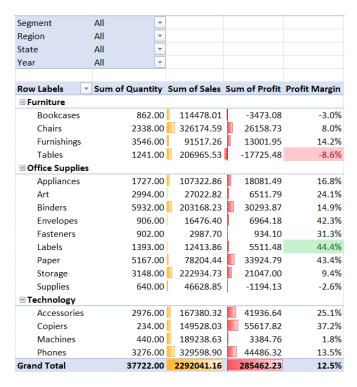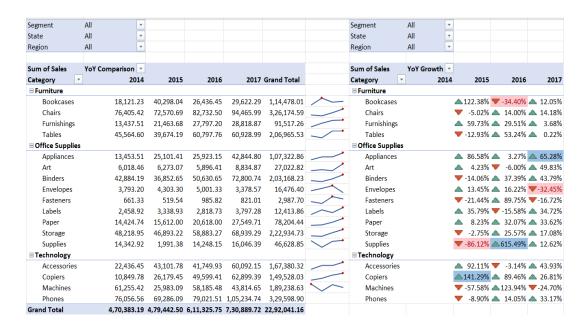# Pivot Tables for analysis

1. **Overall, Sales_Profit**: Pivot table showing total sales and profit of different categories & sub-categories. And also, the profit margin of these products (Profit margin = (Profit/Sales) *100). We can filter profit margin by years showing which product's margin is more or less.

   Profit Margin is calculated by creating measure in power query. Data bars, top 1 and bottom 1 in conditional formatting is used.

Segment	All
Region	All
State	All
Year	All

Row Labels	Sum of Quantity	Sum of Sales	Sum of Profit	Profit Margin
Furniture				
Bookcases	862.00	114478.01	-3473.08	-3.0%
Chairs	2338.00	326174.59	26158.73	8.0%
Furnishings	3546.00	91517.26	13001.95	14.2%
Tables	1241.00	206965.53	-17725.48	-8.6%
Office Supplies				
Appliances	1727.00	107322.86	18081.49	16.8%
Art	2994.00	27022.82	6511.79	24.1%
Binders	5932.00	203168.23	30293.87	14.9%
Envelopes	906.00	16476.40	6964.18	42.3%
Fasteners	902.00	2987.70	934.10	31.3%
Labels	1393.00	12413.86	5511.48	44.4%
Paper	5167.00	78204.44	33924.79	43.4%
Storage	3148.00	222934.73	21047.00	9.4%
Supplies	640.00	46628.85	-1194.13	-2.6%
Technology				
Accessories	2976.00	167380.32	41936.64	25.1%
Copiers	234.00	149528.03	55617.82	37.2%
Machines	440.00	189238.63	3384.76	1.8%
Phones	3276.00	329598.90	44486.32	13.5%
Grand Total	37722.00	2292041.16	285462.23	12.5%

2. **YoY_Sales Comparison**: This pivot table shows sales comparison through out the years. We can analyze which products sales has increased or decreased compared to previous year and by how much percentage. We can filter the results by region, state or segment of customers. Line sparkline is used to show each products trend.

Segment	All
State	All
Region	All

Sum of Sales	YoY Comparison					
Category	2014	2015	2016	2017	Grand Total	
Furniture						
Bookcases	18,121.23	40,298.04	26,436.45	29,622.29	1,14,478.01	
Chairs	76,405.42	72,570.69	82,732.50	94,465.99	3,26,174.59	
Furnishings	13,437.51	21,463.68	27,797.20	28,818.87	91,517.26	
Tables	45,564.60	39,674.19	60,797.76	60,928.99	2,06,965.53	
Office Supplies						
Appliances	13,453.51	25,101.41	25,923.15	42,844.80	1,07,322.86	
Art	6,018.46	6,273.07	5,896.41	8,834.87	27,022.82	
Binders	42,884.19	36,852.65	50,630.65	72,800.74	2,03,168.23	
Envelopes	3,793.20	4,303.30	5,001.33	3,378.57	16,476.40	
Fasteners	661.33	519.54	985.82	821.01	2,987.70	
Labels	2,458.92	3,338.93	2,818.73	3,797.28	12,413.86	
Paper	14,424.74	15,612.00	20,618.00	27,549.71	78,204.44	
Storage	48,218.95	46,893.22	58,883.27	68,939.29	2,22,934.73	
Supplies	14,342.92	1,991.38	14,248.15	16,046.39	46,628.85	
Technology						
Accessories	22,436.45	43,101.78	41,749.93	60,092.15	1,67,380.32	
Copiers	10,849.78	26,179.45	49,599.41	62,899.39	1,49,528.03	
Machines	61,255.42	25,983.09	58,185.48	43,814.65	1,89,238.63	
Phones	76,056.56	69,286.09	79,021.51	1,05,234.74	3,29,598.90	
Grand Total	4,70,383.19	4,79,442.50	6,11,325.75	7,30,889.72	22,92,041.16	

Segment	All
State	All
Region	All

Sum of Sales	YoY Growth			
Category	2014	2015	2016	2017
Furniture				
Bookcases		122.38%	-34.40%	12.05%
Chairs		-5.02%	14.00%	14.18%
Furnishings		59.73%	29.51%	3.68%
Tables		-12.93%	53.24%	0.22%
Office Supplies				
Appliances		86.58%	3.27%	65.28%
Art		4.23%	-6.00%	49.83%
Binders		-14.06%	37.39%	43.79%
Envelopes		13.45%	16.22%	-32.45%
Fasteners		-21.44%	89.75%	-16.72%
Labels		35.79%	-15.58%	34.72%
Paper		8.23%	32.07%	33.62%
Storage		-2.75%	25.57%	17.08%
Supplies		-86.12%	615.49%	12.62%
Technology				
Accessories		92.11%	-3.14%	43.93%
Copiers		141.29%	89.46%	26.81%
Machines		-57.58%	123.94%	-24.70%
Phones		-8.90%	14.05%	33.17%

3. **Sales Trend**: This shows quarterly sales trend. We can see that the months of Sep, Nov, Dec have seen more sales.

Sum of Sales	Year			
Quarter - Months	2014	2015	2016	2017
1				
Jan	13,275.13	29,594.76	19,130.06	42,297.04
Feb	5,406.53	12,679.08	26,954.09	23,506.78
Mar	50,708.35	39,269.66	48,795.91	52,891.39
2				
Apr	30,388.47	25,515.25	41,028.30	40,021.68
May	22,478.88	32,587.95	46,520.18	44,774.93
Jun	35,991.66	29,850.83	48,272.72	47,220.50
3				
Jul	32,990.59	30,400.23	37,595.95	47,183.87
Aug	30,245.24	28,116.31	32,031.58	63,760.02
Sep	73,126.65	69,615.84	70,460.80	91,427.87
4				
Oct	35,741.48	32,575.72	60,858.20	75,551.66
Nov	80,182.19	70,634.85	74,664.18	1,05,200.51
Dec	59,848.02	78,602.02	1,05,013.79	97,053.46
Grand Total	4,70,383.19	4,79,442.50	6,11,325.75	7,30,889.72

4. **Sales by Region & cities**: This Pivot table shows sales in different regions. Thus, it can be observed that East region has most sales. Also top 5 cities from each region have been taken.

Region-City	Sum of Sales
East	
New York City	2,01,309.42
Philadelphia	1,42,426.49
Columbus	53,072.80
Cincinnati	26,170.84
Newark	19,533.14
West	
Los Angeles	1,58,134.72
San Francisco	1,25,345.26
Seattle	73,060.55
San Diego	37,788.91
Phoenix	27,729.47
Central	
Houston	1,29,488.25
Chicago	66,475.36
Detroit	34,624.32
Columbus	17,843.81
Fort Worth	17,675.33
South	
Springfield	28,254.86
Jacksonville	27,316.01
Jackson	26,054.38
Charlotte	25,463.81
Wilmington	20,606.93
Grand Total	12,58,374.68

5. **Profit Analysis**: Shows which products are profitable and which are in loss.

Sum of Profit Row Labels	Column Labels 2014	2015	2016	2017	Grand Total
Furniture					
Bookcases	-621.51	-2500.82	233.40	-584.15	-3473.08
Chairs	6780.55	6402.91	5673.05	7302.22	26158.73
Furnishings	1991.01	3045.14	3893.29	4072.51	13001.95
Tables	-2932.00	-3701.85	-2926.84	-8164.80	-17725.48
Office Supplies					
Appliances	1924.98	3046.41	5267.47	7842.63	18081.49
Art	1392.37	1498.54	1408.05	2212.83	6511.79
Binders	5185.85	6673.14	10662.04	7772.85	30293.87
Envelopes	1472.80	1860.72	2188.90	1441.76	6964.18
Fasteners	178.56	160.94	305.07	289.53	934.10
Labels	1106.52	1502.52	1189.42	1713.03	5511.48
Paper	6178.42	6722.76	9067.03	11956.59	33924.79
Storage	4051.66	3634.18	6221.33	7139.82	21047.00
Supplies	476.76	-10.32	-708.52	-952.04	-1194.13
Technology					
Accessories	5351.53	11248.46	9650.76	15685.88	41936.64
Copiers	2912.94	9930.30	17742.79	25031.79	55617.82
Machines	81.19	2978.75	3580.99	-3256.17	3384.76
Phones	11761.09	10389.76	9492.87	12842.59	44486.32
Grand Total	47292.73	62881.53	82941.10	92346.88	285462.23

6. **Top 5 Customers**: Shows top 5 customers in terms of sales.

Top Customer	Sum of Sales
Sean Miller	25,043.05
Tamara Chand	19,052.22
Raymond Buch	15,117.34
Tom Ashbrook	14,595.62
Adrian Barton	14,473.57
Grand Total	**88,281.80**