

# **Business Analytics – Assignment 3**

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## **Objectives:**

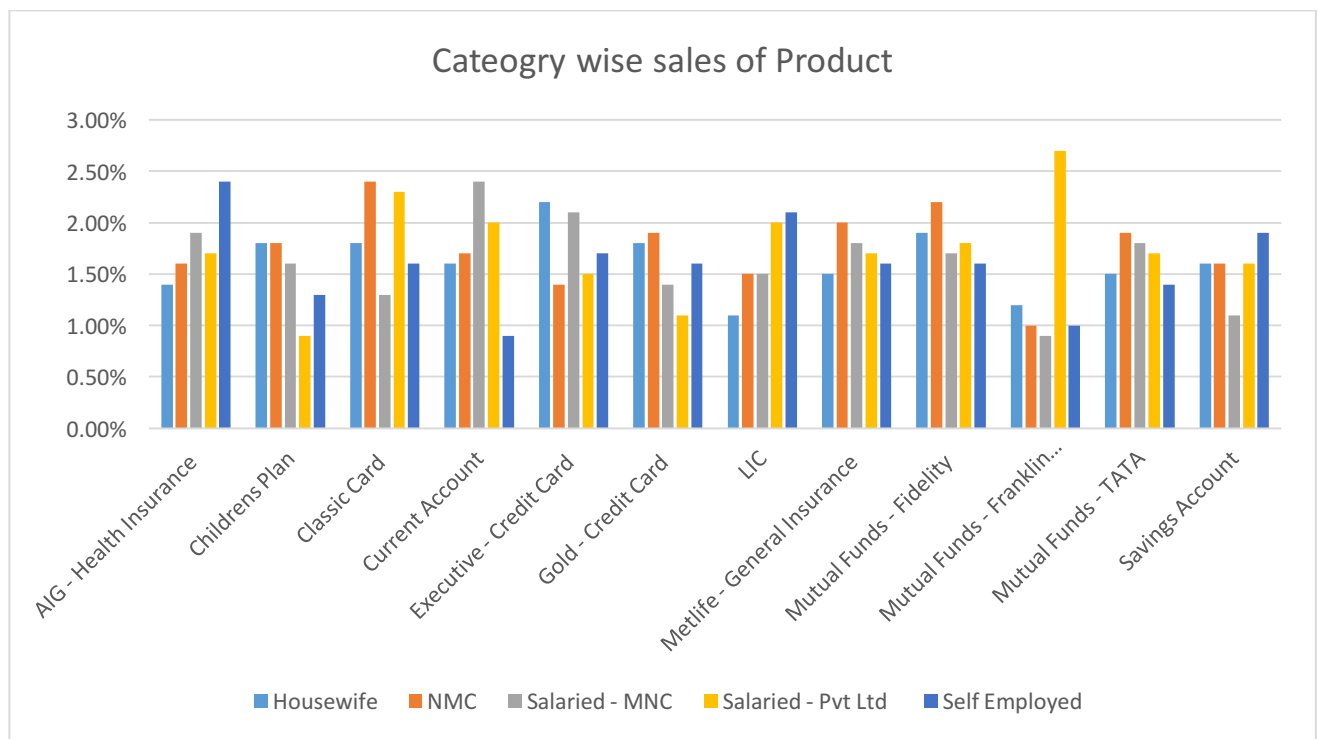
To analyse the given data and answer the following questions:

- At a National level which is the product which gets sold maximum at brand and category level?
- Is there any demographic affinity to selecting a particular product?
- Who in your view is the best agency and why?
- Is there any relationship between number of sales people and business generated?
- Does discount help increase sales of any product?

## Maximum sale at category level:

**Table 1.**

% of Product	Column Labels					
Row Labels	Housewife	NMC	Salaried - MNC	Salaried - Pvt Ltd	Self Employed	Grand Total
AIIG - Health Insurance	1.40%	1.60%	1.90%	1.70%	2.40%	9.00%
Childrens Plan	1.80%	1.80%	1.60%	0.90%	1.30%	7.40%
Classic Card	1.80%	2.40%	1.30%	2.30%	1.60%	9.40%
Current Account	1.60%	1.70%	2.40%	2.00%	0.90%	8.60%
Executive - Credit Card	2.20%	1.40%	2.10%	1.50%	1.70%	8.90%
Gold - Credit Card	1.80%	1.90%	1.40%	1.10%	1.60%	7.80%
LIC	1.10%	1.50%	1.50%	2.00%	2.10%	8.20%
Metlife- General Insurance	1.50%	2.00%	1.80%	1.70%	1.60%	8.60%
Mutual Funds - Fidelity	1.90%	2.20%	1.70%	1.80%	1.60%	9.20%
Mutual Funds - Franklin Temploton	1.20%	1.00%	0.90%	2.70%	1.00%	6.80%
Mutual Funds - TATA	1.50%	1.90%	1.80%	1.70%	1.40%	8.30%
Savings Account	1.60%	1.60%	1.10%	1.60%	1.90%	7.80%
<b>Grand Total</b>	<b>19.40%</b>	<b>21.00%</b>	<b>19.50%</b>	<b>21.00%</b>	<b>19.10%</b>	<b>100.00%</b>



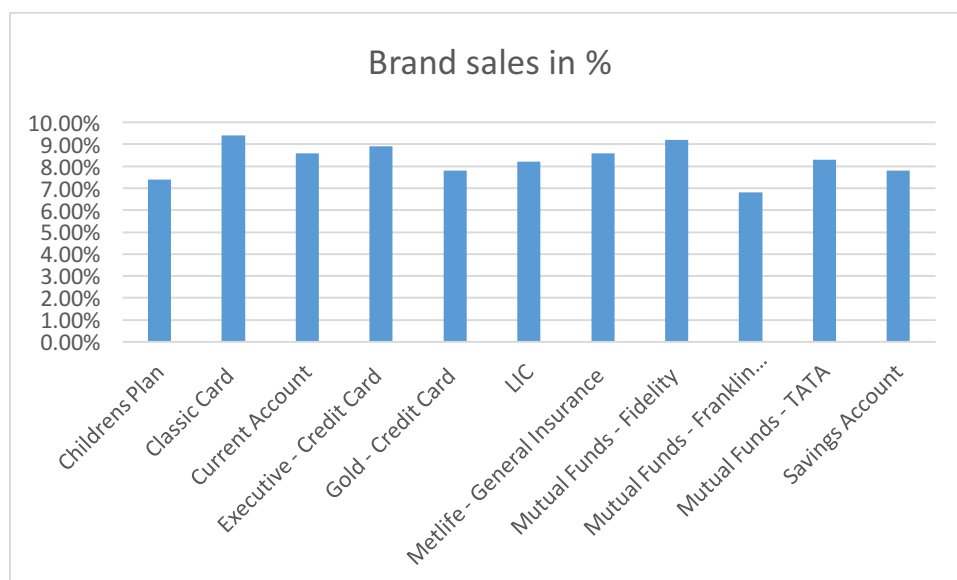
**Graph 1. Category vs Sales**

Table 1 and Graph 1 describe which product is the maximum sold product at the category level. The data shows that Mutual Funds- Franklin Templeton sells the most, 2.70%, at Salaried Pvt Ltd category. It is followed by Current Accounts in Salaried MNC category, Classic Card in NMC and AIG Health Insurance in Self Employed category with 2.40% of the total sales.

### Maximum sale at brand level:

**Table 2.**

Row Labels	% of Product
AIG - Health Insurance	9.00%
Childrens Plan	7.40%
Classic Card	9.40%
Current Account	8.60%
Executive - Credit Card	8.90%
Gold - Credit Card	7.80%
LIC	8.20%
Metlife - General Insurance	8.60%
Mutual Funds - Fidelity	9.20%
Mutual Funds - Franklin Templeton	6.80%
Mutual Funds - TATA	8.30%
Savings Account	7.80%
<b>Grand Total</b>	<b>100.00%</b>



**Graph 1. Brand vs Sales**

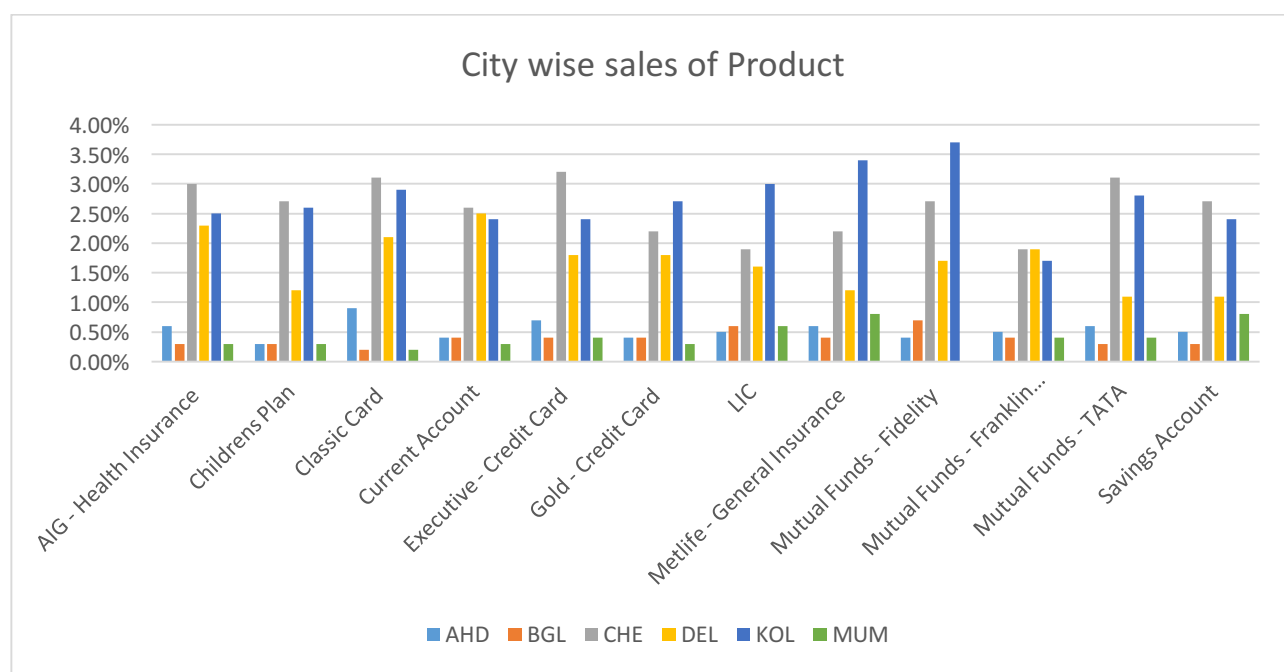
At the brand level, Class card sells the most with 9.40% of the total sales. Its followed by MetLife Fidelity and AIG- Health Insurance with 9.20% and 9.00% of the total sales.

### Demographic Affinity of the products:

CITY:

**Table 3.**

% of Product	Column Labels						
Row Labels	AHD	BGL	CHE	DEL	KOL	MUM	Grand Total
AIG - Health Insurance	0.60%	0.30%	3.00%	2.30%	2.50%	0.30%	9.00%
Childrens Plan	0.30%	0.30%	2.70%	1.20%	2.60%	0.30%	7.40%
Classic Card	0.90%	0.20%	3.10%	2.10%	2.90%	0.20%	9.40%
Current Account	0.40%	0.40%	2.60%	2.50%	2.40%	0.30%	8.60%
Executive - Credit Card	0.70%	0.40%	3.20%	1.80%	2.40%	0.40%	8.90%
Gold - Credit Card	0.40%	0.40%	2.20%	1.80%	2.70%	0.30%	7.80%
LIC	0.50%	0.60%	1.90%	1.60%	3.00%	0.60%	8.20%
Metlife - General Insurance	0.60%	0.40%	2.20%	1.20%	3.40%	0.80%	8.60%
Mutual Funds - Fidelity	0.40%	0.70%	2.70%	1.70%	3.70%	0.00%	9.20%
Mutual Funds - Franklin Templeton	0.50%	0.40%	1.90%	1.90%	1.70%	0.40%	6.80%
Mutual Funds - TATA	0.60%	0.30%	3.10%	1.10%	2.80%	0.40%	8.30%
Savings Account	0.50%	0.30%	2.70%	1.10%	2.40%	0.80%	7.80%
<b>Grand Total</b>	<b>6.40%</b>	<b>4.70%</b>	<b>31.30%</b>	<b>20.30%</b>	<b>32.50%</b>	<b>4.80%</b>	<b>100.00%</b>



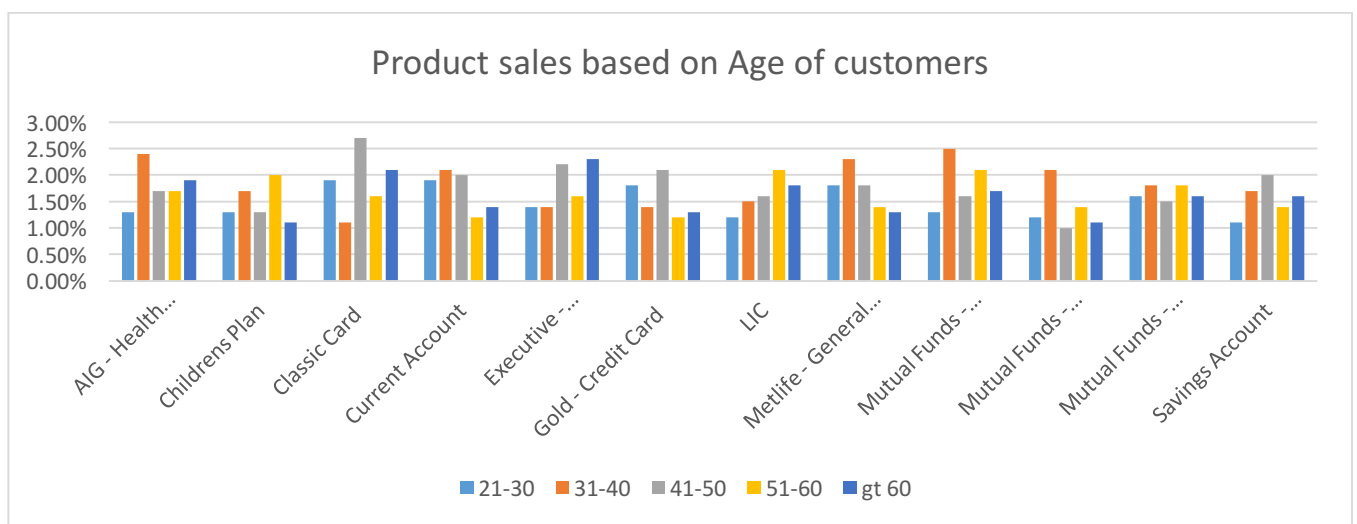
**Graph 3.**

- Cities don't have a demographic affinity towards a certain product. The sale of a product differs from city to city. For example, the Gold credit card sold in Ahmedabad is equal to the sales of gold card in Bangalore, but the sales in Chennai, Delhi and Kolkata are 2.2%, 1.8% and 2.7% respectively and Mumbai shows the sales record of 0.3%.
- However, the percentage of sales is high for all products in Kolkata, Delhi and Chennai as compared to other cities.
- Thus, we conclude that the city has an impact on all the products when it comes to sales but there is no particular product which sells the highest in all cities.

## AGE:

**Table 4.**

% of Product	Column Labels					
Row Labels	21-30	31-40	41-50	51-60	gt 60	Grand Total
AIG - Health Insurance	1.30%	2.40%	1.70%	1.70%	1.90%	9.00%
Childrens Plan	1.30%	1.70%	1.30%	2.00%	1.10%	7.40%
Classic Card	1.90%	1.10%	2.70%	1.60%	2.10%	9.40%
Current Account	1.90%	2.10%	2.00%	1.20%	1.40%	8.60%
Executive - Credit Card	1.40%	1.40%	2.20%	1.60%	2.30%	8.90%
Gold - Credit Card	1.80%	1.40%	2.10%	1.20%	1.30%	7.80%
LIC	1.20%	1.50%	1.60%	2.10%	1.80%	8.20%
Metlife - General Insurance	1.80%	2.30%	1.80%	1.40%	1.30%	8.60%
Mutual Funds - Fidelity	1.30%	2.50%	1.60%	2.10%	1.70%	9.20%
Mutual Funds - Franklin Temploton	1.20%	2.10%	1.00%	1.40%	1.10%	6.80%
Mutual Funds - TATA	1.60%	1.80%	1.50%	1.80%	1.60%	8.30%
Savings Account	1.10%	1.70%	2.00%	1.40%	1.60%	7.80%
<b>Grand Total</b>	<b>17.80%</b>	<b>22.00%</b>	<b>21.50%</b>	<b>19.50%</b>	<b>19.20%</b>	<b>100.00%</b>



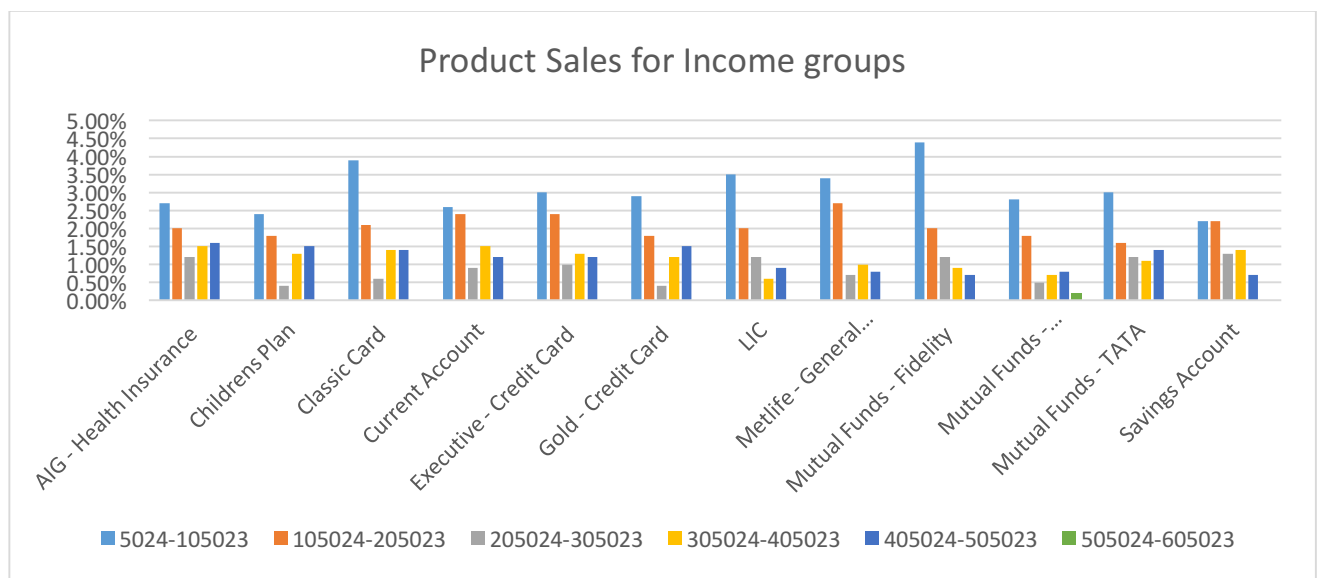
**Graph 4.**

- The table and graph show that the sales is maximum for the 31-40 age group, 22.0%, which is followed by 41-50 and 51-60 with 21.50% and 19.50% of the total sales.
- Age group, as an individual factor, does not affect the sales of a particular product.
- Thus, we conclude that no product sells the best in all age groups. The sales differs from product to product in each age category.

## INCOME:

**Table 5.**

% of Product	Column Labels						
Row Labels	5024-105023	105024-205023	205024-305023	305024-405023	405024-505023	505024-605023	Grand Total
AIG - Health Insurance	2.70%	2.00%	1.20%	1.50%	1.60%	0.00%	9.00%
Childrens Plan	2.40%	1.80%	0.40%	1.30%	1.50%	0.00%	7.40%
Classic Card	3.90%	2.10%	0.60%	1.40%	1.40%	0.00%	9.40%
Current Account	2.60%	2.40%	0.90%	1.50%	1.20%	0.00%	8.60%
Executive - Credit Card	3.00%	2.40%	1.00%	1.30%	1.20%	0.00%	8.90%
Gold - Credit Card	2.90%	1.80%	0.40%	1.20%	1.50%	0.00%	7.80%
LIC	3.50%	2.00%	1.20%	0.60%	0.90%	0.00%	8.20%
Metlife - General Insurance	3.40%	2.70%	0.70%	1.00%	0.80%	0.00%	8.60%
Mutual Funds - Fidelity	4.40%	2.00%	1.20%	0.90%	0.70%	0.00%	9.20%
Mutual Funds - Franklin Temploton	2.80%	1.80%	0.50%	0.70%	0.80%	0.20%	6.80%
Mutual Funds - TATA	3.00%	1.60%	1.20%	1.10%	1.40%	0.00%	8.30%
Savings Account	2.20%	2.20%	1.30%	1.40%	0.70%	0.00%	7.80%
<b>Grand Total</b>	<b>36.80%</b>	<b>24.80%</b>	<b>10.60%</b>	<b>13.90%</b>	<b>13.70%</b>	<b>0.20%</b>	<b>100.00%</b>



**Graph 5.**

- The graph shows that each product has the maximum sales in the 5024-105023 income group followed by the second highest sales in the 105024-205023 income group. Each product has the lowest sales in the 505024-605023 income group for all the 12 products, whereas, 5024-105023 has the maximum sales for each product.
- Thus, we conclude that income group has an effect on the sale of a particular product.

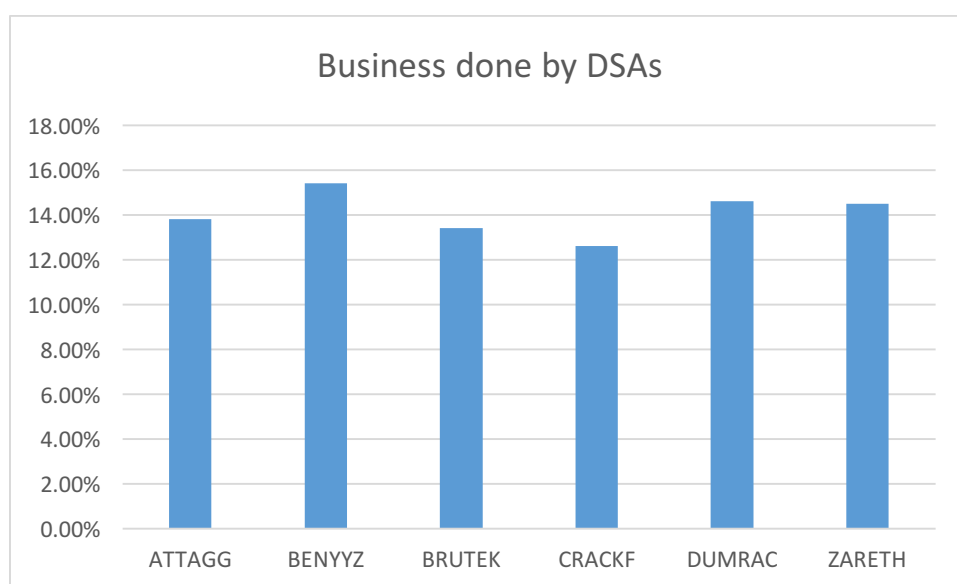
### Best Agency and Reason:

The two competitors for the best agency are Classic Cards and Mutual Funds – Fidelity. Classic card is the most sold brand with a share of 9.4% of the total market sales, beating Mutual Funds Fidelity by 0.2%. Although, Mutual funds – Fidelity has more sales demographically, Classic cards performance is better throughout and therefore Classic card is the best agency.

### Relation between no of sales people and business generated:

**Table 6.**

Row Labels	% of Product
ARTFIN	15.70%
ATTAGG	13.80%
BENYYZ	15.40%
BRUTEK	13.40%
CRACKF	12.60%
DUMRAC	14.60%
ZARETH	14.50%
<b>Grand Total</b>	<b>100.00%</b>



**Graph 6.**

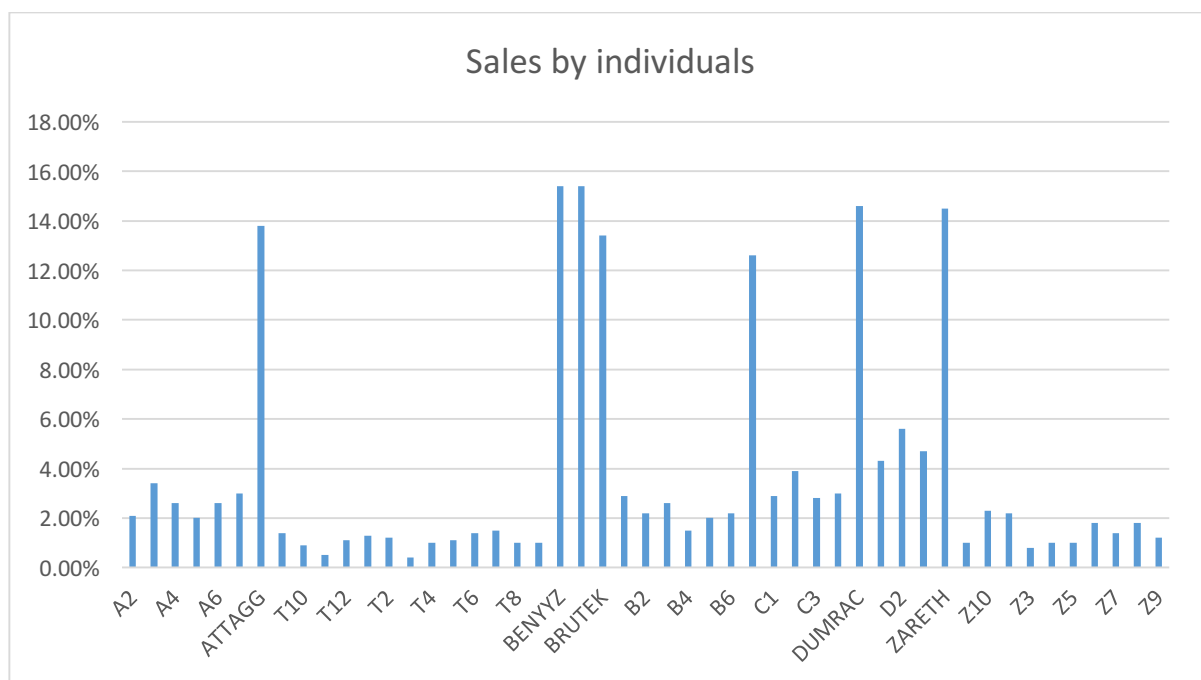
- The above graph shows that out of the 7 DSA's, ARTFIN generates the maximum business 15.70 %.
- The DSAs are further divided and the business generated by individual sales person are -

**Table 7**

Row Labels	% of Product
<b>ARTFIN</b>	15.70%
A2	2.10%
A3	3.40%
A4	2.60%
A5	2.00%
A6	2.60%
A7	3.00%
<b>ATTAGG</b>	13.80%
T1	1.40%
T10	0.90%
T11	0.50%
T12	1.10%
T13	1.30%
T2	1.20%
T3	0.40%
T4	1.00%
T5	1.10%
T6	1.40%
T7	1.50%
T8	1.00%
T9	1.00%
<b>BENYYZ</b>	15.40%
E1	15.40%
<b>BRUTEK</b>	13.40%
B1	2.90%
B2	2.20%
B3	2.60%
B4	1.50%
B5	2.00%
B6	2.20%
<b>CRACKF</b>	12.60%
C1	2.90%
C2	3.90%



C3	2.80%
C4	3.00%
<b>DUMRAC</b>	14.60%
D1	4.30%
D2	5.60%
D3	4.70%
<b>ZARETH</b>	14.50%
Z1	1.00%
Z10	2.30%
Z2	2.20%
Z3	0.80%
Z4	1.00%
Z5	1.00%
Z6	1.80%
Z7	1.40%
Z8	1.80%
Z9	1.20%
<b>Grand Total</b>	<b>100.00%</b>



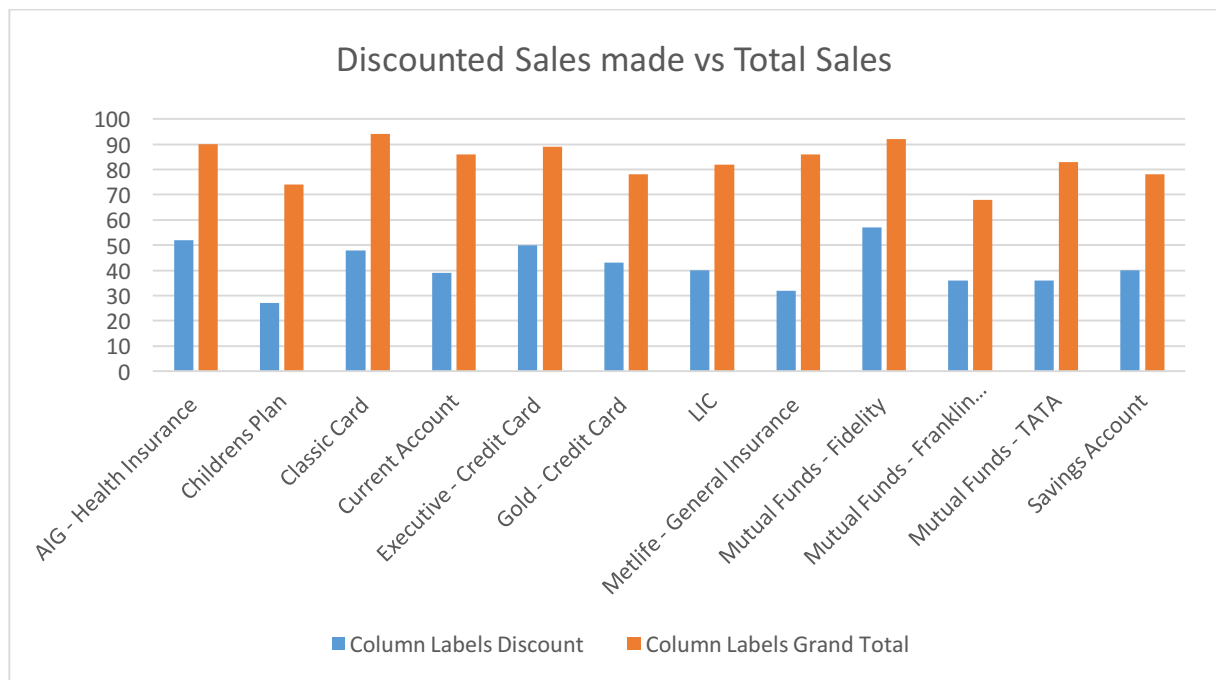
**Graph 7.**

- The graph shows that BENYYZ generates the maximum business, 15.4% with only one employee E1.
- DUMRAC has the second most sales with a total of 14.6% of the market share
- One person is capable of generating 15.40% while on the other hand 10 people generate 14.50% of the total business.

- From the table and graph, we conclude that there is no relationship between the number of sales person and the business generated.

### Discount:

Count of Pricing	Column Labels		
Row Labels	Discount	No Discount	Grand Total
AIG - Health Insurance	52	38	90
Childrens Plan	27	47	74
Classic Card	48	46	94
Current Account	39	47	86
Executive - Credit Card	50	39	89
Gold - Credit Card	43	35	78
LIC	40	42	82
Metlife - General Insurance	32	54	86
Mutual Funds - Fidelity	57	35	92
Mutual Funds - Franklin Temploton	36	32	68
Mutual Funds - TATA	36	47	83
Savings Account	40	38	78
<b>Grand Total</b>	<b>500</b>	<b>500</b>	<b>1000</b>



From the graph we infer the following things –

- For the total amount of products sold, a discount was given on more than 50% of the products with the exception of a few, such as Children's Plan.
- Thus, we conclude that giving a discount helps the sales of products.