

Orion Sports Company Case Study: Executive Report



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Relevance to Departments:

- * - Finance
- # - Sales
- * - Human Resources
- # - Product Development

I. Introduction

In this project, I used SAS Enterprise Guide on data representing various business activities by a fictional company called Orion Sports. The center of this report is the various reports, charts and graphs contained in the "Report to CEO" section.

II. Description of Problem

The reason for creating this report is that the company has just acquired a new CEO. He needs to know background data-centered information about the company. In this scenario, interviews have been conducted with the upper management of several divisions: Sales, Finance, HR, and Product Development. They have requested information on various topics.

The sections of this report correspond to the questions they have asked. I preprocessed data and then ran queries in response to these questions.

III. Methods

I first familiarized myself with the SAS Enterprise Guide software using first the "Getting Started" tutorial. Then I imported the sample Orion data and analyzed its composition. I rewrote the Executives' questions as SASEG-understandable queries. I also analyzed which joins would be necessary to create the data tables for these queries. These last steps were the most time-consuming as there were very many queries requiring complicated data organization and manipulation.

The report is organized by the questions from the executives. Because these executives as well as the CEO all have limited time, the table of contents includes a guide to the sections of the report which may interest them. Along those lines, the paragraphs accompanying the graphs and charts have informative titles, so that time-limited executives can extract the most information at a glance.

SAS Enterprise Guide proved challenging to learn, but powerful and I learned several things during this report. One being that it is important to give descriptive names to the queries, and generally to keep things organized. Some joins can be useful for more than one query, so it is useful to keep the resulting data from these joins in a well-labeled table that can be accessed by later queries. Also it is best to organize data before beginning queries. In particular, types need to be attended to, as a miscategorized field (was interpreted as a string when it was numerical) caused many problems down the line in the report. In terms of skills, I learned how to make a join, query, filter, sort, bar chart, pie chart, summary statistics, frequency counts and several other actions in SASEG.

On a more general level, this project hits home what was repeatedly said by the guest lecturers- that data is not as valuable as information and information in turn less important than action. Data can be difficult to reign in and it is important to follow best statistical practices and maintain a meaningful understanding of the real-world implications behind the digits and strings.

IV. Data Processing

Pre-processing involved importing data from formats other than a SAS data set, such as excel. In this step, it was important to make sure imported categories matched their true types, such that a numeric category was imported as such, etc.

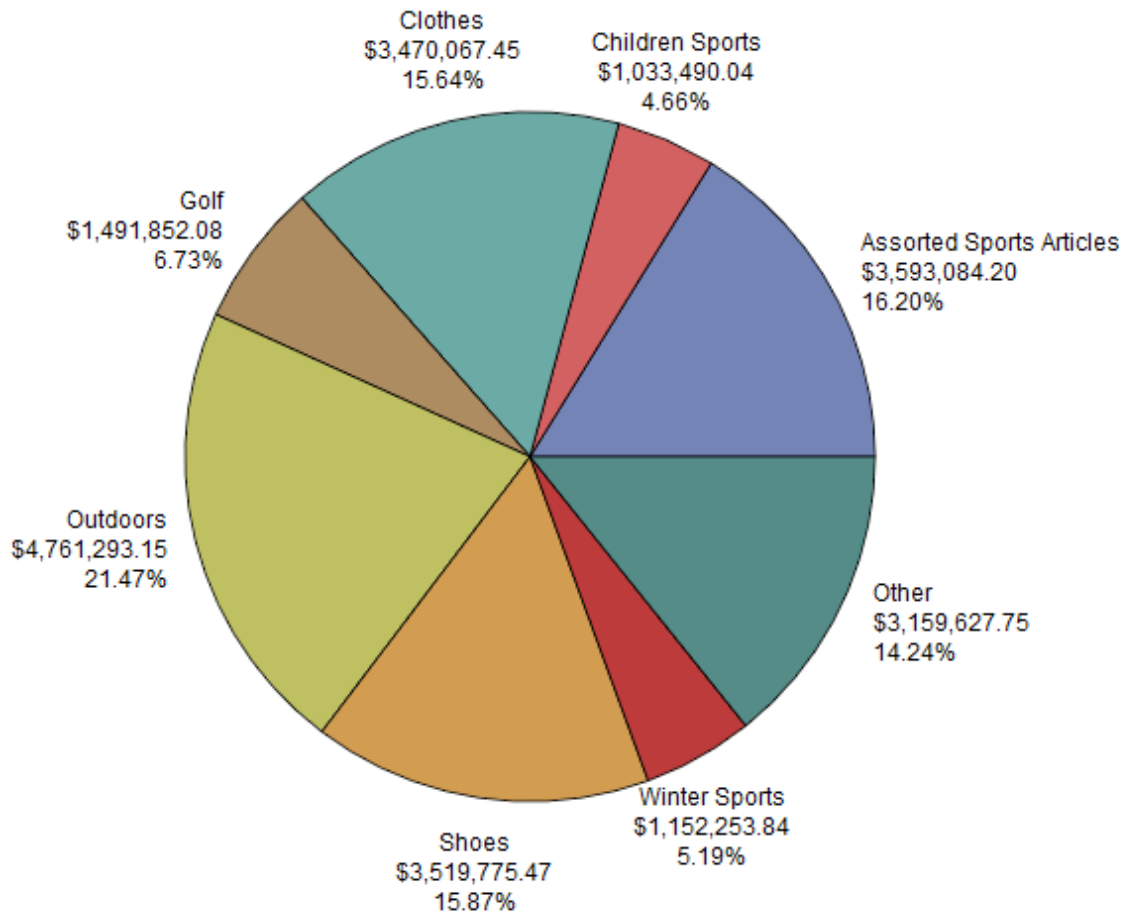
One necessary step was reorganizing the product list so that each line item would include category, group and product line information for itself.

V. Report to CEO

A. Revenue/Sales

1. Total Revenue by Department

Revenue by Group 2013



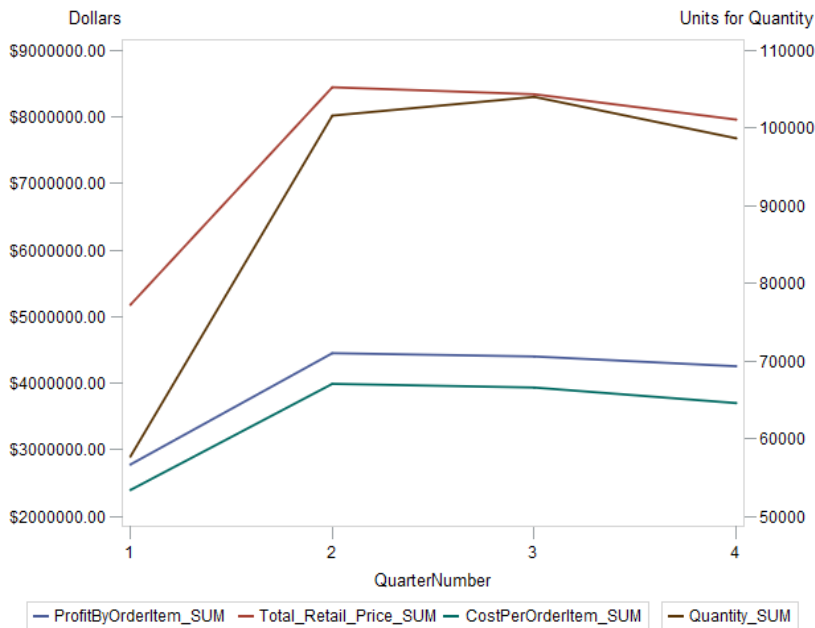
Sports, Clothes and Outdoors Lead:

Sales by Group

Orion is at its core a sporting goods company with a large proportion of sales coming from the sale of Sports Articles themselves. Alongside this, there are also large portions of sales from Outdoor products and Clothes and Shoes which are associated with Sports. Our overall revenue was almost 30 million dollars in 2013.

2. Relative Sales by Country, Year and Quarter

Revenue, Profit, Cost and Quantity Sold, 2013



Winter Dip: Sales by Quarter

Revenue dips considerably during the 1st quarter. As a sporting good company, this may not be surprising as many sporting activities take place during the summer. To counteract this sales dip, we could invest in expanding our winter sports offerings, or promoting our existing offerings.

Interestingly, quantity dips disproportionately to revenue. This may be that although we sell many fewer items in winter, the items that are sold are high-value items. Perhaps customers are taking advantage of sales to purchase investment pieces for summer sports, but are less likely to purchase smaller "impulse buys" as they will not be able to use them for several months. In this case, we can improve our winter "impulse buy" categories.

Year On Year Sales

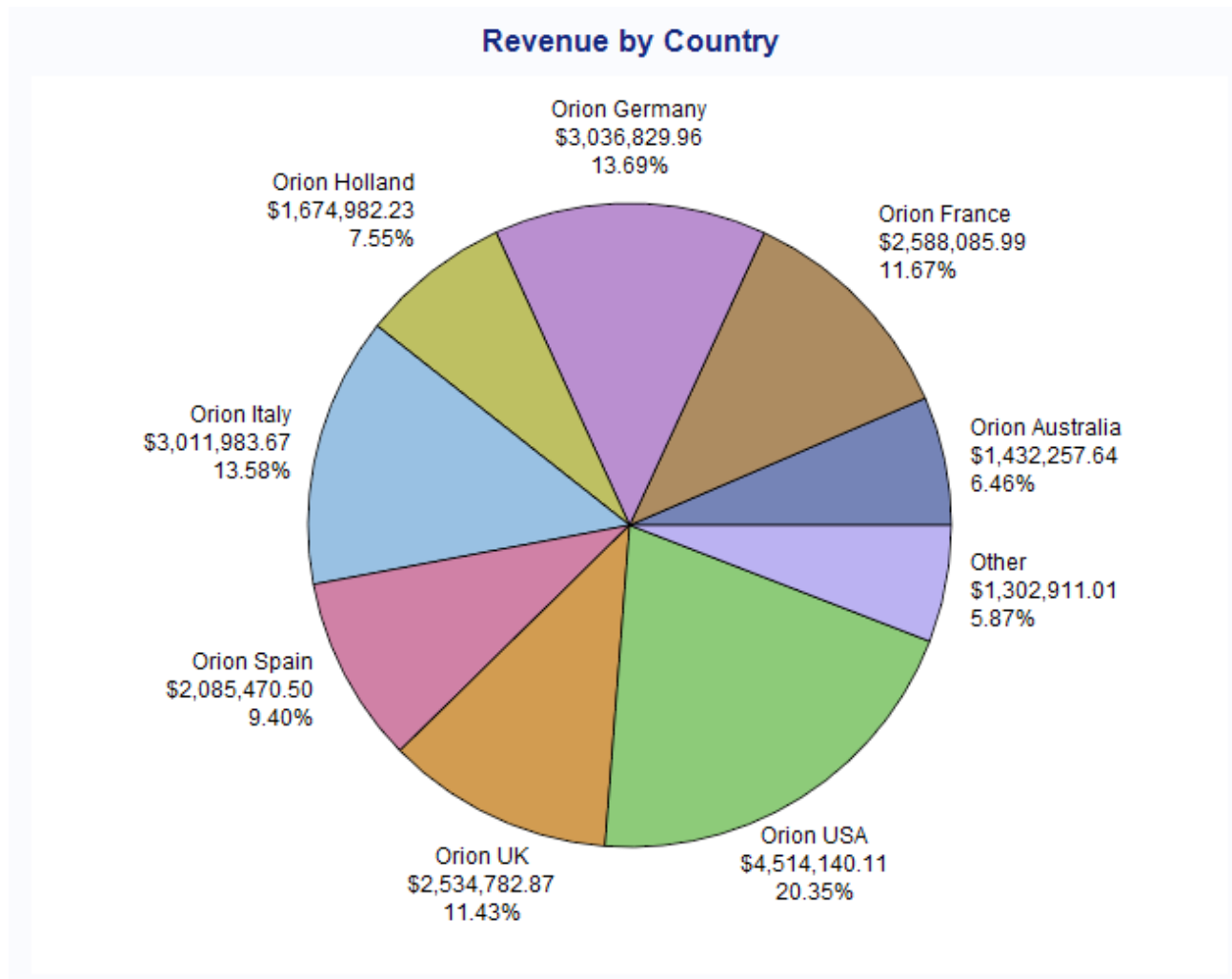
YEAR	SUM_of_Quantity	SUM_of_Total_Retail_Price	Sum of Cost by Year	Profit by Year	Percentage Increase on Previous Year
2009	261159	\$21849784.61	\$10206885.43	\$11,642,899.18	0
2010	301752	\$24960592.83	\$11723725.50	\$13,236,867.33	13.69047
2011	362984	\$30484331.66	\$14318512.80	\$16,165,818.86	22.12723
2012	309328	\$25966868.75	\$12183436.83	\$13,783,431.92	-14.73719
2013	362094	\$29934910.62	\$14035980.27	\$15,898,930.35	15.34813

Trouble in 2012: Sales by Year

Unfortunately, we have not had consistently increasing sales for the past few years. There was no data prior to 2009, so the percent increase would of course be meaningless. 2010 was a good year, with a greater than 10% increase on the previous year. 2011 was even better, increasing profit by 22%. 2012 was a very bad year with a 15% decrease on the previous year. This may be attributable to the global financial slowdown, which affected France, one of our biggest markets, in 2012 and Italy from 2011 to today³. However, sales are no longer decreasing, and have increased since last year. We are now just under our highest revenue intake of \$30mm in 2011.

A European Company with International Branches: Sales by Country Office

The country with the highest revenue in 2013 was Orion USA, with Germany, Italy, France and the UK also representing large sources of revenue. These countries are similar in being developed countries, however many differences exist in their terrain and leisure activities, which could affect sporting goods sales. Overall it is beneficial to have several country offices located in the various countries, who are able to respond to cultural, legal and financial conditions in those countries.

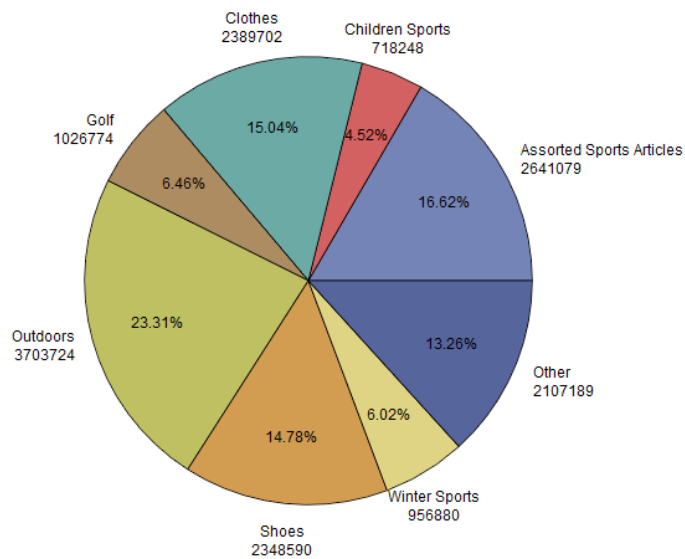


B. Products

1. Profitable and High-Grossing Product Groups

a. Overview

Profit by Product Category, 2013



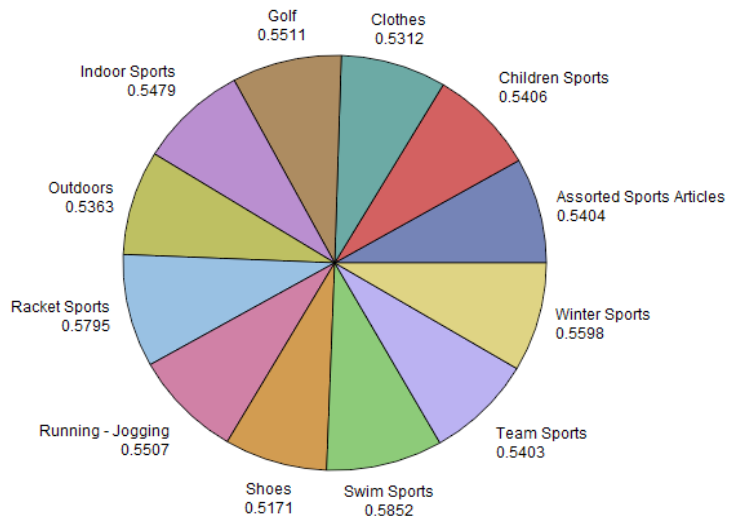
Large Outdoors Contribution: Profit by Product Category

Clothes and Shoes make up a surprisingly large proportion of the total company profit, although outdoors remains our largest single category. The "Other" portion may obscure several small categories. Winter sports makes up a very small proportion of total profit, as reflected by the dip in winter revenue seen in Figure 2.

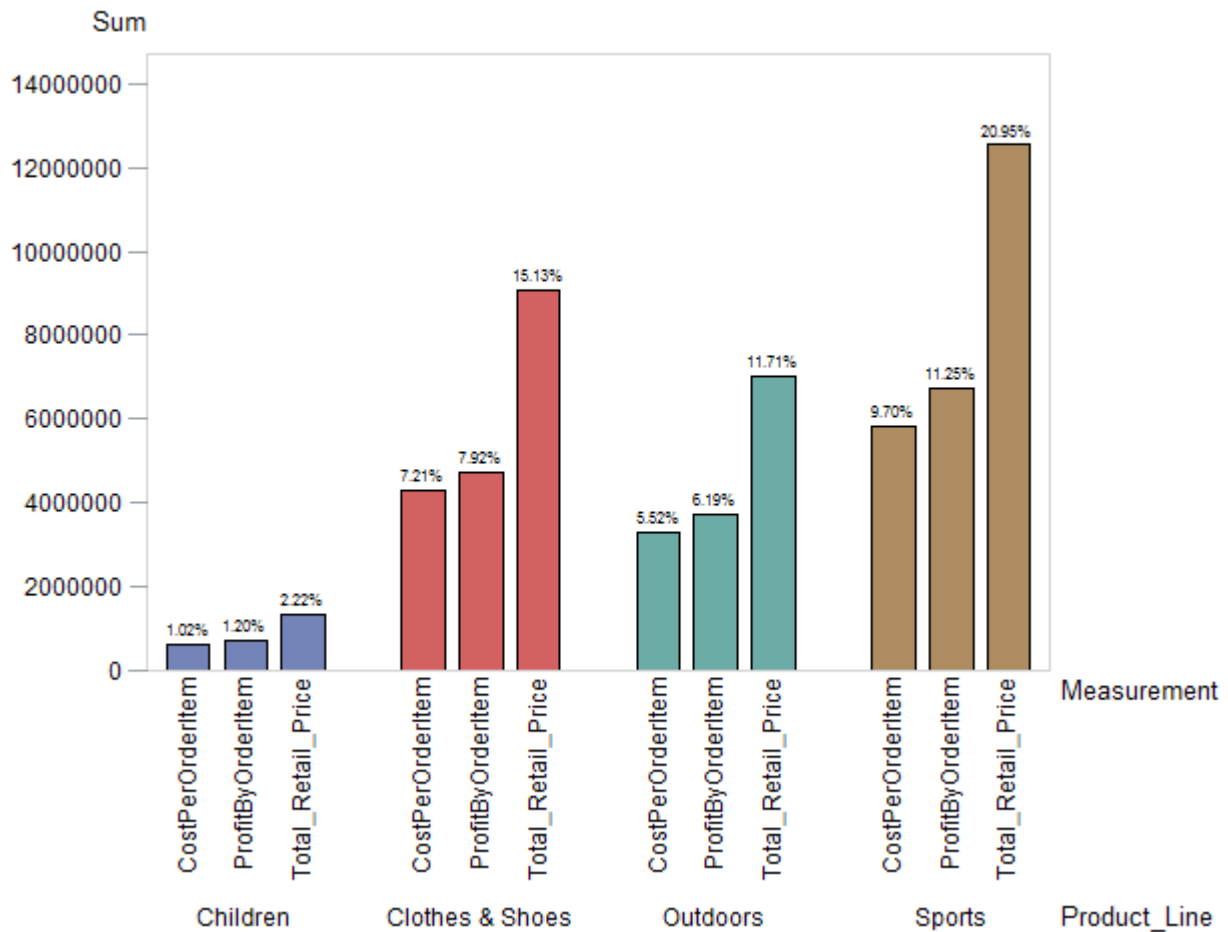
Reasonable Pricing: Profit Margin by Category

On average, considering all profit and cost within each category, no category stands out as especially good or bad in terms of profit margin, and all hover around an industry-standard 50%. This suggests pricing in general is more or less where it needs to be.

Average Profit Margin by Category, 2013



Revenue, Profit and Cost by Product Line, 2013



Sports in the Lead:

Profit, Cost and Revenue by Product Line

Products are categorized into four lines, and above we see the various contributions of each product line, with profit and cost by line mapped on the same scale. Sports is the clear leader in terms of Revenue, followed by Clothes and Shoes, then Outdoors, then Children. This adds another dimension to the revenue by category figure. We see that divisions within lines may make them appear smaller than they are, as when sports is taken as a group, it is larger than Outdoors (which has only one category).

As a sporting goods company, it is natural that Sports should be our largest category.

Profit and cost ratios are reasonable across all product lines.

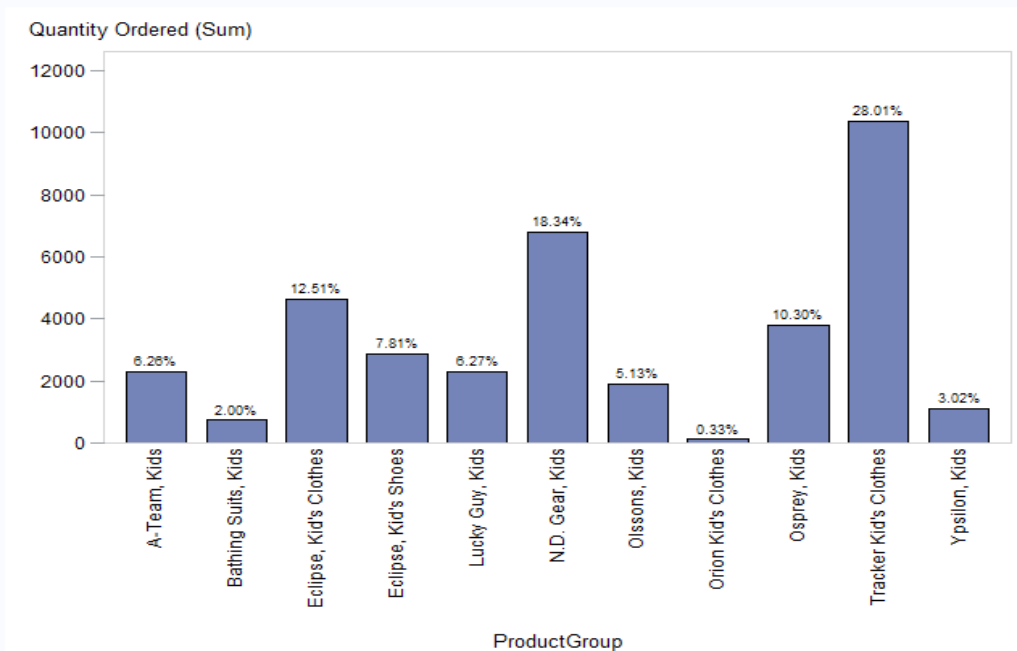
b. Breakdown by Group and Category Within Product Lines

i. Quantity Ordered by Group and Category

1. Children's Line

Children's Line: Quantity Ordered by Group and Category

Product_Category=Children Sports



Children's Line has High Variation by Group:

Quantity Ordered by Group and Category, Children's Line

Orion's Kid's Clothes are a very small share of orders. As an in-house brand, there may be hidden overhead and it could increase our profits to eliminate this group entirely.

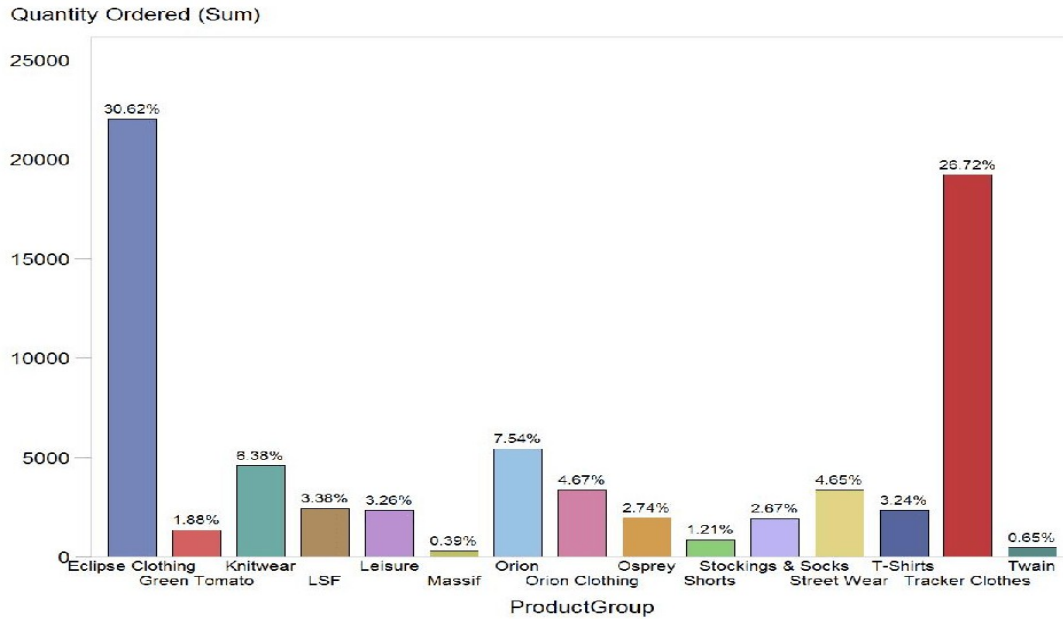
N.D. Gear and Tracker are the largest contributors to quantity sold in this line.

Children's line has only one category, so this is the only figure for this line.

2. Clothes and Shoes Line

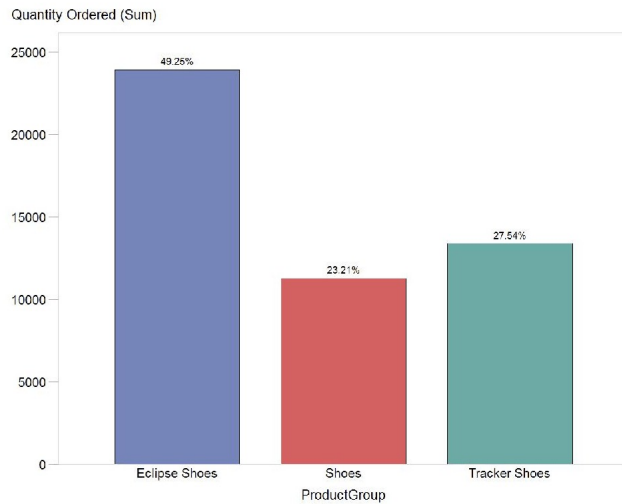
Quantity Ordered by Group and Category, 2013, Clothes & Shoes Line

Product_Category=Clothes



Quantity Ordered by Group and Category, 2013, Clothes & Shoes Line

Product_Category=Shoes



**Tracker and Eclipse Dominate:
Quantity Ordered by Group and
Category, Clothes and Shoes**

Eclipse Clothing and Tracker Clothes are by far our highest-performing categories in this product line. Care should be taken to maintain our positive relationship with these suppliers.

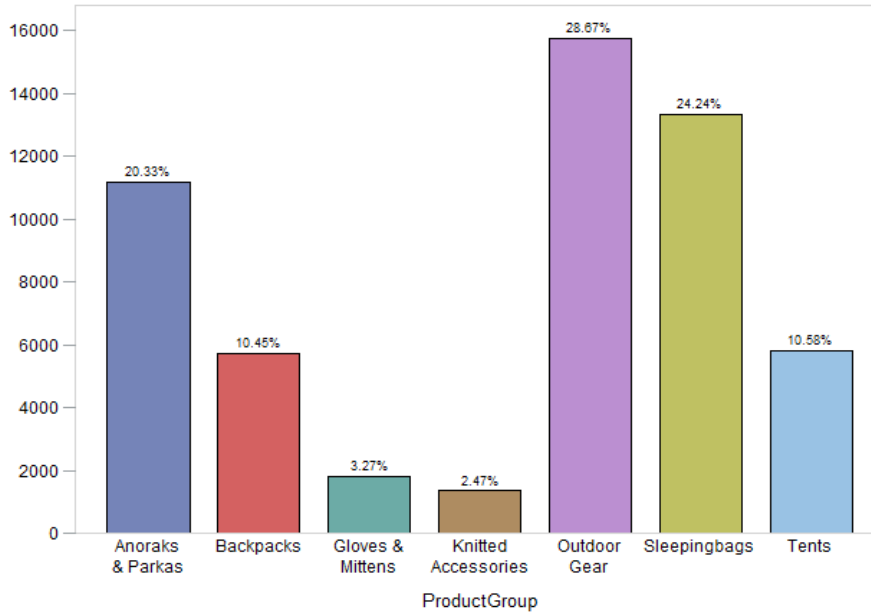
Twain and Massif represent less than 1% of sales by quantity each, so removing them from our offerings could help our efficiency.

3. Outdoors

Quantity Ordered by Group and Category, 2013, Outdoors

Product_Category=Outdoors

Quantity Ordered (Sum)



Outdoor Gear Leads: Quantity Ordered by Group and Category, Outdoors

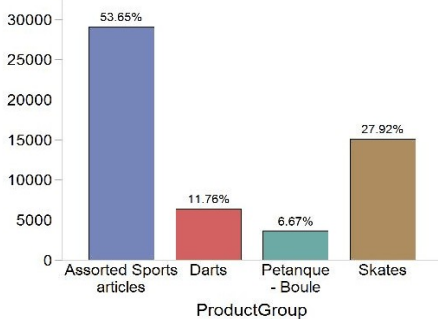
Within Outdoor, Outdoor Gear, the catchall category, leads. This could indicate that Outdoors is a diverse category with many small components. Sleeping bags and Anoraks are large producers here. Anoraks, gloves, and knitted accessories can also be thought of as clothing, showing the surprising pervasiveness of clothing as a high performing category in our company.

4. Sports

Quantity Ordered 2013, Sports

Product_Category=Assorted Sports Articles

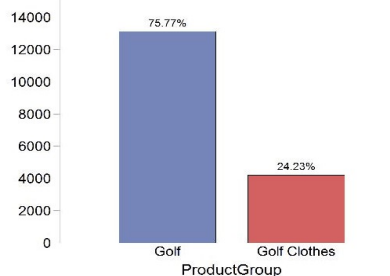
Quantity Ordered (Sum)



Quantity Ordered 2013, Sports

Product_Category=Golf

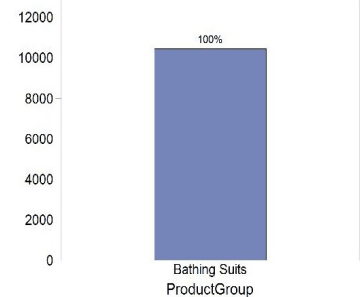
Quantity Ordered (Sum)



Quantity Ordered 2013, Sports

Product_Category=Swim Sports

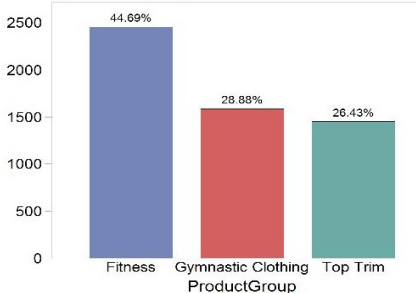
Quantity Ordered (Sum)



Quantity Ordered 2013, Sports

Product_Category=Indoor Sports

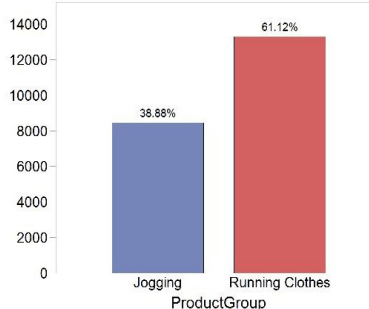
Quantity Ordered (Sum)



Quantity Ordered 2013, Sports

Product_Category=Running - Jogging

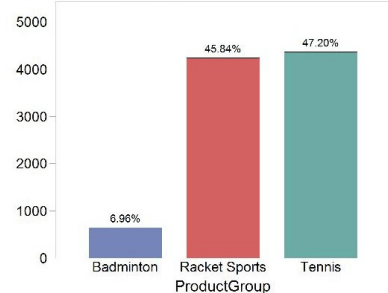
Quantity Ordered (Sum)

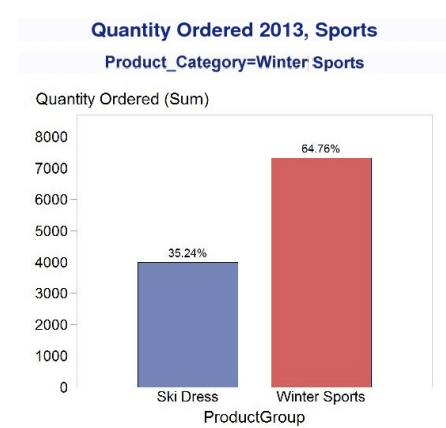
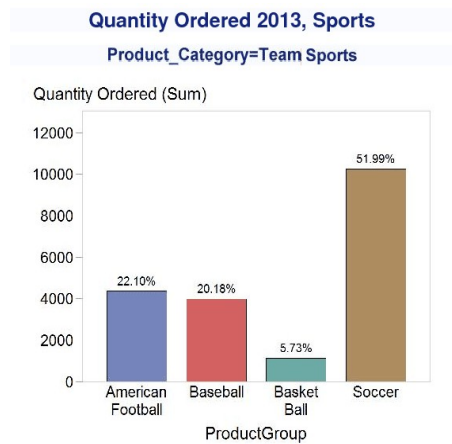


Quantity Ordered 2013, Sports

Product_Category=Racket Sports

Quantity Ordered (Sum)



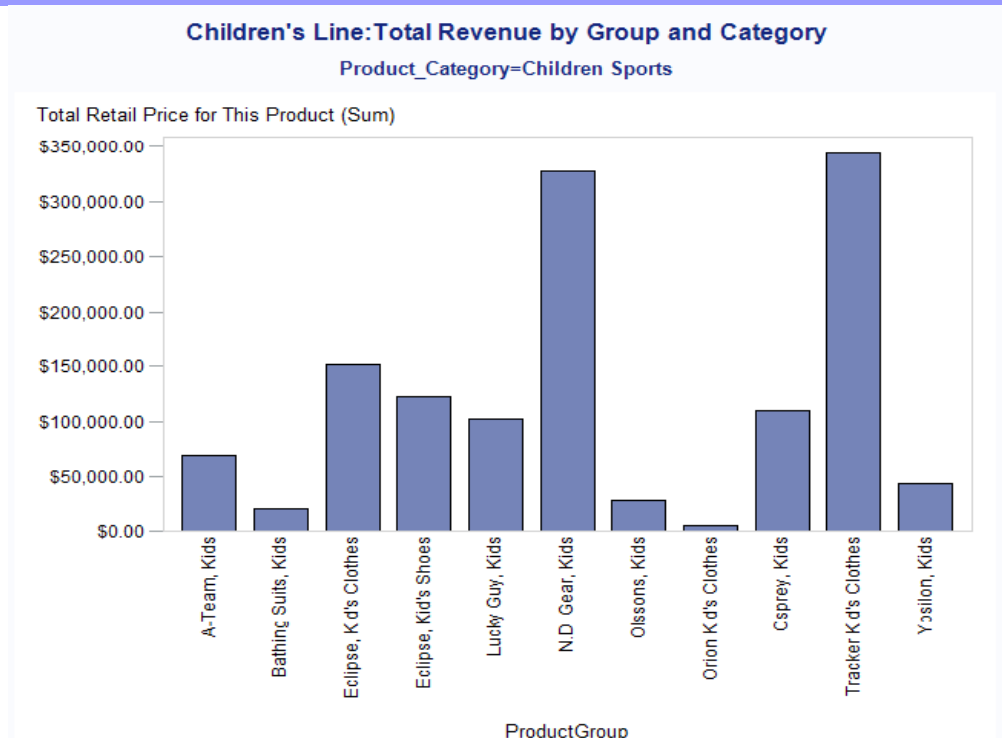


Diversity in Sports: Quantity Ordered by Group and Category, Sports

Sports, as our largest line, has many categories as well as groups within those categories. Skates do surprisingly well, selling 15,000 units. And American Football, Baseball, and Basketball, being primarily played only in America sell much less than the more international Soccer. Ski Dress represents a large proportion of sales in Winter Sports, suggesting that we are a sporting goods company first and a clothing company a close second.

ii. Revenue by Group and Category

1. Children's Line



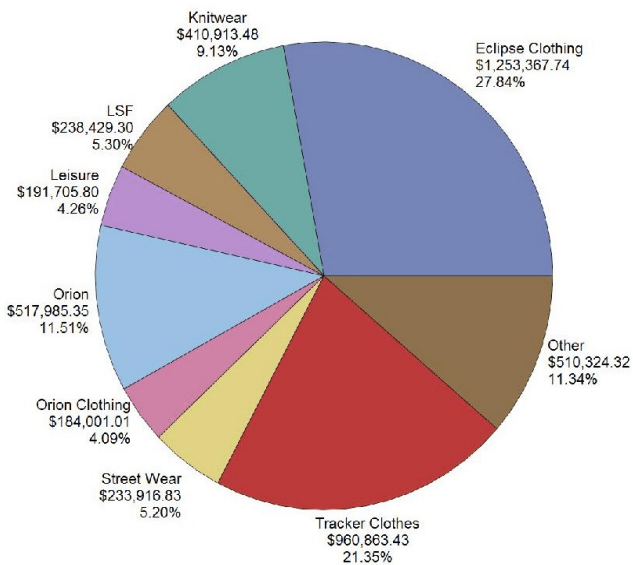
Sales by Revenue Reflect Sales by Quantity, Children's Line

As in Sales by Quantity, ND Gear and Tracker lead. One slight difference is the difference between ND Gear and Olsson is more pronounced by revenue than quantity. Olsson may produce fewer, higher-value products.

2. Clothes and Shoes

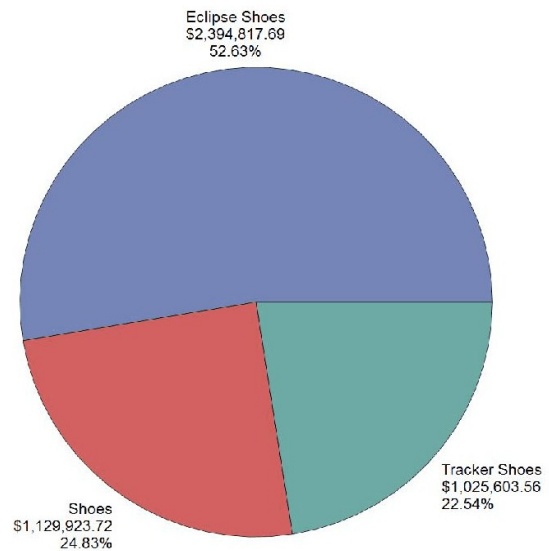
Revenue by Group and Category, 2013, Clothes & Shoes Line

Product_Category=Clothes



Revenue by Group and Category, 2013, Clothes & Shoes Line

Product_Category=Shoes



Shoes and Clothes Approximately Equal in Revenue, More Categories in Clothes

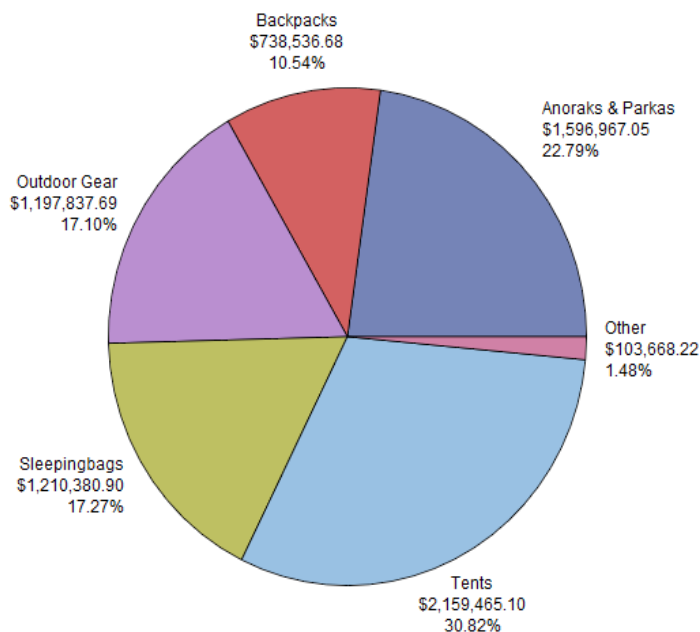
Knitwear has a larger contribution to revenue than by quantity. Tracker and Eclipse contribute slightly less than they did by quantity, suggesting they are low-cost brands. Shoes conform more to sales by quantity.

Shoes are a somewhat homogenous category, with only 3 groups.

3. Outdoors

Revenue by Group and Category, 2013, Outdoors

Product_Category=Outdoors



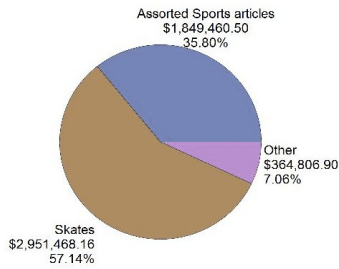
Tents Pop Up in Revenue

Tents, while contributing only 10% of sales by quantity in this category, pull in 30% of revenue. These are a big moneymaker for us and we should continue to promote them as best we can. Outdoor gear takes 17% of revenue as compared to 28% of sales by quantity, suggesting that it is composed of several lower value items. Knitwear, gloves and accessories, contributing a combined 6% of sales by quantity, don't register outside of the 1% other category in sales by revenue, showing they are less important than they appear in terms of sales intake.

4. Sports

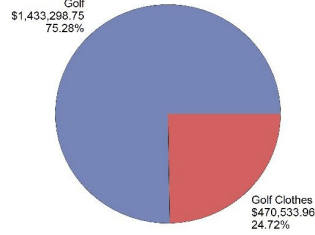
Total Revenue by Group and Category, 2013, Sports

Product_Category=Assorted Sports Articles



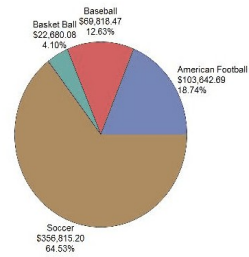
Total Revenue by Group and Category, 2013, Sports

Product_Category=Golf



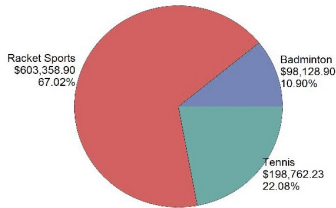
Total Revenue by Group and Category, 2013, Sports

Product_Category=Team Sports



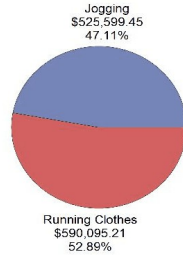
Total Revenue by Group and Category, 2013, Sports

Product_Category=Racket Sports



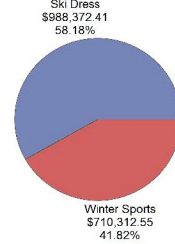
Total Revenue by Group and Category, 2013, Sports

Product_Category=Running - Jogging



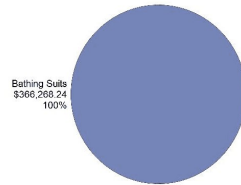
Total Revenue by Group and Category, 2013, Sports

Product_Category=Winter Sports



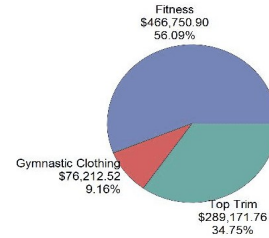
Total Revenue by Group and Category, 2013, Sports

Product_Category=Swim Sports



Total Revenue by Group and Category, 2013, Sports

Product_Category=Indoor Sports



Changes in Importance: Sports Revenue by Group and Category

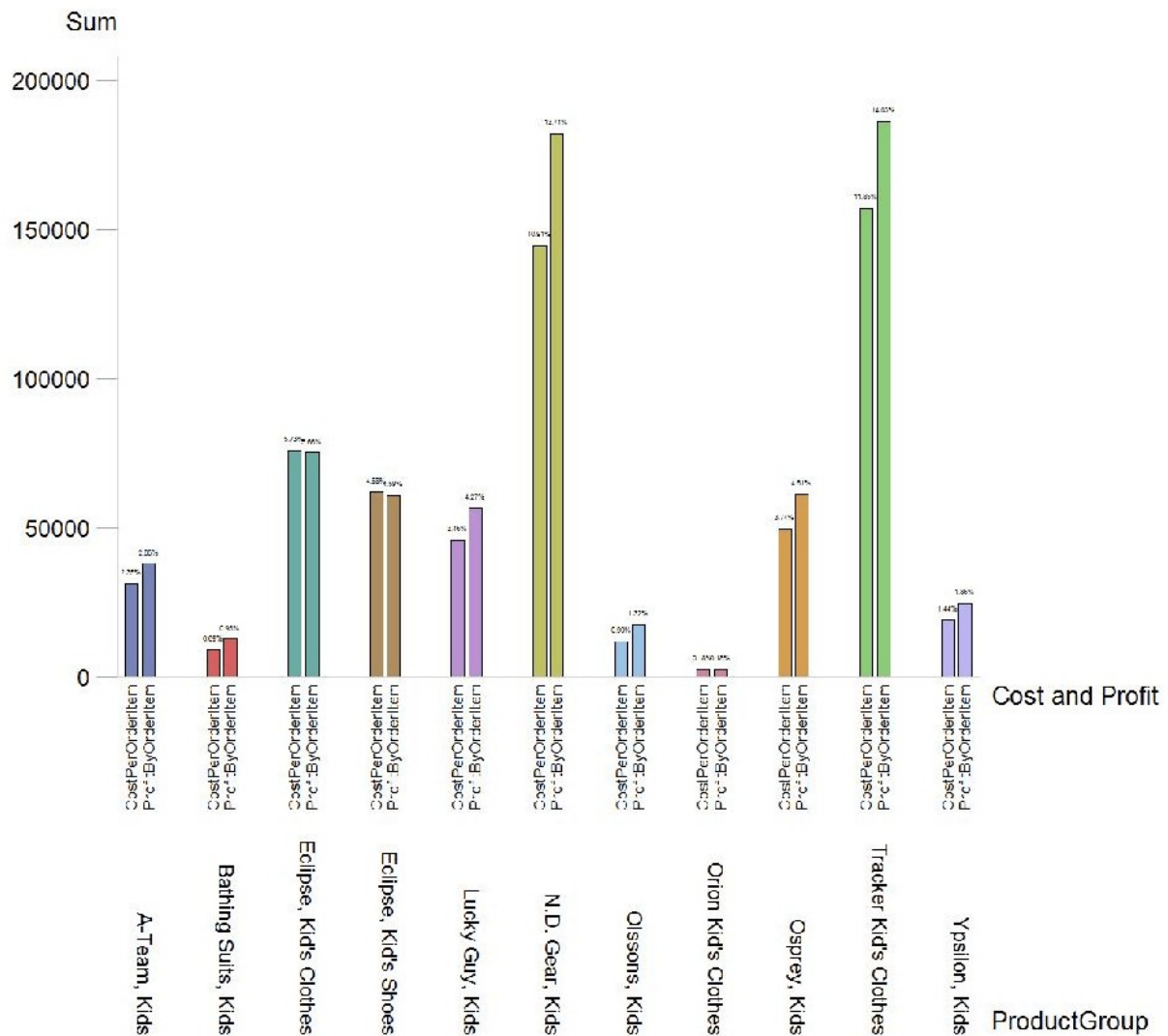
Skates jump considerably in importance when looked at by revenue, taking in 57% of sales by revenue in the largest Sport category, compared to 28% by quantity. Darts and petanque combined are less than 7% compared to 19% by quantity. Gymnastic clothing takes a hit in importance with 8% of sales by revenue in indoor sports versus 29% by quantity. This shows that revenue is a more important metric than quantity.

iii. Profit and Cost by Group and Category

1. Children's Line

Cost and Profit by Product Group and Category, Children's Line

Product_Category=Children Sports



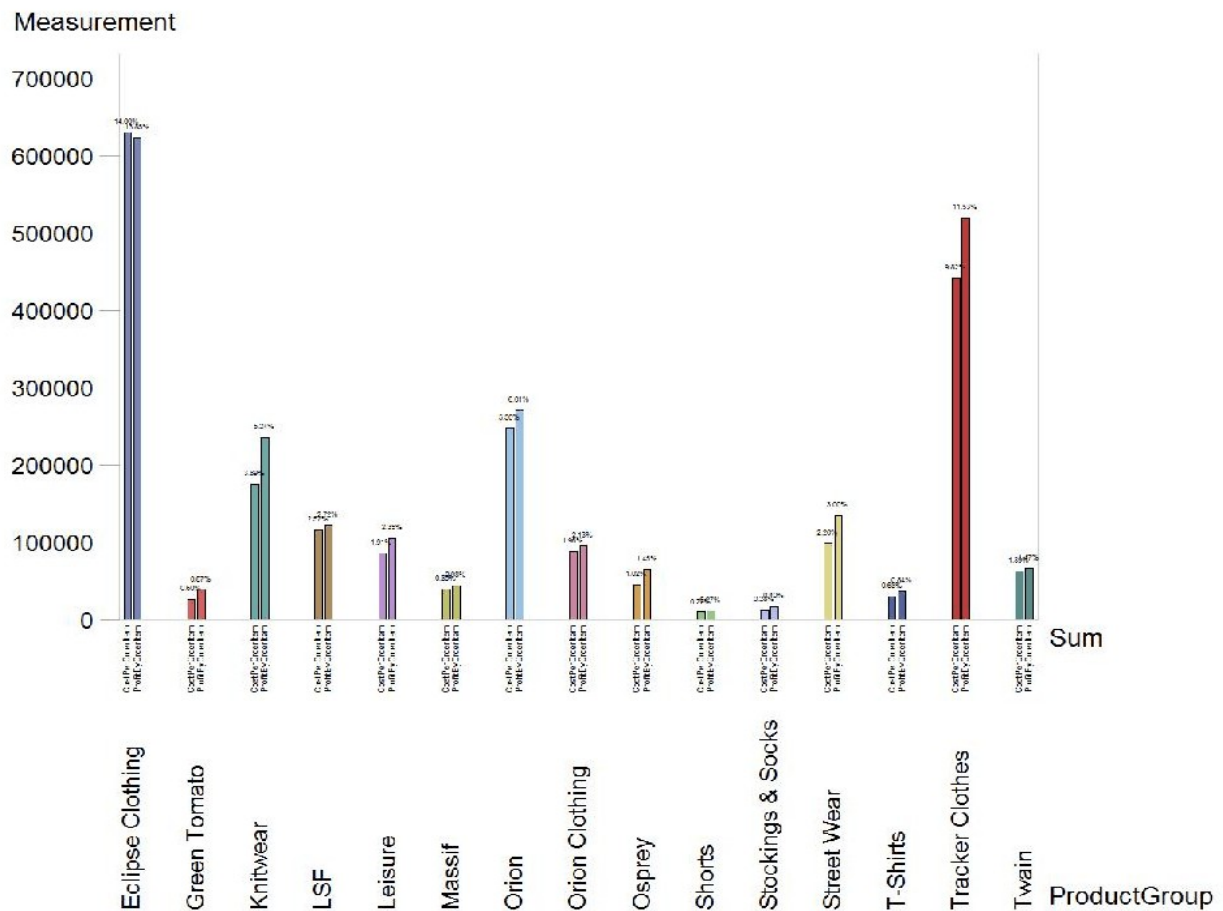
ND and Tracker Lead Again: Profit and Cost, Children's Line

Each group in the Children's Line has a more or less reasonable profit to cost ratio. However, the Eclipse Kids' Clothing and Shoes groups have a slightly less favorable profit to cost ratio. ND Gear and Tracker clearly contribute a huge amount of profit to this line.

2. Clothes and Shoes

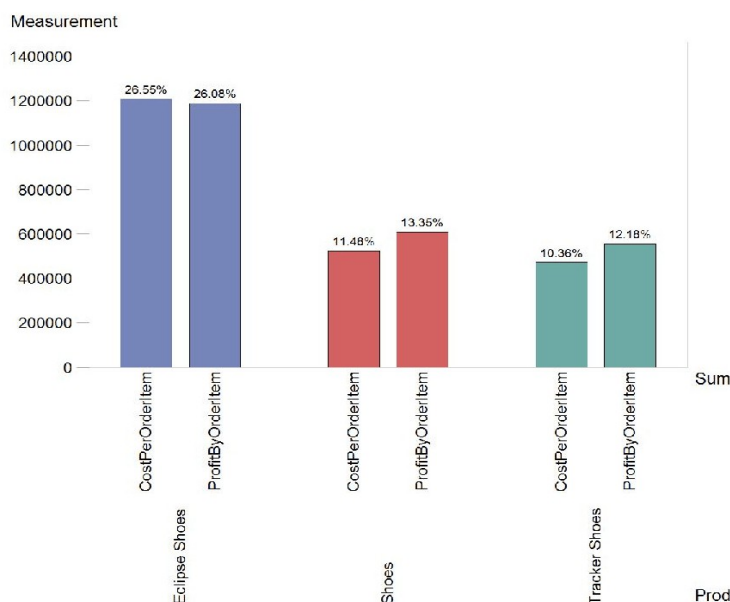
Profit and Cost by Group and Category, 2013, Clothes & Shoes Line

Product_Category=Clothes



Profit and Cost by Group and Category, 2013, Clothes & Shoes Line

Product_Category=Shoes



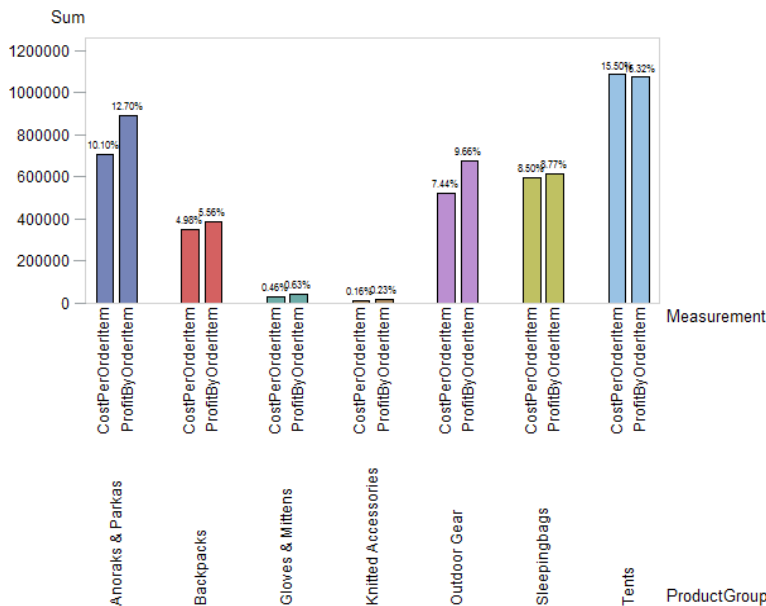
All Profitable, Some More than Others: Profit and Cost by Group, Clothing and Shoes

As we have previously seen, Tracker and Eclipse are high-revenue generators in the clothing and shoes category. In these charts, we see that Tracker has a more favorable profit-to-cost ratio than rival Eclipse. It is interesting that this unfavorable profit-to-cost ratio is consistent for Eclipse across product lines. We may consider renegotiating our rates with them, showing them that they stand out among our other suppliers as being less profitable relative to sales.

3. Outdoors

Profit and Cost by Group and Category, 2013, Outdoors

Product_Category=Outdoors



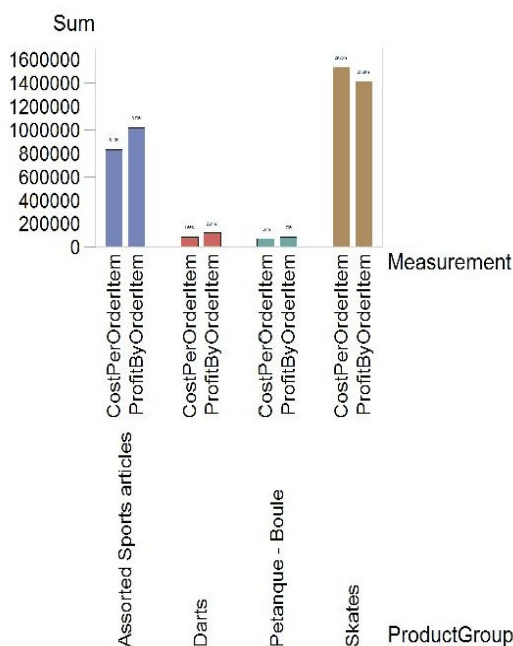
Tents vs. Anoraks: Profit and Cost by Group, Outdoors

Despite their large contribution to sales by revenue, Tents have a slightly less favorable profit-to-cost ratio than other groups in this category. However, their large contribution to revenue ameliorates this fact. Anoraks and Outdoor Gear have favorable profit-to-cost ratios.

4. Sports

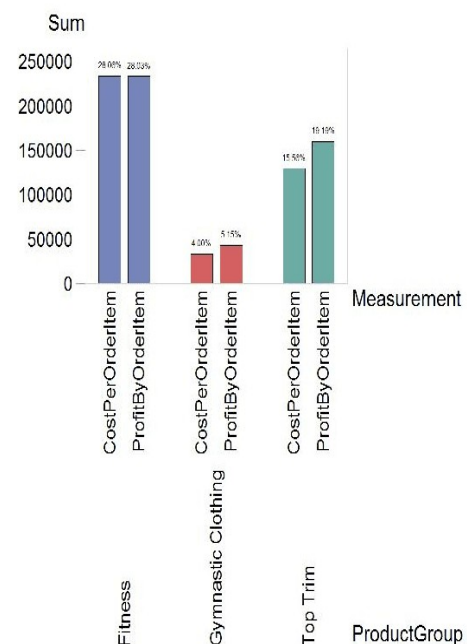
Profit and Cost By Group and Category, 2013, Sports

Product_Category=Assorted Sports Articles



Profit and Cost By Group and Category, 2013, Sports

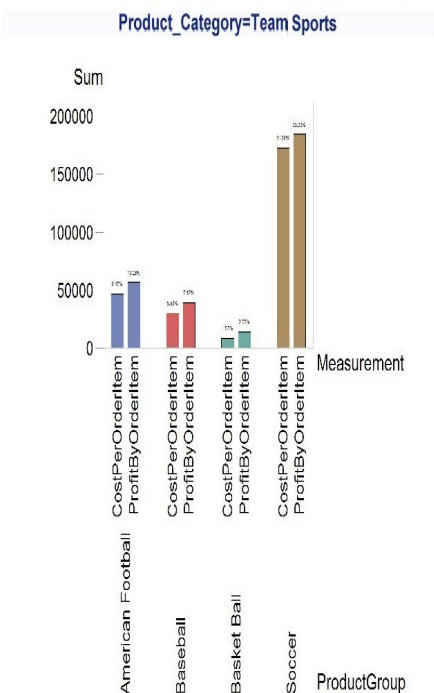
Product_Category=Indoor Sports



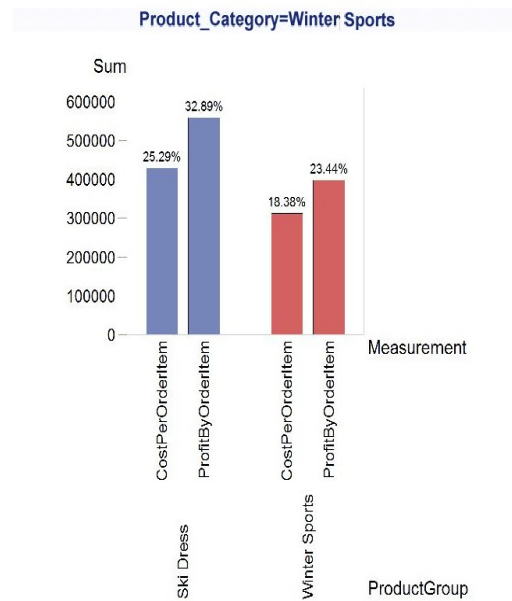
Prestige at Play?: Profit and Cost, Sports

Golf products have an unfavorable cost-to-profit ratio, however, golf clothes have a surprisingly high profit to cost ratio which more than compensates for this difference. Again we see the importance of clothing to our company's bottom line. All items in the racket sports category also had a quite high profit-to-cost ratio. It could be that golf and tennis, as "prestige sports" might even benefit from high price tags. Skates, like tents, are another high earner with a less impressive profit-to-cost ratio.

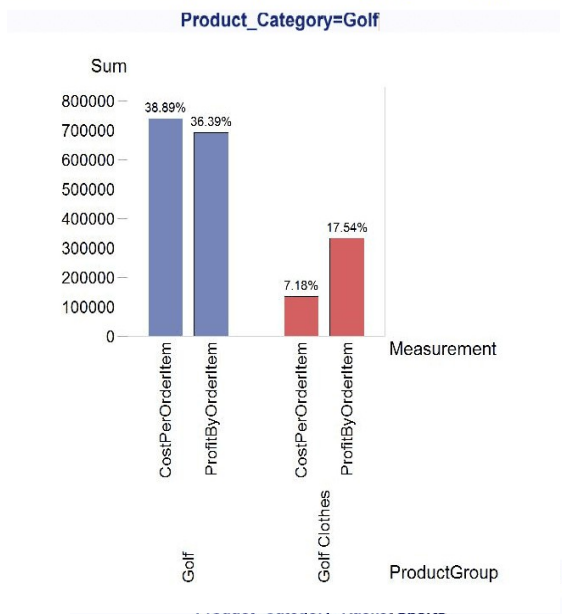
Profit and Cost By Group and Category, 2013, Sports



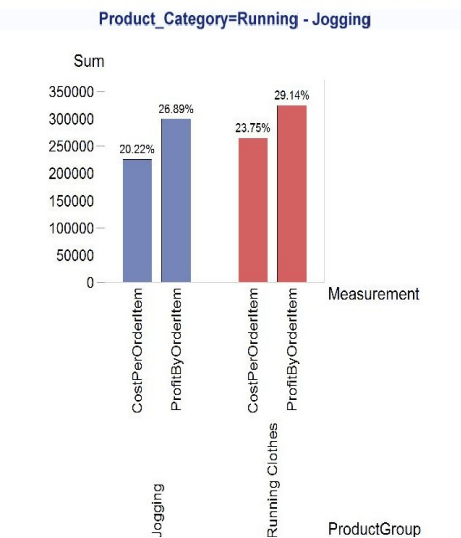
Profit and Cost By Group and Category, 2013, Sports



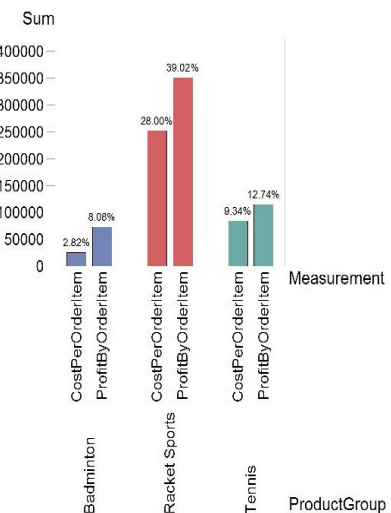
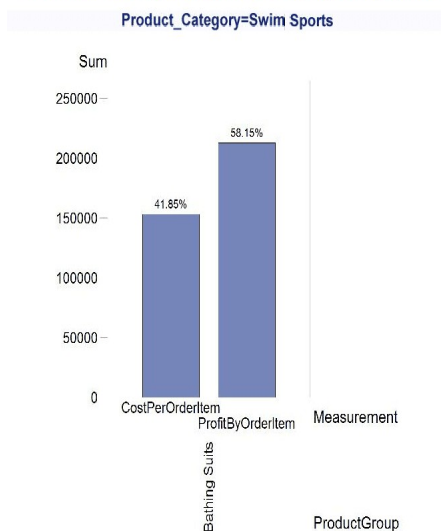
Profit and Cost By Group and Category, 2013, Sports



Profit and Cost By Group and Category, 2013, Sports



Profit and Cost By Group and Category, 2013, Sports

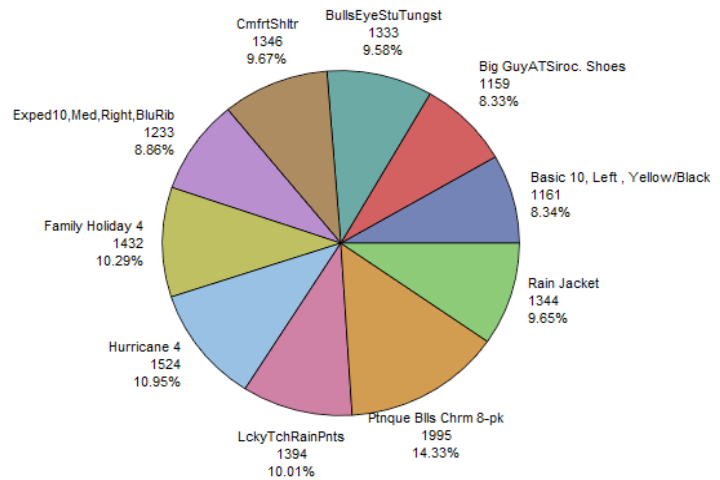


2. Most Popular Products

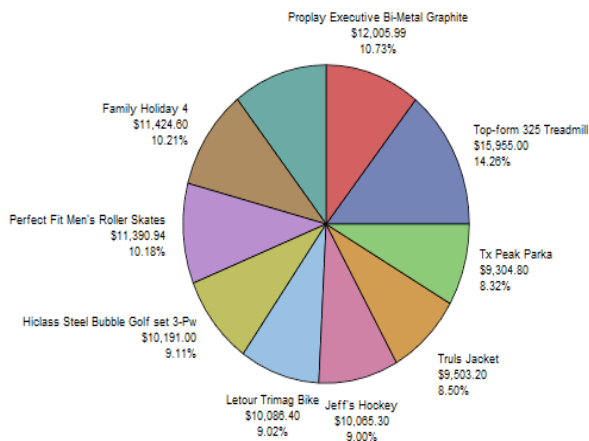
Sports and Variety: Top Individual Products by Quantity

Petanque Balls, a tent, a dart set, and rain pants have all made it into the top ten products in terms of sales by quantity. It is difficult to make generalizations about what unites these products. It would be interesting to investigate their placement in stores and catalogs, in order to determine what makes them so popular.

Top 10 Products Sold in 2013 by Quantity



Top 10 Products Sold in 2013 by Revenue



Eclectic Hits: Top Individual Products by Revenue

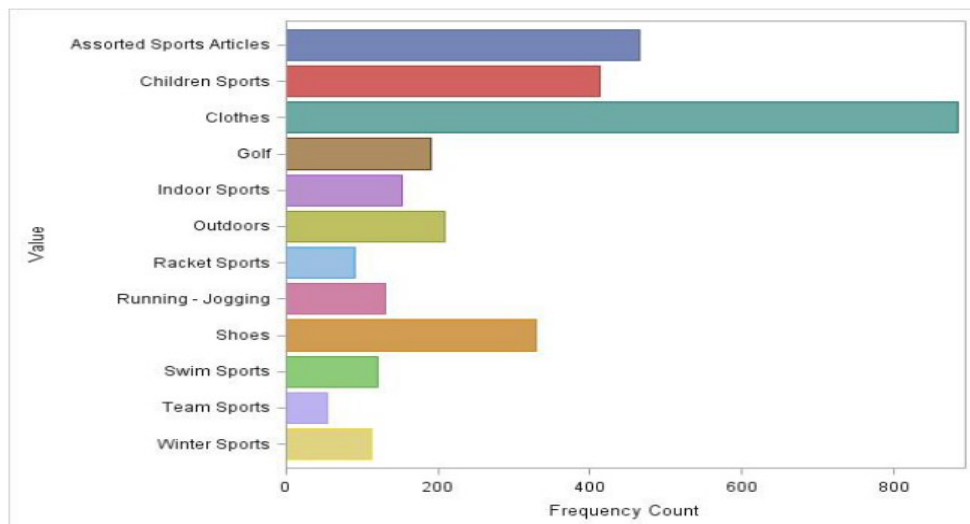
Skates continue to be a surprise hit, with one model placing in the top ten of all products in terms of revenue.

One product is a treadmill which should come as no surprise as it is a big ticket item.

Clothing and shoes items also make appearances, confirming the importance of these categories.

3. Products not sold in 2013

Products Not Sold in 2013 by Category



3,000 Products Not Active

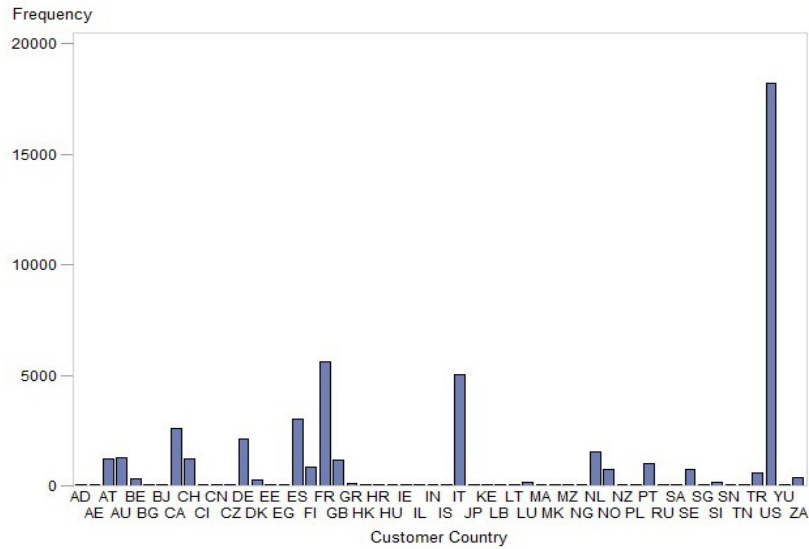
Over 3,000 products are on the books but were not ordered in 2013. The majority are in the Clothes or Sports category, which reflects the large size of these groups. It would be worthwhile to remove these products from our line and our accounting systems going forward.

C. Customers

1. Customers Inactive 12 Months

50,000 Inactive Customers

Inactive Customers by Country 2013



Over 50,000 customers did not place an order in 2013. A list of their names is beyond the scope of this report, so they are here summarized by country. The United States has by far the largest amount-this is worth investigating.

Inactive customers are an opportunity for growth- if they have placed an order, at one point we had a product they needed. We can conduct a survey of these customers to find out what dissatisfied them about their experience or if there is anything we can do better. We can also send them a discount postcard in the mail.

2. Most Valuable Customers

Most Valuable Customers

Customer ID	Customer Last Name	Customer First Name	Customer Country	Overall Revenue	Revenue by Customer	Percent Total Revenue by Customer
72147	Roelants	J.J.W.	NL	\$29934910.62	\$12,311.88	0.041129
91248	Hop	R.J.F.	NL	\$29934910.62	\$10,849.80	0.036245
52537	García Vela	Iván	ES	\$29934910.62	\$9,841.82	0.032877
59770	Mccotter	Octavia	GB	\$29934910.62	\$9,536.34	0.031857
50386	Wuth	Tillmann	DE	\$29934910.62	\$9,345.46	0.031219
56051	Winthagen	T.A.M.	NL	\$29934910.62	\$9,113.00	0.030443
89591	Armisen	Pedro	ES	\$29934910.62	\$9,046.20	0.03022
62099	Eigel	Crescent	US	\$29934910.62	\$8,932.10	0.029838
63238	Tiberi	Jack	FR	\$29934910.62	\$8,915.30	0.029782
83407	Perone	Massimo	IT	\$29934910.62	\$8,710.73	0.029099

Netherlands VIPs: Most Valuable Customers by Total Spend, 2013

Despite the Netherlands office being responsible for just 7.5% of total company revenue, they are responsible for three out of ten of our top customers.

Because these customers have such a large spend, it is worth learning more about all of them on an individual basis. Further research should be done to determine if they may be reselling our products, for example.

D. Efficiency

1. Top Salespeople and Managers

Top 10 Employees by 2013 Sales

SUM_of_Total_Retail_Price	Employee ID	Employee Name	Manager ID	Department	Job Title	Salary Company	Country_Abbreviation	Sales-Salary Manager Name
\$171,083.22	120525	H.C. Gobel	120577	Sales	Sales Rep. II	28120 Orion Holland	NL	142963.2 S.E.G. Konig
\$162,903.07	120359	Christelle Bourrier	120415	Sales	Sales Rep. II	27555 Orion France	FR	135348.1 Alain-Patrick Da Cunha
\$162,252.80	120623	Patrizia Moraschini	120654	Sales	Sales Rep. I	27095 Orion Italy	IT	135157.8 Francesca Crescenzo
\$160,586.86	120836	Inés Niqui Salvat	120881	Sales	Sales Rep. IV	31515 Orion Spain	ES	129071.9 Juan Sánchez Marin
\$158,956.29	120527	Jan-Reijer Rutten	120577	Sales	Sales Rep. III	30135 Orion Holland	NL	128821.3 S.E.G. Konig
\$158,250.12	120361	Agnes de Fourtoul	120415	Sales	Sales Rep. II	26790 Orion France	FR	131460.1 Alain-Patrick Da Cunha
\$157,163.76	120619	Eugenio Bottazzo	120654	Sales	Sales Rep. I	26105 Orion Italy	IT	131058.8 Francesca Crescenzo
\$153,878.70	121040	Brienne Darrohn	121144	Sales	Sales Rep. III	29525 Orion USA	US	124353.7 Renee Capachietti
\$148,768.66	120621	Piera Bvenigni	120654	Sales	Sales Rep. I	25895 Orion Italy	IT	122873.7 Francesca Crescenzo
\$143,761.22	120526	Gerard Blanken	120577	Sales	Sales Rep. II	27640 Orion Holland	NL	116121.2 S.E.G. Konig

High-performers in Netherlands, Italy, France

Considered with the above context that 3 of the top customers are located in the Netherlands, it is perhaps unsurprising that three of the top salespeople are in the Netherlands, as it is reasonable that they are assigned to these customers. More notable is that Manager Francesca Crescenzo of Italy appears on this list three times, as three of her salespeople have made it into the top ten employees. Alain-Patrick Da Cunha of Orion France also has two salespeople in the top ten. These salespeople and managers should be recognized for their achievements, and perhaps could give talks to other salespeople within their office or even in other offices on effective sales strategies for our products.

Bottom 10 Employees by 2013 Sales

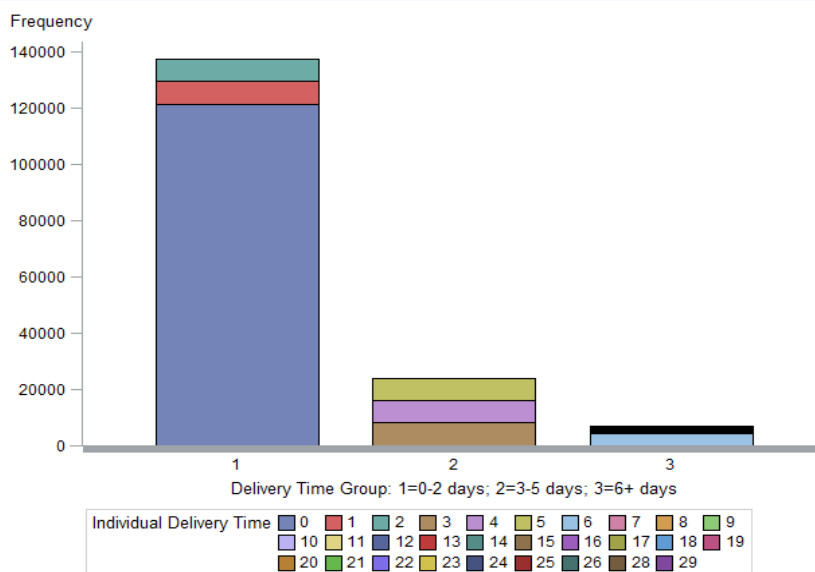
SUM_of_Total_Retail_Price	Employee ID	Employee Name	Manager ID	Department	Job Title	Salary Company	Country_Abbreviation	Sales-Salary Manager Name
\$18.60	121113	Karen Costine	121145	Sales	Temp. Sales Rep.	27480 Orion USA	US	-27461.4 Dennis Lansberry
\$173.10	120499	Helmut Rettig	120512	Sales	Temp. Sales Rep.	28885 Orion Germany	DE	-28711.9 Signid Lotfalkhani
\$189.90	120500	Markus Haßelberg	120512	Sales	Temp. Sales Rep.	27475 Orion Germany	DE	-27285.1 Signid Lotfalkhani
\$334.80	120252	Jean-Do Lenaers	120258	Sales	Temp. Sales Rep.	26450 Orion Belgium	BE	-26115.2 Kenneth Van Heembeek
\$355.20	120960	Biddy Chalisey	120989	Sales	Sales Rep. IV	30615 Orion UK	GB	-30259.8 Byron Baker
\$394.00	120565	F.R.E. Van Den Nobelen	120577	Sales	Temp. Sales Rep.	26075 Orion Holland	NL	-25681.1 S.E.G. Konig
\$396.80	120251	Fr. Rochtus	120258	Sales	Temp. Sales Rep.	25785 Orion Belgium	BE	-25388.2 Kenneth Van Heembeek
\$429.60	120187	Reyne Catenacci	120103	Sales	Temp. Sales Rep.	26665 Orion Australia	AU	-26235.4 Wilson Dawes
\$466.20	121101	Bumetta Buckner	121143	Sales	Sales Rep. I	25390 Orion USA	US	-24923.8 Louis Favaron
\$593.70	120324	Ketty Nielsen	120330	Sales	Sales Rep. II	28580 Orion Denmark	DK	-27986.3 Bjarne Gudomlund Buch-Larsen

Temporary Salespeople in Bottom Ten

Conversely, there are several managers who have more than one salesperson in the bottom ten, such as Sigrid Lotfalkhani, and Kenneth van Heembeek. Notably, some of these sales representatives are temporary employees who may not have had as much time to accumulate sales.

2. Delivery Times

Banded Delivery Time 2013



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Efficient Deliveries with Some Room for Improvement

Overall delivery times were mostly efficient, with the vast majority occurring in 0-2 days. However, there was a small proportion of deliveries that took 7-29 days to arrive. When a delivery takes this long, we face the possibility of losing a customer. Further research is needed into why some deliveries take this long, and which steps can be taken to ameliorate this long lag time. Failing that, management of customer expectations is essential. We must inform customers of the expected delivery time of their products before they make their purchases, and take steps to ensure that our estimates are accurate.

E. Recommendations to CEO

There is high variability in the revenue by category. It may be more efficient to eliminate categories which have less than, say, 1% of the revenue.

It is apparent that there is not much salary variability by performance. Employee performance data should be used to give bonuses to high-performing salespeople as perhaps employees would be more motivated by bonuses. Also, it may make sense to lay-off the bottom-performing 10% of employees. The Netherlands office in particular appears to be very well-run with many of our top-performing employees and most-valuable customers being located there, despite this office being of average size in terms of revenue.

There is a large number of inactive customers. Inactive customers could be sent a follow-up postcard informing them of our recent product additions and offering them a 20% discount on their next order, encouraging them to become our customer again.

Sports remains our strongest category, and we should take steps to ensure that we maintain our identity as a sporting goods company. However, when looking within sales by product categories, it becomes clear that the clothing aspects of sporting goods are very important as well, and clothing can be considered our second identity. To support this, we should maintain good relationships with our clothing suppliers. Also, with the growth of online commerce, a return policy that customers can believe in is very important in the clothing business. I recommend we offer free shipping on clothing returns as well as a liberal return policy to encourage customers to order clothing online and via catalog without fear of fitting concerns.

VIII. References

1. SAS Enterprise Guide Help and SAS Enterprise Guide Getting Started Tutorial were consulted in performing this coursework.
2. Syphus, Stacey (2012). *SAS® Enterprise Guide® 1: Querying and Reporting Course Notes*. Cary, NC: SAS Institute Inc.
3. Great Recession in Europe. (2014, April 14). In *Wikipedia, The Free Encyclopedia*. Retrieved 14:36, April 26, 2014, from http://en.wikipedia.org/w/index.php?title=Great_Recession_in_Europe&oldid=604088953