Analyzing User Retention and Price Sensitivity for Spotify in a Competitive Market

Graciela Mong

About ↘

Spotify®

Founded: 2008, Stockholm, Sweden

the **world's leading music/audio streaming platform**

246 million paid Spotify Premium **users**

626 MILLION USERS IN MORE THAN 180 MARKETS

Market Leader: Holds **one-third global market share** in the music streaming industry

Purpose ↘

Understand:

- Price Sensitivity
- Feature Preferences
- Competitive Dynmaics
- User Retention

Identify:

- Strategies to Retain Users, particularly Young Adults (12–34)
- Turning Point for User Churn

Research Methodology: Two Phased Approach

- Qualitative Interviews
- 8 Interviews
- Exploring User Motivations, Preferences, and Switching Behaviors
- Quantitative Survey
- Targeting Users Aged 12 – 34
- Quantifying Preferences, Satisfaction, and Price Sensitivity

Qualitative Interviews Key Findings

↘ Insights for Spotify

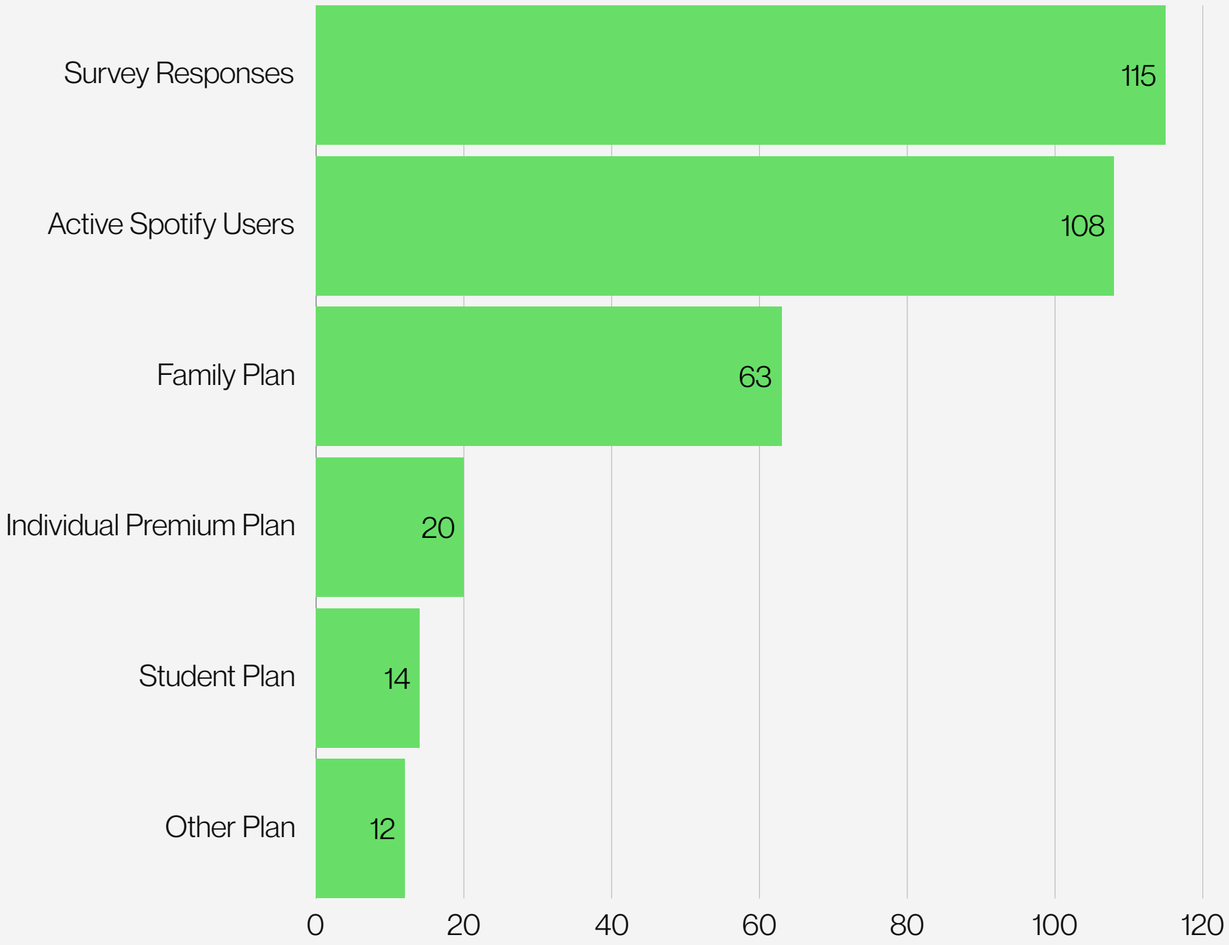
- **Differentiate with Key Strengths:** Leverage strengths in personalization, podcasts, and social sharing to stand out
- **Enhance User Experience:** Address user pain points (playlist tools, intrusive notifications)
- **Refine Pricing Strategies:** Maintain competitive, flexible pricing to reduce churn

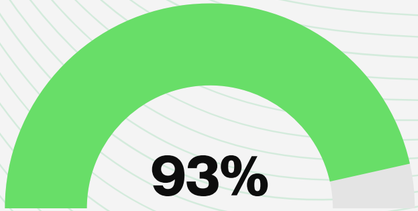
	SPOTIFY	APPLE MUSIC
Strengths	**High Loyalty and Integration:** Premium subscribers for 6–10 years, using Spotify for daily activities like commuting and studying. **Key Features:** Curated playlists, offline listening, integration of music, podcasts, and audiobooks, with "Spotify Wrapped"	**Familiarity with Platform**: long-term users benefit from integration into Apple's ecosystem. **Family-Paid Plans** **Key Features:** Radio/infinity mode, lyrics search, and high app quality with consistent updates.
Weaknesses	Better **playlist creation** tools Reducing **intrusive notifications** Enhancing **social connectivity** features	Lack of i**ntegrated podcasts** Limited **social sharing and collaborative playlists.**
Price - Sensitivity	Users **tolerate minor price increases** but may explore alternatives if hikes are frequent or significant. **Family and student plans are crucial** for retaining cost-sensitive groups.	Many were on family paid plans resulting in **less price-sensitivity** but may consider switching if prices rise significantly.

Survey: Data Collection and Samling ↘

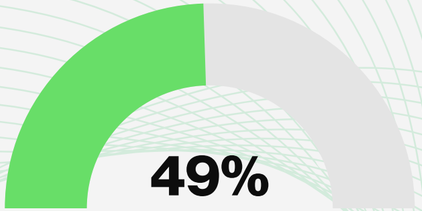
- Online Survey
- Qualtrics
- Convenience Sampling
- Snowball Sampling
- Spotify Users
- Aged 12-34
- cost and speed effective
- limited generalizability

Key Findings ↘

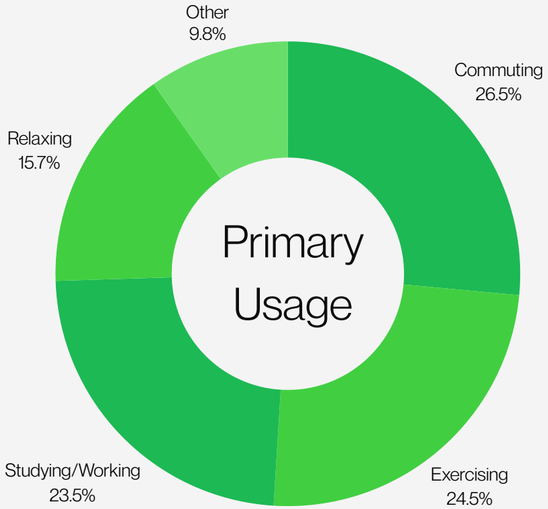


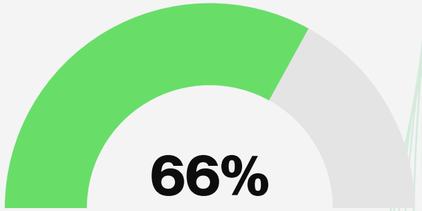


Between Age 12-34



use Spotify 4–10 hours weekly

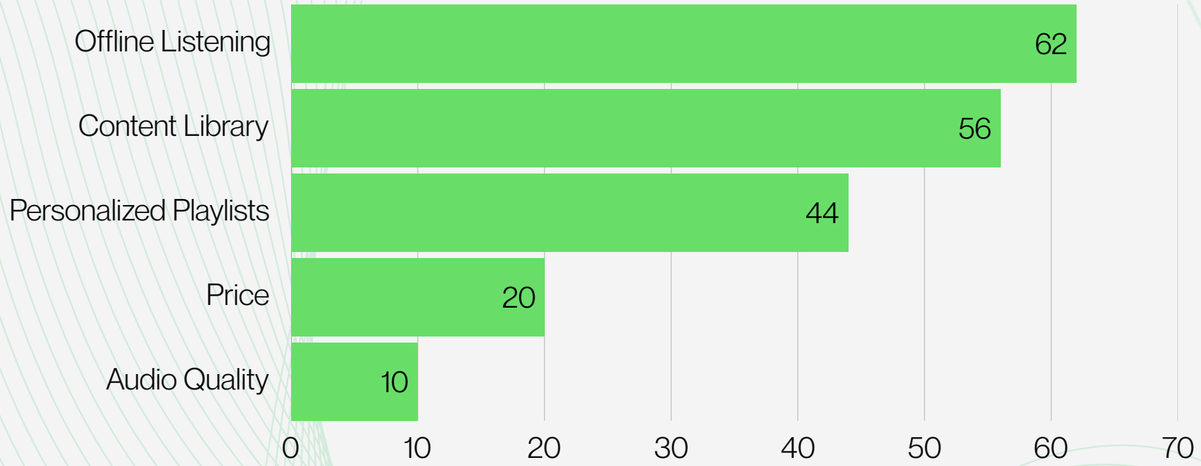




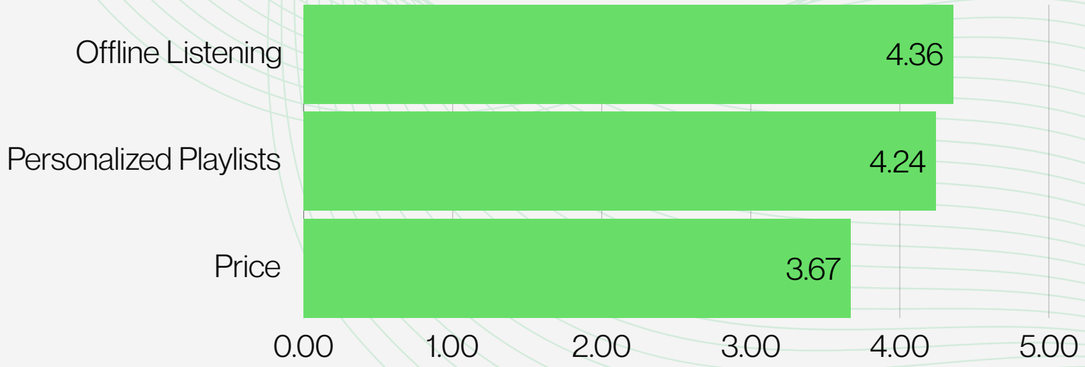
used Spotify for 5+ years

Key Findings ↘

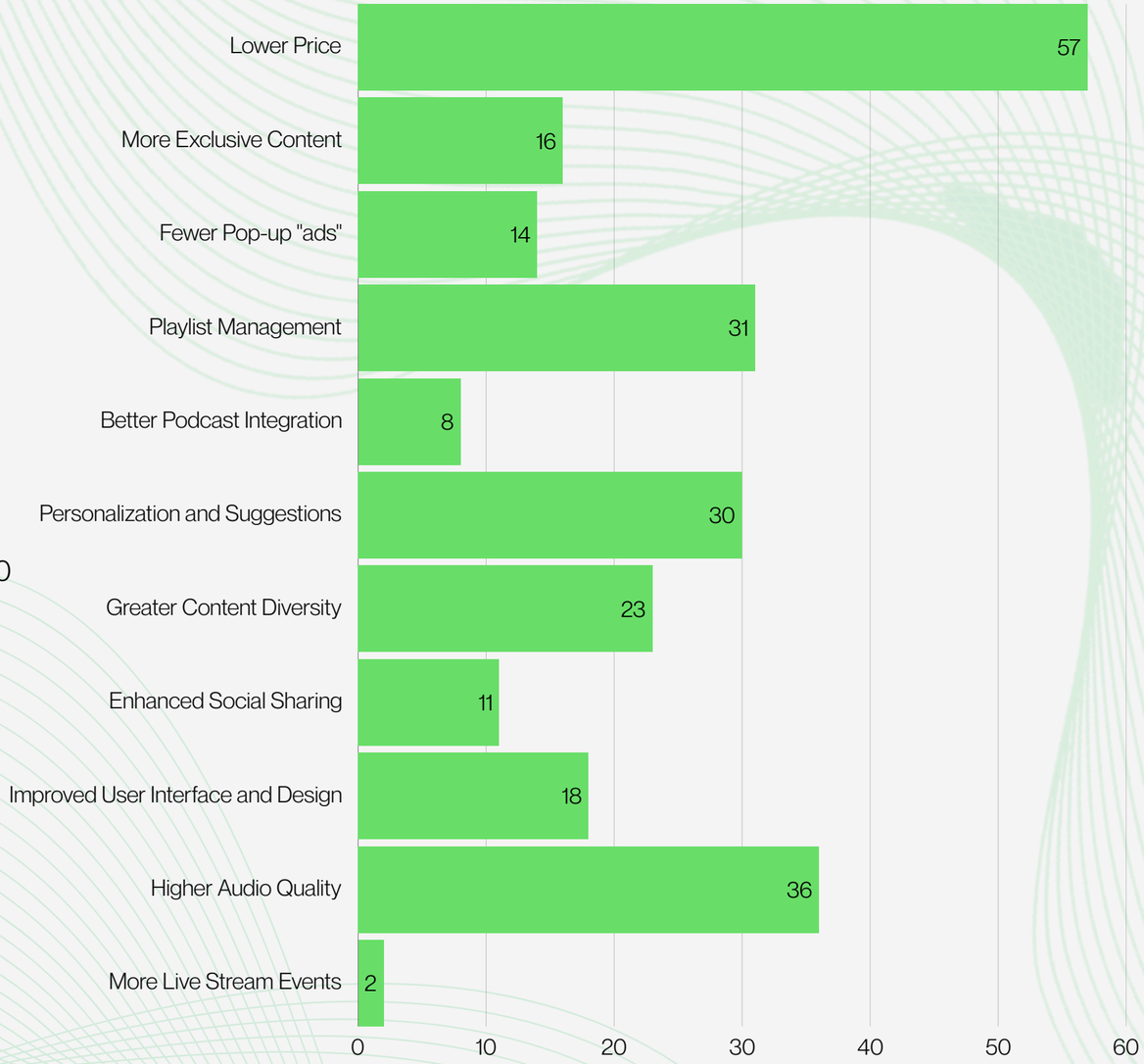
Importance of Features (multiple choice ranking)



Satisfaction with Features (likert 1-5)



User Preferences for Improvements that Drive Retention

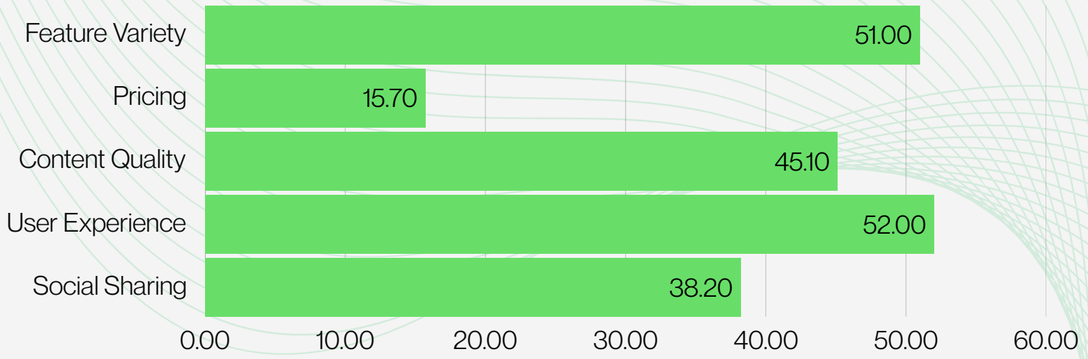


Key Findings ↘

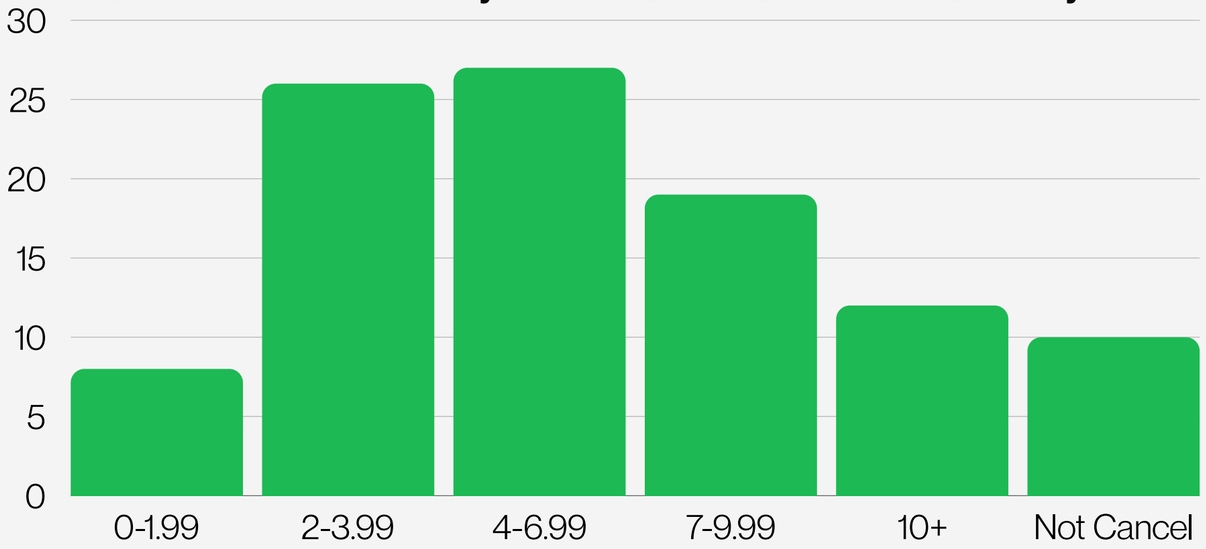
70% WERE NOT AWARE OF PRICE INCREASES

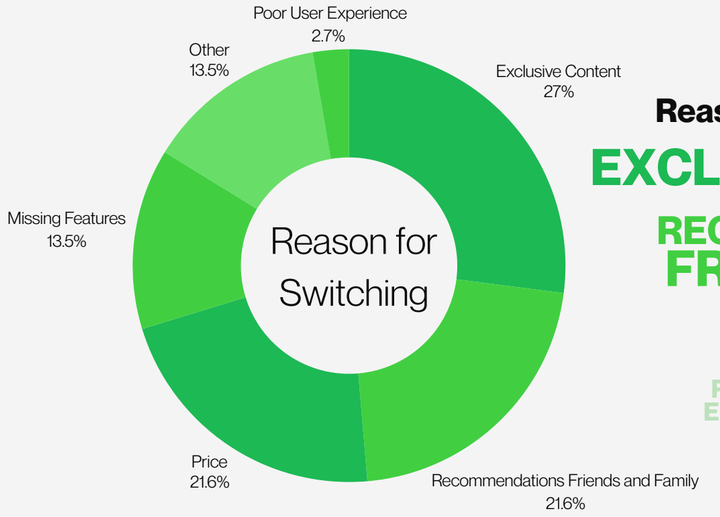
78% HAVE NOT CONSIDERED SWITCHING TO A COMPETITOR

Percieved Performance Compared to Competitors, Rated as "Better" and "Much Better"



Cancellation Likelihood by Price Increase to show Price Sensitivity





Reasons for Switching:

EXCLUSIVE CONTENT

RECOMMENDATIONS FROM FRIENDS AND FAMILY

PRICE

MISSING FEATURES

POOR USER EXPERIENCE

Hypothesis ↘

- **At what point do users decide to leave Spotify?**

- H1: Price increases significantly affect users' willingness to continue using Spotify.

Results ↘

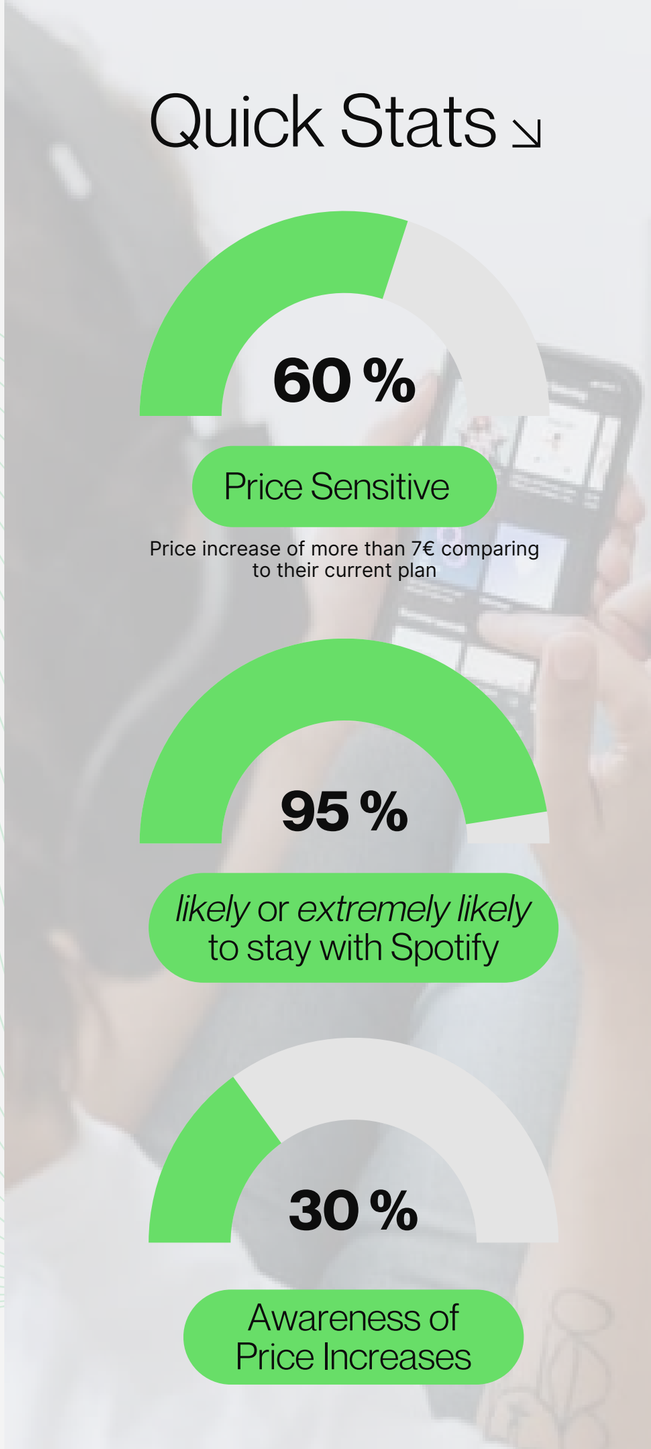
€7+

PRICE INCREASE IS THE TIPPING POINT FOR MOST USERS TO CONSIDER LEAVING SPOTIFY.

H1: **Confirmed**

- Significant correlation ($r = 0.535$, $p < 0.001$)
- Price increases strongly correlate with cancelling intention
- Spotify should carefully manage price adjustments, especially for price-sensitive users like students. Do not increase price more than €7 with a period of 1 year

Quick Stats ↘



60 %

Price Sensitive

Price increase of more than 7€ comparing to their current plan

95 %

likely or *extremely likely* to stay with Spotify

30 %

Awareness of Price Increases

Hypothesis ↘

- **How price-sensitive are young adults?**
  - H2: Young adults (aged 12–24) are significantly more price-sensitive than older demographics.
  - H3: Subscription type influences price sensitivity among young adults.

Results ↘

H2: Rejected

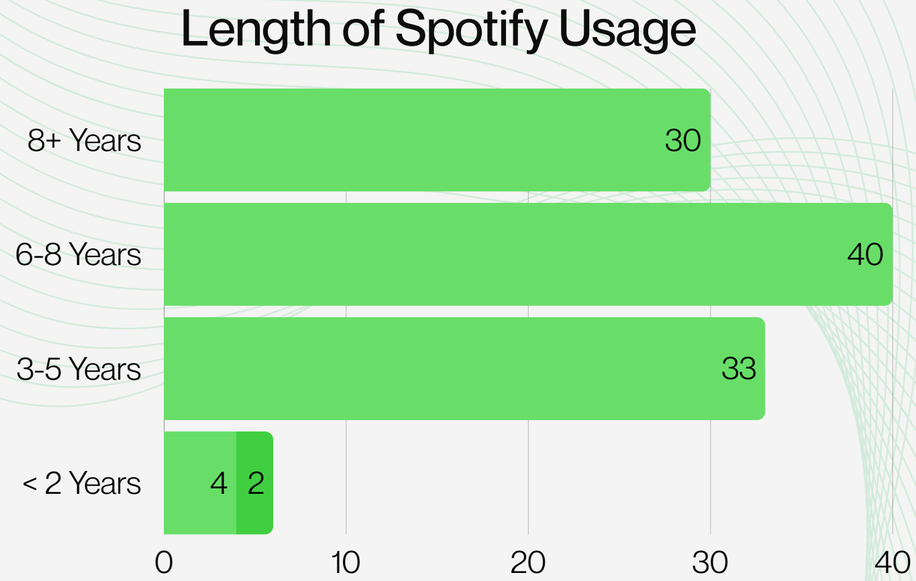
- Independent samples t-test (p = 0.959)
- No significant difference in price sensitivity between younger adults (12–24) and older adults (25–34)

H3: Rejected

- One-way ANOVA (p = 0.878)
- Subscription type (e.g., student, family, individual plans) did not significantly influence price sensitivity

Hypothesis ↘

- **How price-sensitive are young adults?**
  - H4: Subscription length impacts price sensitivity.
  - H5: Price sensitivity positively influences switching intentions.



Results ↘

H4: **Confirmed**

- One-way ANOVA (p = 0.002)
- Long-term subscribers (8+ years) are more price-sensitive than newer users
- Targeted loyalty rewards could mitigate sensitivity among long-term users

H5: **Confirmed** (with marginal significance)

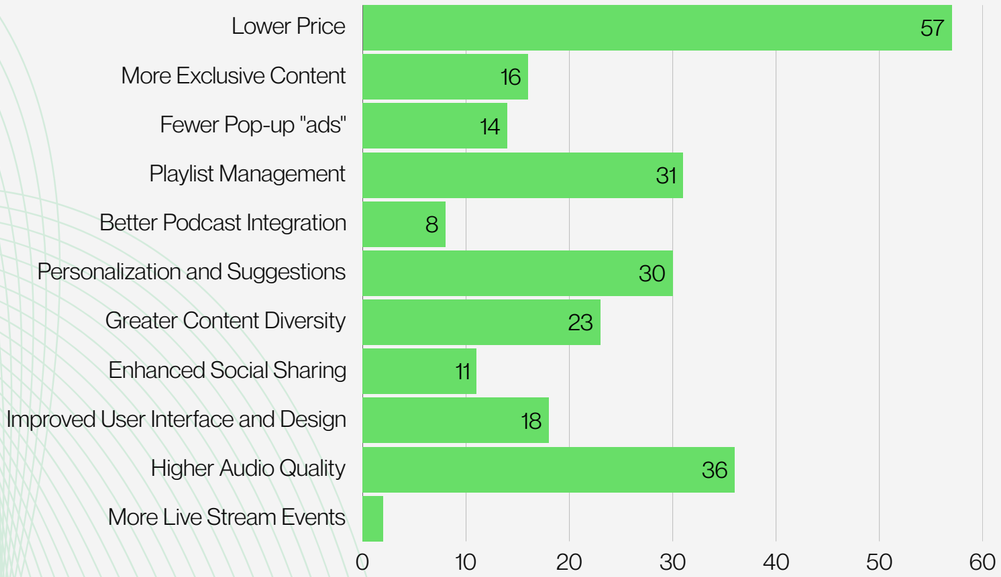
- Binary logistic regression (Odds Ratio = 2.531, p = 0.069): High price sensitivity increases the likelihood of switching
- Managing price sensitivity can reduce churn risk

Hypothesis ↘

- **What factors influence the decision to stay with or leave Spotify?**

- H6: Satisfaction with features significantly impacts users' decisions to stay

User Preferences for Improvements that Drive Retention



Results ↘

H6: Partially Confirmed

- Overall model (Multiple Linear Regression) was marginally significant (p = 0.053)
- Price-service ratio had a significant positive effect (p = 0.017, coefficient = 0.222)
- The price-service balance is a stronger driver of loyalty than feature-specific satisfaction

Limitations ↘

- Small and skewed sample, lacking diversity.
- Biases from convenience sampling, self-reported data, and remote surveys.
- Limited focus on non-price factors; include content, and user interface preferences

Recommendations ↘

- **Address Price Sensitivity**
  - Flexible pricing (discounts for loyal users and students).
  - Test gradual price increases.
  - Transparent pricing builds trust.
- **Strengthen Core Features**
  - Emphasize offline listening and personalized playlists in marketing.
  - Improve social sharing and playlist management features.
- **Strengthen Loyalty Among Long-Term Subscribers**
  - Introduce loyalty programs (rewards, exclusive content).
  - Offer anniversary perks and personalized premium experiences.
- **Stand Out in a Competitive Market**
  - Invest in exclusive content (podcasts, artist collaborations).
  - Emphasize superior user experience and feature variety.
  - Address pricing concerns.

Conclusions ↘

- **Balance user expectations with pricing, features, and loyalty programs.**
- **Use flexible pricing and clear communication to build trust.**
- **Improve underperforming features and enhance strong ones.**

Thank You!

H2: Correlation Analysis

- likelihood of cancel if Spotify increased its price
- importance of price in decision to maintain a spotify subscription

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Correlations

		Likelihood_cancellation_price increase	Importance_price_on_staying
Likelihood_cancellation_priceincrease	Pearson Correlation	1	.535**
	Sig. (2-tailed)		<.001
	N	102	102
Importance_price_on_staying	Pearson Correlation	.535**	1
	Sig. (2-tailed)	<.001	
	N	102	102

**. Correlation is significant at the 0.01 level (2-tailed).

H2: independent samples t-test:

- dep variables: price increase cancel (amount of money)
- indep variable: age - recoded into Young (12-24) and older (25-34)

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Group Statistics

	age_groups	N	Mean	Std. Deviation	Std. Error Mean
Priceincrease_cancellation	12-24	58	3,31	1,404	,184
	25-34	44	3,30	1,472	,222

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Priceincrease_cancellation	Equal variances assumed	,415	,521	,052	100	,479	,959	,015	,287	-,554	
	Equal variances not assumed			,052	93,391	,479	,959	,015	,289	-,558	

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Priceincrease_cancellation	Cohen's d	1,434	,010	-,381	,402
	Hedges' correction	1,445	,010	-,379	,399
	Glass's delta	1,472	,010	-,382	,402

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

- H3: One- way ANOVA
- dep variables: price increase cancel (amount of money)
- indep variable subscription type

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Oneway

Descriptives

Priceincrease_cancellation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Individual Premium	17	3,24	1,437	,349	2,50	3,97	1	6
Family Plan	58	3,40	1,486	,195	3,01	3,79	1	6
Student Plan	14	2,93	,997	,267	2,35	3,50	1	5
Duo Plan	2	4,00	,000	,000	4,00	4,00	4	4
For US Users: Basic Individual Plan	2	4,00	1,414	1,000	-8,71	16,71	3	5
Free (ad-supported)	6	3,00	2,098	,856	,80	5,20	1	6
I Do Not Know	3	3,33	1,528	,882	-,46	7,13	2	5
Total	102	3,30	1,427	,141	3,02	3,58	1	6

ANOVA

Priceincrease_cancellation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,045	6	,841	,398	,878
Within Groups	200,533	95	2,111		
Total	205,578	101			

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
Priceincrease_cancellation	Eta-squared	,025	,000	,041
	Epsilon-squared	-,037	-,063	-,019
	Omega-squared Fixed-effect	-,037	-,063	-,019
	Omega-squared Random-effect	-,006	-,010	-,003

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

- H4: One-way ANOVA
- dep variables: price increase cancel (amount of money)
- indep variable: length of subscription (recorded because of too less responses on first groups, new groups; less than a year, 1-5 (instead of 2-3 and 4-5), 5-7, 8+

:

Oneway

Descriptives

Priceincrease_cancellation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
less than a year	2	2,00	,000	,000	2,00	2,00	2	2
1-5 years	32	2,78	1,008	,178	2,42	3,14	1	4
5-7 years	40	3,25	1,335	,211	2,82	3,68	1	6
8+ years	28	4,07	1,676	,317	3,42	4,72	1	6
Total	102	3,30	1,427	,141	3,02	3,58	1	6

ANOVA

Priceincrease_cancellation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28,753	3	9,584	5,312	,002
Within Groups	176,826	98	1,804		
Total	205,578	101			

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
Priceincrease_cancellation	Eta-squared	,140	,023	,249
	Epsilon-squared	,114	-,007	,226
	Omega-squared Fixed-effect	,113	-,007	,224
	Omega-squared Random-effect	,041	-,002	,088

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Priceincrease_cancellation

Tukey HSD

(I) Usage_length_broad	(J) Usage_length_broad	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
less than a year	1-5 years	-,781	,979	,855	-3,34	1,78
	5-7 years	-1,250	,973	,575	-3,79	1,29
	8+ years	-2,071	,983	,158	-4,64	,50
1-5 years	less than a year	,781	,979	,855	-1,78	3,34
	5-7 years	-,469	,319	,459	-1,30	,36
	8+ years	-1,290*	,348	,002	-2,20	-,38
5-7 years	less than a year	1,250	,973	,575	-1,29	3,79
	1-5 years	,469	,319	,459	-,36	1,30
	8+ years	-,821	,331	,069	-1,69	,04
8+ years	less than a year	2,071	,983	,158	-,50	4,64
	1-5 years	1,290*	,348	,002	,38	2,20
	5-7 years	,821	,331	,069	-,04	1,69

*. The mean difference is significant at the 0.05 level.

- H5: cross tabs+chi square and binary logistic regression
- dep variables: switching intentions (considered switching yes or no)
- indep variable: price sensitivity (likelihood to cancel if price increased, recoded into high (likert 4,5) and low (likert 1,2,3)

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Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Considered_switching_dummy * price_sensitivity_grouped	102	94,4%	6	5,6%	108	100,0%

Considered_switching_dummy * price_sensitivity_grouped Crosstabulation

			price_sensitivity_grouped		
			1,00	2,00	Total
Considered_switching_dummy	did not consider switching	Count	63	16	79
		% within Considered_switching_dummy	79,7%	20,3%	100,0%
		% within price_sensitivity_grouped	81,8%	64,0%	77,5%
	considered switching	Count	14	9	23
		% within Considered_switching_dummy	60,9%	39,1%	100,0%
		% within price_sensitivity_grouped	18,2%	36,0%	22,5%
Total		Count	77	25	102
		% within Considered_switching_dummy	75,5%	24,5%	100,0%
		% within price_sensitivity_grouped	100,0%	100,0%	100,0%

Odds ration interpretation: one unit increase of price senitivty means odds of high switching likelihood increases by 2.5

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,431[a]	1	,064		
Continuity Correction[b]	2,486	1	,115		
Likelihood Ratio	3,201	1	,074		
Fisher's Exact Test				,096	,061
Linear-by-Linear Association	3,397	1	,065		
N of Valid Cases	102				

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3,201	1	,074
	Block	3,201	1	,074
	Model	3,201	1	,074

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	105,688[a]	,031	,047

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Considered_switching_dummy		
	Observed		did not consider switching	considered switching	Percentage Correct
Step 1	Considered_switching_dummy	did not consider switching	79	0	100,0
		considered switching	23	0	,0
	Overall Percentage				77,5

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	price_sensitivity_grouped	,929	,511	3,306	1	,069	2,531
	Constant	-2,433	,723	11,320	1	<,001	,088

a. Variable(s) entered on step 1: price_sensitivity_grouped.

- H5: multiple linear regression
- dep variable: likelihood continuing using Spotify next year
- indep variable: satisfaction scores with different features

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Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.392[a]	.153	.077	.671

a. Predictors: (Constant), satisfaction_PriceRatio, satisfaction_PersonalizedPlaylists, satisfaction_OfflineListening, satisfaction_SocialSharingFeatures, satisfaction_Podcasts, satisfaction_PersonalizedRecommendations, satisfaction_SpotifyWrapped, satisfaction_UserInterface

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.261	8	.908	2.017	.053[b]
	Residual	40.055	89	.450		
	Total	47.316	97			

a. Dependent Variable: Likelihood_staying_with_Spotify

b. Predictors: (Constant), satisfaction_PriceRatio, satisfaction_PersonalizedPlaylists, satisfaction_OfflineListening, satisfaction_SocialSharingFeatures, satisfaction_Podcasts, satisfaction_PersonalizedRecommendations, satisfaction_SpotifyWrapped, satisfaction_UserInterface

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.548	.696		6.537	<.001
	satisfaction_SpotifyWrapped	-.177	.090	-.214	-1.967	.052
	satisfaction_PersonalizedPlaylists	.104	.107	.103	.973	.333
	satisfaction_PersonalizedRecommendations	.128	.094	.146	1.361	.177
	satisfaction_OfflineListening	.007	.092	.008	.074	.941
	satisfaction_Podcasts	-.046	.079	-.060	-.580	.563
	satisfaction_UserInterface	.027	.097	.031	.276	.783
	satisfaction_SocialSharingFeatures	-.198	.104	-.211	-1.908	.060
	satisfaction_PriceRatio	.222	.091	.261	2.432	.017

a. Dependent Variable: Likelihood_staying_with_Spotify

Research Questions and Possible Answers

- At What Point Do Users Decide to Leave Spotify?
  - Findings and Possible Answers:
    - Key Insight: Price sensitivity is a critical factor influencing users' likelihood of cancellation.
    - Data-Driven Answer:
    - A strong correlation ($r = 0.535$, $p < 0.001$) was found between the importance of price and the likelihood of canceling subscriptions.
    - Users indicated they would cancel their subscriptions if the price increases exceeded €7, highlighting a clear tipping point for price-driven churn.
  - Conclusion: Spotify must tread carefully with price increases, particularly for cost-sensitive segments like students and young professionals.
- How Price-Sensitive Are Young Adults?
  - Findings and Possible Answers:
    - Key Insight: Price sensitivity is relatively consistent across younger demographics (aged 12–34) and subscription types.
    - Data-Driven Answer:
    - Hypotheses testing revealed no significant differences in price sensitivity between younger age groups ($p = 0.959$) or across subscription types ($p = 0.878$).
    - Long-term users, however, exhibited greater price sensitivity (ANOVA $p = 0.002$).
  - Conclusion: Price sensitivity is a general characteristic among Spotify users, with long-term users particularly vulnerable to price changes.
- What Factors Play a Part in Their Decision to Stay with or Leave Spotify?
  - Findings and Possible Answers:
    - Key Insight: Price-service balance and feature satisfaction influence retention.
    - Data-Driven Answer:
    - Price-service ratio emerged as the only significant factor driving user loyalty ($p = 0.017$).
    - Satisfaction with specific features, like Spotify Wrapped and social sharing, showed marginal influence but was not statistically significant overall.

Long-term users are more sensitive to price changes, which aligns with their higher loyalty but also higher switching costs.
Conclusion: Users prioritize the perceived value of Spotify relative to its cost over individual feature satisfaction.
What Factors Drive Retention and Loyalty?
Findings and Possible Answers:
Key Insight: Offline listening, personalized playlists, and pricing transparency play critical roles.
Data-Driven Answer:
Features like offline listening and personalized playlists were highly valued, receiving the highest satisfaction scores.
Users emphasized the importance of pricing transparency and flexibility in maintaining their loyalty.
Competitive offerings like Apple Music and YouTube Music pose threats due to exclusive content and competitive pricing, even though switching intentions are generally low.
Conclusion: Spotify should continue emphasizing its core strengths while addressing dissatisfaction in features like social sharing and playlist management.

Research Questions, Answers, and Recommendations

1. At What Point Do Users Decide to Leave Spotify?

Findings and Conclusions:

Users are more likely to consider leaving when price increases surpass €7. This is supported by a strong correlation between price sensitivity and cancellation likelihood ($r = 0.535$, $p < 0.001$).

While minor increases are tolerated, significant hikes risk pushing users toward free alternatives or competitors.

Recommendations:

Introduce gradual, targeted price adjustments to reduce churn risk.

Offer tiered pricing plans or added value (e.g., bundled features) to justify price increases for sensitive segments like students and early-career professionals.

Monitor price perceptions through regular surveys to understand the evolving tolerance threshold for increases.

2. How Price-Sensitive Are Young Adults?

Findings and Conclusions:

Price sensitivity does not significantly vary across younger age groups (12–34) or subscription types (e.g., family, student plans), as indicated by p-values of 0.959 and 0.878, respectively.

Long-term users, however, demonstrate significantly higher price sensitivity (ANOVA $p = 0.002$). This group's loyalty makes them valuable, but their heightened awareness of pricing increases the churn risk.

Recommendations:

Provide loyalty rewards, discounts, or exclusive offers for long-term subscribers to balance their heightened price sensitivity.

Tailor pricing strategies to focus on the longevity of customer relationships rather than demographic differences.

Develop messaging that emphasizes the value of Spotify's offerings beyond cost.

3. What Factors Play a Part in Their Decision to Stay with or Leave Spotify?

Findings and Conclusions:

The price-service ratio is the most significant factor influencing user loyalty ($p = 0.017$).

Satisfaction with features such as Spotify Wrapped and social sharing showed marginal significance but did not strongly affect loyalty overall.

Users emphasized core strengths like offline listening and personalized playlists as critical for retention, while dissatisfaction with social sharing features and playlist tools were cited as areas for improvement.

Recommendations:

Maintain and highlight core features like offline listening and personalized playlists in marketing efforts.

Enhance underperforming features, such as social sharing and playlist management, to address user concerns.

Ensure pricing transparency to foster trust and align perceived value with cost.

4. What Factors Drive Retention and Loyalty?

Findings and Conclusions:

Strong loyalty among long-term users stems from core features and ease of use but is tempered by price sensitivity.

Switching intentions are generally low (78% of respondents have not considered switching), but competitors like Apple Music and YouTube Music pose risks due to exclusive content and competitive pricing.

Recommendations:

Leverage loyalty programs to further engage long-term users by offering milestone rewards, exclusive content, or premium features.

Emphasize personalization, convenience, and feature variety in competitive positioning.

Address pricing concerns by comparing Spotify's unique strengths against competitors in user communication.

Overall Recommendation:

Spotify should adopt a holistic approach that balances strategic pricing, feature refinement, and loyalty-driven initiatives. By aligning these with user preferences and sensitivities, Spotify can sustain its leadership position in the competitive music streaming industry.