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A Fixed Operations Technology Research Project

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Introduction

In 2010, Reynolds and Reynolds released their findings of a research study quantifying the impact of five tools available for automotive retail dealership service departments. Dealers utilizing five Reynolds service solutions were compared against dealers with fewer or none of these service applications, and retention was determined by dividing the number of vehicles serviced in the last six months by the number of vehicles serviced in the last twenty-four months. The tools analyzed were Technician Dispatching, Service Sales Kit, One Step Service, Service Price Guides and Factory Style Maintenance Menus. Our analysis determined that each individual tool had significant impact on key performance measures in the service department, and when the tools were combined the impact was even more noteworthy.

In the past, dealerships counted on high traffic volume to balance the low number of vehicle sales, service appointments, and parts sales. “Dealer service traffic volumes are expected to decline by approximately 20 percent between 2009 and 2013, resulting in a 25 percent decrease in service dollars from owners of late (2005 to 2009) model year vehicles.”

- J.D. Power and Associates – Press Release



The decrease in traffic will certainly affect the revenues of the dealerships, so they will have to look for other opportunities to counter that problem. The service department is known as “Recession Resistant” for dealerships, which means during an actual recession, dealerships will be more dependent on the service department to help pay the bills, so they have to make sure it is always profitable and makes use of the best available technology.

Dealerships that implemented these programs saw a dramatic increase in; the number of VINs being serviced, total repair order count, customer retention, and profit per repair order, allowing for greater fixed absorption and increased revenues in today’s declining markets. It was discovered that the five programs enhanced the customers’ overall experience at the dealership, resulting in an average 11% increase in retention. (Reynolds and Reynolds).



The Problem Statement

The purpose of this project is to validate whether or not using technology such as the programs offered by Reynolds and Reynolds has a positive effect on service department operations. Through the data provided, we will illustrate the affects of certain technologies that are available to dealership service departments. We intend to use the data to form our own calculations to determine whether or not the results of both are similar.

Data Overview



Reynolds and Reynolds provided us with an abundance of data that they collected from their live databases. The data includes information gathered from 5,537 dealerships of varying sizes and locations, representing an aggregate count of 171,682,039 VINs and 6,445,958 repair orders. This large sample leads to a very accurate representation of the market as a whole. However, none of the data provided to Northwood by Reynolds and Reynolds contained any personally identifiable information, nor was there way to link specific data back to a specific dealer. Their data shows the differences in a number of different variables based on the number of technologies that dealerships employed. What we set out to find was if, in fact, it was the programs themselves that changed those variables. One objective was to look at how the numbers of individual VINs on file for a dealership over certain periods of time affect dealership business. The time periods were grouped as such; 0-6 months, 7-9 months, 10-12 months, 13-24 months, and 25 months or greater. Using the raw data collected from Reynolds and Reynolds, we took our own route to determine whether or not the technologies employed had an effect on the outcome of the business. After reviewing the data and forming our own calculations of the information, it is safe to assume that the information is valid and the results have not been tampered with in any way.

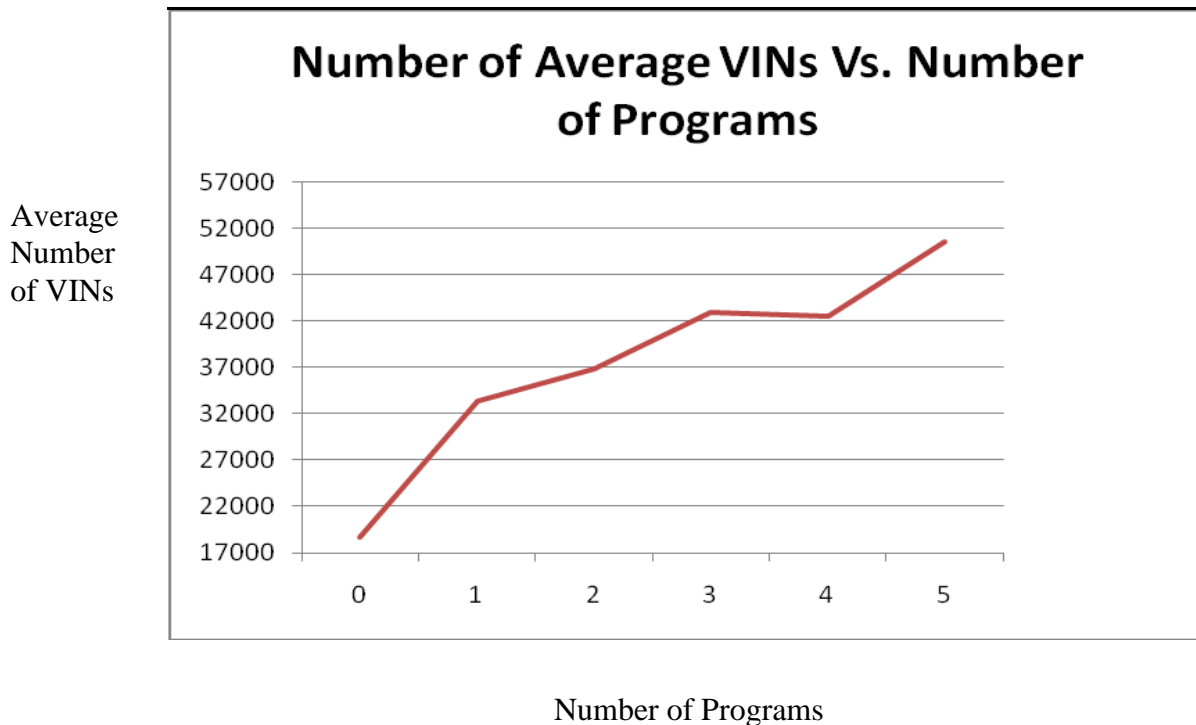


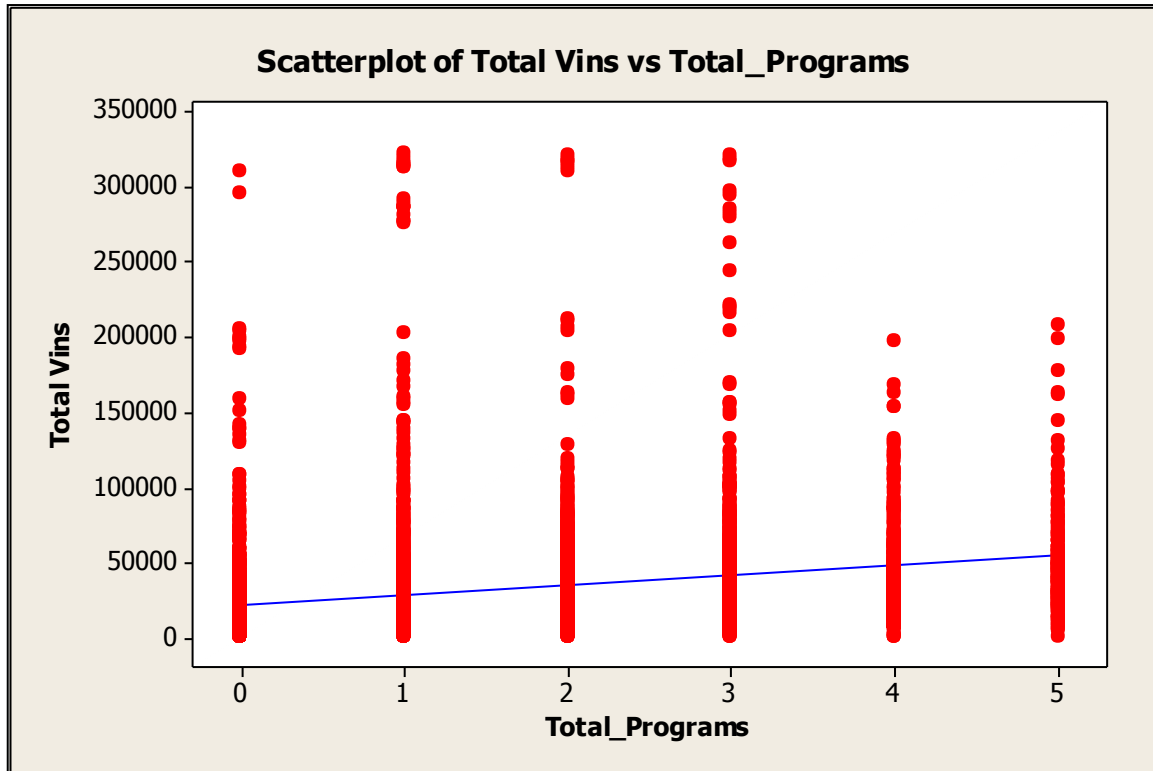
Praxis – Solutions

With today's problems, dealerships see a need to find a way to counter them. One of the best solutions would be to employ a number of tools such as those offered by Reynolds and Reynolds for the dealership service department, like "Service Sales Kit", "Technician Dispatching", "One Step Service", "Service Price Guide", and "Factory Style Maintenance Menus". Each of the tools has its own use and can be used independently, or they can be integrated to work together. Tools like the "Service Sales Kit" are designed to increase service sales, parts sales and the rated customer satisfaction. Another useful tool would be one such as "Technician Dispatching", which is designed to increase the efficiency of the technician and maximize the profit of each available service bay. Dealerships can consider employing a tool like "One Step Service", which is used to increase the speed and accuracy of the department in order to meet customer expectations. Also, a tool such as the "Service Price Guide" can be used to increase the accuracy of the ROs and to maximize the efficiency of the technician with less "downtimes". The last example of a helpful service tool is one like the "Factory Style Maintenance Menus". By taking advantage of tools like this, service departments see the number of R.O.s increase, as well as the gross profit to a certain extent. (The Reynolds and Reynolds Company, 2011)

Calculations

For our first calculation, we chose to see whether or not the amount of programs employed shows an increase in overall business in fixed operations. Referencing the graph below, you can see that the number of programs could increase the average number of VINs on file. This information was gathered by taking the average number of VINs that have been active in the service department per dealership and comparing them to the number of programs employed. What was unique to find was that, on average, smaller dealerships were employing four or more of the programs available, whereas the larger dealerships employed less programs on average. We can assume that the reason smaller dealerships have more service business is because they are implementing the programs available to them.





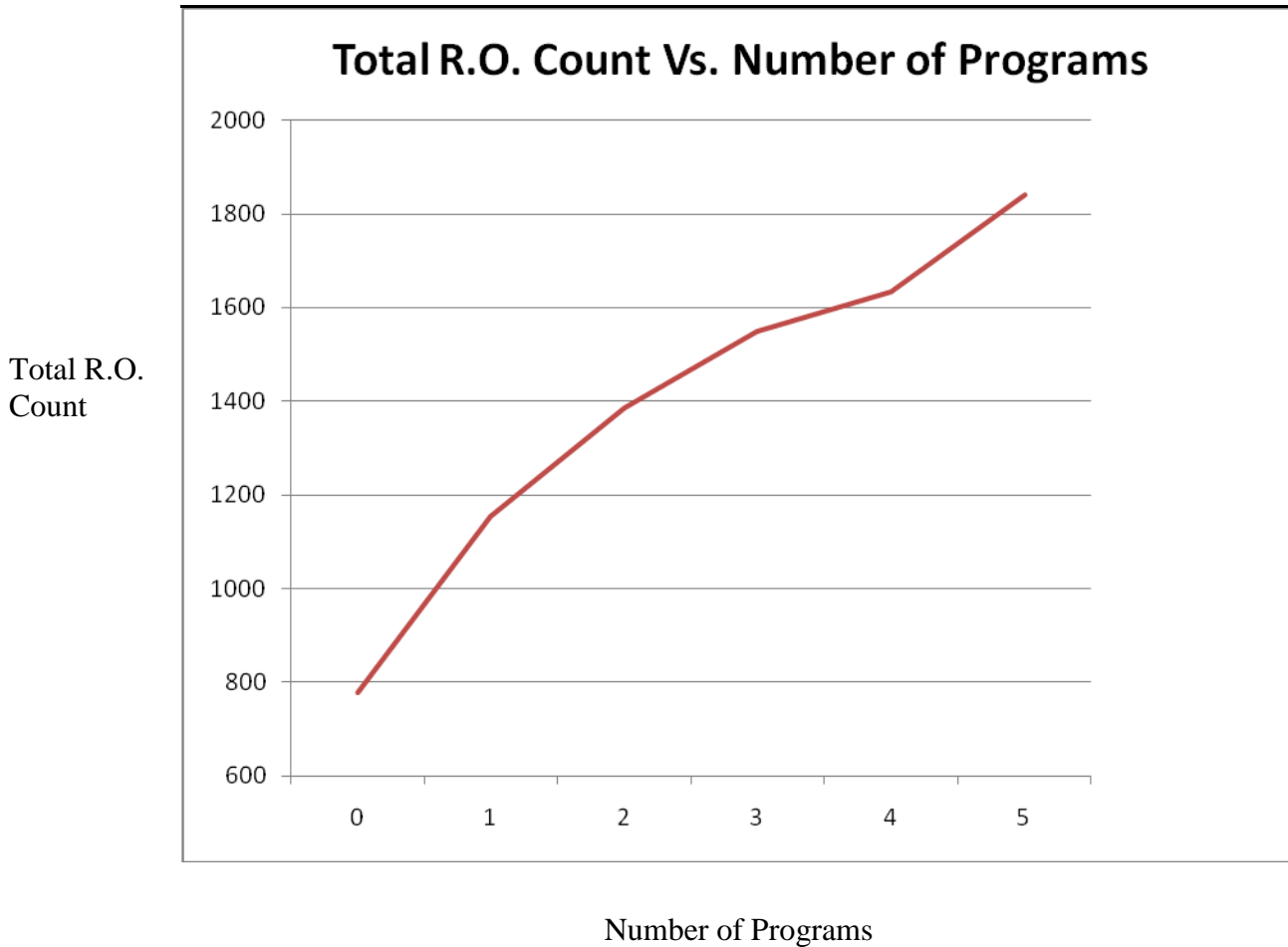
By examining the above scatter plot with a line of regression, one can see that the plot illustrates our claims that larger dealerships do not necessarily utilize more programs or have more average VINs, which is represented by the blue line in the plot. This goes to say that the smaller dealerships who use more programs are certainly seeing a higher average number of VINs in the service department as opposed to the larger stores that use less programs. The red dots display the total number of VINs on file per a single dealership, whereas the blue line represents the average number of active VINs as they relate to the number of programs being utilized. We cannot say that there is a cause and effect relationship relating to average VIN increases due to the number of programs used because the majority of vehicles in the data lie between zero and three programs.



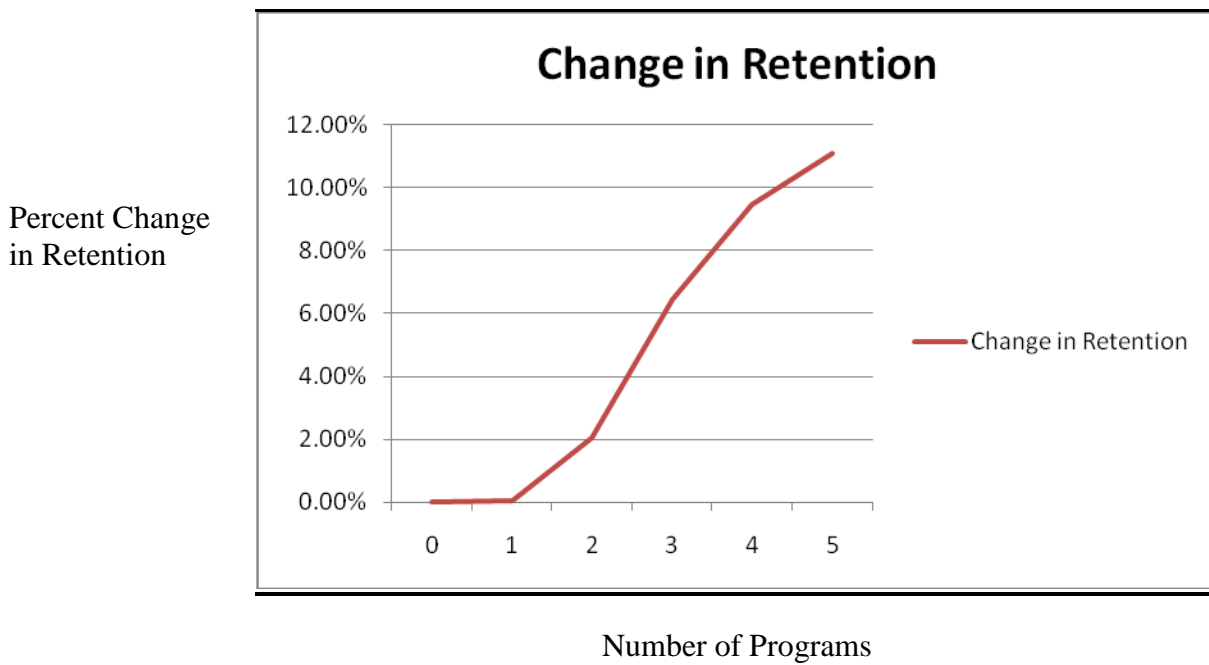
We can however say that there is a correlational relationship that is obvious between the number of programs used and the increase in the average active VINs seen in the dealership. It is therefore safe to say that with the increased amount of programs being used in a dealership it is likely that dealership will have increased traffic in the service department.



For our second calculation, we set out to determine whether or not utilizing the programs had an effect on the total number of repair orders written. As shown below, the number of programs does have a direct correlation with the total repair order count. It is safe to assume that by employing a number of such programs, one can expect to see an increase in repair order count.

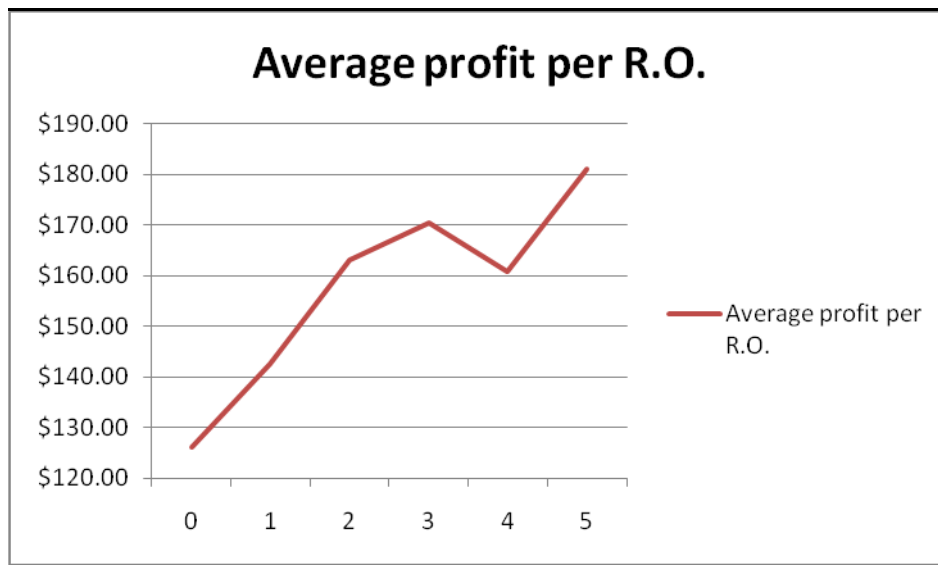


For our third calculation, customer retention was calculated by dividing the number of vehicles in service in the last six months by the number of vehicles in service in the last twenty-four months. An example of this is: if there were 800 vehicles serviced over the past twenty-four months and 400 vehicles serviced in the last six months, the six month retention would be 50%. This shows that as the dealership employs these programs, they begin servicing more vehicles over a shorter period of time. This leads us to believe that the programs being integrated do have an effect on the level of service department business.



For our last pertinent calculation, we chose to analyze the effect that using such programs has on the amount of profit per repair order. Our calculations combined the parts and labor profit per repair order and compared them to the number of programs being used. What we found to be true was when a program is integrated into service operations, one can expect to see an increase in profit per repair order, however, we cannot assume that adding another program guarantees more profit per repair order.

Profit per R.O.
(in dollars)



Number of Programs



Summary

Based on our calculations and the data we have studied, it is safe for us to conclude that using technology such as that offered by Reynolds and Reynolds does, in fact, have a positive effect on dealership service operations. This is safe to say because of the fact that we were able to achieve results similar to those that the Reynolds and Reynolds study found using different methods. Our results validate that the methods used by Reynolds and Reynolds to show the positive effects of service department programs are accurate.

Our Findings



- Overall, using supplemental service department tools such as those offered by Reynolds and Reynolds can likely provide an increase in business.
- We found that the data provided to us was accurate and provided an excellent representation of the market as a whole.
- We have determined that by combining any number of these programs, one can expect to see an increase in service business, profit, and customer retention.
- We have determined that using only one supplemental service program has little effect on 24 month customer retention in service. There is a strong correlation between the number of service programs and 24 month customer retention for dealers with two or more service programs.
- We have found that the size of the dealership does not have a direct correlation to the number of programs used. Furthermore, we found that many smaller stores using more service programs saw more business than significantly larger stores that used fewer programs.



Resources

Tews, J. (2009). Exceptional service satisfaction enhances dealer and manufacturer profitability. J.D Power and Associates, Retrieved from <http://businesscenter.jdpower.com/news/pressrelease.aspx?ID=2009030>

The Reynolds and Reynolds Company. (2011). Automotive parts and service software for era. Retrieved from http://www.reyrey.com/solutions/era/fixed_ops/index.asp