines the European automobiles in comparison to their American counterparts with the following “... *European cars are generally less costly to buy and operate than American cars; they are smaller, lighter, narrower, use less fuel; they are more nimble on the road, have better road-holding ability, better breaking, and allow a more intimate view of the road. (Olley, 503)*” These traits are what specifically separate the E.U. car market from that of the American car market. These traits are also why American car manufacturers seldom export their vehicles over to Europe, as larger cars that use more

gasoline go against the basic principles of European roadway regulations. Keeping in mind that this article was published in the early 1950s, Olley's remarks and observations here act more as blueprints for what's to come in future endeavors for the European auto industry. What is interesting in Olley's article here is that those exact blueprints that one day will become the baseline formula for all car industries in the E.U. are actually American based ideas taken by European countries and perfected over the course of a few years in those countries. As Olley points out "*... all four styles show the American influence, which the British and Germans have accepted perhaps unwillingly, the French with reservations, the Italians enthusiastically. It was remarkable how suddenly after the war the Italians seized on the American styling and refined it, so that now it is difficult to say whether the other European nations are following the American or the Italian styling (Olley, 507)*" In context to what Olley is speaking about, the early designs of many European auto manufacturers relied heavily on what styles were popular within the U.S. : keeping in mind of course the fact that roads in Europe are much smaller than they are in the U.S. It is ironic that the Italian's attempt to recreate and perfect an American car model is what would later help define the default car model for most of modern day Europe. Though in particular to this time period, the numerous enhancements European automakers would provide for American based car models would be a contributing factor to the reason why European car models today are priced higher than American cars.

The early European car models of the 50s and 60s that were based upon American brand automobiles became obsolete once the energy crisis of '73' took place. The contemporary small and sporty cliché that later came with the European brand automobile is in part owed to an initiative made by German automakers responding to the energy crisis of '73 with the focus of developing small, compact cars that served the needs of their consumers. Their response was

meant to change the wholesale predicament faced by many European auto manufacturers at the time, that cars were meant for more than just a means of transportation. Precisely, it is within this time period that German automakers offered the comprehensive solution of focusing more on the consumer rather than production; ultimately changing the car industry from a producer's market to a consumer's market. Dr. Ingo Koehler, a German economic and business historian offers more insight on this distinct time frame for German automakers. In his article for "*The Business History Review*", Koehler argues "*With the onset of a modern German consumer society, cars had to do more than simply provide mobility. A growing number of car buyers began to expect not only high quality and stylish design at every price point; they also insisted on products that would give them a sense of social distinction and self-fulfillment... by the mid 1960s (German automakers) were producing models that were distinctive, sporty, and comfortable... Under pressure from the oil shock... consumer preferences reverted to utility value and fuel efficiency (Koehler, 57-58).*" Adhering with earlier principles for automobile manufacturing, many German cars prior to the oil shortage of 1973 were bigger and heavier than their contemporary relatives: this is in large part due to European automakers practicing early American methods of car production.

American cars were (and still are) often times bigger and made to fit both the driver and passengers comfortably inside the vehicle with room to spare. As WWII had left much of Europe and her economy in ruins, many European countries along with Western Germany chose to follow the quick and industrious American methods of car production. These methods, though efficient in practice, were unfeasible during the energy crisis, and with many consumers resolving to omit further car purchases at that time, Germany's top auto manufacturers switched to consumer friendly business practices. It is due to those practices that in today's global

automarket, a German car will almost always have a higher price tag than an American one. The avant-garde marketing strategy kept this important aspect in mind as Koehler puts *“Buyers were spending less money for their vehicles, and they were de-emphasizing matters of prestige in their buying decisions. The principle of economic efficiency renewed the demand for compact cars, while diminishing sales of upmarket cars (Koehler, 58).”* In investing time, effort, and money to service this new consumer profile, the many different auto manufacturers of Germany focused entirely on reinventing the standard car product that would one day be prevalent all over Europe.

Koehler points out the many changes that were standard in German automobiles from 1973 onwards. He explains that, *“... exterior, interior, and safety accessories were substantially improved. Existing small cars and subcompact models were upgraded to the standards of large vehicles. Features that had once been available only on upscale models now became a standard on midsized and compact cars, and this occurred without any mark-up costs for the buyers... offer new incentives to buy into a market determined by price competition (Koehler, 68).”* These new measures that were put into practice by various German car manufacturers were what would be considered the groundwork for the modern day European automaker approach to producing a new car product. Measures that Koehler accused reluctant American car manufacturers of “half-heartedly” following. In regards to those measures, the “small and compact” attitude for German car manufacturers as well as a complete reliance on consumer opinion is what contributes to the greater price quote of most European cars in comparison to American ones.

The idea of the European car product is that it resembles the pride and joy of its owner. Maurice Olley in an article from 1921 remarks, *“The limited size of the industry and of the individual manufacturers in Europe makes for higher cost, but for a more painstaking treatment of both the initial design and the finished article. It makes for a car of more individuality, a*

greater distinctiveness in each maker's designs and a greater receptiveness to designs that are highly unconventional... the design of the average European car is largely controlled by the engineering department, whereas the design of the American automobile is principally controlled by the buying public through the sales organization. (Olley, 423)" In this passage Olley does a fantastic job in explaining the exact nuanced details that separate the initial intentions of American and European car manufacturers. As has been stated earlier in this paper, a primary focus for European car manufacturers is the relationship between the customer and their car product, not just the efficiency of that car product irrespective of who drives it. The higher end price quote a European car manufacturer places upon their car product is a direct result of the expressed individuality or style that is carved/crafted into the body of the vehicle itself from the aspirations of the engineer. To draw on another comparison, the same way a high-end European retail designer may introduce a new article of clothing worn at the leisure of their consumer base, an American clothing store will put out a series of items specifically for the purpose of providing the public with clothes to cover themselves. The main point here is the difference in inspiration to create. That inspiration as Olley defines time and again provides reasoning to discrepancies between American and European car product's final price quotes.

The evidence that is provided by Sardikas, Baltas, Koehler, and Olley show the main physical characteristics that differ between European and American automobiles; characteristics that provide COO bias for consumers in purchasing European car products over others, and creating a demand that heightens the final price quotes for European manufactured cars.

Brand Name and Style

As with any good that can vary in terms of its popularity, car pricing can vary due to its brand name just as much as it does performance. Author Yunis Alam, in his book "*Race, Taste, Class, and Cars*" makes this distinction in chapter four of his book. Alam makes the claim that in the English city of Bradford, (his referred group in this case being the British Pakistani population,) "*Taste, therefore, cannot be understood unless it is anchored in history, migration, and of course, cultural, economic and sociopolitical forms of power. The present buying preferences among British-born Bradfordian Pakistanis generally favour German-manufactured cars, but this preference is not unusual, given the broader increasing popularity of German brands over several years: the Volkswagen Golf, for example, was the second most popular car to be registered in 2018 (Alam, 115).*" Alam's claim reinforces the persistent stereotype of European Brand superiority when a consumer makes their decision based upon what is globally desired at the time. To further this notion, Alam points out "*It is unlikely that James Bond would own a well-used, yellow, three-wheeled minivan, but Del Boy Trotter - one of the characters in 'Only Fools and Horses' - would probably own an elite or high-end car if he could afford it; indeed, when Trotters become millionaires, Del Boy is gifted a Rolls-Royce (Alam, 114).*" The significance from Alam's pop culture reference is that James Bond and Del Boy Trotter, though both fictional characters, represent the top tier life style and class that many of their fans aspire towards in small aspects of their daily lives. The intuition here is that the Aston Martin, the go-to vehicle of James Bond, or the Rolls-Royce for Del Boy Trotter, are both vehicles that help to define the success and popularity displayed by their owners. As Alam points out, a mini-van would be below the tastes and aspirations of a character like James Bond. As many consumers base their consumption on what is socially desired by their peers at any given moment, cars do not differ from this notion. To add depth to Alam's claims, his interviews with local

Bradfordians only strengthen his aforementioned argument. One such interviewee points out, *“You can't go wrong with your Audis, VWs, and BMs - Mercedes, they're okay but not as good sellers as the others... But yeah, your German cars, they've become more and more popular since I'd say about 20 years now. Before, people were not buying them as much... People have money to spend now - in our dads' days, not everyone had a car and if they did, it was a Toyota or a Nissan.... Everyone wants them [German cars] because they're good cars - reliable, look nice and they have a beautiful quality reputation... more and more go for your A3s, 3 Series, Golfs, and that kind of thing... (FS, 48, male, 22 November 2018) (115-116, Alam)”*, which goes to show the stark differences in brand superiority between European, American, and Japanese automobiles. The idea that a Japanese car is deemed a cheaper substitute for a European one showcases the power of brand name in compelling European automakers to price their products at the price quotes they offer. Brand names can sometimes accurately gauge a final price quote for an automobile, and coupled with other factors at play, provide the final argument for why an automaker marks their products at the price quote they choose. Automakers whose products develop a reputation may price their automobiles based on a plethora of consumer responses to their products.

Economist Frank Verboven in an article he authored in 1999 examined how competing European car manufacturers focused on charging exorbitant price amounts on premium based models of car products that their respective consumer bases have insufficient knowledge of. Meanwhile, these same car manufacturers simultaneously charge agreeable amounts for that car brand's baseline model. Verboven in researching this modern form of car pricing suggests *“...when consumers are not well informed about the prices of premium models, firms can charge monopoly markups on the premium models. This gives them an incentive to attract customers by*

charging low prices for the base models. If brand rivalry is intense, this incentive is very strong, so that large percentage markup differences between base and premium models result... brand rivalry is extremely intense in the subcompact and foreign categories. (Verboven, 420)” This suggestion displays the recent marketing strategy of car manufacturer Porsche who charged upwards of \$180,000 for their newest car product.

The Porsche Taycan 4s at an MSRP of \$195,870 almost quadruples the amount of Porsche’s cheapest car option available which is the Porsche Macan at \$52,100. Owing to the fact that Porsche is a foreign auto brand in the American car market, and that traditionally Porsche is considered a luxury vehicle amongst other European car imports to the U.S., the MSRP rate for the Porsche Taycan 4s is the auto manufacturers premium based product in which the exorbitant amount displays Porsche’s monopoly within the small luxury sports car market, as the Taycan 4s is the first electric run Porsche. The arguments presented by European car manufacturing companies on final price quotes for their premium car products relate almost exclusively to qualitative aspects found within those specific cars. Qualitative aspects such as extra horsepower, lower suspension, more or fewer doors, and even a tailgate all can affect the final price quote of a premium based car model that can astronomically separate that model from other baseline models. Though the Porsche Macan serves more as an SUV than a sports car, the Porsche 911 Turbo which is the inspiration of the Taycan 4s has an MSRP at \$99,200, still almost \$100,000 off from the Taycan 4s. The takeaway here is that many different European car manufacturers export to the U.S. a myriad of luxury and sport vehicles that consistently have premium and base rate models. Those premium models advertise top ingenuity currently accessible to those car manufacturing companies. Such ingenuity is advertised in many of those

European auto manufacturer's baseline car products as well, which in turn provides them with a reason to price their products at higher price than that of American cars.

Aside from brand name, the style of an automobile may play a rather large part in a car manufacturer determining that product's final price quote. In an article authored by economists B. Peter Pashigian, Brian Bowen and Eric Gould; "*Fashion, Styling, and the Within-Season Decline in Automobile Prices*" reviews the decline of seasonal variations of a series of automobiles between the years 1954 and 1989. In one scenario they describe the difference in costs with Toyota altering the appearance of the Miata versus Mercedes-Benz altering the appearance of their newest model with the following "*To take two extreme cases, styling changes are more dramatic for specialty cars such as a Miata than for the Mercedes-Benz. Compared to the luxury and specialty class, manufacturers have introduced modest model changes for full-size cars. The greater amplitude of the seasonal variation for higher-priced autos suggests that styling assumes greater importance as the price of an automobile increases... Car prices vary more seasonally for expensive automobiles (Pashigian, Bowen, Gould, 285).*"

This indicates that with the material used to make a Mercedes-Benz, a complete augmentation of the automobile's design is much more costly to Mercedes-Benz than for the Toyota Miata, which in this case the car itself is made from cheaper material, the main point is Toyota can afford to augment their car however many times over, whereas the material used to make a Mercedes-Benz is already costly enough that any extreme augmentations of the car will result in a net loss for the company rather than any gain in profit.

Despite Toyota, Japanese car developer Nissan also allows for technological augmentations to their car product's, as the flagship car of that company, the Nissan GTR Skyline can receive any number of cheap augmentations to the car, since the material used to

make the car itself is not of the same quality as that of Mercedes or Porsche for example. As car quality consistently favors the European automaker, it is with no surprise that styling plays a large role in European automakers pricing their products at a higher rate than American or Japanese automakers. The change in methodology for European auto manufacturers can be summed up in the following *“The disappearing seasonal variation in new automobile prices and the smaller annual percentage decline in resale values suggest that new cars of adjacent model years are becoming closer substitutes, for new cars. A plausible explanation for these trends is that the styling changes during the fifties and sixties were more dramatic than those of more recent years... technical changes such as suspension systems and engine performance are assuming greater importance (Pashigian, Bowen, Gould, 293)”* where small augmentations to similar car body take shape rather than a complete switch around of the car style. A perfect example can be an observation between the Ferrari f40, an Italian supercar which debuted in 1994 versus the Ferrari f50 which debuted in 1995. If one were to compare and contrast the difference amongst the two Ferraris, there would be only a handful of noticeable differences. Rather Ferrari augmented the speed, engine strength, tire type, and tailgate of the f50 from its older counterpart the f40. Though these changes were subtle, the cost to augment the f50 from its older predecessor was enough for Ferrari to introduce the model as the new successor.

For American auto manufacturers which also practiced a much liberal form of car styling the fifties primarily going to the sixties found that the costs outweigh the benefits. As has been stated in this article, *“...the decline in the market share of the Big Three (General Motors, Ford, Chrysler) is closely related to the increase in the market share of small cars, so it is difficult to distinguish between the effect due to precommitment and to the growth of small cars (Pashigian, Bowen, Gould, 300).”* in which those three American car manufacturing companies agreed to

change the style of their products at the end of every 4th quarter, or at the end of every year. However, rather than switch to subtle augmentations for their auto products, the American auto industry opted instead to rely on practical implementations within their car products to account for scarce changes in new model designs. Overall, in terms of styling, the main reason that consistently comes up for why car manufacturers in Europe and America decide against dramatic changes in their car product's designs are due to costs.

Car Performance

As is the case with any other product sold in vast competition, another reason why price disparities are so prevalent between American and European automobiles can be found through observations of the standard performance qualities of car products exhibited by both markets. Performance based qualities that are considered desirable in a car are weight, horsepower, comfort, handling, engine strength, and of course aesthetic. An article titled "*Automobile Prices in Market Equilibrium*" that was published in the journal series "*Econometrica*" looked at market distribution shares for European, Japanese, and American cars throughout the 1970s to the 1990s that were sold within the American domestic market. In one of the article's charts on "*Table II*", it was noted that consumers preferred cars that had just the right amount of ratio for weight/horsepower capabilities of their automobiles. For instance, the 1985 Plymouth Grand Fury had just .170 while the Porsche 911 Turbo had .948 weight to horsepower capabilities. This meant that the 911 was not only the sturdier of the two automobiles that handled well amid turns and acceleration, it was also the faster performer of the two automobiles and therefore was

considered by the American public to be a much more high end and reliable car option at that time. It must be kept in mind that the Plymouth Grand Fury is an American brand sports car while the Porsche 911 Turbo is German. While the Plymouth Grand Fury barely passed the zero percentile distribution of sales, the Porsche 911 was within the 100th percentile in market distribution of sales. This would infer that the Porsche 911 Turbo is not only the preferred model between the two sample cars within the chart, it is also the higher priced automobile between the two sample points as it is in higher demand than the Plymouth Grand Fury. Another chart that provided useful information within this article was "Table V" in which the demand elasticities in relation to price and attributes was recorded for thirteen different car models. The only European car model within that chart was the BMW735i, in which its mile/dollar price ratio was at 1.885 in comparison to the Ford Taurus being at 2.262 mile/dollar price ratio or the Ford Accord being at 3.016 mile/dollar ratio. The significance here being that the BMW runs a better mileage system as it is the more fuel efficient of the three sample points here, and therefore is a most valuable option of the three to the American consumer market.

Professor Peran van Reeve in his 2011 article argues that private automobile ownership in Europe is a lot less common than in the U.S. A main reason for this being that space for transportation in Europe, especially that of roadways is scarce. With that in mind, the European automaker therefore encounters a limited domestic consumer base, where only so many individuals who take interest in their product can actually buy it. As van Reeve notes "*... rising incomes and inflation compensate for any effect from an increase in the price of car usage. People have a deep-seated desire to be mobile, and increased wealth makes the costs of motoring increasingly affordable. In congested city centres, the implication is that charges must be high and increase fast in real terms in order to reduce congestion sufficiently and to permit*

predictable and reliable journey times (368, van Reeven).” Chiefly, with a limited amount of space available for European motorists, European car manufacturers price their items in relation to the scarcity of public road space as much as they do their auto product’s other merit based qualities. Van Reeven continues on with his argument stating “... *growth in income and population quickly compensates the short-run effect of higher car usage costs. Actually, pricing may even increase car usage. Congestion suppresses demand from income and population growth. By reducing congestion, pricing releases this latent demand. As a result, new users quickly take up freed road space, so that the most notable effect of pricing may be an increase in traffic on other (uncharged) roads and times of day (van Reeven, 370).*” Taking into account van Reeven’s observation, like with any other durable good, as demand rises so does price, and in looking at road congestion and scarcity, it is noteworthy that with the usual small build of a European automobile, such scarcity in road space would fall in line with European automakers pricing their products higher, and as such, keeping intact the competition in regards to demand for their consumers . The point here is that the European automaker services a very specific consumer type, therefore their products, though can indeed function anywhere around the world, are specifically developed to meet the rigid auto roadway protocols and fuel emission standards of the E.U.

Renowned car engineer Maurice Olley, who has experience both in car manufacturing companies GM and in Rolls-Royce, breaks down some of the key performance based characteristics between American and European cars as well as consumer based mentality both in Europe and the U.S. which ultimately affects the end pricing methods for vehicles from both the U.S. and E.U. In regards to consumer outlook of vehicular usage in an article Olley authored in 1921, Olley exclaims that the outlook is much different in the U.S. than in the E.U. Olley

explains the differences in motivation between American and European drivers stating “... *in the first place motoring here (U.S.) is transportation, pure and simple. It is rapidly becoming the most important system of transportation in the country. In Europe... the automobile is not transportation but adventure. (Olley, 419)*” This inference made by Olley can argue to a degree the motivation a European automaker may have in selecting a higher price quote for their car product. Driving in Europe is seen more as a leisure activity than as an absolutely necessary means of travel. Olley explains “*Probably the great reason for motoring being a commonplace here is the higher standard of living that brings a car within the reach of almost everyone, whereas in Europe it is still almost a luxury... in Europe the better roads, the more attractive and historical countryside and the more merciful climate enhance the pleasure of motoring. (Olley, 419)*” As Europe is much more centralized with many countries having a plethora of cities, space in general is much more scarce in the E.U. than in the U.S. Just as well, public transportation through trains, buses, and ferries are more readily accessible in Europe than in the United States. Taking such information into account, it would only make sense that European automakers price their products with the intuition that those products will be used more for leisure than out of pure necessity. The opposite is true in the U.S. where with a much larger landscape, roads that are wider and longer in distance, cars become an absolute necessity for transportation, especially as the public transit system which is so well connected in Europe is completely absent in the U.S.

Conclusive remarks in road tests from journalists

Jim Mateja, an Auto Writer for the *Chicago Tribune* newspaper provides the main counterargument that both helps argue for and argue against this paper's thesis. With the paper column dating back to February 1991, Mateja explained how the Japanese introduction of small, compact, fuel efficient cars introduced onto American shores in the 70s and 80s took the American auto market by surprise. As was stated in Mateja's article, American automakers could not contend with the likes of Nissan, Toyota, and Honda. The Japanese right after introduced their brands of luxury vehicles into the mix as well being that of Acura, Lexus, and Infiniti. The results from the 1989-1990 period proved destructive towards European automakers sales; quoting from the paper "*As the U.S. reacted to Japanese economy cars, so did the Europeans react, underestimating the impact of these cars on the American buyer. The Americans bought the Japanese marques, at the expense of the Europeans.*" Japanese automakers had successfully succeeded in introducing a more affordable, yet just as stylish, option to the American auto market which also combated the immense prices of products from the European auto industry. The introduction of Japanese vehicles into the American market had taken such a toll on European luxury sales that "*only Mercedes Benz and Volkswagen sold more cars in calendar year 1990 than in 1989.*" Mateja also compared price ranges between Japanese automobiles and European automobiles adding "*The Europeans have chosen to fight fire with gasoline, competing against the \$38,000 to \$40,000 Japanese luxury models with predominantly \$50,000 to \$80,000 vehicles.*" These snippets from Mateja's article give sufficient reasoning as to why European automakers would want to lower product pricing as the American consumer would want to go for the more affordable option. However he noted that a "federal gas guzzler tax" as

well as a “federal luxury vehicle” tax only caused European car prices to rise. That being said, the European car market at that point in time had to consider another variable (Japanese luxury cars) in the auto industry and had to reassess adding more affordable variants of their car brands, should they wish to continue profiting off of the American consumer market. Mateja’s article provides a specific point in time where European automakers had to rethink pricing strategy when releasing their products for consumption overseas, however that was only one point in time. As European cars still tend to be more expensive than Japanese luxury cars to this day, Mateja’s article merely provides a theoretical threat to European dominance in the luxury brand corner of the American car market. The effect that was most profound in the Japanese expanding their car sales to American shores was that their auto manufacturers' car products were cheap and reliable. As this is not at all true nor consistent with European car products, it is still that superior quality within the build of a European sports car allows for that heightened price quote to exist.

Noton Norambuena and Carlos Esteban, two Ph.D. students from the University of California at Berkeley wrote a dissertation titled “*Essays on structural estimation in the European car market*” in which they showed how European cars are preferred when purchased by EU citizens. Their findings showed that statistically domestic products are preferred when one should choose to make a large investment in any product. Their findings from their essays and experiments can be summed up with the following statement “*a home bias fixed effect in the utility function can change the price elasticities for domestic goods.*” Their end results are that preference towards domestic products will affect price elasticity in the long run and the pricings of European cars overseas will therefore reflect the prices of those cars within their respective E.U. countries. Overall, home bias for European consumers is understandable as purchasing from domestic auto manufacturers not only allows discount rates to those consumers. The car products

themselves are better understood by their potential owners as they have had exposure to those specific car companies and know what brands and quality to expect from those companies.

Kevin Schweitzer, another Auto Writer for the *Chicago Tribune* wrote about Dave Van Sickle, director of the AAA automotive and consumer information branch, and his experiences testing out and driving various Japanese, German, British, Korean and Swedish cars. He took into account car handling and known facts about possible problems encountered when repairing these vehicles. The cars that listed as the least problematic for Van Sickle were Lexus with 85 problems, Jaguar with 108 problems, Acura with 118 problems, BMW with 119 problems, Saab tied with Toyota at a number of 121 problems, Buick tied with Infiniti at a number of 123 problems, Cadillac with 126 problems, and lastly Mercedes with 129 recorded problems. The top five cars with the least recorded problems are all either of European make or Japanese make. That being said, a testament to European automakers credibility in their car quality comes from Van Sickle's own physical tests with the automobiles. Considering among those top five cars being Swedish, British, and German, the successful tests of those European automobiles allows for some understanding as to the pricing of their yearly released variants and models. Other results Schweitzer recorded on his paper were as follows, "*Family Sedan or Wagon: Volkswagen Passat Small car: Honda Civic EX, Green car: Toyota Prius, Most fun to drive: Honda S2000, Upscale sport sedan: BMW 330i, Best car tested: Mercedes E320 4matic wagon, Small SUV: Toyota RAV4, Mid-size SUV: Lexus RX300, Pickup: Toyota Tundra, and Minivan: Honda Odyssey.*" These results vouch for the character in German cars specifically but also just how the German auto market can price their vehicles as they wish, the top upscale sport sedan went to the German brand BMW, the best car tested went to the German brand Mercedes, and the best family sedan or wagon went to Volkswagen. Quality, performance, style, and brand all give

character to the tests conducted by Van Sickle and showcase why European automobiles are cherished as much as they are. With those results in, the price dispersion can be understood through sheer demand and respect alone. The article by Schweitzer allows for an understanding in terms of brand name as well as car handling as to why these prominent qualities make for superior European priced automobile brands in the global car market to continually prevail in sales.

Darlin Damson, a contributor to the *Wall Street Journal Eastern Edition*, back in 1985 argued the mentality of American consumerism towards domestic and foreign automobiles as well as the preferences and prejudices that exist within that mentality. Damson's article describes a survey on car quality that was looked over by several American auto sales experts. The unanimous conclusion they all came to was that foreign cars were among the preferred options for college educated Americans. As the abstract in the article put it, "*a third of college educated Americans and about 30% of Americans under 35 years of age replied that they would buy a foreign model*". This method showed a youth preference in automobiles that are non-American. The "*more expensive cars bought more frequently*" are the likes of VW, Lotus, Saab, BMW, and Mercedes, all European brand cars. Where there is a great demand for the continuing nuanced changes to style, the European car brands contribute over 50 brands offered throughout twelve different countries of a variety of chic, stylish, and fast sport cars. While the American car offers a familial appeal, the European car services in particular the individual.

Conclusive Thoughts

In looking through the variety of economists, journalists, university employees, and engineers in the case of Maurice Olley, it is without much deliberation that the main reasons for noticeable price disparities were due to the argued points throughout this paper. These points were exchange rate fluctuation often favoring the euro over the dollar, the domestic discount rates European automobile manufacturers repeatedly employed to secure strong trust relationships with their clients, the car fuel usage and quality material which was often more expensive for European cars than American ones, the brand name fame through pop culture and media, and lastly the many different trial and error tests by journalists who advocated superior handling and experiences for European automobiles rather than American or Japanese ones. Economists, financial advisors, and scholars like Michael Knetter, Joseph Gagnon or Yunis Alam all directly supported my argument as they allowed a full understanding into the “Price to Market” (PTM) as well as the Country of Origin (COO) strategies European automakers would enact in order to match or best their American and Japanese competitors. Aside from the fact that European cars consistently were sought in moderate to high demand globally, the demand for constant improvement and variation promoted European automobiles through minute changes to style and handling as was the observed case in the article authored by economists B. Peter Pashigian, Brian Bowen and Eric Gould; “*Fashion, Styling, and the Within-Season Decline in Automobile Prices*”. In terms of comparison in quality between European and American automobiles, European automobiles and their quality were highly regarded above all others for reasons Maurice Olley brilliantly determined in the article “*EUROPEAN POSTWAR CARS*”. That being said, the literature holds true backing the main thesis of European cars being more expensive than others due to the following aforementioned reasons above. In careful consideration to which audiences would most enjoy this paper, the initial two that immediately

come to mind are those car enthusiasts who would want to understand what exactly their investments are when deciding whether or not to purchase any sort of European car as well as what qualities they stand to gain or sacrifice by making that investment in a European automobile. The overall important aspect of this paper would be to provide people with a better understanding of how producers of any item should rely on marketing their brand just as well as promoting the importance of quality when producing their goods. This paper can verify through multiple analyses of other papers that car prices heavily rely on brand name and car performance as well as quality. The discovery of a survey done by Mr. Damson only allows further explanation that the success of selling a product relies heavily on how exactly that product is marketed in the first place. The purpose of this paper was to review specific components of the previously stated thesis that will allow a solid understanding as to why European cars are on average the more expensive than their American counterpart within the global car market. With much determination from the sources uncovered, there was much available to buttress the main argument that allowed the stated hypothesis to prevail. Upon further analysis from the stated sources and reviews from others. Newspaper articles that date back to the 1980s supported the notion of car quality being an important factor in the price dispersion between European cars and non-European cars, one of the biggest reasons for these price dispersions were conducted through a series of car tests that were then documented by journalist Darlin Damson, commenting on the results of weak engines and poor mileage from American cars like Chevy and Ford in comparison to better mileage and quality performance provided a big reason as to why there was such a different in price dispersion to begin with. Labour costs and euro/dollar differences only added further proof to the stated thesis. However, not all European made cars that were superior to their Japanese and American counterparts. Countries like France and Italy

had their fair share of problems, with the former manufacturing cars of such poor quality that they were deemed unfit for American usage. Cars such as the Peugeot, Renault, and Pigeon all have had fairly poor reputations within the global car market for being poorly built and extremely unreliable. Italian cars did not fare that much better; though Ferrari and Lamborghini are expensive due to their stylish looks, wonderful handling, superb material quality, and quick acceleration speeds, they were on average difficult to repair once damaged. English cars and German cars had better reputations upon the European stage with a runner-up now being Swedish automobiles such as Saab and Volvo. These facts overall countered the main thesis as the main reasoning behind the stated thesis is that quality and performance gave way to European cars being the relatively more pricey vehicles in the auto-industry, and though there are European countries that produce stable, reliable, stylish, high quality, brand-named cars, this certainly wasn't the case with every European car. This left the stated thesis to rely more on facts such as brand name, car aesthetic, exchange rates, and labor costs to help the determinant factors in assuring the reasoning behind price discrepancies between European and non-European cars. This paper as well examined customer preferences in looks rather than just their knowledge on car facts as well when providing a valid argument. Overall, the success in this thesis was determined much through European manufacturer and customer bias as well as through tangible affirmation through design and quality themed articles praising the genius of European automakers. It was the overwhelming amount of evidence that produced the desired results for this paper in reaffirming that one can conclude that the price disproportion between European and American automakers lies principally on the European auto manufacturer's currency strength, domestic market, fuel type, material quality, style, and precedent trial and error reviews from notable critics.

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