



OBSERVATIONS

Dennis DesRosiers

Quality, Quality, Quality

You rarely hear these words any more but there was a day and age when “planned obsolescence” was popular. This was before my time, but from what I understand goods were specifically designed and manufactured to only last a specific period of time; usually a short period of time. The theory being that the shorter the life span of a product, the more consumers would buy.

This may have been the case but I suspect goods didn’t last long more because of the types of materials available and/or the processes used to make the goods. There are many goods, like appliances, that have a noticeably shorter life span today than a half-century ago. So I question the whole concept of the “planning” side of ‘planned obsolescence’.

In the automotive sector we do know that the Japanese got their foothold in North America for two reasons. First, the oil embargo in 1973 meant that a lot of vehicle owners could not find gasoline and thus were looking for small fuel-efficient vehicles. Most Japanese vehicles at that time fit the bill (and vice versa for Detroit-built vehicles) and as a result became very popular.

Once owning one of these gas misers the owners discovered a second reason for buying Japanese. Their vehicles were very well built and they loved it. Interestingly, the earliest Japanese vehicles sold in Canada (mid-1960’s)

were notoriously poorly built but somewhere along the way they discovered William Edwards Deming’s philosophy and began to build as much quality into their vehicles as possible using Deming’s statistical methods. They were nothing compared to the quality today but were still much better than their earlier vehicles.

Deming first started lecturing in Japan in 1950 in a time when Japan was noted for having very poor quality. Deming made a significant contribution to Japan’s reputation for innovative, high-quality products, and economic power. He is regarded as having had more impact on Japanese manufacturing and business than any other individual not of Japanese heritage. Despite being honoured in Japan in 1951 with the establishment of the Deming Prize, he was only just beginning to win widespread recognition in the U.S. at the time of his death in 1993.

By embracing Deming’s process techniques the Japanese automotive sector began producing higher quality vehicles and they resonated with North American consumers. This began the march to increased market share for the Japanese and a rapid gain in market share from the Detroit Three. Soon, other players caught on and all players in the automotive sector began to focus on three of the most important words to ever enter the dictionary of automotive jargon ... “quality, quality, quality”.

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New and Used Vehicle Sales in Canada - 000's of units

	New Vehicle Sales	Percent New Vehicles	Used Vehicle Sales	Percent Used Vehicles	Total Vehicle Sales	Total Units in Operation	Sales as a Percent Of UIO
2006	1,613	40.60%	2,356	59.40%	3,970	19,365	20.50%
2007	1,652	38.50%	2,637	61.50%	4,288	20,243	21.20%
2008	1,634	38.30%	2,634	61.70%	4,268	21,204	20.10%
2009	1,460	34.40%	2,790	65.60%	4,249	21,675	19.60%
2010	1,557	34.70%	2,926	65.30%	4,483	22,001	20.40%
2011	1,586	34.40%	3,028	65.60%	4,613	22,185	20.80%
2012	1,676	36.80%	2,873	63.20%	4,549	22,503	20.20%
2013	1,745	38.40%	2,801	61.60%	4,546	23,521	19.30%
2014	1,851	40.60%	2,714	59.40%	4,565	24,479	18.60%
2015	1,899	40.10%	2,842	59.90%	4,741	25,561	18.50%
2016	1,949	40.20%	2,898	59.80%	4,847	26,263	18.50%
2016/2015	2.60%		2.00%		2.20%	2.70%	

Source: DesRosiers Automotive Consultants Inc, CVMA, GAC, and IHS Automotive, driven by POLK. 2016 light vehicle registration database released Fall 2016. Further reproduction prohibited without written authorization from DesRosiers Automotive Consultants Inc.

It is hard to measure but the global automotive sector has invested hundreds of billions if not trillions of dollars improving the quality of vehicles. When you put this much effort into improving quality guess what happened? The quality of vehicles increased slowly but three to four decades into the era of "quality, quality, quality" and vehicles are radically better built and continue to improve to this day.

There are a number of excellent ways to measure quality but most are not in the public domain so we can't quantify their results. Others exist as a proxy and certainly map the

road to higher quality. Some US consultants measure "initial quality" by surveying consumers on 'things gone wrong' during the first months/years of ownership. Others measure 'customer satisfaction' which implicitly reflects on quality as higher quality is critical for higher satisfaction.

We have come up with two other measures and established solid data for Canada. The first measures the 'survival rate' for each brand or type of vehicle. We know, to the unit, exactly how many vehicles were bought in any model year and we know how many are still on the road today. Divide the two numbers

and you have the survival rate. The one problem with this measure is that we only have reliable data going back to 1985 which provides us with a measure of survival starting in the year 2000. We update this information annually and now have information as of 2016. Seventeen years of data is pretty good but it would be nice to go back even further. I wrote about this in my February Observation this year entitled "Survival of the Fittest". In the year 2000, only 26.1 percent of vehicles survived 15 years of ownership. As of 2016, approximately 49.4 percent of vehicles survived 15 years of ownership. This could only have happened

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if quality had increased substantially. A 15 year old vehicle was first bought in 2001 and thus the increase in quality over the last decade plus isn't yet reflected in the numbers. I would venture to guess that 60 to 70 percent of vehicles bought today will still be on the road fifteen years from now.

The second measure is to calculate "the expected useful life" of a vehicle. Essentially, this is the average odometer reading of vehicles when they disappear from provincial registration records. The advantage of this second method is that we have data going back to the 1960's. The disadvantage is that a vehicle could disappear and/or appear in registration records because of imports or exports rather than it being scrapped. However, cross border trade of about 250K units, in a big year, isn't large enough to fundamentally change the data when there are now 27 million light vehicles on the road in Canada.

This measure also shows a significant increase in quality. In the 1960's the average vehicle in Canada was taken off the road between 175K and 200K kilometers. This decade a vehicle taken off the road due to old age can easily reach 325K to 350K kilometers. Therefore, vehicles are lasting essentially

twice as long today. And as with survival rates, the improvement in the quality of the vehicles over the last decade plus is not yet reflected in the statistics. On this variable I would venture to guess that a vehicle bought today will last even longer; potentially over 350 thousand kilometers.

So why does all this matter? I would argue that the most significant change the automotive sector has ever experienced has been the increase in quality. Virtually every element of this industry has changed because of the increase in quality. Let me touch on a few things in this "Observation" and I'll discuss a long list of others in my next.

Impact of Quality on the Used Vehicle Sector:

There was a day and age that when someone bought a used vehicle they were "buying someone else's problems" and indeed for the most part they were. How do you manufacture a high quality used vehicle? First you manufacture a high quality new vehicle and let someone drive it for a few years. With increased quality, used vehicles have become valuable commodities and are actually the fastest growing segment in the market. At the turn of the century the used vehicle market in Canada amounted to approximately 1.5 to 1.8 million units.

This year it is on track to exceed 3 million units for the first time. Since vehicles last so long and are reasonably mechanically fit quite late into their life consumers are embracing them at record rates. In the year 1990 there were less than a million vehicles on the road in Canada over 10 years old, today there are over 11 million and these form the core of the used vehicle market. It's stunning, when you think about it.

This has significantly increased ownership of vehicles in Canada. From 1970 to about the year 2000 ownership measured by vehicles per driving age population was about two-thirds. This year it is over 87 percent. Most of the added million used vehicles sold today are older units that are affordable for the lower end of the economic spectrum to purchase. The highest income earners typically buy a new vehicle and the lowest income earners typically buy a used vehicle. With an extra 10 million vehicles on the road there is plenty of supply with reasonable quality and at a reasonable price. For less than \$5K a consumer can pick up an older used vehicle that might have another 50k to 100K kilometers of use left in it. Therefore, increased quality essentially opened up an avenue for lower income consumers to

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have access to personal use transportation.

The used vehicle market used to be known as having a "culture of deceit" which was directly related to the poor quality of the product available. It was unreliable and sellers tried to hide a vehicle's problems from the buyer. Unfortunately, there is still some of that out there today but for the most part the "culture of deceit" has disappeared especially for younger used vehicles. This has resulted in a change in the fundamental way consumers buy their used vehicle. Shabby independent stores in the back alley ways have pretty well disappeared and have been replaced by highly imaged independent stores and franchised dealer stores. Used vehicle superstores are in most markets and used vehicle sales are beginning to move to online digital formats. In the old days you would be foolish to buy a used vehicle without a detailed hands-on inspection. This is less necessary today.

Furthermore, we now have used vehicle warranty programs in the market to protect consumers from future problems with their used vehicle purchase. From a bottom line perspective, a warranty can only be offered if the need to exercise it is minimal. Since

little goes wrong on mechanical items like power train, transmission, and engine performance during the first decade of use, the industry can warranty selected used vehicles and provide considerable comfort for the consumers buying used vehicles.

The franchised new vehicle dealer now embraces used vehicle sales almost to the same degree they sell new vehicles. It is quite common for a new vehicle dealer to have a one to one ratio of new and used vehicle sales and the industry average is about 0.8 used sales for each new vehicle sold. This has significantly strengthened the financial viability of the new vehicle dealer body. Used vehicle sales now account for close to 20 percent of their revenue and over 12 percent of their profit. Add in profit from the F & I side of selling a used vehicle and most new vehicle dealers have more than twenty percent of their bottom line tied to a used vehicle. They now sell close to a million used units a year.

There are indirect benefits from them selling so many used vehicles. For instance, dealers are now highly dependent on their CRM systems to stay in touch with their customer base. This was always relatively easy for the first owner of the vehicle.

Now that dealers also sell approximately a million used vehicles they also have significantly more information to feed their CRM system for second and subsequent owners with the resultant increased opportunity to generate profit from these vehicle owners. Why? Quality, Quality, Quality.

I've only touched the surface of the impact of quality on the automotive sector. In my next Observation I'll do a deeper dive. **DAR**