


Analyse the Data Marts

Now, we will analyse the Data Marts with Excel Power Pivot.

Analyse the Monthly Sales

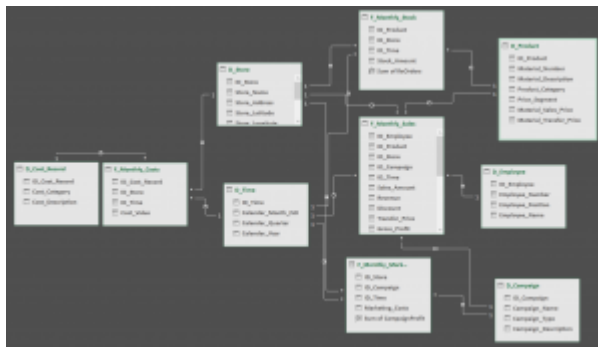
In Excel, under **PowerPivot** → **Manage** → **From Database**, connect to **SQL Server**

- Server name: NO RDB
- Use SQL Server identification
- User name: NO SID
- Password: NO PAS
- Save your password
- Database: select the data mart from the drop-down menu: pick NO SID_DATAMART
-  in the **ADVANCED** tab, check, if the parameter **Persistent Security Info** is set to **false**.
- Click **Next**

In the **Choose How to Import the Data** windows, check if **select from a list of tables and views to choose the data to import** ist selected. Click Next.

- select F_Monthly_Sales, F_Monthly_Costs, F_Monthly_Marketing and F_Monthly_Stock and **Select Related Tables**.
- Click Finish.

Your data model should look quite complex now.



Create a new query and answer the following question:

How was the Company Profit?

Calculate company profit = Revenue - Discount - TransferPrice - Costs

Row Labels	Sum of Revenue	Sum of Transfer_Price	Sum of Discount	Sum of Gross_Profit	Sum of Cost_value	CompanyProfit
Q1	493.841,97 €	266.985,20 €	185,00 €	136.741,78 €	127.821,74 €	9.718,96 €
2017 01	25.288,83 €	9.524,70 €	0,00 €	5.756,13 €	39.737,62 €	-33.981,49 €
2017 02	149.353,35 €	96.782,89 €	185,00 €	58.466,05 €	42.314,49 €	8.451,85 €
2017 03	139.209,21 €	159.687,69 €	0,00 €	80.518,52 €	48.298,72 €	39.238,80 €
Q2	3.086.218,82 €	711.718,81 €	779,70 €	238.728,45 €	182.810,82 €	211.718,79 €
2017 04	569.275,87 €	380.834,34 €	779,70 €	187.661,63 €	53.587,72 €	134.073,90 €
2017 05	284.368,98 €	389.200,54 €	0,00 €	95.368,44 €	45.814,08 €	50.154,35 €
2017 06	232.575,47 €	341.678,52 €	0,00 €	78.896,95 €	43.408,89 €	27.488,05 €
Q3	985.097,88 €	878.318,90 €	1.079,40 €	186.714,68 €	184.796,74 €	91.977,89 €
2017 07	148.308,96 €	86.132,81 €	0,00 €	58.251,05 €	42.210,98 €	8.140,05 €
2017 08	242.208,36 €	158.489,66 €	1.079,40 €	82.628,38 €	47.780,71 €	35.858,59 €
2017 09	171.544,81 €	118.633,73 €	0,00 €	52.924,28 €	44.845,13 €	7.979,15 €
Q4	291.743,66 €	395.988,92 €	185,00 €	65.847,75 €	122.941,38 €	-57.293,63 €
2017 10	85.275,82 €	87.109,10 €	185,00 €	30.961,22 €	42.362,62 €	-11.208,80 €
2017 11	45.889,78 €	81.248,94 €	0,00 €	14.860,19 €	40.289,64 €	-25.689,88 €
2017 12	62.572,81 €	42.536,27 €	0,00 €	20.036,34 €	40.489,73 €	-20.453,39 €
Grand Total	2.234.968,48 €	1.489.969,90 €	2.069,99 €	742.830,49 €	526.710,48 €	216.138,81 €



PowerPivot: CompanyProfit

How was the Market Share?

Create new measures

- Margin: $Gross_Profit / Revenue$
- Profitability: $Company\ Profit / Revenue$
- Market Bikes: 12000
- Market Share: $Sales\ Amount / Market\ Bikes$

Row Labels	Sum of Revenue	Sum of Gross_Profit	Margin	Sum of Cost_Bikes	CompanyProfit	Profitability	Sum of Sales_Amount	MarketShare%
2017.01	50.993,73 €	17.580,19 €	34,51%	42.413,54 €	-24.893,65 €	-48,79%	47	0,39%
2017.02	152.838,34 €	47.844,61 €	31,35%	104.993,73 €	1.342,53 €	0,75%	185	1,53%
2017.03	342.930,74 €	80.941,17 €	23,60%	261.989,57 €	52.154,25 €	15,26%	189	1,56%
2017.04	358.930,37 €	118.718,49 €	33,07%	240.211,88 €	53.287,82 €	15,52%	269	2,24%
2017.05	736.732,57 €	217.748,75 €	29,56%	518.983,82 €	73.381,46 €	10,00%	424	3,53%
2017.06	478.383,28 €	138.283,43 €	28,90%	340.100,85 €	78.708,49 €	16,53%	310	2,58%
2017.07	309.528,93 €	100.872,68 €	32,60%	208.656,25 €	54.588,41 €	17,80%	231	1,90%
2017.08	194.149,87 €	63.739,47 €	32,83%	130.410,40 €	38.980,29 €	20,68%	146	1,21%
2017.09	181.072,26 €	55.495,88 €	30,65%	125.576,38 €	48.781,80 €	26,89%	114	0,95%
2017.10	190.964,45 €	39.571,49 €	20,77%	151.392,96 €	44.880,95 €	23,59%	82	0,68%
2017.11	46.535,85 €	16.712,76 €	35,91%	29.823,09 €	42.405,63 €	142,86%	40	0,33%
2017.12	86.237,65 €	27.769,35 €	32,21%	58.468,30 €	43.639,30 €	101,71%	61	0,51%
Grand Total	2.942.775,23 €	938.528,75 €	31,92%	2.004.246,48 €	239.854,58 €	11,97%	2050	17,08%



PowerPivot: MarketShare

How was the Product Mix?

Row Labels	Sum of Stock_Amount	Sum of Sales_Amount
City Bikes	42,89%	13,58%
E-Bikes	12,55%	19,99%
Kid Bikes	9,41%	8,55%
Mountain Bikes	10,04%	21,89%
Race Bikes	6,28%	19,47%
Trekking Bikes	18,83%	16,52%
Grand Total	100,00%	100,00%



PowerPivot: Product Mix

Check, if your product mix in the store fits to the product mix sales amount.

How was your Marketing Mix?

You started marketing campaigns in different months. Check, if you selected the months, where the highest sales activities are.

Row Labels	Sum of SalesAmountNoCampaign	Sum of SalesAmountCampaign	Sum of Sales_Amount
2017.01	38	9	47
2017.02	99	9	108
2017.03	175	14	189
2017.04	254	15	269
2017.05	310	114	424
2017.06	272	63	335
2017.07	216	19	235
2017.08	136	10	146
2017.09	99	15	114
2017.10	78	4	82
2017.11	38	2	40
2017.12	58	3	61
Grand Total	1773	277	2050



PowerPivot: Marketing Mix

- You should plan your marketing campaign in months with a high sales amount

Which Marketing Campaign was successful?

Check, if your marketing campaigns were successful. A marketing campaign is successful, when the gross profit is higher than the marketing costs.

Row Labels	2017:01	2017:02	2017:03	2017:04	2017:05	2017:06	2017:07	2017:08	2017:09	2017:10	2017:11	2017:12	Grand Total
Revenue € 1.5 to													
Sum of Marketing_Costs													490,300 €
Sum of Gross_Profit													19,834,700 €
Sum of CampaignProfit													18,624,700 €
Revenue on Display													
Sum of Marketing_Costs													20,000,000 €
Sum of Gross_Profit													20,724,000 €
Sum of CampaignProfit													5,724,000 €
Single Ads													
Sum of Marketing_Costs	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	12,000,000 €
Sum of Gross_Profit	1,500,700 €	1,522,200 €	1,506,000 €	1,450,000 €	1,534,100 €	1,511,300 €	1,480,000 €	1,511,200 €	1,518,000 €	1,520,000 €	1,500,000 €	1,500,000 €	18,022,500 €
Sum of CampaignProfit	500,700 €	522,200 €	506,000 €	450,000 €	534,100 €	511,300 €	480,000 €	511,200 €	518,000 €	520,000 €	500,000 €	500,000 €	6,022,500 €
Native Ads													
Sum of Marketing_Costs													11,000,000 €
Sum of Gross_Profit													10,000,000 €
Sum of CampaignProfit													41,000,000 €
Advertising/Wordpress													
Sum of Marketing_Costs													1,000,000 €
Sum of Gross_Profit													1,000,000 €
Sum of CampaignProfit													1,000,000 €
Total Sum of Marketing_Costs	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	1,000,000 €	12,000,000 €
Total Sum of Gross_Profit	1,500,700 €	1,522,200 €	1,506,000 €	1,450,000 €	1,534,100 €	1,511,300 €	1,480,000 €	1,511,200 €	1,518,000 €	1,520,000 €	1,500,000 €	1,500,000 €	18,022,500 €
Total Sum of CampaignProfit	500,700 €	522,200 €	506,000 €	450,000 €	534,100 €	511,300 €	480,000 €	511,200 €	518,000 €	520,000 €	500,000 €	500,000 €	6,022,500 €



Analyse your Marketing Campaign

How did your Salesperson perform?

The following report shows the performance of your salespersons. Does the revenue, the sales amount and the gross profit correlate? With other words, does the salesman with the highest sales amount make the highest gross profit?

Analyse **GrossProfit**, **Revenue**, **SalesAmount** and **GrossProfit-to-Revenue ratio** by salesmen.

Row Labels	Sum of Gross_Profit	Sum of Revenue	GrossProfitRatio	Sum of Sales_Amount
Salesman				
Marcus Friedrich	276.781,29 €	806.897,91 €	34,55%	403
Sabine Meyer	228.954,37 €	725.397,01 €	31,56%	576
Gerhard Winkler	163.491,85 €	512.070,68 €	31,93%	383
Jan Peters	133.749,83 €	506.353,25 €	26,41%	306
Arnim Schmidt	128.551,41 €	391.056,48 €	32,87%	382
Grand Total	933.528,75 €	2.941.775,33 €	31,73%	2050



HowTo PowerPivot - How does your Salespersons perform?

Did you employ enough salespersons?

Make a quick calculation:

- Your store is open 300 days a year, because shops are closed on Sunday.
- Your store is open from 10 am to 8 pm (10 hours a day). Opening hours a year: ?
- A salesperson works 40 hours a week. He/she gets 6 weeks paid holidays. Also, calculate 3 weeks off for education, trainings and exhibition visits. Also plan 1 week absence because of illness and 1 week for public holidays. Working hours a year: ?
- 3 salesman should be **always** in store.

How many salesman should be employed?

- If you have employed **not enough** salesperson, you will get a negative service factor which influences your sales amount 😞
- Also, play with the commission factor. The more commission a salesman gets, the better he/she will sell. Be careful: a high commission will melt your profit 😊

Analyse your costs

Row Labels	Sum of Cost_Value
Additional Procurement Costs	15.975,00 €
Additional Procurement Costs for City Bikes / Premium	450,00 €
Additional Procurement Costs for E-Bikes / Budget	945,00 €
Additional Procurement Costs for E-Bikes / Mid-Low	270,00 €
Additional Procurement Costs for E-Bikes / Premium	180,00 €
Additional Procurement Costs for Kid Bikes / Budget	315,00 €
Additional Procurement Costs for Kid Bikes / Mid-Up	90,00 €
Additional Procurement Costs for Mountain Bikes / Budget	5.040,00 €
Additional Procurement Costs for Mountain Bikes / Mid-Low	945,00 €
Additional Procurement Costs for Mountain Bikes / Premium	45,00 €
Additional Procurement Costs for Race Bikes / Budget	6.210,00 €
Additional Procurement Costs for Race Bikes / Mid-Low	225,00 €
Additional Procurement Costs for Race Bikes / Mid-Up	270,00 €
Additional Procurement Costs for Race Bikes / Premium	855,00 €
Additional Procurement Costs for Trekking Bikes / Mid-Up	135,00 €
Commission	26.425,28 €
Commission for Felix Neubauer, 2 %	9.489,84 €
Commission for Gerhard Winkler, 1 %	2.192,81 €
Commission for Jan Peters, 1 %	3.749,08 €
Commission for Marcus Friedrich, 1 %	2.192,16 €
Commission for Markus Beck, 1 %	3.623,08 €
Commission for Markus Seibert, 1 %	5.178,31 €
Marketing Campaign	10.000,00 €
Marketing Campaign [10]: Social Media Campaign	3.000,00 €
Marketing Campaign [25]: Mountain Bike Race	4.000,00 €
Marketing Campaign [45]: Free Bike Check	3.000,00 €
Monthly Rent	156.000,00 €
Rent for Store	156.000,00 €
Monthly Salary	240.400,08 €
Monthly Salary for Andreas Miller, Mechanic, 0 %	5.000,04 €
Monthly Salary for Felix Neubauer, Salesman, 2 %	45.000,00 €
Monthly Salary for Franz Schneider, Student Assistant, 0 %	5.000,04 €
Monthly Salary for Gerhard Winkler, Salesman, 1 %	30.000,00 €
Monthly Salary for Jan Peters, Salesman, 1 %	27.999,96 €
Monthly Salary for Karin Kramer, Student Assistant, 0 %	5.000,04 €
Monthly Salary for Katharina Bauer, Cleaner, 0 %	5.400,00 €
Monthly Salary for Marcus Friedrich, Salesman, 1 %	21.999,96 €
Monthly Salary for Markus Beck, Salesman, 1 %	24.999,96 €
Monthly Salary for Markus Seibert, Salesman, 1 %	33.999,96 €
Monthly Salary for Melanie Gabler, Student Assistant, 0 %	5.000,04 €
Monthly Salary for Stefan Beck, Mechanic, 0 %	26.000,04 €
Monthly Salary for Thomas Fuchs, Student Assistant, 0 %	5.000,04 €
Monthly Social Costs	77.910,12 €
Social Costs for Andreas Miller	750,00 €
Social Costs for Felix Neubauer	15.750,00 €
Social Costs for Franz Schneider	600,00 €
Social Costs for Gerhard Winkler	10.500,00 €
Social Costs for Jan Peters	9.800,04 €
Social Costs for Karin Kramer	750,00 €
Social Costs for Katharina Bauer	810,00 €
Social Costs for Marcus Friedrich	7.700,04 €
Social Costs for Markus Beck	8.750,04 €
Social Costs for Markus Seibert	11.900,04 €
Social Costs for Melanie Gabler	750,00 €
Social Costs for Stefan Beck	9.099,96 €
Social Costs for Thomas Fuchs	750,00 €
Grand Total	526.710,48 €



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Done