



Bakery's Pie Analysis

Task:

Help Pie Bakery to improve their business by gathering insights from the last two years of pie sales!

Order NO	Order Date	Month/Yr	Day of Week	Pie Flavor	Quantity	Cost	Slice Or Whole Pie	Pre-Order/In-Store Purchase	Organic?
12520	6/11/2019	6/1/2019	Tuesday	Apple	4	10	Slice	In-Store	Yes
12521	6/11/2019	6/1/2019	Tuesday	Apple	4	10	Slice	Pre-Order	Yes
12522	6/11/2019	6/1/2019	Tuesday	Apple	3	7.5	Slice	In-Store	Yes
12523	6/11/2019	6/1/2019	Tuesday	Apple	4	80	Whole	In-Store	Yes
12070	6/14/2019	6/1/2019	Friday	Apple	5	12.5	Slice	Pre-Order	Yes
12071	6/14/2019	6/1/2019	Friday	Apple	3	7.5	Slice	In-Store	Yes
12072	6/14/2019	6/1/2019	Friday	Apple	1	20	Whole	Pre-Order	Yes
12073	6/14/2019	6/1/2019	Friday	Apple	5	12.5	Slice	In-Store	Yes
11793	6/15/2019	6/1/2019	Saturday	Apple	1	20	Whole	Pre-Order	Yes
11794	6/15/2019	6/1/2019	Saturday	Apple	1	2.5	Slice	In-Store	Yes
11065	7/4/2019	7/1/2019	Thursday	Cherry	5	100	Whole	Pre-Order	Yes
11066	7/4/2019	7/1/2019	Thursday	Cherry	5	100	Whole	In-Store	No
11067	7/4/2019	7/1/2019	Thursday	Cherry	3	7.5	Slice	Pre-Order	Yes
11068	7/4/2019	7/1/2019	Thursday	Strawberry Rhubarb	4	10	Slice	Pre-Order	No
11069	7/4/2019	7/1/2019	Thursday	Cherry	4	80	Whole	In-Store	Yes
11070	7/4/2019	7/1/2019	Thursday	Strawberry Rhubarb	1	20	Whole	In-Store	No
11071	7/4/2019	7/1/2019	Thursday	Cherry	3	7.5	Slice	Pre-Order	No
11072	7/4/2019	7/1/2019	Thursday	Cherry	5	12.5	Slice	In-Store	Yes
11073	7/4/2019	7/1/2019	Thursday	Apple	1	2.5	Slice	In-Store	No
11074	7/4/2019	7/1/2019	Thursday	Cherry	4	80	Whole	Pre-Order	No
11075	7/4/2019	7/1/2019	Thursday	Strawberry Rhubarb	3	60	Whole	In-Store	Yes
11076	7/4/2019	7/1/2019	Thursday	Apple	2	5	Slice	In-Store	No
11077	7/4/2019	7/1/2019	Thursday	Apple	1	20	Whole	Pre-Order	No
11078	7/4/2019	7/1/2019	Thursday	Apple	2	40	Whole	In-Store	Yes
11079	7/4/2019	7/1/2019	Thursday	Apple	1	2.5	Slice	Pre-Order	Yes

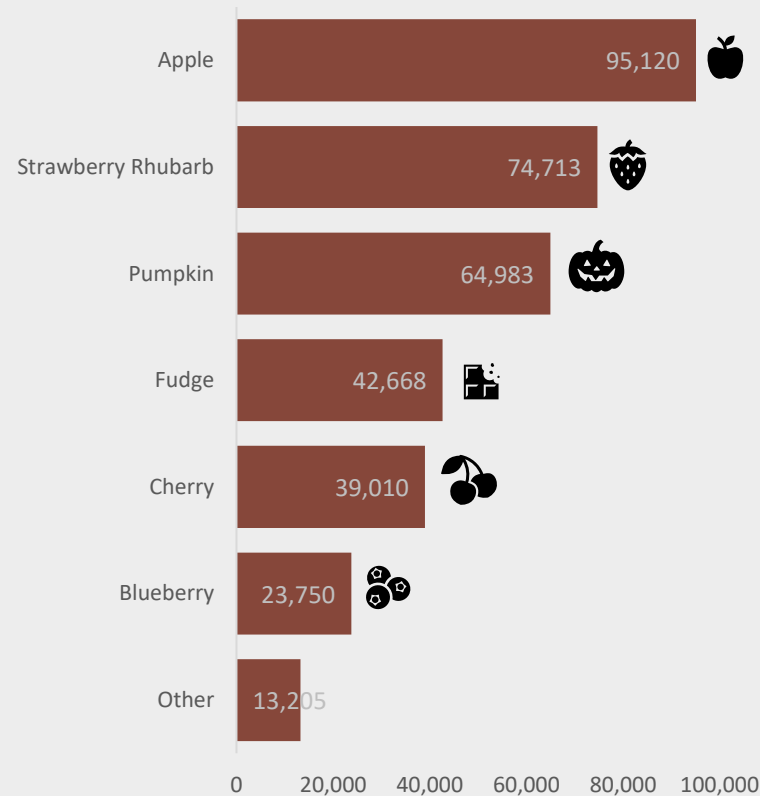
The data:

- Starts from June 2019 to November 2021.
- The bakery has 7 pie flavors.
- The quantity of the pie ranges from 1 to 5.
- The cost of the pie ranges from 2\$ up to 100\$.
- There are two options of the pie slice or whole.
- The purchase is done by two ways make in store or pre-ordered.
- There are two types of ingredients Organic or not.



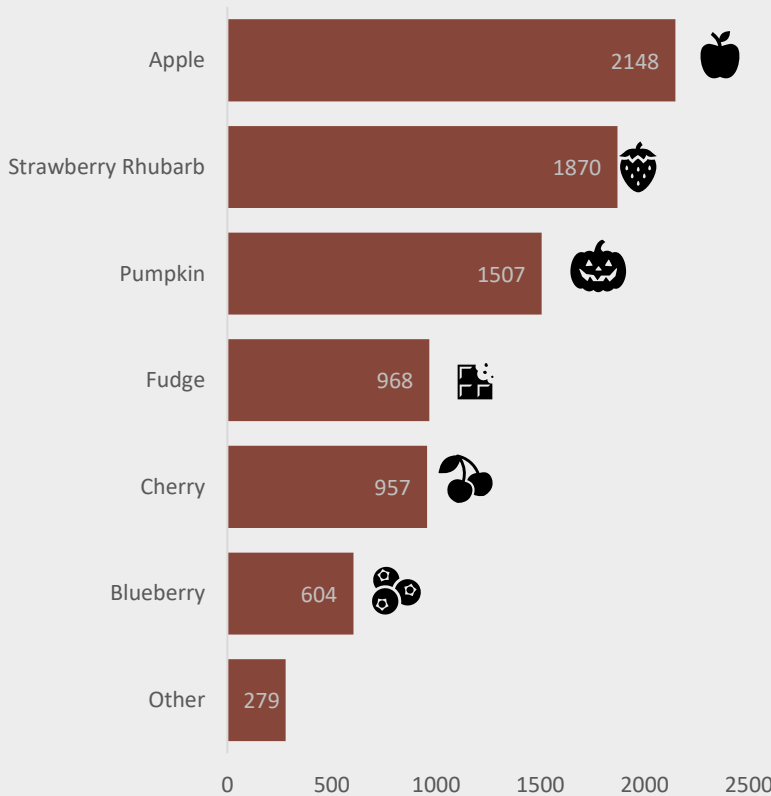
Pie Flavor Analysis

Revenue earned per Flavor



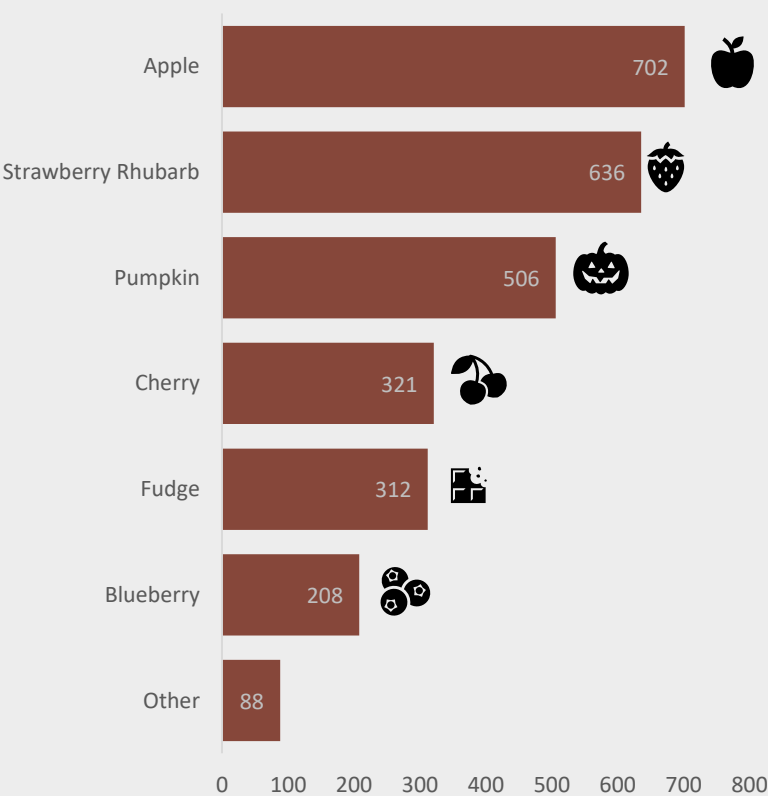
Apple and Strawberry produce the most revenue while blueberry produces the least.

Total Quantity per Flavor



Apple and Strawberry are ordered more in quantity.

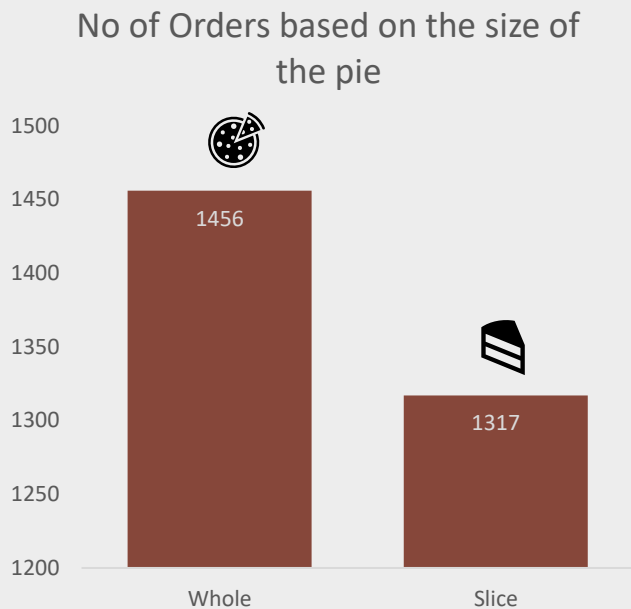
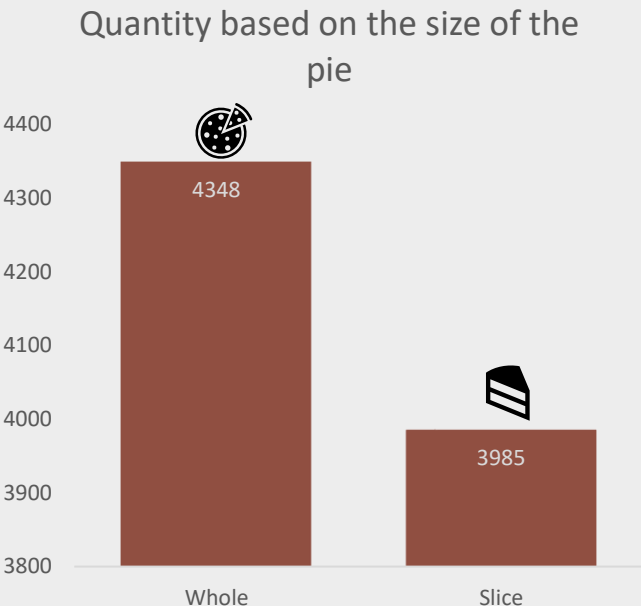
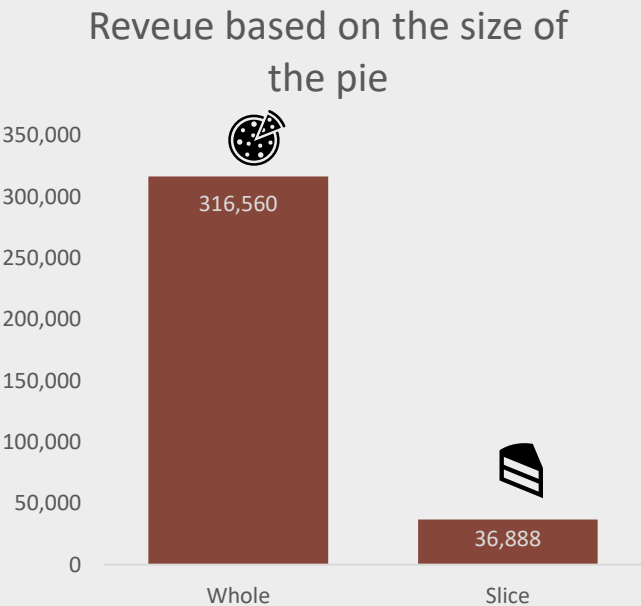
Total No of Orders per Flavor



Apple is the highest number of orders while blueberry is ordered less.



Size of the pie Analysis



Whole



Slice

Min Cost	20	2.5
Avg Cost	59.7	7.6
Max Cost	100	12.5

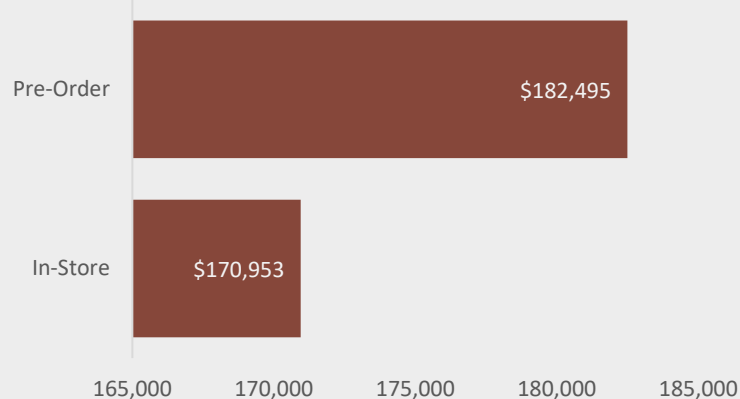
Insights :

- Whole pies generate revenue more than slice pies.
- Whole pies are more in quantity and No of orders.
- The whole pie has 8 slices, The cost of the slice is the same alone or in a whole pie, so there is no difference in buying a whole pie or just a slice.

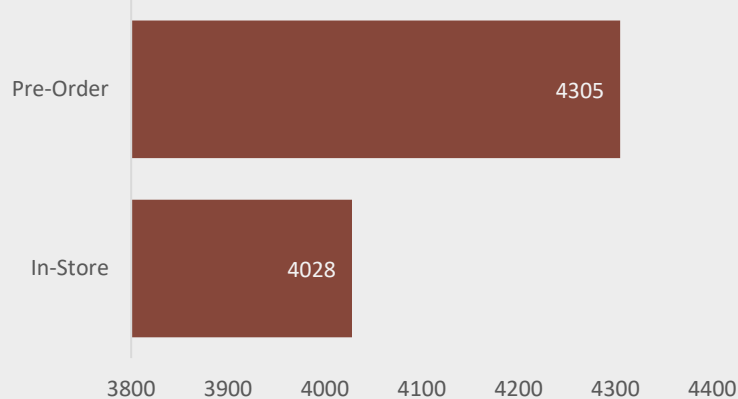


A purchasing System Analysis

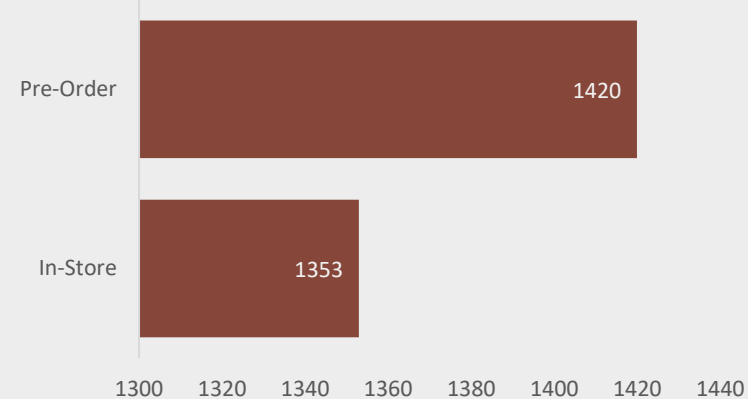
Total Revenue based on The system of Purchasing



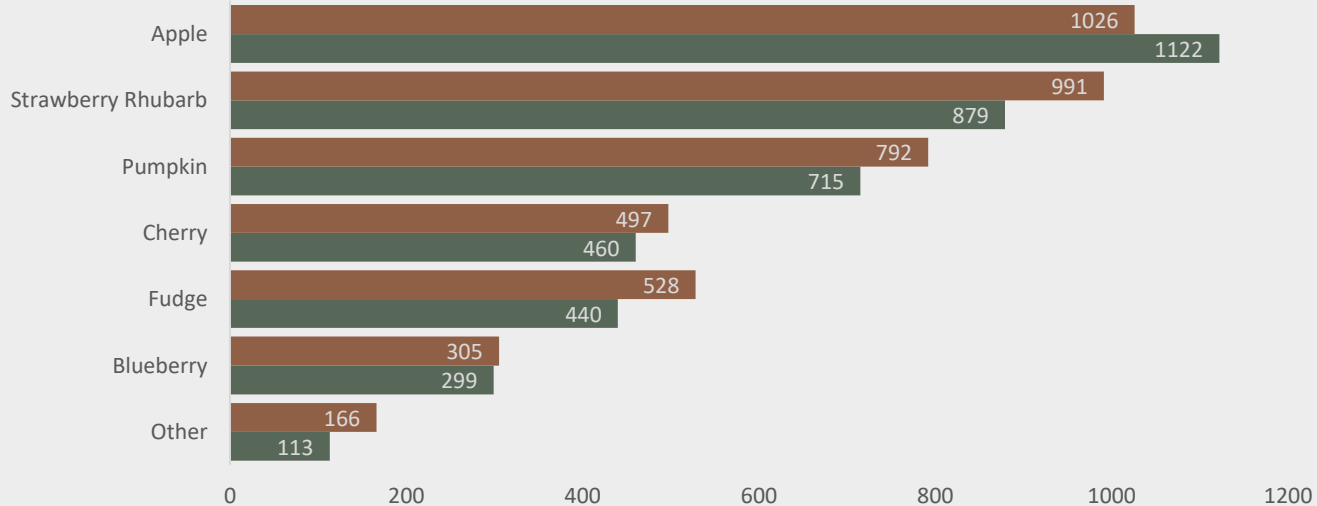
Quantity based on The system of Purchasing



No of Orders based on The system of Purchasing



Quantity of Flavor Pies based on the mode of purchase



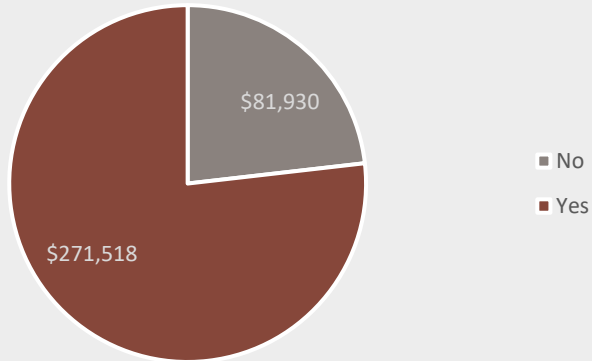
Insights :

- Pre-Order system produce more revenue, quantity and No of Orders.
- Based on the analysis I did **Apple flavor** is more In-Store orders while the other Flavors are more in Pre-Order system.

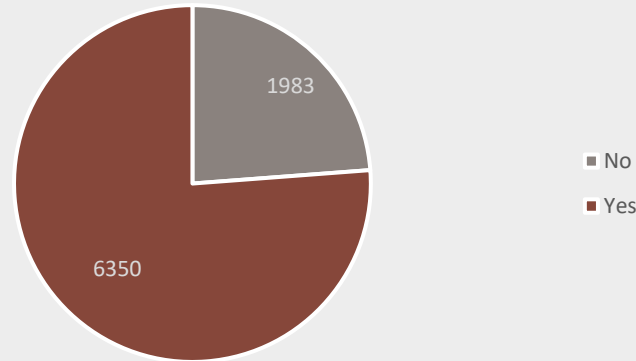


Ingredient Analysis

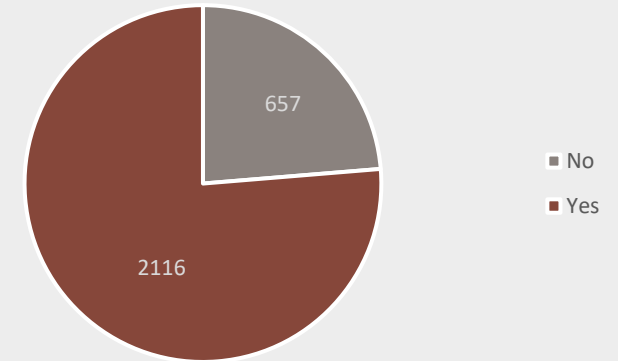
Total Revenue based on Organic or not



Quantity based on Organic or not



No of Orders based on Organic or not



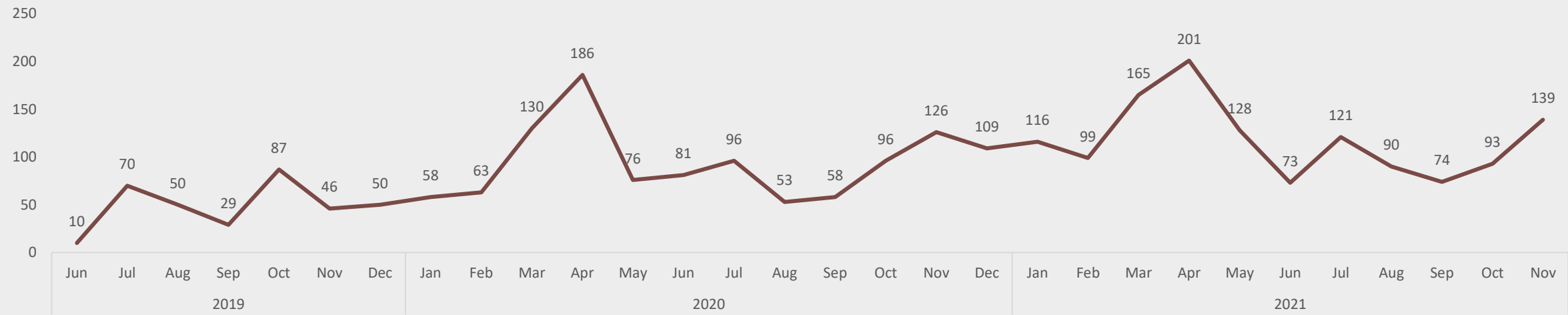
Insights :

- Organic pies produce revenue threefold the pies that don't have Organic ingredients.
- Customers order the organic pies more, so the quantity and No of orders are so high compared to nonorganic pies.

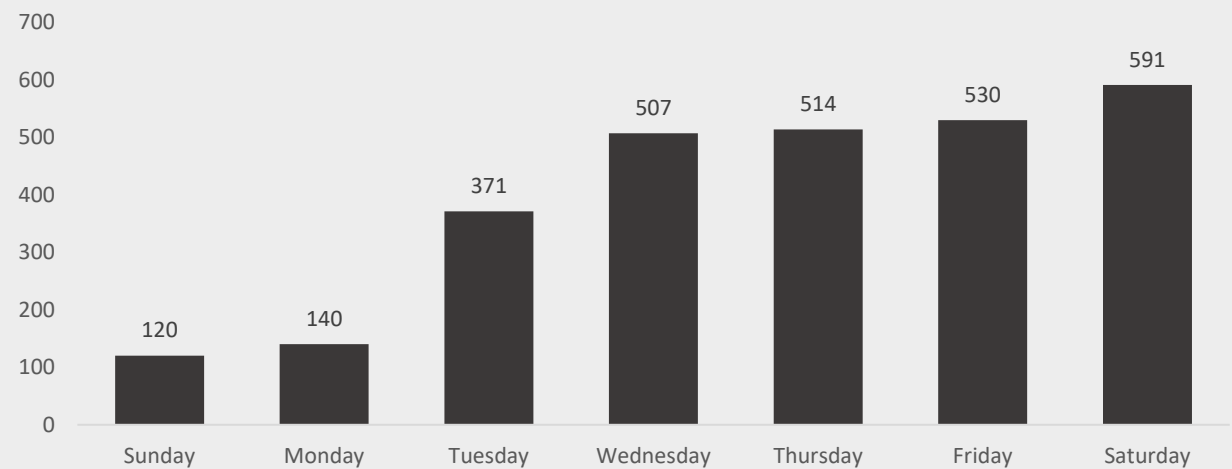


Sales Analysis Over The past 3 Years

No. of Orders over Years



No. of Orders based on The Day of Week

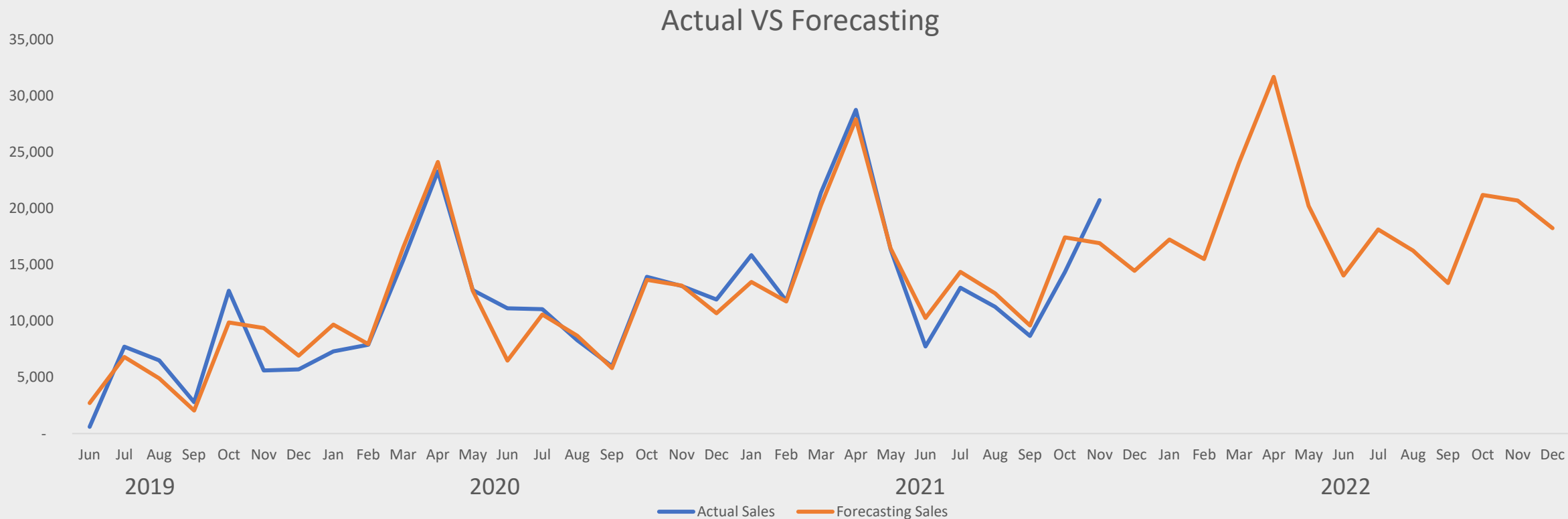


Insights :

- Sales had increased more in April and November, respectively, The increase had happened because the occasions in these months.
- Sales had increased more in the workdays more than the weekend.



Sales Forecasting Using Regression



- Here I made Forecasting from Dec 2021 To Dec 2022.
- The same trending that happened in Apr the last year will happen in this year too.