Business Data Management
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Product Portfolio Presentation

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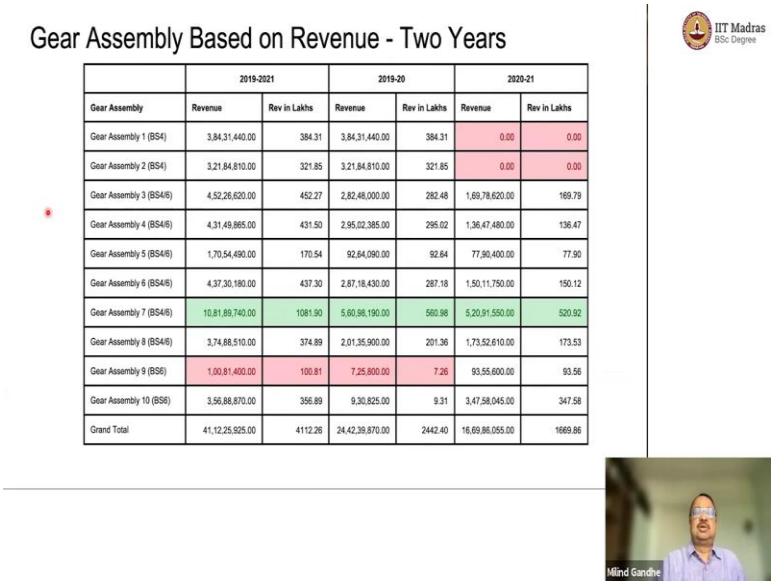

	2019-2021		2019-20		2020-21	
Gear Assembly	Revenue	Rev in Lakhs	Revenue	Rev in Lakhs	Revenue	Rev in Lakhs
Gear Assembly 1 (BS4)	3,84,31,440.00	384.31	3,84,31,440.00	384.31	0.00	0.00
Gear Assembly 2 (BS4)	3,21,84,810.00	321.85	3,21,84,810.00	321.85	0.00	0.00
Gear Assembly 3 (BS4/6)	4,52,26,620.00	452.27	2,82,48,000.00	282.48	1,69,78,620.00	169.79
Gear Assembly 4 (BS4/6)	4,31,49,865.00	431.50	2,95,02,385.00	295.02	1,36,47,480.00	136.47
Gear Assembly 5 (BS4/6)	1,70,54,490.00	170.54	92,64,090.00	92.64	77,90,400.00	77.90
Gear Assembly 6 (BS4/6)	4,37,30,180.00	437.30	2,87,18,430.00	287.18	1,50,11,750.00	150.12
Gear Assembly 7 (BS4/6)	10,81,89,740.00	1081.90	5,60,98,190.00	560.98	5,20,91,550.00	520.92
Gear Assembly 8 (BS4/6)	3,74,88,510.00	374.89	2,01,35,900.00	201.36	1,73,52,610.00	173.53
Gear Assembly 9 (BS6)	1,00,81,400.00	100.81	7,25,800.00	7.26	93,55,600.00	93.56
Gear Assembly 10 (BS6)	3,56,88,870.00	356.89	9,30,825.00	9.31	3,47,58,045.00	347.58
Grand Total	41,12,25,925.00	4112.26	24,42,39,870.00	2442.40	16,69,86,055.00	1669.86

Doctor Milind Gandhe: Siva the other thing that we did was we also looked at the revenue in the 2 financial years across gear assemblies. Is this something that is of interest to ACE gears, or this is, this is not interesting?

Siva Kumar Padmanabhan: It is. It is highly of interest, and I think it answers the question that we talked about earlier, which is which are the products that is giving me the most revenue, or most, bringing in the money for the company.

And if you see here, the green product gear assembly number 7, it is fetched in 2019 to 21, the, the, the 2 years together, which is the first 2 columns, it is fetched 10 crores. That is a very strong contribution that is coming from that one product.

Out of the total sales of 41 crore 12 lakhs that you see at the bottom about a fourth of that revenue, more than one fourth, more than 25 percent is coming from just one product. That is the significant insight that you are giving through this analysis, with that green.

And similarly, the worst contributor, or the lowest contributor is gear assembly 9 because it is only fetched 1 crore out of 41 cores. Only 2 percent 2 and a half percent is coming from that product.

Again partly because of it is a BS6 product, it did not have revenues in the first year. It only kicked in, in the second year. But you can see that it is overall not contributing that much. With

all the investment that gone into BS6, is it really been worth it this is for this product. That is one question that I could, I could see.

And then another thing that this kind of analysis is showing is the BS4 products are quickly falling off in 2020, 2021 because from April 1st, 2020, no BS6 products could be sold so the gear assembly 1 and 2 have dropped down to 0 revenue in the second year, which is also coming out nicely in this analysis.

Siva Kumar Padmanabhan: Maybe I will just pick up the final item, which is that the gear assembly 1 and 2, the revenue has fallen off completely in 2021 because they were BS4 products. This analysis also clearly shows that the, the BS4 products have led to loss of revenue.

And then you can also ask a question was the revenue of the BS4 products made up by or are compensated sufficiently by the revenue from the BS6 products, and that is possibly looking at the 2019-20 revenues in, and then for the, for the 1 and 2 and comparing it with the 2020-21 for the 9 and 10, and I guess the answer is not fully, but to some extent it was compensated.

Doctor Milind Gandhe: And I think that is largely because gear assembly 9 does not seem to have contributed as much as we expected it would.

Siva Kumar Padmanabhan: Yes, correct. In this case they had to do a re-design of their, some of their BS6 vehicles because of some issues discovered subsequently. There was a delay in the launch of that model of vehicle and that contributed the gear assembly being very low in sales.

Doctor Milind Gandhe: Right.

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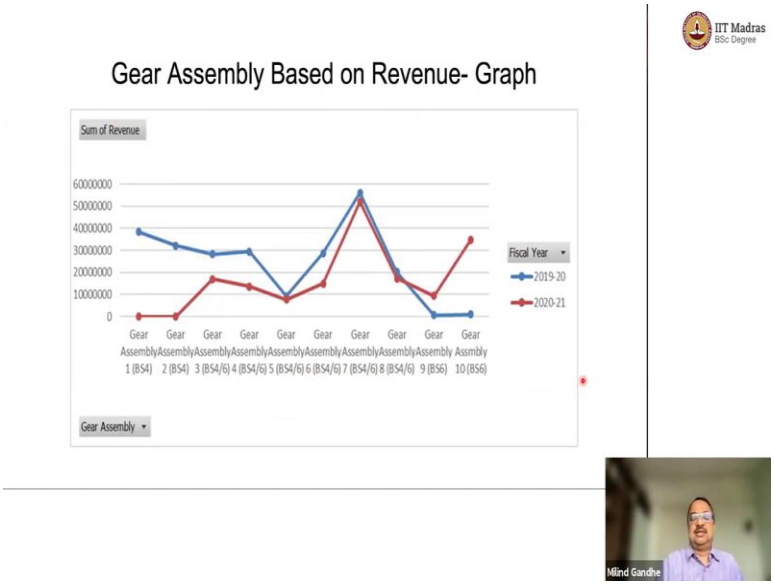

Doctor Milind Gandhe: Yes, and again there is a graphical view. I think it summarizes what you just explained to us, Siva.

Siva Kumar Padmanabhan: Absolutely. I think it is nice to know the also the impact of COVID, and the fact that if you look at '20, '19-'20 you know some of the, the revenues are actually quickly dropping off on 9 and, BS, BS6 impact for 9 and 10 falls to 0. But importantly it also

shows that for gear assembly 9 and 10, although the, if you look at '19-'20, they, they are actually being launched in '20- '21, but already in '19-'20 they started to see some uptick in, in sales.

Professor G. Venkatesh: And how do you explain that? Is it because the lead time?

Siva Kumar Padmanabhan: Yes, the lead that is required to prime the, the whole manufacturing system. The components are to be produced well ahead of the finished products.

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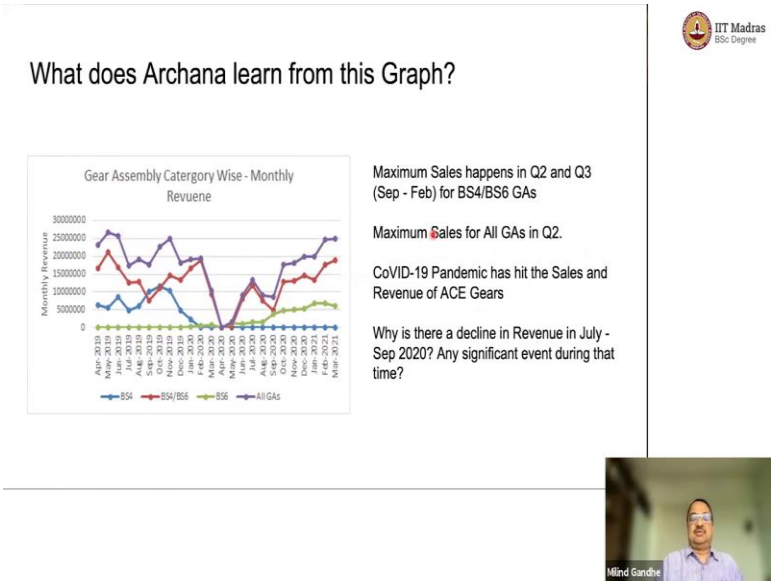

Doctor Milind Gandhe: Did we want to kick this off? This one.

Professor G. Venkatesh: Yeah

Doctor Milind Gandhe: This is basically what we have done. Just so that you know GV, what we have done is we have clustered these gear assemblies into three categories BS4 only, BS6 only, and BS4 and BS6, and plotted against month.

Professor G. Venkatesh: Siva, I mean this whole question about BS4, BS6 and, so, what we have done basically is we have tried to cluster the revenues. Because that we saw here, was the revenue, composite revenue picture. Now we are trying to see whether we can see a picture for revenues gear-wise. Gear, not individual gear-wise but category-wise.

You put all the BS4 revenues together, BS6 revenues together and the BS4, BS6, those gears which are, gear assemblies that can be used for both 4 and 6 together. So, BS4, BS4, 6 and BS6. And of course, the comp, total revenues, all of them put together, those revenues also we have put in one chart.

This allows us to see what is happening to the BS4 revenues, what is happening to the BS6 revenues, what is happening to the one that BS4 and 6 together, revenues.

Siva Kumar Padmanabhan: Yes. I think this is also quite insightful because it shows the patterns in the, in the transition that happens. So, the blue line which is a BS4 line completely dries up by February, well ahead of the transition, because we cannot, we cannot produce any more after February because it would not be, there would not be enough time to put that into a finished vehicle and sell it because the court the supreme court had said no sales after April 1st, 2020.

And similarly, BS6, you can see a pickup starting in February. It is slowly rising February '20, and then through the year after the recovery from COVID, it is steadily increasing in the revenue.

And you can also see the overall pattern that it took us almost 24 months to get to that 25-lakh level or 250, 2.5 crore monthly revenue level, which we reached in, early part of the 2019 financial year. Then there is only one month where we reached again, November 2019 and then it took us almost one and a half years to touch those.

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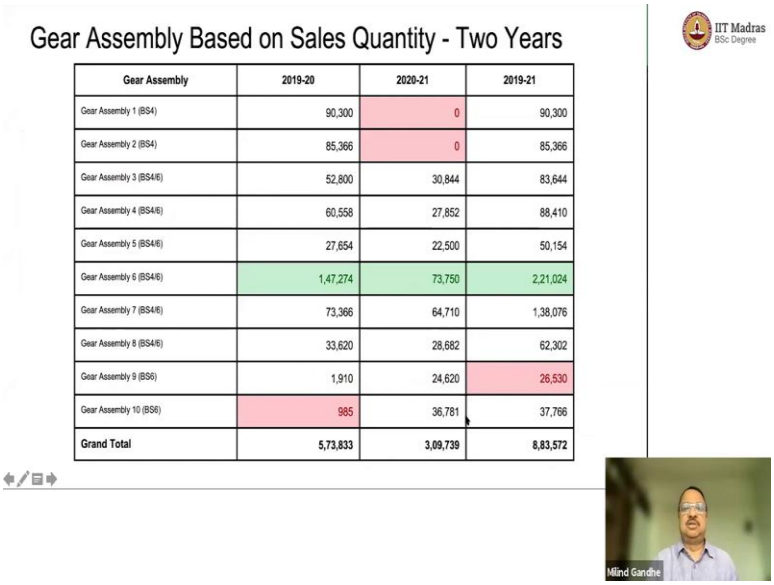

Gear Assembly	2019-20	2020-21	2019-21
Gear Assembly 1 (BS4)	90,300	0	90,300
Gear Assembly 2 (BS4)	85,366	0	85,366
Gear Assembly 3 (BS4/6)	52,800	30,844	83,644
Gear Assembly 4 (BS4/6)	60,558	27,852	88,410
Gear Assembly 5 (BS4/6)	27,654	22,500	50,154
Gear Assembly 6 (BS4/6)	1,47,274	73,750	2,21,024
Gear Assembly 7 (BS4/6)	73,366	64,710	1,38,076
Gear Assembly 8 (BS4/6)	33,620	28,682	62,302
Gear Assembly 9 (BS6)	1,910	24,620	26,530
Gear Assembly 10 (BS6)	985	36,781	37,766
Grand Total	**5,73,833**	**3,09,739**	**8,83,572**

Doctor Milind Gandhe: Shall we start. I will start projecting.

Professor G. Venkatesh: Yeah.

Doctor Milind Gandhe: GV you know.

Professor G. Venkatesh: Yeah, I mean, we will not see anything different but, yeah, it will open. We just see a graph.

Doctor Milind Gandhe: Okay.

Professor G. Venkatesh: We have repeated the same thing, Siva, what we did with revenue, we did with quantity, just to see if the returns that comes out when you look at quantity because it could well be that something, something, volume, volume-wise something is doing well. And even though it may not be contributing in terms of revenue as much as, but in terms of volume it might be keeping the factory busy.

Siva Kumar Padmanabhan: Yes.

Professor G. Venkatesh: And now in the quantity picture it seems that gear assembly 6 is the one that is doing the best.

Siva Kumar Padmanabhan: Yes, that is quite interesting. When we looked at the overall revenue, we saw that 7 was the one that was giving the, the most sales revenue. But when you look at quantities it is 6 that is the highest selling gear. So, this shows the difference in the contributions on the unit cost of these gears.

GA7 sold only 1.38 lakhs in the two years whereas GA6 sold 2.21 lakhs units. But if I go back to the revenues picture GA7 was giving us almost two to three times the revenue of GA6. This is because the GA6 is possibly a very low cost, which is used in volume models such as hatchback or compact hatchback, which sells in large volumes.

If you look at the top ten sales of cars in India, usually the top spots are occupied by cars like the Swift or the Wagon-R or the, the Maruti 800, those types of cars which are very large numbers, but their unit selling price is quiet, much smaller than other cars.

The gears that go into those types of models are typically high volume low, low unit price. So, gear 6 could be one of those. Whereas if you look at gear 7, it could be the one that goes more in SUVs, or mid-price kind of cars, or mid high-end cars where there is sufficient volume today the car the mid-size SUV segment, which is occupied by the likes of the Hyundai Creta, the Kia Seltos, and the newly launched like Skoda Kushaq, and all those segments.

The volume is very high and so is the value. The volume is maybe not as high as a hatchback, but it is quite high, and the value is quite high because these components need to take higher torque, and higher power and so on. So, so that could be where the 7 belongs, where this move, both reasonably good volume but also good unit cost, unit price.

Doctor Milind Gandhe: What struck me as interesting, Siva, and wanted your insight into this is that gear assembly 6 seems to have dropped quite a bit from ’19-’20 to ’20-’21, but gear assembly 7 did not drop similarly. So, we went from 147k to 73k, 74k for gear assembly 6.

Professor G. Venkatesh: We saw that revenue, there were some interesting observations on revenue, some interesting observations on quantity. Can we see revenue and quantity together, is the next question we asked? And the best way to depict, because there are 2 dimensions, we thought that the best way to depict would be a scatter plot. Milind, if you can bring up the scatter plot.

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Doctor Milind Gandhe: Siva, this is what we did. We plotted the two-year revenue and the two-year sales quantity on x-axis and y-axis, and we were trying to see if there were some trends.

We tried to fit in a trend line through linear regression. I am not sure if that trend line gives us any information. What is your, how, how do you look at this when you look at it from the company's point of view?

Siva Kumar Padmanabhan: Yes, this is very interesting chart. I, I really like this chart because it gives us a lot of insights on the product portfolio. So, this is a very important strategic function of companies called portfolio management where they must look at their entire set of products and figure out which ones we want to focus more on, which product lines we want to grow, and which product lines we want to get out of.

If you look at this chart, there is number of insights that come in here. First of all, the first thing that top management wants to look at in, in these things is what are the most important products for us. And usually most important would translate to a high revenue and high profitability. We do not have the profitability dimension here, but you can see that gear assembly 7 is a very important product because it is bringing in the highest revenues of all the 10 products that we have. That is significant. And the fact that the quantity is not very high indicates that it is also a very valuable product. Per unit price is quite high for that product. That is one insight.

The other part that we want to look at is what is our like, if you are, like the look at ABC, of the raw material, you can also think about an ABC of the finished product where you say other products that give, that we want to make a lot of quantities but does not really give a lot of revenues.

You can see that gear assembly 6 is kind of like that, where the sales quantity, it is an important product because it is giving decent revenue it is, probably the second highest revenue earning, if you look at the horizontal, or third is revenue earning product. It is not unimportant, but it is consuming a lot of effort because we must make a lot of quantities to reach that revenue. It is an important product maybe not as important as the gear assembly 7.

And then you see what we call the products that are fetching, they are high in, high in quantity but low in, in terms of revenue. If you see, some of those products like gear assembly 2 and so on, fit in that category.

And the final one is where we have insignificant quantity, insignificant revenue. Gear assembly number 9 seems to be like that, where the quantity is less, so is the revenue. And we know that the specific reason for this is because a particular automobile model took time to take off. It is too early to conclude that we should kill that product but if this was happening year-over-year, we might kill that product because why spend efforts on a product that does not sell much and does not give us a lot of revenue as well.

This chart as a very insightful chart that helps us to make those portfolio decisions on products.

And if you look at the kind of line that shows I would be very interested in the line, in those that are in the top quadrant where the revenue is high, the quantity is high or at least the two right quadrants, where the revenue is high that would be of most interest to, to company management typically. It is a good chart.

Another chart that is used very commonly in portfolio management is by looking at the trend of products over time. What are the products that are new products, that are that have just recently been introduced but they are growing very fast? What are those products that are stable products, that we have been handing our portfolio for long, which are kind of our cash cows? The new products that are growing very fast and profitable are the stars.

And then you have products which are old, which are declining in revenue, and which are also not profitable, which are kind of the dog products. That is another chart that is very commonly used in portfolio management kind of decisions.

Professor G. Venkatesh: The cash cow, so you have made, made into animals, except for stars, you have a cash cow, you have a dog, and you have a star. And is there anything else? Do you have a pig? You do not have anything else.

Siva Kumar Padmanabhan: I forget, the last quadrant, there is there is high growth, high margin products then there are high margin stable products, then there is low margin low growth products and there is one more, which I am forgetting. But that is a very common analysis that we use for portfolio.

Doctor Milind Gandhe: Okay.