

SonicStream Digital Media Analysis Report

Analysis report by Keiran Seth V. Castrodes

Introduction

SonicStream Digital is a digital music store platform that started on 2021, currently selling a total of around 3,500 distinct music and video tracks.

Since the year of 2025 has already passed, the analytics team is tasked with the analysis of SonicStream's company performance along the following factors:

- Sales performance,
- Geographic insights,
- Customer behavior,
- Employee performance,
- Operational efficiency, and
- Time-based analysis.

The Marketing and Product Strategy team has decided to increase sales by focusing on top-selling IPs. Prior to analysis, this can be investigated by genre, country, or seasonal/yearly trend. In simpler terms, the team wishes to find out if there are any niches or trends that the company can cater to.

The Human Resources team has decided to ask for assistance from the analytics team to conduct employee performance reviews. In simpler terms, the team wishes which customer representatives performed well or need further assistance or training.

Lastly, the Sales team has decided to ask for assistance from the analytics team in understanding SonicStream's current customer base. In simpler terms, they wish to estimate the longevity of our past and current customers.

This report is a collection of insights made by the Analytics team to address the business tasks given to us by the Marketing and Product Strategy team, the Human Resources team, and the Sales team.

Statement of the Business Task

The objective of this report is three-pronged:

1. Help the Marketing and Product Strategy team increase sales finding trends and niches.
2. Help the Human Resources team conduct performance reviews on the current customer representatives.
3. Help the Sales team understand the current customer base.

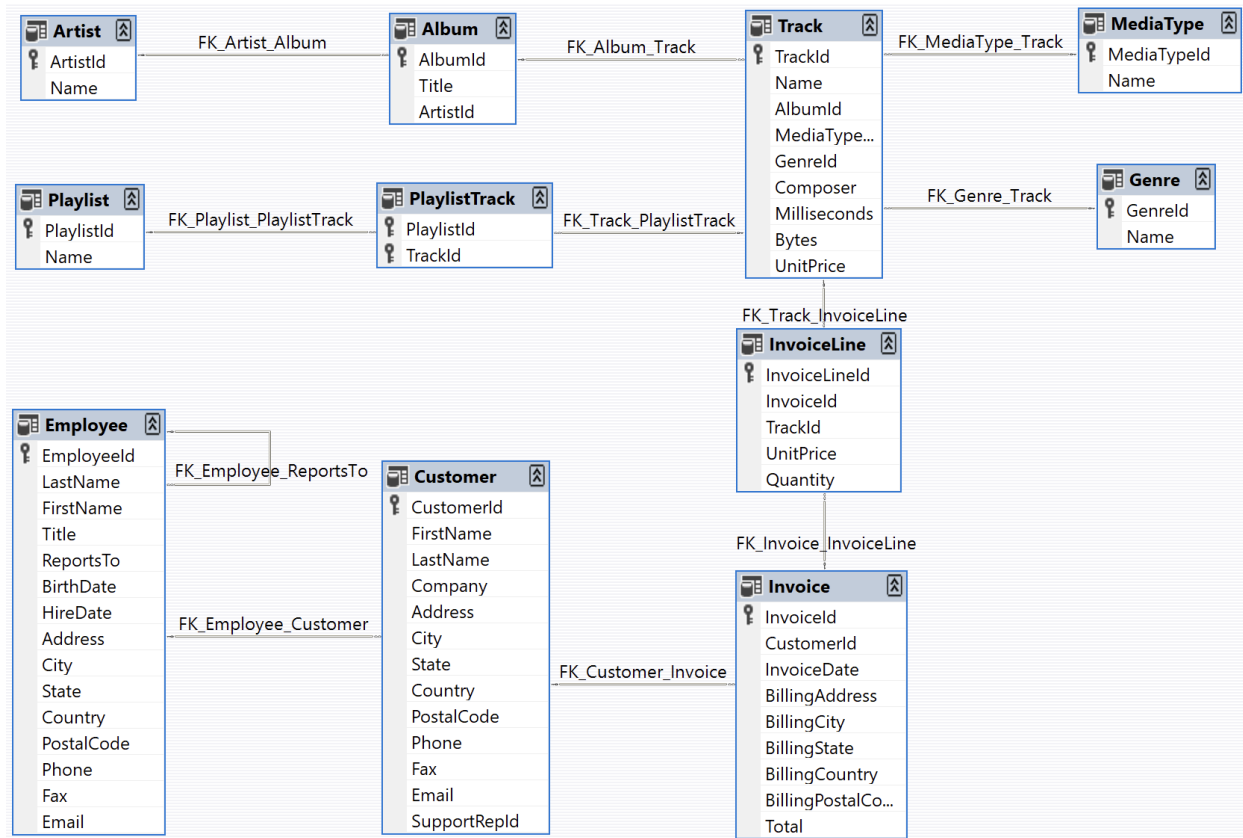
The goal of the analytics team is to deliver a comprehensive report on:

- Sales performance,
- Geographic insights,
- Customer behavior,
- Employee performance,
- Operational efficiency, and
- Time-based analysis.

Description of Data Sources

The analytics team will use SonicStream's in-house database, which contains all information in their digital media store. These include not just information about artists, albums, tracks, but also the information on invoices, customers, and employees.

See the entity-relationship diagram below.



Dataset Assessment

- **Reliable** - SonicStream benefits from keeping their records correct and secure.
- **Original** - SonicStream owns this database.
- **Comprehensive** - The dataset includes information about sales, customers, employees, and information on artists, albums, tracks, genres, and media types.
- **Current** - The current state of the dataset includes records from 2021 up to the present.
- **Cited** - This dataset is private property of SonicStream, and thus not publicly cited.

Summary of Data Preparation

After the database is sent to us from the Data Administration team, the Analytics team prepared the database in:

- **pgAdmin 4** for the purpose querying in SQL (PostgreSQL),
- **Microsoft Excel** for producing tables and graphs used in this analysis report, and
- **Microsoft Power BI** for the interactive dashboard containing key insights for the other stakeholders.

For more information on the data preparation process, see the [Documentation of Data Preparation](#).

Analysis

This section will lay out the insights given from the database in six sections:

- Sales Performance
- Time-based Analysis
- Operational Efficiency
- Geographic Insights
- Customer Behavior
- Employee Performance

Sales Performance

In this section, we will examine the volume of sales and the revenue generated throughout the entire lifetime of SonicStream's dataset, from 2021 to 2025. We will observe how these two measures differ in terms of the top-selling genres, albums, and artists, with an emphasized focus on genres.

How many invoices were made? How many sales were made? How much revenue was made?

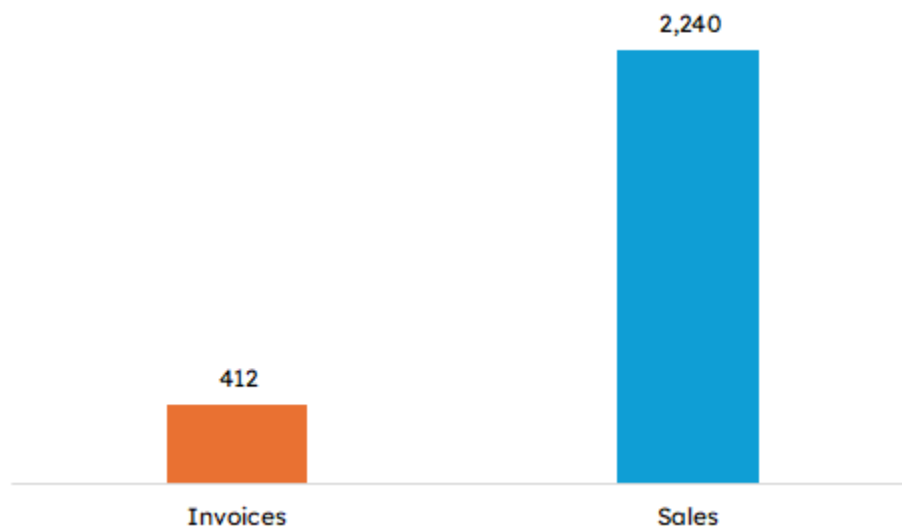


Figure 1. The number of unique invoices and the total number of sales from 2021 to 2025.

Throughout the company's entire lifetime, from 2021 to 2025, SonicStream earned \$2,328.60 after making a total of 412 unique invoices and a total of 2,240 sales.

What are the top-selling genres in terms of the number of sales?

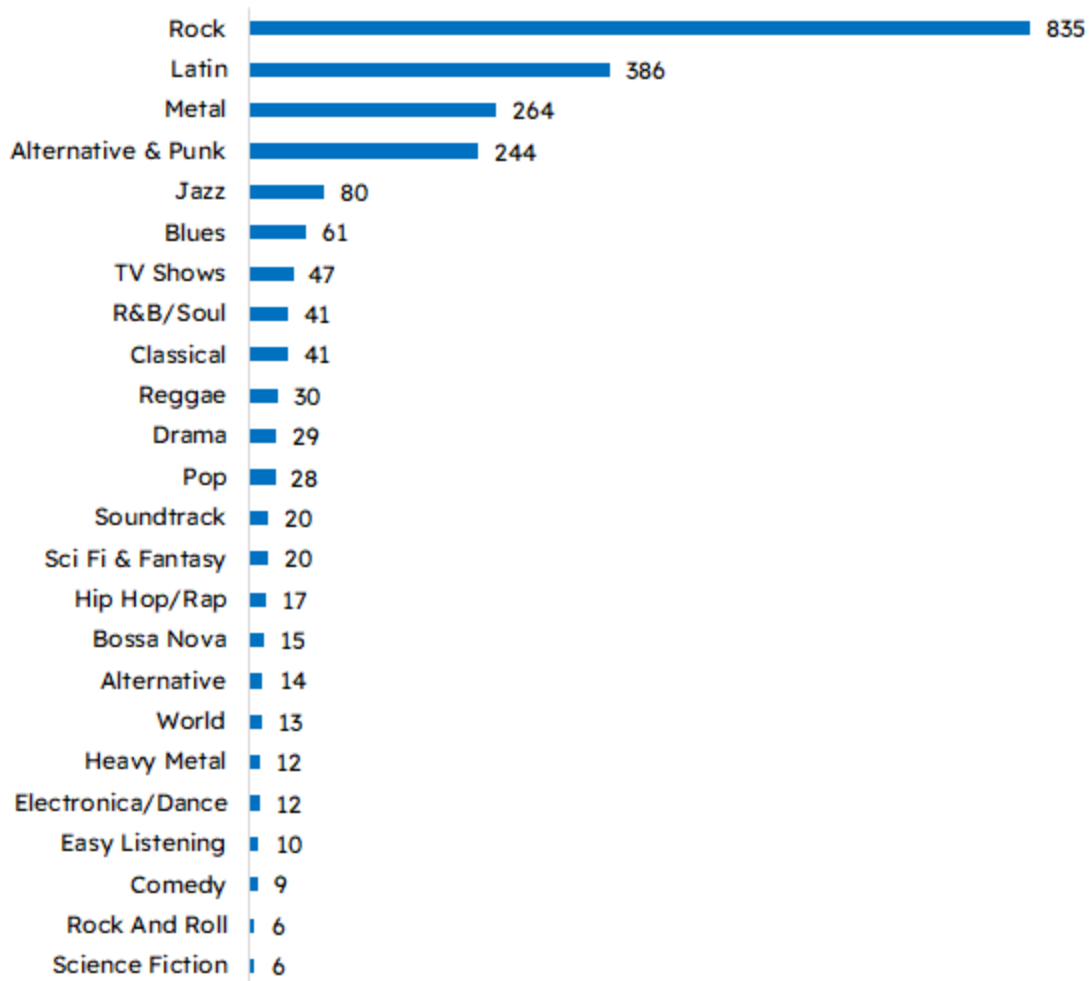


Figure 2. Number of sales by genre.

Viewing the number of sales in terms of the music genre, we find that, in descending order, Rock, Latin, Metal and Alternative & Punk are the 4 top-selling genres. These 4 genres produced at least 3 times the number of sales compared to the un-mentioned genres.

Ultimately, Rock is the number one top-selling genre in terms of the number of sales, being at least twice as top-selling than Latin, the second top-selling genre.

What are the top-selling genres in terms of the revenue?

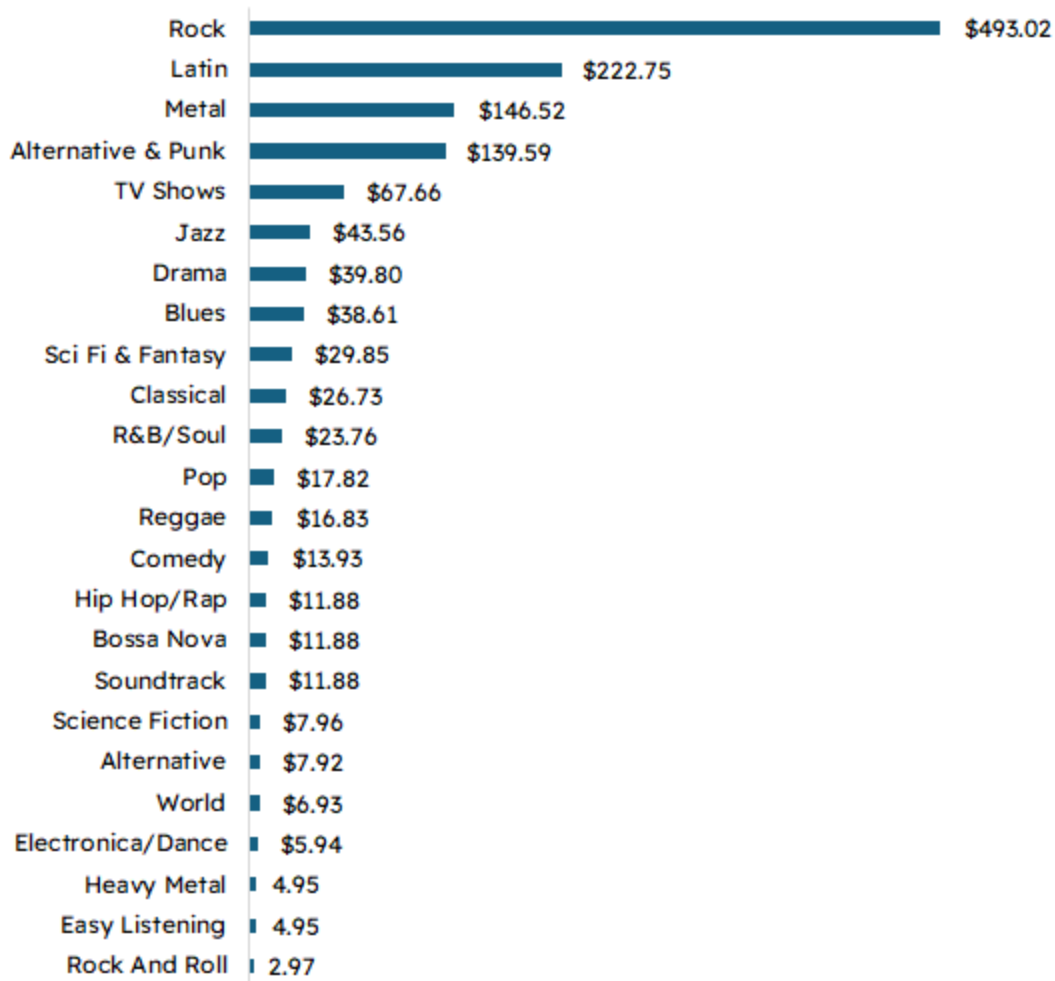


Figure 3. Revenue by genre

Viewing the revenue in terms of the music genre, we find that, in descending order, Rock, Latin, Alternative & Punk, and Metal are the top 4 selling genres. These 4 genres produced twice the revenue compared to the rest of the un-mentioned genres.

Ultimately, Rock is the number one top-selling genre in terms of revenue, being at least twice as top-selling than Latin, the second top-selling genre.

Thus, we found that in terms of both the number of sales and the revenue, the top 4 genres are Rock, Latin, Metal and Alternative & Punk.

What are the top-selling albums in terms of the number of sales?

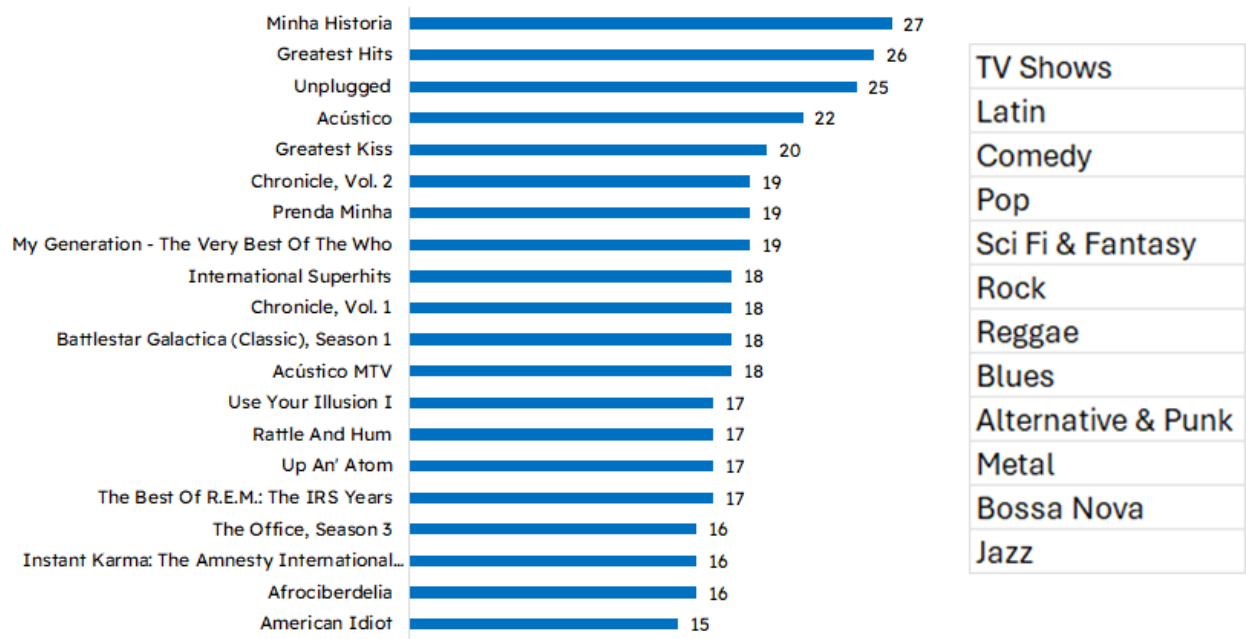


Figure 4. Top 20 albums by the number of sales and included genres.

Here, we list the top 20 albums in terms of the number of sales. Contrary to the insight given by Figure 2, the genres are more varied. Among these albums, low-selling genres such as TV Shows, Comedy, Pop, and Sci Fi & Fantasy are included, as well as the high-selling genres, Rock, Latin, Metal and Alternative & Punk, mentioned above.

What are the top-selling albums in terms of the revenue?

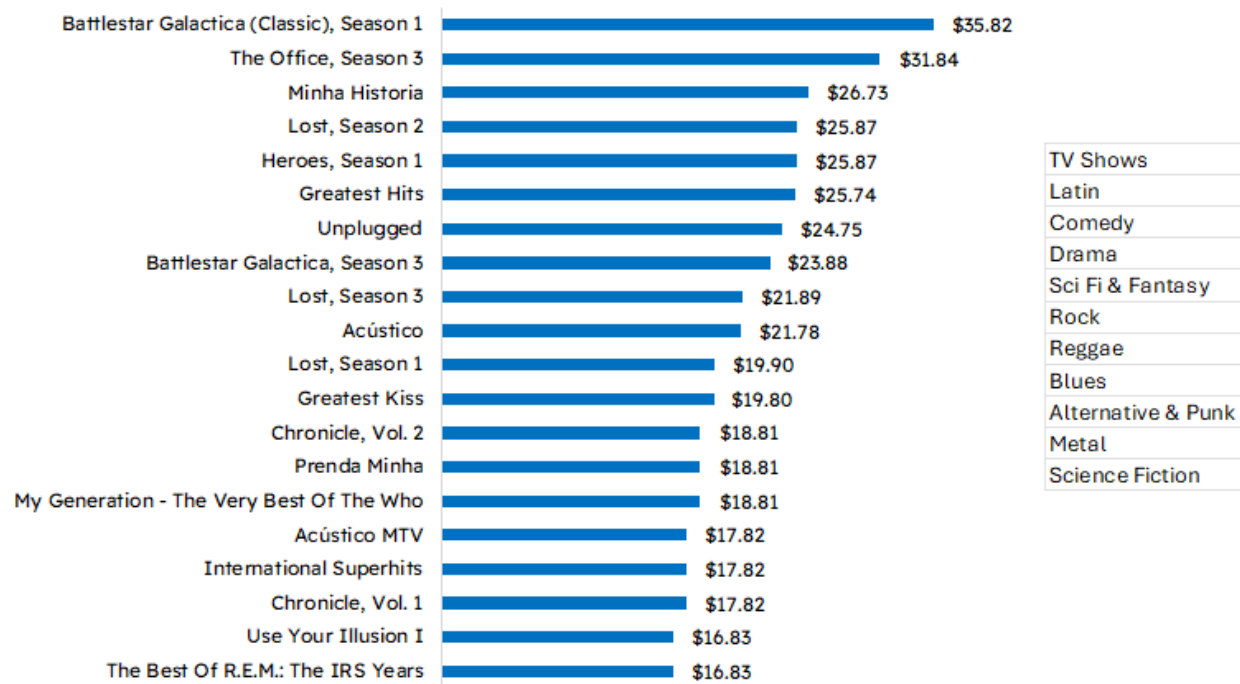


Figure 5. Top 20 albums by revenue and included genres.

Here, we list the top 20 albums in terms of the revenue. Contrary to the insight provided by Figure 3, the genres are more varied. Among these albums, low-selling genres such as TV Shows, Comedy, Drama, and Sci Fi & Fantasy are included, as well as the high-selling genres, Rock, Latin, Metal and Alternative & Punk, mentioned above.

Furthermore, notice that some of the albums listed in the chart are TV shows, namely, Lost, Heroes, and The Office.

Thus, we find that the top 20 albums by sales and the top 20 albums by revenue are mostly similar.

Consequently, after observing figures 4 and 5, we can see that there is no strong correlation between the top-selling genres and the top-selling albums. This observation makes sense since customers do not necessarily always buy and/or download full albums, but this needs more supporting data and research.

What are the top-selling artists in terms of the number of sales?

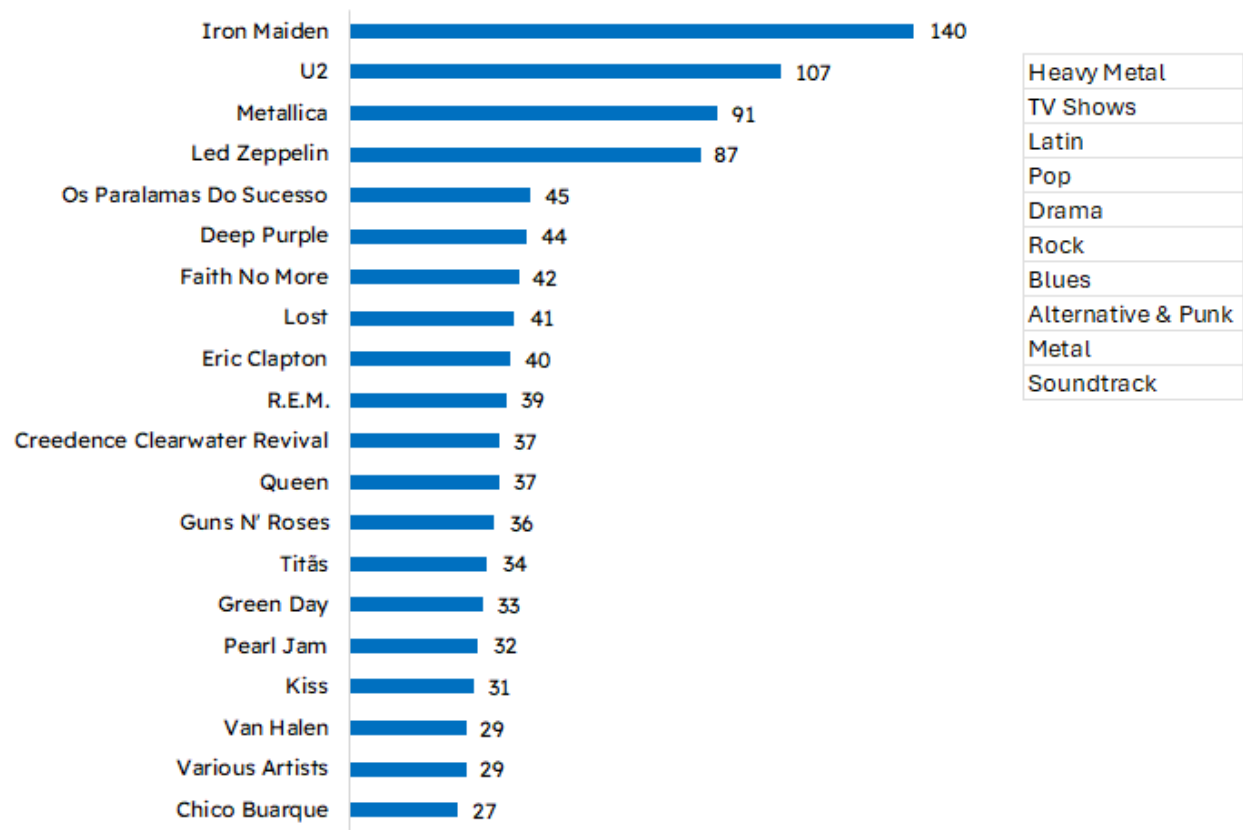


Figure 6. Top 20 artists by number of sales and included genres.

Here, we list the top 20 artists in terms of the number of sales. Supporting the insight provided by figure 2, most of the top selling genres are in this list. Namely, Rock, Latin, Metal and Alternative & Punk.

What are the top-selling artists in terms of the revenue?

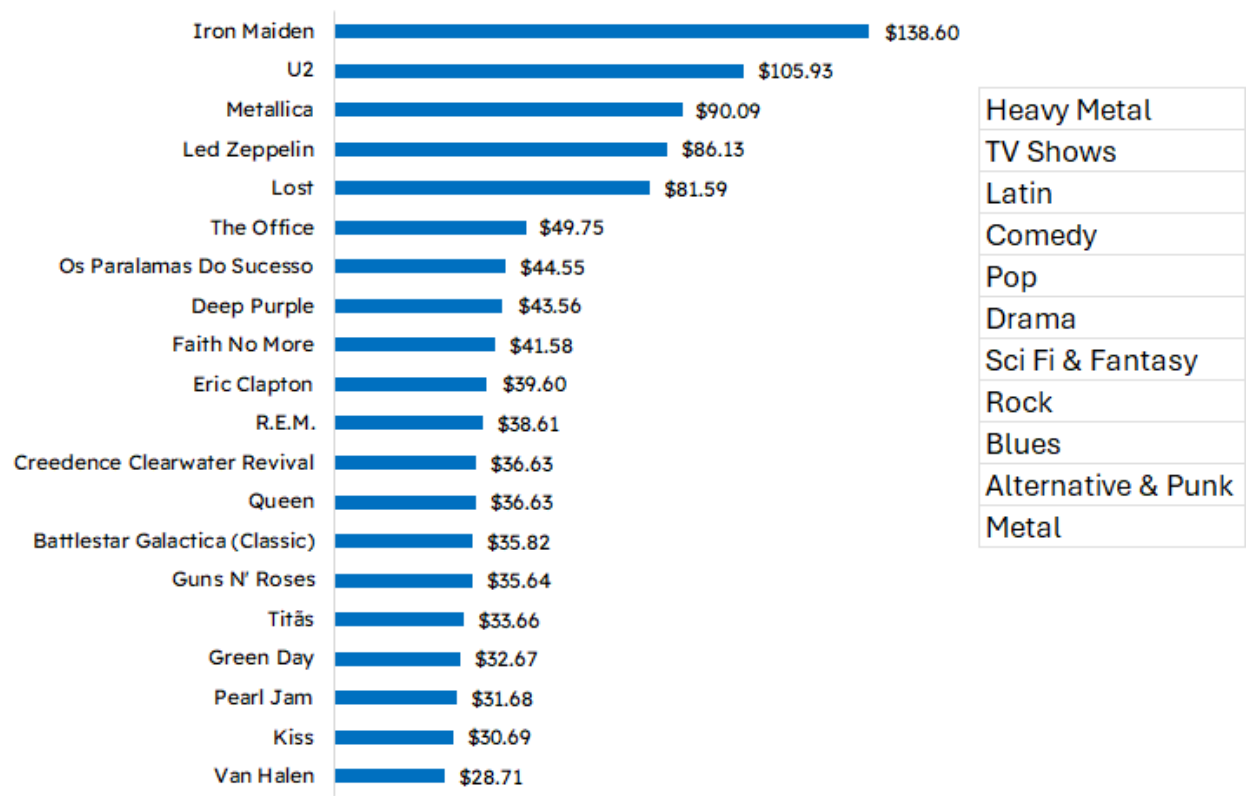


Figure 7. Top 20 artists by revenue and included genres.

Here, we list the top 20 artists in terms of the revenue. Supporting the insight provided by figure 3, most of the top selling genres are in this list. Namely, Rock, Latin, Metal and Alternative & Punk. However, note that some TV shows seem to climb up the list when comparing in terms of revenue. For example, see Lost between the two lists.

Time-based Analysis

In this section, we examine how the insights we uncovered in previous section, Sales Performance, differ by and change over time periods. This is where observe the changes in the number of sales and the revenue generated over time.

What is the yearly trend in the number of unique invoices? The number of sales? The revenue?

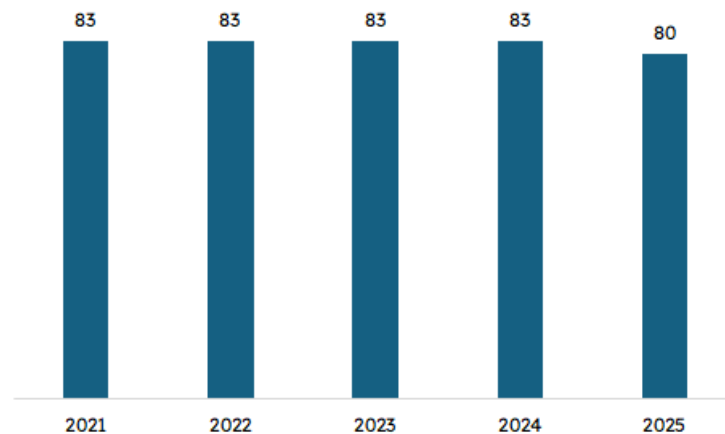


Figure 8. Number of unique invoices by year.

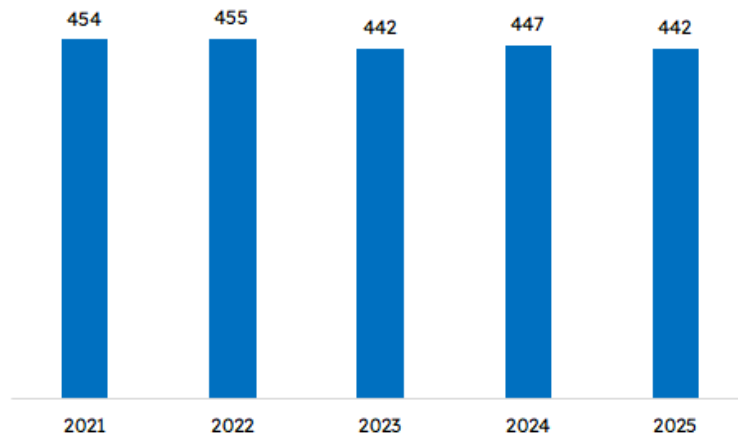


Figure 9. Number of sales by year.

Viewing the number of unique invoices and the number of sales by year, we see that there is not much significant variation. However, there is a slight decrease in the number of sales starting from 2023 and in the number of unique invoices in 2025.

Because of this, in all years, the number of unique invoices is still immensely close to the average yearly invoice of 82.40. Similarly, the number of sales is also immensely close to the average yearly sales of 448.

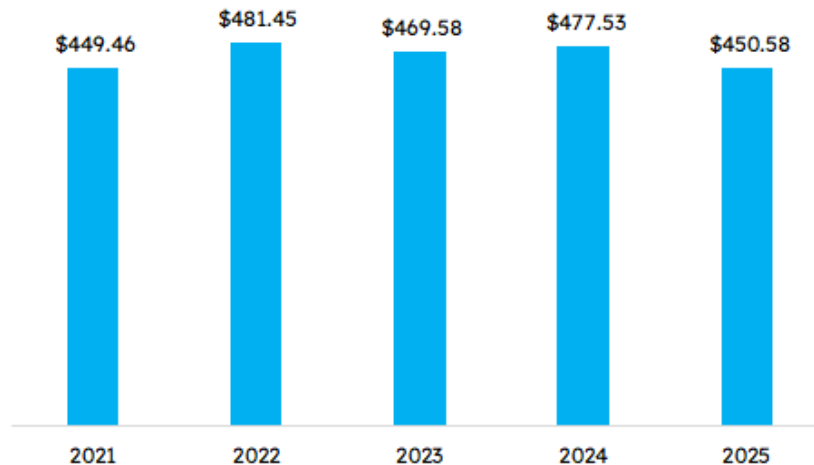


Figure 10. Revenue by year.

Viewing the revenue by year, we also see a similar situation where there is not much significant variation. Every revenue from 2021 to 2025 is immensely close to the average yearly revenue of \$465.72, with only the years 2022 to 2024 passing this average.

For each year, what is the quarterly trend in the number of unique invoices? The number of sales? The revenue?

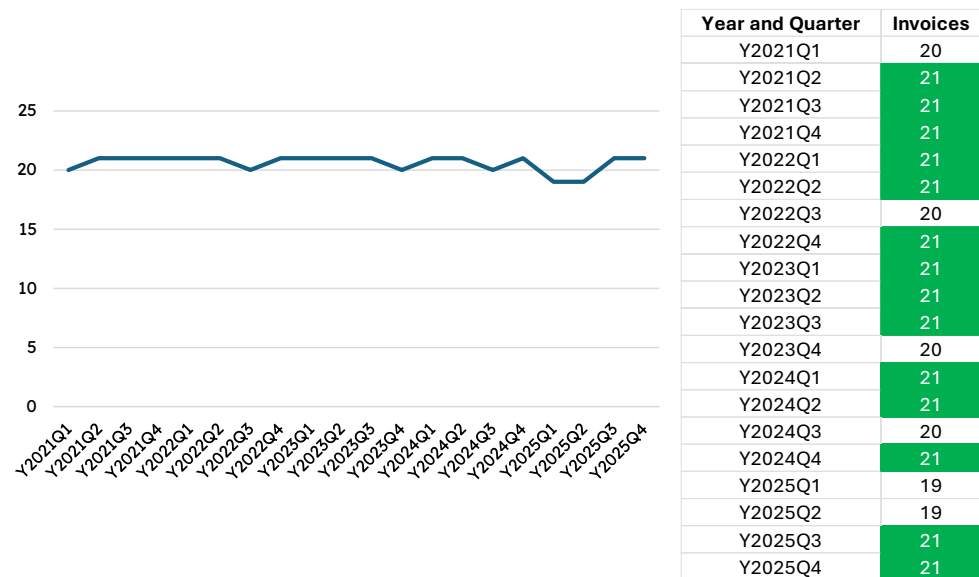


Figure 11. Number of unique invoices by year and quarter

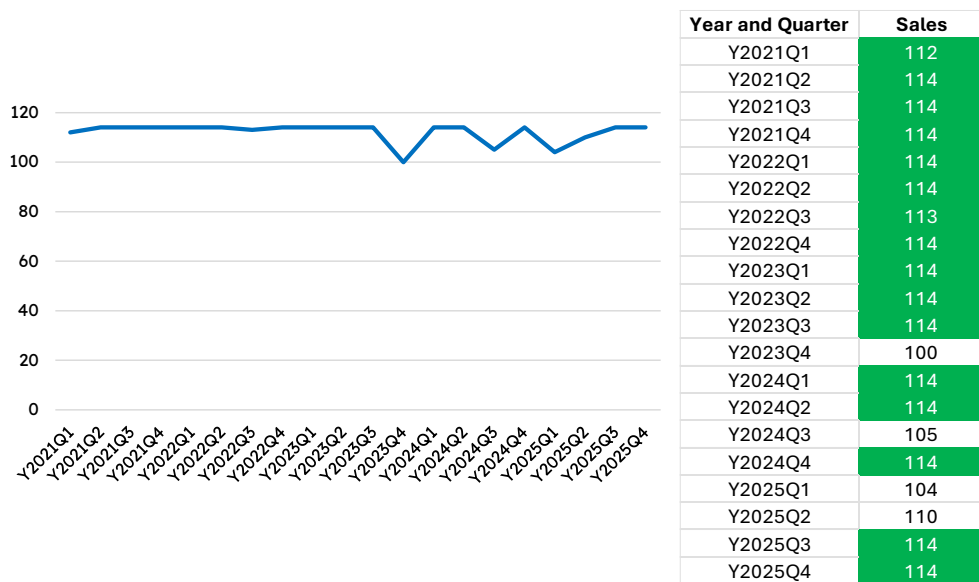


Figure 12. Number of sales by year and quarter

Viewing the number of unique invoices and the number of sales by year and quarter, we see that there is not much significant variation. In each quarter, most quarters pass the quarterly average of 21 invoices and the quarterly average of 112 sales.

However, note that in the number of sales, there are significant dips in quarter 4 of 2023, quarter 3 of 2024, and the first half of 2025.

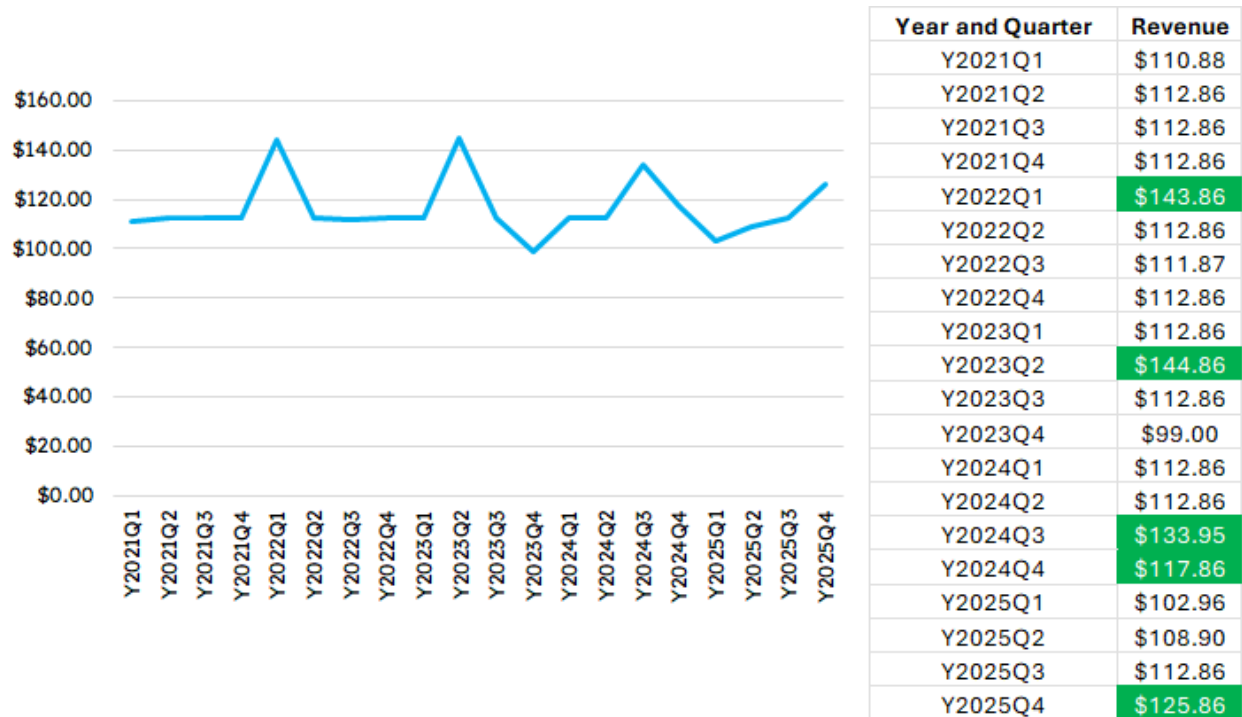


Figure 13. Revenue by year and quarter

Viewing the revenue by year and quarter, there is more variation. However, each quarterly revenue falls in the range from \$99.00 to \$144.86. However, only few pass the quarterly average revenue is \$116.43.

For each year, what is the monthly trend in the number of unique invoices? The number of sales? The revenue?

Year and Month	Invoices	Sales	Revenue	Year and Month	Invoices	Sales	Revenue
Y2021M1	6	36	\$ 35.64	Y2023M6	7	38	\$ 50.62
Y2021M2	7	38	\$ 37.62	Y2023M7	7	38	\$ 37.62
Y2021M3	7	38	\$ 37.62	Y2023M8	7	38	\$ 37.62
Y2021M4	7	38	\$ 37.62	Y2023M9	7	38	\$ 37.62
Y2021M5	7	38	\$ 37.62	Y2023M10	7	38	\$ 37.62
Y2021M6	7	38	\$ 37.62	Y2023M11	6	24	\$ 23.76
Y2021M7	7	38	\$ 37.62	Y2023M12	7	38	\$ 37.62
Y2021M8	7	38	\$ 37.62	Y2024M1	7	38	\$ 37.62
Y2021M9	7	38	\$ 37.62	Y2024M2	7	38	\$ 37.62
Y2021M10	7	38	\$ 37.62	Y2024M3	7	38	\$ 37.62
Y2021M11	7	38	\$ 37.62	Y2024M4	7	38	\$ 37.62
Y2021M12	7	38	\$ 37.62	Y2024M5	7	38	\$ 37.62
Y2022M1	7	38	\$ 52.62	Y2024M6	7	38	\$ 37.62
Y2022M2	7	38	\$ 46.62	Y2024M7	7	38	\$ 39.62
Y2022M3	7	38	\$ 44.62	Y2024M8	7	38	\$ 47.62
Y2022M4	7	38	\$ 37.62	Y2024M9	6	29	\$ 46.71
Y2022M5	7	38	\$ 37.62	Y2024M10	7	38	\$ 42.62
Y2022M6	7	38	\$ 37.62	Y2024M11	7	38	\$ 37.62
Y2022M7	7	38	\$ 37.62	Y2024M12	7	38	\$ 37.62
Y2022M8	7	38	\$ 37.62	Y2025M1	7	38	\$ 37.62
Y2022M9	6	37	\$ 36.63	Y2025M2	5	28	\$ 27.72
Y2022M10	7	38	\$ 37.62	Y2025M3	7	38	\$ 37.62
Y2022M11	7	38	\$ 37.62	Y2025M4	5	34	\$ 33.66
Y2022M12	7	38	\$ 37.62	Y2025M5	7	38	\$ 37.62
Y2023M1	7	38	\$ 37.62	Y2025M6	7	38	\$ 37.62
Y2023M2	7	38	\$ 37.62	Y2025M7	7	38	\$ 37.62
Y2023M3	7	38	\$ 37.62	Y2025M8	7	38	\$ 37.62
Y2023M4	7	38	\$ 51.62	Y2025M9	7	38	\$ 37.62
Y2023M5	7	38	\$ 42.62	Y2025M10	7	38	\$ 37.62
				Y2025M11	7	38	\$ 49.62
				Y2025M12	7	38	\$ 38.62

Table 1. Number of unique invoices, number of sales, and revenue by year and month

These are the monthly trends in the number of unique invoices, the number of sales, and the revenue. Note that the cells highlighted are the months where the monthly revenue passes (greater than or equal to) the monthly average revenue.

What is the forecasted revenue for the next 2 years?

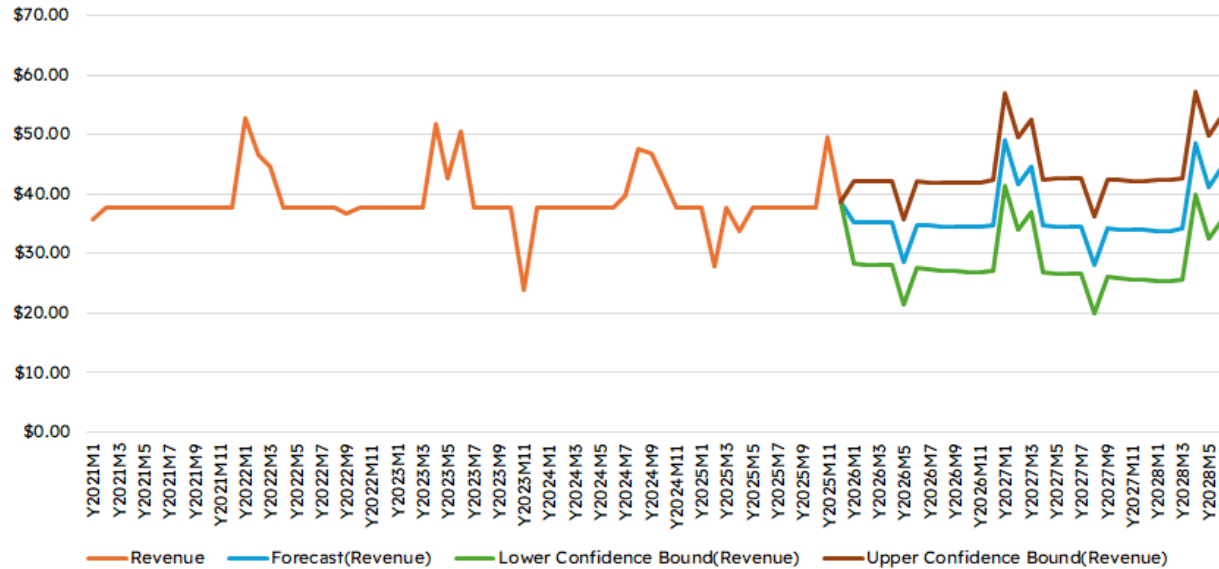


Figure 14. Forecasted revenue for the next 2 years

According to the monthly forecast over the store's lifetime, revenue will continue to settle for the next two years. To spark revenue growth, SonicStream must begin to make changes in sales strategies, marketing strategies, and create plans in increasing the current customer base.

What is the quarterly trend in the number of invoices, the number of sales and the revenue?

Average Number of Invoices	21
Maximum Number of Invoices	21
Minimum Number of Invoices	19

Table 2. Average, Maximum, and Minimum Quarterly Number of Invoices

Average Number of Sales	112
Maximum Number of Sales	114
Minimum Number of Sales	100

Table 3. Average, Maximum, and Minimum Quarterly Number of Sales

Average Revenue	\$116.43
Maximum Revenue	\$144.86
Minimum Revenue	\$99.00

Table 4. Average, Maximum, and Minimum Quarterly Revenue

Quarter	Average Number of Invoices	Average Number of Sales	Average Revenue
1	20	112	\$116.68
2	21	113	\$118.47
3	21	112	\$116.88
4	21	111	\$113.69

Table 5. Average Quarterly Number of Invoices, Average Quarterly Number of Sales, and Average Quarterly Revenue

While quarters 1 to 3 pass the average revenue of \$116.43, the quarterly average revenues are not too distant from the mean. Furthermore, observe that while in some years quarter 4 did pass the quarterly average revenue, the average in quarter 4 is still below, but close, to the quarterly average revenue.

Quarter	Seasonality Index
1	1.002147213
2	1.017521257
3	1.003864983
4	0.976466546

Table 6. Seasonality Index for all quarters

After computing for the seasonality index for all quarters, we find that there is increased revenue in the first 3 quarters.

What is the monthly trend in the number of invoices, the number of sales and the revenue?

Average Number of Invoices	7
Maximum Number of Invoices	7
Minimum Number of Invoices	5

Table 7. Average, Maximum, and Minimum Monthly Number of Invoices

Average Number of Sales	37
Maximum Number of Sales	38
Minimum Number of Sales	24

Table 8. Average, Maximum, and Minimum Monthly Number of Sales

Average Revenue	\$38.81
Maximum Revenue	\$52.62
Minimum Revenue	\$23.76

Table 9. Average, Maximum, and Minimum Monthly Revenue

Month	Average Number of Invoices	Average Number of Sales	Average Revenue
1	7	38	\$40.22
2	7	36	\$37.44
3	7	38	\$39.02
4	7	37	\$39.63
5	7	38	\$38.62
6	7	38	\$40.22
7	7	38	\$38.02
8	7	38	\$39.62
9	7	36	\$39.24
10	7	38	\$38.62
11	7	35	\$37.25
12	7	38	\$37.82

Table 10. Average Monthly Number of Invoices, Average Monthly Number of Sales, and Average Monthly Revenue

As reflected in the previous question, most of the months in the first three quarters pass the monthly average revenue. Namely, **January, March, April, June, August, and September**. However, note that the monthly average revenues for all months are not too distant from the mean.

Month	Seasonality Index
1	1.036330843
2	0.96469982
3	1.005410977
4	1.021128575
5	0.995104355
6	1.036330843
7	0.979644422
8	1.02087091
9	1.011079619
10	0.995104355
11	0.959804174
12	0.974491111

Table 11. Seasonality Index for all months

After computing for the seasonality index for all months, we find that there is increased revenue in the months of January, March, April, June, August, and September.

Operational Efficiency

In this section, we look at the many ways in which the SonicStream digital store sells tracks and generate revenue per invoice, and within several timeframes.

What’s the average and median number of tracks per invoice?

Mean Tracks Sold Per Invoice	5.44
Median Tracks Sold Per Invoice	4

Table 12. Average and Median Tracks Sold Per Invoice

On average, there are 5 tracks being sold per invoice, with a median of 4 tracks being sold per invoice. This means that the distribution of the number of tracks being sold per invoice are positively skewed. In simpler terms, SonicStream has more invoices where they sell at most 5 tracks.

What’s the distribution of invoices by the number of tracks being sold?

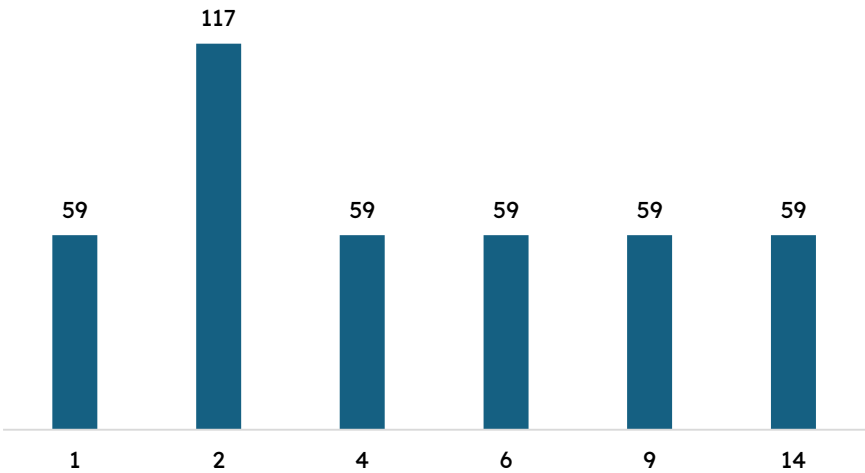


Figure 15. Count of Invoices by Number of Tracks Per Invoice

The highest number of invoices (117 invoices) contain 2 tracks. For invoices which do not contain 2 tracks, the number of invoices (59 invoices) are equivalent. Note that while there are invoices where there are 14 to 15 tracks sold, there are no invoices where the number of tracks are greater than 9 or less than 14, which might be because SonicStream has no albums with those track count ranges.

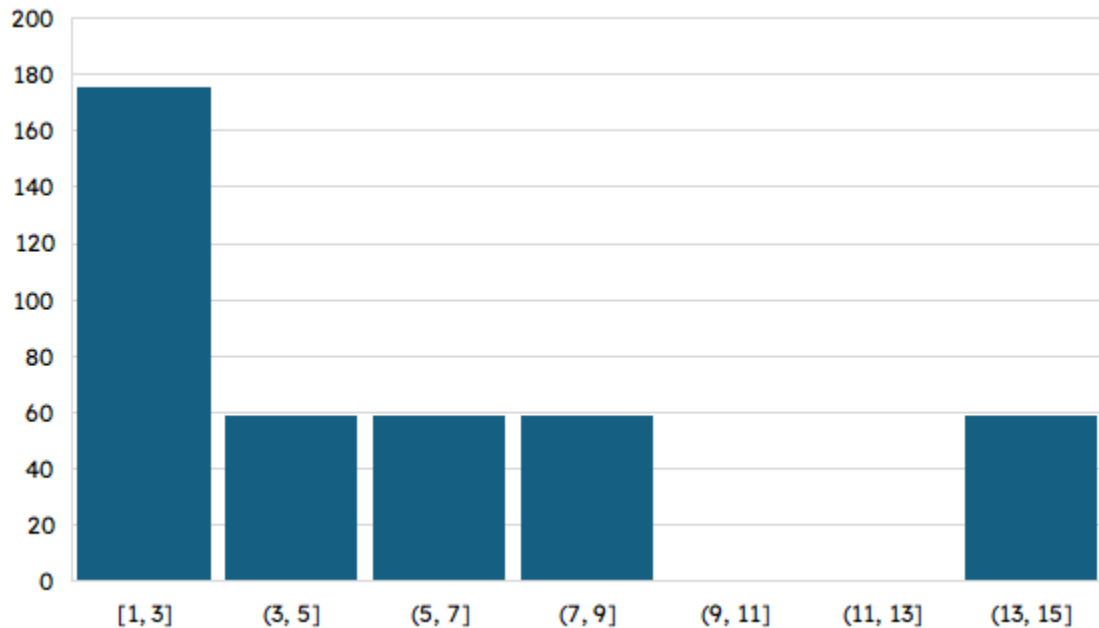


Figure 16. Frequency Distribution of Number of Tracks Per Invoice

After modeling this into a histogram, we observe that the distribution is positively skewed. Thus, we find that the typical invoice contains 1 to 3 tracks. However, this range can stretch up to 9 or 15 tracks.

What's the average and median revenue per invoice?

Average Revenue Per Invoice	\$6.00
Median Revenue Per Invoice	\$3.96

Table 13. Average and Median Revenue Per Invoice

The average revenue generated per invoice is \$6.00, with a median revenue per invoice of \$3.96. This means that the distribution of the revenue generated per invoice is positively skewed. In simpler terms, SonicStream has more invoices where they generate more at most \$6.00.

What’s the distribution of invoices by the revenue?

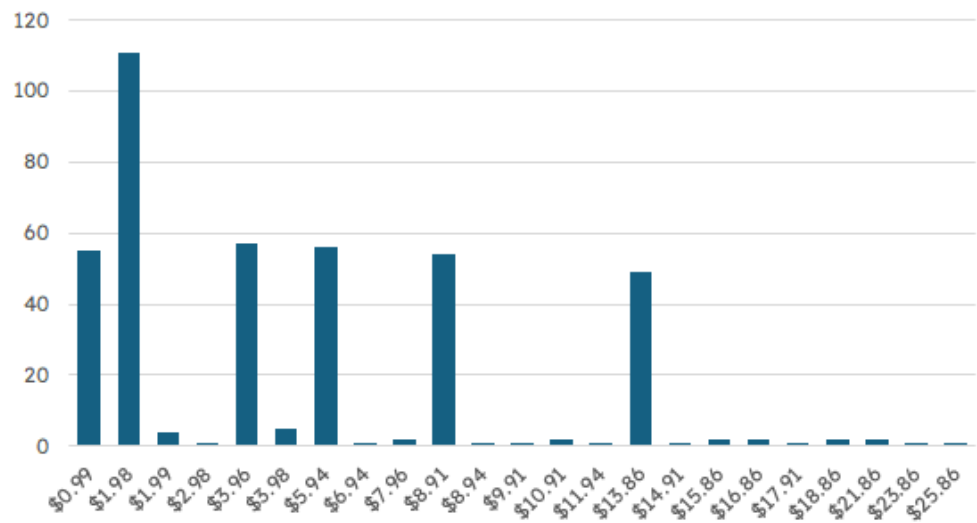


Figure 17. Count of Invoices by the Revenue Per Invoice

The highest number of invoices, at least 100 invoices, generated a revenue of \$1.98. Furthermore, at least 50 invoices generated a revenue of \$0.99, \$3.96, \$5.94, \$8.91, and \$13.86. Less than ten invoices generated revenues of other values. Note that this observation seems to be supported by the distribution of number of invoices by the number of tracks sold.

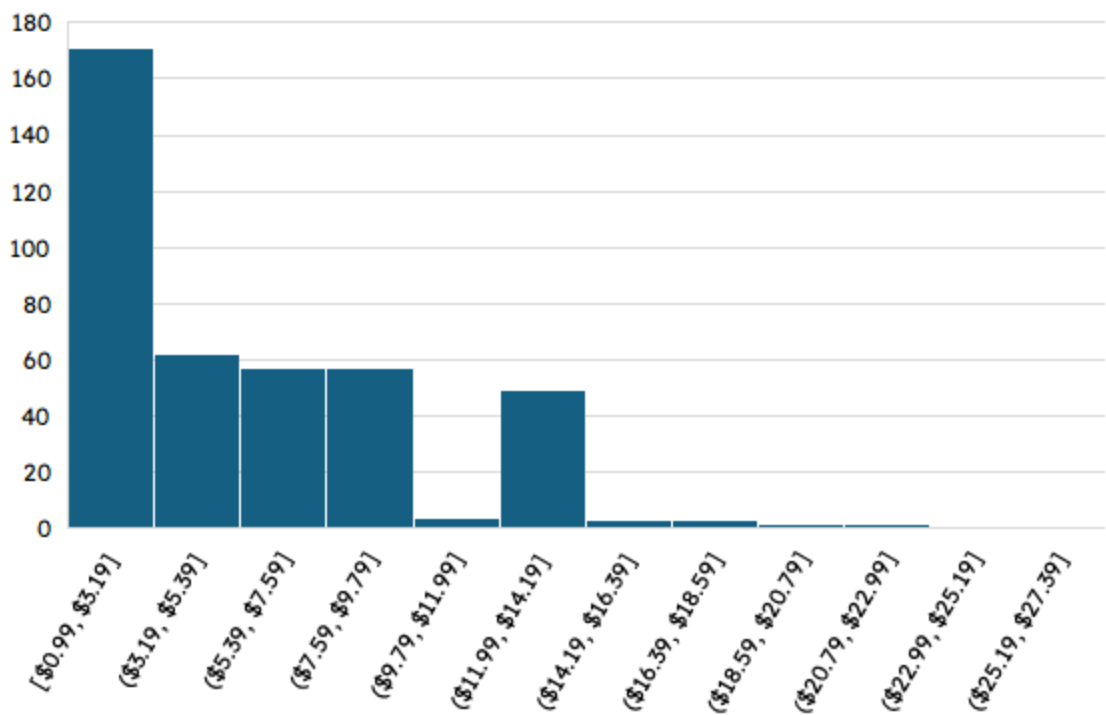


Figure 18. Frequency Distribution of Revenue Per Invoice

After modeling this into a histogram, we observe that the distribution is positively skewed. Thus, we find that the typical invoice generates a revenue ranging from \$0.99 to \$3.19. However, this can stretch up to \$9.79 or \$14.19.

How many tracks are being sold weekly? How much revenue is generated weekly?

Mean Weekly Tracks Sold	11
Median Weekly Tracks Sold	14
Mean Weekly Revenue	\$11.53
Median Weekly Revenue	\$13.86

Table 14. Weekly Tracks Sold and Revenue Generated

The average weekly number of tracks sold is 11 tracks and the average weekly revenue generated is \$11.53. The associated median values are 14 tracks and \$13.86, respectively.

Thus, we find that a typical week for SonicStream sells 11 to 14 tracks and generates \$11.53 to \$13.86.

How many tracks are being sold monthly? How much revenue is generated monthly?

Mean Monthly Tracks Sold	37.33
Median Monthly Tracks Sold	38
Mean Monthly Revenue	\$38.81
Median Monthly Revenue	\$37.62

Table 15. Monthly Tracks Sold and Revenue Generated

The average monthly number of tracks sold is 37 tracks and the average monthly revenue generated is \$38.81. The associated median values are 38 tracks and \$37.62.

Thus, we find that a typical month for SonicStream sells 37 to 38 tracks and generates \$37.62 to \$38.81.

How many tracks are being sold quarterly? How much revenue is generated quarterly?

Mean Quarterly Tracks Sold	112
Median Quarterly Tracks Sold	114
Mean Quarterly Revenue	\$116.43
Median Quarterly Revenue	\$112.86

Table 16. Quarterly Tracks Sold and Revenue Generated

The average quarterly number of tracks sold is 112 tracks and the average quarterly revenue generated is \$116.43. The associated median values are 114 tracks and \$112.86.

Thus, we find that a typical quarter for SonicStream sells 112 to 114 tracks and generates \$112.86 to \$116.86.

How many tracks are being sold yearly? How much revenue is generated yearly?

Mean Yearly Tracks Sold	448
Median Yearly Tracks Sold	447
Mean Yearly Revenue	\$465.72
Median Yearly Revenue	\$469.58

Table 17. Yearly Tracks Sold and Revenue Generated

The average yearly number of tracks sold is 448 tracks and the average yearly revenue generated is \$465.72. The associated median values are 447 tracks and \$469.58.

Thus, we find that a typical year for SonicStream sells 447 to 448 tracks and generates \$465.72 to \$469.58.

Geographic Insights

In this section, we examine how sales volume and revenue generated vary across countries.

What is the average and median number of sales per country?

Average Number of Sales Per Country	93
Median Number of Sales Per Country	38

Table 18. Number of Sales by Country

The average number of sales per country is 93 sales, with the associated median value of 38 sales. From this, we observe that the distribution of the number of sales by country is positively skewed. Thus, we find that there are more countries where the number of sales is at most 93.

What are the top 9 countries by the number of sales?

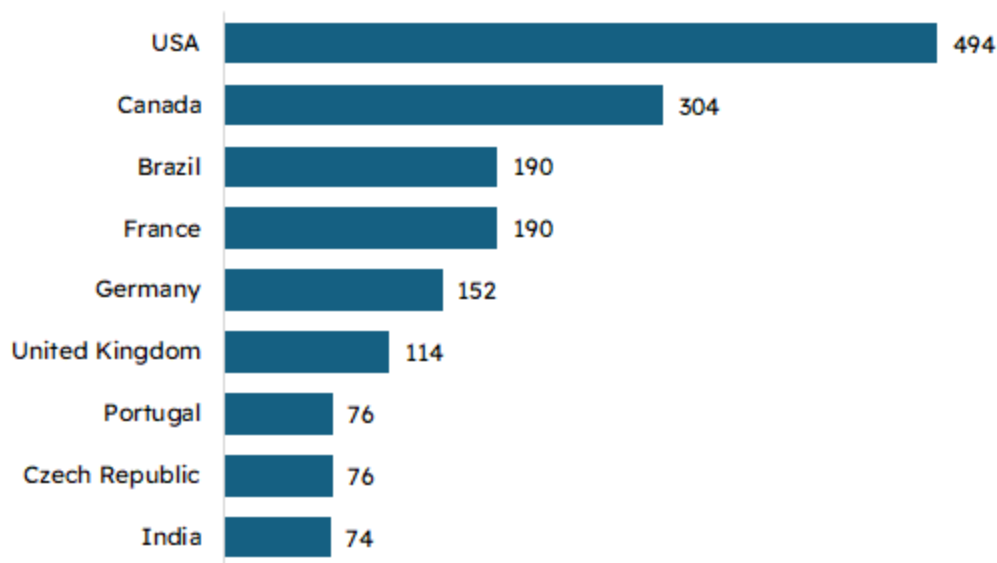


Figure 19. Top 9 Countries by Sales Volume

After counting the number of sales per country, we list above the top 9 countries in terms of sales, where:

- **USA** has at least 50% more sales than the rest of the countries, and
- **Canada** has at least 50% more sales than the rest of the countries, other than USA.

Brazil, France, Germany, and United Kingdom follow closely after USA and Canada, having at least 100 sales. **Portugal, Czech Republic, and India** have at least 70 sales.

What is the average and median number of invoices per country?

Average Number of Invoices Per Country	17
Median Number of Invoices Per Country	7

Table 19. Number of Invoices by Country

The average number of invoices per country is 17 invoices, with the associated median value of 7 sales. From this, we observe that the distribution of the number of invoices by country is positively skewed. Thus, we find that there are more countries where the number of invoices is at most 17.

What are the top 9 countries by the number of invoices?

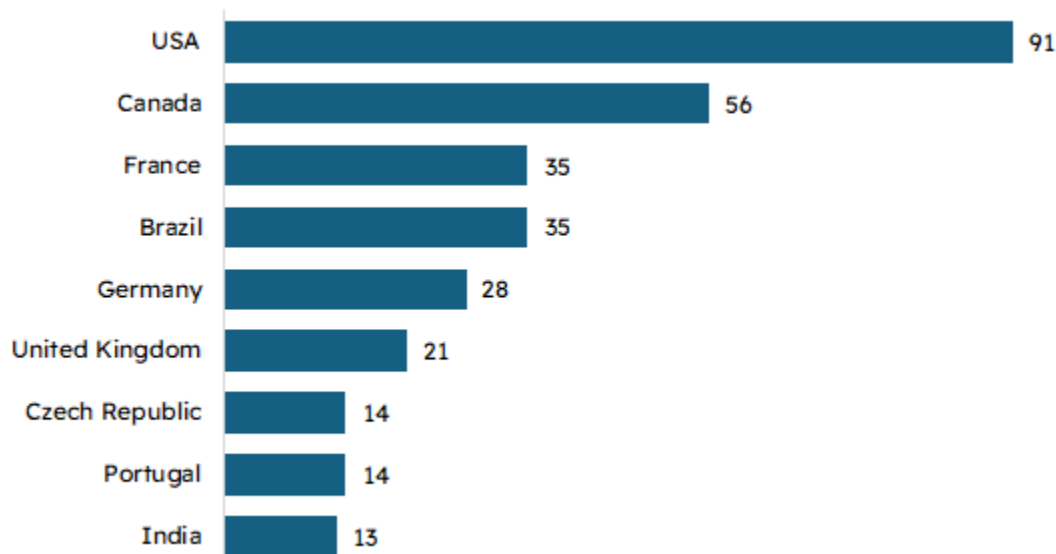


Figure 20. Top 9 Countries by Invoice Volume

After counting the number of invoices per country, we list above the top 9 countries in terms of the number of invoices, where:

- **USA** has at least 50% more invoices than the rest of the countries, and
- **Canada** has at least 50% more invoices than the rest of the countries, other than USA.

Brazil, France, Germany, and United Kingdom follow closely after USA and Canada, having at least 20 invoices. **Portugal, Czech Republic, and India** have at least 13 invoices.

What is the average and median revenue per country?

Average Revenue Per Country	\$97.03
Median Revenue Per Country	\$44.12

Table 20. Revenue per Country

The average revenue per country is \$97.03, with the associated median value of \$44.12. From this, we observe that the distribution of the revenue generated by country is positively skewed. Thus, we find that there are more countries where the revenue generated is at most \$97.03.

What are the top 9 countries by revenue?

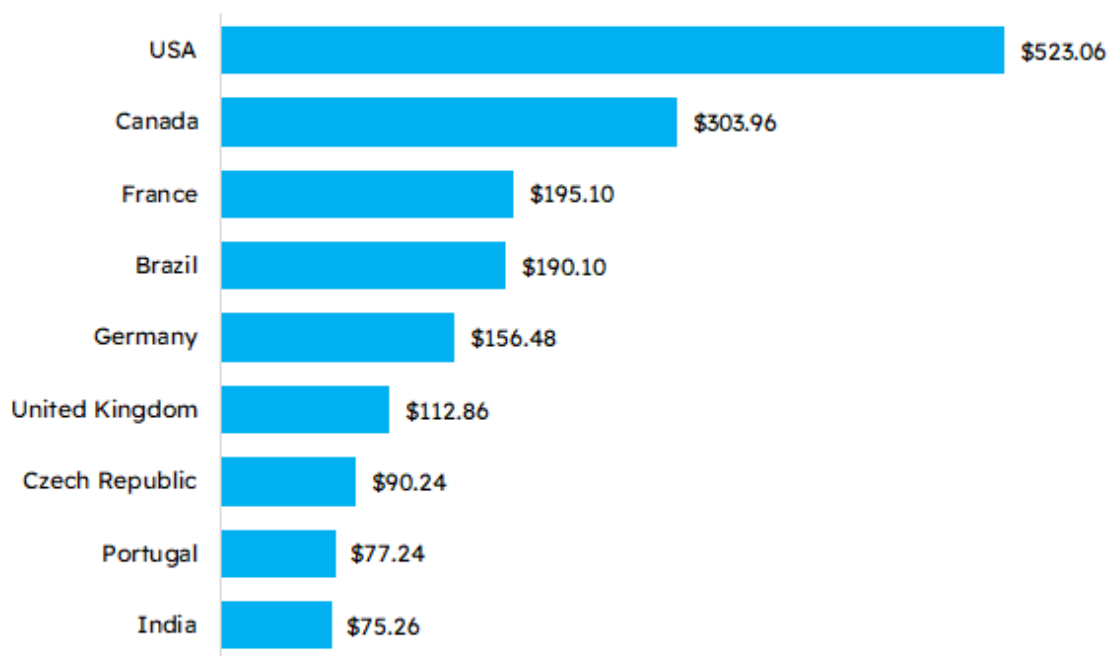


Figure 21. Top 9 Countries by Revenue

After aggregating the revenue generated per country, we list above the top 9 countries in terms of the revenue generated, where:

- **USA** generated at least 50% more revenue than the rest of the countries, and

- **Canada** generated at least 50% more invoices than the rest of the countries, other than USA.

France, Brazil, Germany, and United Kingdom follow closely after USA and Canada, having generated a revenue of at least \$100. **Czech Republic, Portugal, and India** have generated a revenue of at least \$75.

Is there any correlation between the number of customers and the revenue by country?

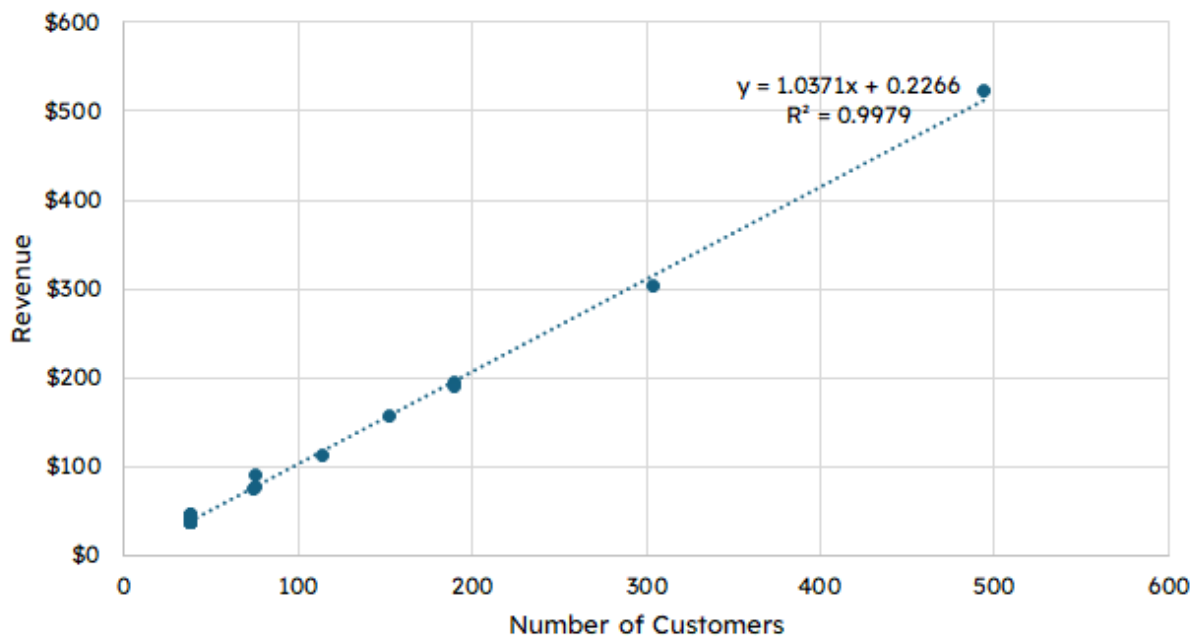


Figure 22. Relationship between the Number of Customers and Revenue by Country

The correlation coefficient is observed to be extremely close to 1, which implies that there is a strong positive correlation between the number of customers and the revenue generated by country. Thus, we can conclude that, as of now, there are no countries which are either high-revenue and low-sales-volume or low-revenue and high-sales-volume.

Customer Behavior

In this section we examine the sales volume and revenue generated from a typical customer. We will also calculate the customer order values, the customer order frequency, the customer lifespan, and the customer lifetime value.

What’s the average and median number of tracks per customer?

Average Number of Tracks	38
Median Number of Tracks	38

Table 21. Number of Tracks Per Customer

In terms of the number of tracks per customer, the average and median tracks sold are equal. In fact, almost all customers have bought 38 tracks.

What’s the average and median revenue per customer?

Average Revenue	\$39.47
Median Revenue	\$37.62

Table 22. Revenue Per Customer

In terms of the revenue generated per customer, the average and median revenue, \$39.47 and \$37.62, are really close to each other. While the average revenue per customer is higher than the median revenue per customer, the difference is not significant especially after knowing that most of SonicStream’s customers have bought 38 tracks.

What is the average order value? What is the average purchase frequency?

Revenue	\$2,328.60
Number of Sales	2240
Average Order Value	\$1.04

Table 23. Computing for the Average Order Value

Year	Number of Unique Customers	Number of Orders	Order Frequency Per Year
2021	46	454	9.869565217
2022	46	455	9.891304348
2023	47	442	9.404255319
2024	47	447	9.510638298
2025	46	442	9.608695652

Average Order Frequency
9.656891767

Table 24. Computing for the Average Order Frequency

The typical SonicStream customer has an average order value of \$1.04 and typically makes 9-10 purchases every year. These results seem to be around the standard for a digital media store which sells songs.

What is the customer value? What is the customer lifespan?

Average Order Frequency	9.656891767
Average Order Value	\$1.04
Customer Value	\$10.04

Table 25. Computing for the Customer Value

Average Customer Lifespan	1403 days 17:53:53.898305	3.842299673
Median Customer Lifespan	1289 days	3.528220288

Table 26. Computing for the Customer Lifespan

After finding that the typical SonicStream customer generates \$1.04 on average and makes 9-10 purchases every year, the typical SonicStream customer has a yearly customer value of \$10.04.

After finding each customer's first and last transaction dates with SonicStream, the average and median lifespan of a typical SonicStream customer is around 3 to 4 years.

What is the average customer lifetime value?

Average Order Frequency	10
Average Order Value	\$1.04
Average Customer Lifespan	4
Customer Lifetime Value	\$38.57

Table 27. Computing for the Average Customer Lifetime Value

After knowing that the typical SonicStream customer generates \$10.04 every year, and a SonicStream customer generally lasts 3 to 4 years, the average customer lifetime value is \$38.57.

Employee Performance

In this section, we will briefly examine the sales performance of our sales representatives, in terms of sales volume and revenue generated.

What is the number of unique customers served per representative?
What is the customer coverage ratio of the sales representatives?

Sales Agent	Number of Unique Customers
Jane	21
Margaret	20
Steve	18

Table 28. Number of Unique Customers Per Sales Representative

Throughout their work here in SonicStream, our sales agents are mostly within a small range of the number of unique customers they oversaw. Note that Jane and Margaret have at least 20 unique customers, but Steve is not falling that far behind with 18 customers.

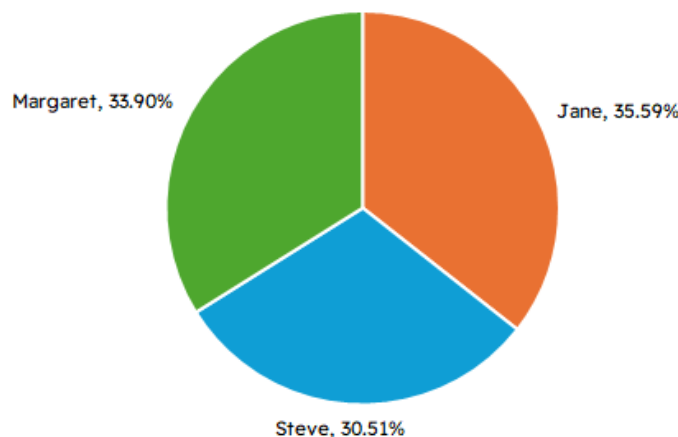


Figure 23. Customer Coverage Ratio of the Sales Representatives

Once we look at the customer coverage ratios for our three sales representatives, we find that the percentage of coverage of the customer base is mostly equal among them. The order of the most coverage is also equivalent to the order of the number of unique customers.

Which support representative has facilitated the highest number of sales?

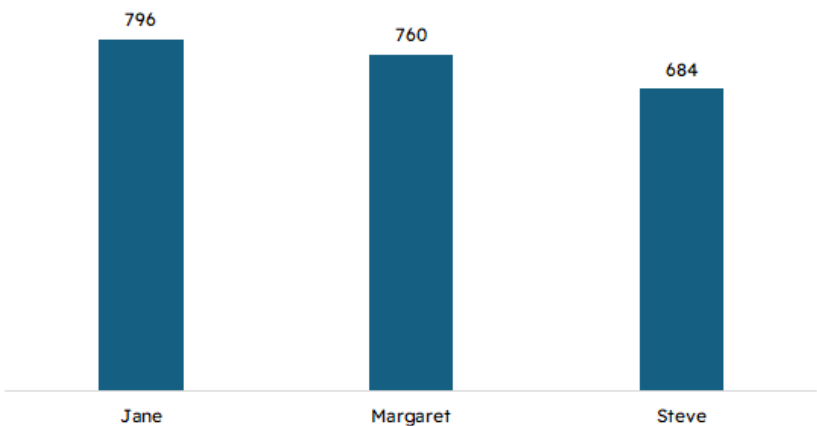


Table 29. Sales Volume by Representative

Jane has facilitated 796 sales, which is the highest among the support representatives. However, Margaret and Steve are not falling far behind, with 760 sales and 684 sales, respectively.

Which support representative has generated the highest amount of revenue?

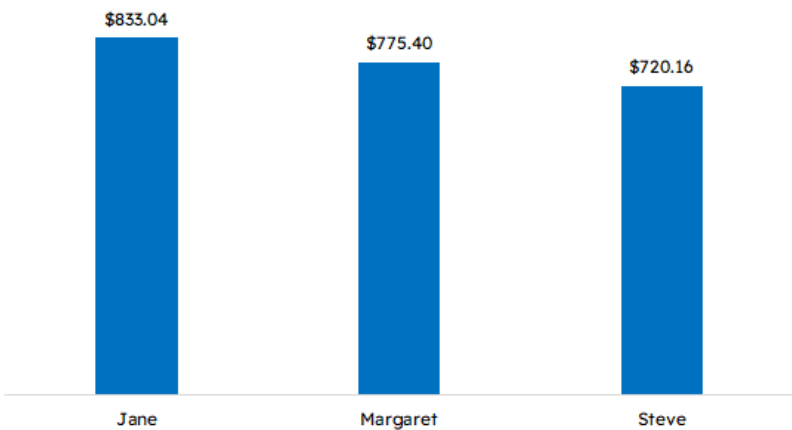


Table 30. Revenue by Representative

Jane has generated \$833.04, which is the highest among the support representatives. However, Margaret and Steve are not falling far behind, with \$775.40 and \$720.16, respectively.

How many sales did each representative make over time?

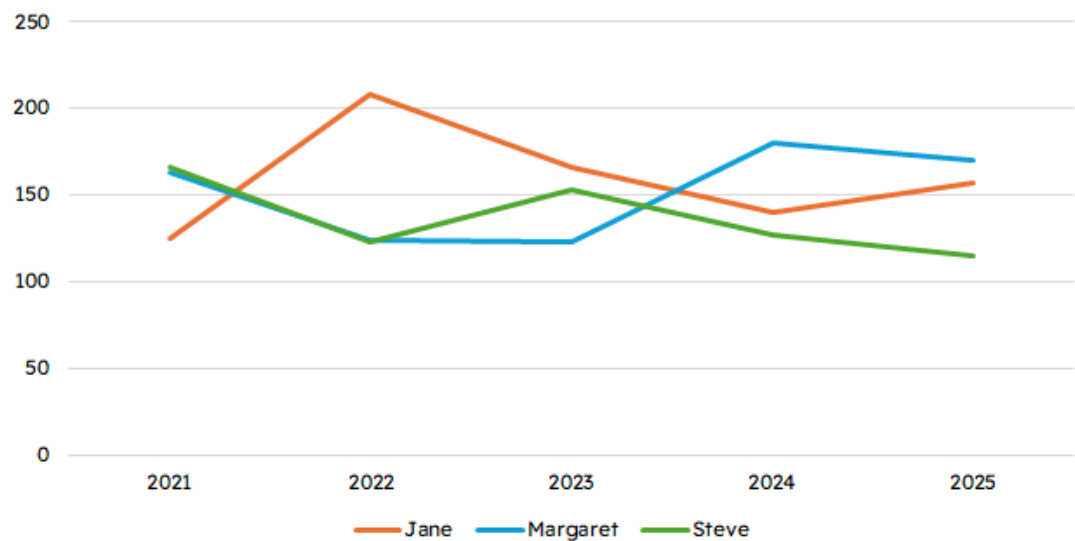


Figure 24. Yearly Sales Volume by Sales Agent

Year	Jane	Margaret	Steve
2021	125	163	166
2022	208	124	123
2023	166	123	153
2024	140	180	127
2025	157	170	115

Table 31. Yearly Sales Volume by Sales Agent

After looking at the volume of sales facilitated by our support representatives, we find that:

- The volume of sales facilitated by Margaret is increasing from starting from 2024.
- The volume of sales facilitated by Jane peaked in 2022 but seems to settle lower from 2023 onwards.
- The volume of sales facilitated by Steve peaked at the starting year, 2021, and in 2023. However, it settles lower in other years.

How much revenue did each representative generate over time?

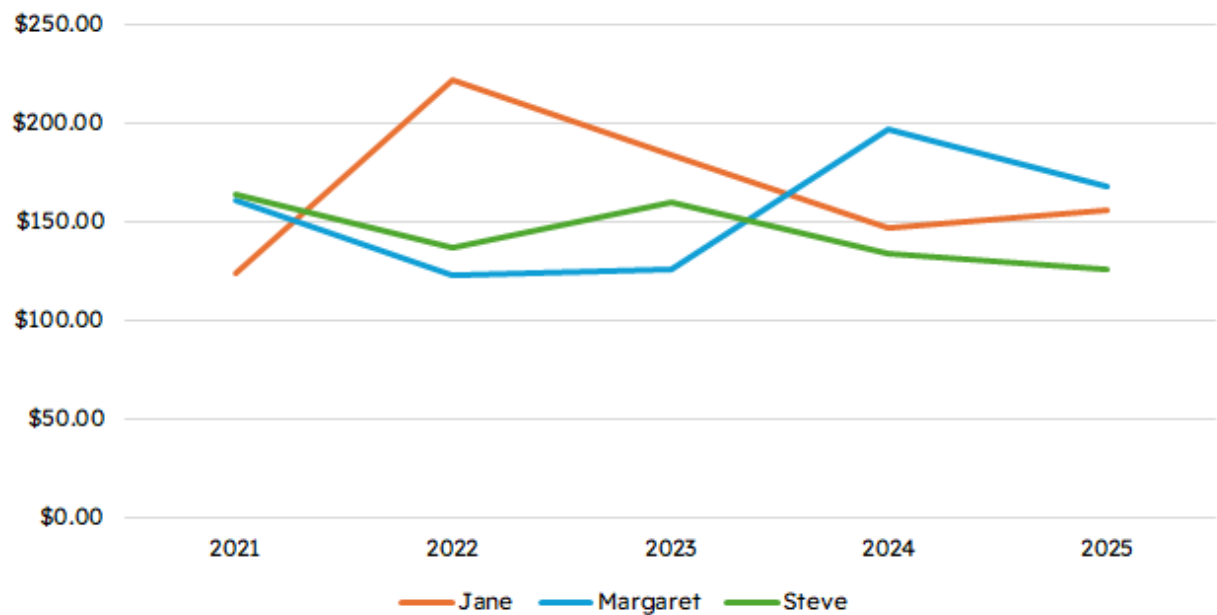


Figure 25. Yearly Revenue by Sales Agent

Year	Jane	Margaret	Steve
2021	\$123.75	\$161.37	\$164.34
2022	\$221.92	\$122.76	\$136.77
2023	\$184.34	\$125.77	\$159.47
2024	\$146.60	\$197.20	\$133.73
2025	\$156.43	\$168.30	\$125.85

Table 32. Yearly Revenue by Sales Agent

After looking at the revenue generated by our support representatives, we find that the trend is equivalent with the volume of sales facilitated:

- The revenue generated by Margaret is increasing from starting from 2024.
- The revenue generated by Jane peaked in 2022 but seems to settle lower from 2023 onwards.
- The revenue generated by Steve peaked at the starting year, 2021, and in 2023. However, it settles lower in other years.

Conclusion

After examining the dataset given by SonicStream's database team, we have collected the relevant insights which may serve SonicStream's Marketing and Product Strategy Team, Human Resources Team, and Sales Team.

Summary of Insights

These are the relevant insights summarized and gathered from the analysis report.

Sales Performance

1. SonicStream earned \$2,328.60 after making a total of 412 unique invoices and a total of 2,240 sales.
2. In volume of sales and revenue, the top 4 genres are: **Rock, Latin, Metal, and Alternative & Punk.**
3. In volume of sales and revenue, the top-selling albums are more varied in genre, which include the less top-selling genres.
 - a. To increase volume of sales and generate more revenue, SonicStream should consider selling IPs under **TV shows, Comedy, Drama, and Sci Fi & Fantasy**, just to name a few.
4. In volume of sales and revenue, the top-selling albums also reflect the top-selling genres. However, in terms of revenue, some entries include **TV shows.**

Time-based Analysis

1. There is no significant variation in volume of sales and revenue yearly.
2. There is no significant variation in volume of sales and revenue quarterly.
 - a. In terms of the volume of sales, most quarters passed the quarterly average number of sales.
 - b. In terms of the revenue, only five quarters passed the quarterly average revenue.
3. There is no significant variation in volume of sales.
4. There are clusters of months where the revenue passed the average monthly revenue. These spikes reflect the quarters where the quarter passed the average quarterly revenue.
5. According to the monthly forecast over the store's lifetime, **revenue will continue to settle for the next two years.** To spark revenue growth, changes in sales and marketing strategies and efforts in increasing the current customer base are required.

6. After finding the seasonality index, we find that the first three quarters (January to September) yield higher revenues than the average.
7. After finding the seasonality index, we find that the months January, March, April, June, August, and September yield higher revenues than the average, which support insight 5.

Operational Efficiency

1. SonicStream sells 5 tracks per invoice on average. The median is 4 tracks per invoice. This implies that SonicStream has more invoices where they sell at most 5 tracks.
2. The typical invoice contains at least 1 to 3 tracks, with 2 tracks being the most common. However, this range can stretch up to 9 or 15 tracks.
3. SonicStream generates an average revenue of \$6.00 per invoice, with a median of \$3.96. This implies that SonicStream has more invoices where they generate at most \$6.00.
4. The typical invoice generates a revenue ranging from \$0.99 to \$3.19. However, this range can stretch up to \$9.79 or \$14.19.
5. A typical week for SonicStream sells 11 to 14 tracks and generates \$11.53 to \$13.86.
6. A typical month for SonicStream sells 37 to 38 tracks and generates \$37.62 to \$38.81.
7. A typical quarter for SonicStream sells 112 to 114 tracks and generates \$112.86 to \$116.86.
8. A typical year for SonicStream sells 447 to 448 tracks and generates \$465.72 to \$469.58.

Geographic Insights

1. There are more countries where the number of sales is at most 93.
2. Across the number of sales, the number of invoices, and the revenue generated, the top 9 countries are:
 - a. **USA** is at least 50% ahead of the rest of the countries.
 - b. **Canada** follows and is at least 50% ahead of the rest of the countries other than USA.
 - c. **Brazil, France, Germany, and United Kingdom** follow after Canada, occupying the middle portion of the top 9 ranking.
 - d. The rest of the countries are **Portugal, Czech Republic, and India**.
3. There is a strong positive correlation between the number of customers and the revenue generated by country. Thus, as of now, there are *no countries which are either high-revenue and low-sales-volume or low-revenue and high-sales-volume*.

Customer Behavior

1. The average and median tracks sold per customer are equal, which is 38 tracks.
2. The average and median revenue generated per customer are close to each other, which are \$39.47 and \$37.62, respectively.
3. The typical SonicStream customer has an average order value of \$1.04 and typically makes 9 to 10 purchases every year.
4. The typical SonicStream customer has a yearly customer value of \$10.04.
5. The average and median lifespan of a typical SonicStream customer is around 3 to 4 years.
6. SonicStream's average customer lifetime value is \$38.57.

Employee Performance

1. The three representatives have assisted 18 to 21 unique customers. Jane has assisted the most, but Margaret and Steve are not too far behind.
2. The **customer coverage ratio is mostly equal across the three representatives**, where each of them cover around 33% of the customer base.
3. Jane facilitated the highest number of sales, with Margaret and Steve not falling behind.
4. Jane generated the highest revenue, with Margaret and Steve not falling behind.
5. After viewing the yearly trend of the volume of sales, we find that:
 - a. The volume of sales facilitated by Margaret is increasing from starting from 2024.
 - b. The volume of sales facilitated by Jane peaked in 2022 but seems to settle lower from 2023 onwards.
 - c. The volume of sales facilitated by Steve peaked at the starting year, 2021, and in 2023. However, it settles lower in other years.
6. After viewing the yearly trend of the revenue, we find that:
 - a. The revenue generated by Margaret is increasing from starting from 2024.
 - b. The revenue generated by Jane peaked in 2022 but seems to settle lower from 2023 onwards.
 - c. The revenue generated by Steve peaked at the starting year, 2021, and in 2023. However, it settles lower in other years.

Recommendations

One of the most crucial insights gained from this analysis report is that SonicStream, as it is in the present, will observe the revenue stagnate for the next two years, according to the monthly forecast. Because of this, it is essential for SonicStream to discuss strategies and plans for increasing sales activity.

1. Continue stocking up on tracks which fall under the top 9 genres, especially Rock, Latin, Metal, and Alternative & Punk.
2. Consider catering to niche genres and perhaps expand on TV and films. To increase volume of sales and generate more revenue, SonicStream should consider selling IPs under **TV shows, Comedy, Drama, and Sci Fi & Fantasy**, just to name a few.
3. Maintain performance for the first 3 quarters. However, address lower sales volume and revenue in the fourth quarter by considering special promotional sales events, especially around Halloween and Christmas.
4. Since our typical invoices contain 1 to 3 tracks, let us consider bundling options to increase the number of tracks sold per invoice.
5. Most of the top-selling countries are in North America, Europe, South America and Asia. We can focus our efforts in increasing our customer base for these continents.
6. The performance review with the representatives should involve asking them their sales strategies during their high-sales-volume and high-revenue months and quarters.