



OBSERVATIONS

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Quality, Quality, Quality (Part 2)

In my last Observation I discussed what I believe have been the three most important words to change how the ‘business’ of the automotive sector operates over the last few decades, “Quality, Quality and Quality”. Every element of the industry has changed radically as a result of the increased quality of the vehicles we buy. I outlined two notable statistics. First, from our recent research, a vehicle scrapped today might average 250k – 300k kilometers. If we look at a new vehicle bought today, we expect this new vehicle might have an expected life between 300k – 350k kilometers. In the 1960/70’s most vehicles were taken off the road at under 200K kilometres, so vehicles are lasting more than 50 percent as long today. Second, reflecting their longer life, in the year 1990 there were only 700K vehicles on the road over 10 years old in Canada. Today there are over 11 million and by 2020 there will be over 12 million.

I then discussed the impact on the used vehicle sector where sales have increased from well under 2 million used vehicles per year to over 3 million per year since the turn of the decade. Quality has eliminated much of the ‘culture of deceit’ that existed in the used vehicle market. In this Observation, I’ll discuss the impact on other areas of the automotive sector.

The Automotive Finance Market

I fundamentally believe that the entire growth of leasing of new vehicles is due to higher quality. The primary financial advantage to leasing is lower monthly payments. With a lease, the consumer only pays down the difference between the capital cost of the vehicle and the residual value of the vehicle (most leasing has a four year term). The consumer does pay more interest on a lease since interest is on the depreciating value and the value doesn’t depreciate to zero like with a loan. But by not having to pay back the entire capital cost the monthly payment on a lease is lower than on an equivalent loan. The higher the residual value the lower the monthly payment, and the residual value is directly related to the quality of the vehicle. Think about a consumer buying a new vehicle in the 1970’s. They typically drove it about 20K kilometres per year and in essence used up about 80K to 100K of the kilometres imbedded in the vehicle. They lasted about 175k to 200K so the second owner was buying a vehicle with another 100K to 125K kilometres of expected useful life. The identical consumer today may drive more (about 25K kilometres per year) so usage is up 100K to 125K kilometres per year. But since it will last up to 350K kilometers the second owner is in essence buying the vehicle with another 225K additional kilometres of use.

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**SIZE OF THE AFTERMARKET BY MARKET SEGMENT - \$ MILLIONS
EXCLUDES WARRANTY WORK, COLLISION & FLEET MAINTENANCE**

	1 TO 5 YEAR OLD VEHICLES	6 TO 10 YEAR OLD VEHICLES	OVER 10 YEAR OLD VEHICLES	TOTAL
DURING 2010	\$4,648.1	\$6,966.9	\$7,625.9	\$19,240.9
DURING 2011	\$4,657.4	\$7,213.9	\$7,751.6	\$19,622.8
DURING 2012	\$4,396.4	\$7,152.5	\$7,762.5	\$19,311.4
DURING 2013	\$4,478.7	\$7,161.8	\$8,450.3	\$20,090.8
DURING 2014	\$4,605.7	\$7,052.0	\$9,143.3	\$20,801.0
DURING 2015	\$4,597.6	\$7,025.0	\$9,368.0	\$20,990.5
DURING 2016	\$4,809.1	\$6,889.2	\$9,718.0	\$21,416.3

Source: DesRosiers Automotive Consultants Inc.

What is worth more: a four year old vehicle with another 100K kilometres of expected useful life or a four year old vehicle with approximately another 225K kilometers of expected useful life? The latter, of course, thus higher residual values lead to lower monthly payments which lead to higher levels of leasing. Without higher quality vehicles this would never have happened.

And whether a leasing company makes money on the leased vehicle or not is highly dependent on their ability to sell the vehicle at the end of the lease. Back in the 70's and 80's not only were residual values very low but they also were very volatile. The realized residual values varied radically so it was also very high risk to put a vehicle out on a lease. Therefore, most leases were open leases where the consumer assumed the residual value risk. Now that vehicles are better built, some of this residual value risk has been ameliorated. With less risk, the industry has move

almost entirely to closed leases where the lessor takes the risk rather than the consumer.

Combine higher residual values with lower residual value risk, both due to higher quality, and we have a large and vibrant leasing industry.

A third implication of higher quality on how vehicles are financed is the growth in sub-prime lending. The top quartile of the economy have very little trouble finding financing for their vehicle with normal lending terms and most own a vehicle. It is the bottom quartile that has trouble finding financing and are the ones that migrate to sub-prime or near-prime lending. The high quality of vehicles has, as mentioned above, resulted in a massive number of older vehicles on the road. And these older vehicles are, by definition, a much lower price than a new or newer vehicle. This has resulted in rapid growth for vehicle ownership with the bottom quartile and/or bottom two quartiles of consumers as

older vehicles became available and more affordable. Vehicle ownership may have been reachable but these consumers still needed financing. As you reach deeper into the economy it is reflected in lower credit scores and thus the need for sub-prime lending. Ownership in the year 2000 was only two thirds of the driving age population and now it is over 85 percent and these additional owners now comprise the bulk of the consumers in the sub-prime auto finance market.

The Automotive Aftermarket

With higher quality, the maintenance intervals of many repair categories for most vehicles have also been stretched. Remember the days when you needed an oil change every 3K to 5K kilometres? Now many if not most owner manuals call for an oil change every 10K kilometres and some even longer. The same can be said for most regular maintenance categories such as brakes, tires, exhaust, etc. Exhaust is a good example of how quality has changed the 'repair outlets' that fix vehicles. There were at least a half dozen repair chains that specialized in exhaust jobs, Speedy Muffler King, Thruway Muffler, Midas, to name just a few. They could specialize because there was so much exhaust work. With the move to galvanized and now stainless steel (driven by the search for

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Vehicle Usage in Canada

	Total Units in Operation	Total Kilometres Driven All Vehicles 000's	Kilometres Driven Per Vehicle
DURING 1990	12,081,772	269,646,295	22,318
DURING 2000	17,100,899	394,983,497	23,097
DURING 2010	22,001,278	524,389,230	23,834
DURING 2016	26,263,152	604,647,712	23,023

Source: IHS Automotive, driven by POLK, 2016 light vehicle registration database released Fall 2016 and DesRosiers Automotive Consultants Inc.

quality), the number of exhaust jobs plummeted and all the exhaust specialty chains changed their focus to become 'generalist' rather than specialists. Indeed, the same is happening with tire specialist chains in that category. Canadian Tire moved to become a generalist a few decades ago but all Tire specialists have or are in the process of becoming 'generalists' today. Why? Better quality and longer lasting tires.

Obviously there is less regular maintenance today during the early years of a vehicle's life. But that doesn't mean that there is less maintenance over the life of a vehicle. Go back to the oil change example. With an oil change every 5K kilometres and a vehicle lasting 200K kilometers there were between 30 and 40 oil changes over the life of a vehicle. With a 10K kilometre oil change interval today with a vehicle lasting 350K plus kilometres there is still 30 to 40 oil changes over the life of a vehicle. And since

engine technology has gotten much more complex, once again due to quality, there is a need for higher spec oil and more costly oil. So there actually may be more oil dollars through the life of a vehicle today than before despite much higher quality vehicles.

But this example does lead to one very significant change in the aftermarket. The dollars available for older vehicles has exploded. In 1990 the aftermarket for older vehicles was \$3.0 billion, last year it was close to \$10 billion and by 2021 it is forecasted to be close to \$12 billion. There has been growth in the other age categories but not nearly as much as for older vehicles.

But also note that the size of the aftermarket today is more than twice the size in 1990. Well, higher quality vehicles also led to an explosion of vehicles on the road and there are 10 million more vehicle owners today than at the turn of the century. Do the

math, more owners times the amount of driving per vehicle has resulted in total usage growing from 525 billion kilometres of total usage to a forecast of 675 billion kilometres of total usage by 2021 even as kilometres driven per vehicle is starting to decline. Twice the usage, even with longer maintenance intervals, results in a larger aftermarket. Why? Quality, quality, quality.

Not all maintenance categories have been negatively affected. Back a couple of decades ago a consumer may not have had certain work performed because it was expensive and not worth doing given how much life there was left in their vehicle. Engine work and transmission work are two examples. Now that vehicles are on the road so long, a number of categories like these have become more prevalent and indeed new repair chains have thrived as a result. Mr. Transmission is one example. And indeed new maintenance categories have popped up. Who even heard of a cabin air filter up until the 1990's? Now it is a category on its own. Will we see the same with batteries as Battery electric vehicles proliferate? Electronics as autonomous vehicle become more popular?

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The New Vehicle Market

We are finishing the best new vehicle market in the history of the Canadian industry. This will be the fifth year in a row of record sales and total light vehicle sales will exceed 2 million units for the first time. Include medium and heavy duty trucks and sales will come close to 2.1 million units in 2017. There are many reasons for this, but quality is certainly one of the critical reasons. Higher quality resulted in a record number of older vehicles on the road. But no matter how well they are built, if they are used and the usage table indicates they have been driven a lot, they ultimately come off the road. Scrapage of vehicles has traditionally been in the 1.2 to 1.5 million units per year range. This is increasing and will be in the 1.5 to 1.8 million range going forward. These potential consumers don't necessarily buy a new vehicle when their vehicle is removed from the road, but in order to maintain ownership levels, most consumers do buy another vehicle. Even if they buy a younger used vehicle the owner of this vehicle is then in the market for a new or newer vehicle. I believe that most units that are taken off the road eventually result in a new vehicle coming onto the road.

Going back to the finance issue, higher residual values make it easier for a baby boom generation consumers to afford a new

vehicle since the equity in the vehicle they are trading in is higher. There is no difference between a vehicle company putting an incentive worth a few thousand dollars on the windshield of a vehicle and a vehicle being traded in being worth a few thousand dollars more than the market in previous years. Both allow a consumer to more easily afford a new vehicle.

Quality also was a key differentiator between brands in past decades; witness the growth of brands who played heavily on the quality variable. But now that quality is very high across almost all brands and the ability to differentiate based on quality alone has been reduced. One of the things that the OEMs have done to adjust for this is to proliferate their product line up. There are now 50 to 70 all new models introduced each year compared to between 30 and 40 back in the 1980's/90's. This has been facilitated by the flexing of assembly plants to allow multiple models to be manufactured on the same assembly line. Flexing of assembly wasn't developed specifically because of quality but the need for much higher quality manufacturing led to a complete revamp of all assembly facilities and these very modern plants were designed to give the OEMs more ability to proliferate their product line-ups. This was not a direct result of higher quality but higher quality played a definite indirect part of this

move. Model proliferation is one of the reasons we have record new vehicle sales. There is now a model in just about every nook and cranny of the market and these products are jam packed with the technology consumers want and are willing to pay for. Credit to high quality.

So I would argue that quality is behind the new vehicle market being able to sell 2 million plus vehicles per year compared to not that long ago when a spectacular market was about 1.5 to 1.6 million units.

Conclusion

I think I could double or even triple the number of incidences to write about where quality has changed the face of the automotive sector. I've touched on a dozen or more in this and the last Observation. I'll keep track of any that I think of and when the list is long enough will write another Observation on this topic. The one that comes readily to mind that I've written about a lot over the years is our Government's policy related to climate change. I respect that electrifying new vehicle sales may be necessary but isn't the biggest issue the total number of vehicles on the road and how long they last... both a direct result of quality. Wouldn't climate change policy be more effective if it focused on getting older vehicles OFF the road. But enough for now. **DAR**