



Rationalization of Revenue Leakage in the Over-The-Top Ecosystem An Application of the Fraud Triangle Theory

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Abstract:

Nowadays most of people watches content on Over-The-Top platforms like Netflix, Amazon Prime, YouTube and Disney+ Hotstar. However, a major problem faced by these Over-The-Top service provider companies is "revenue leakage". When people share their passwords with friends and family instead of buying separate subscriptions revenue leakage occurs. The study tries to understand why people shares password. For this we used the famous "Fraud Triangle Theory" to check three main reasons to fraud occurrence namely Pressure by asking is it too expensive? Opportunity by asking is it too easy to share? And Rationalization by asking do people think it is okay to share? We conducted a survey to get answers from different types of users. The results were quite surprising. We found that a person's gender whether male or female and their occupation like student, job, or business do not make any difference. Everyone whether a student or a working professional thinks similarly about sharing passwords. Most people feel that subscriptions are costly (Pressure) and that sharing is very easy (Opportunity), so they don't feel it is wrong (Rationalization). We also found that most users in India still prefer free to use or ad-supported apps like YouTube. Because 87% users uses YouTube over paid Over-The-Top platforms. This suggests that Over-The-Top companies cannot just stop password sharing by force; they need to make plans that fit the Indian mindset, like lower prices or better family plans, to stop this loss.

Keywords: Over-The-Top Platforms, Fraud Triangle, OTT, Password Sharing, Revenue Leakage, Consumer Behaviour.

1. Introduction

1.1 The Digital Boom in Indian Entertainment:

The way India watches entertainment has changed completely in the last ten years. Before 2016, most families gathered around a single Television set with a cable connection. Today, entertainment is personal and mobile. Thanks to the "Digital India" revolution and affordable 4G/5G data, millions of Indians now use Over-The-Top platforms like JioCinema, Netflix, Amazon Prime, and Disney+ Hotstar. A recent industry report by (IBEF, 2025) states that the Indian Over-The-Top market is one of the fastest-growing markets in the world. This growth has created a massive business opportunity. But it has also leads to new type of financial headache for these companies.

1.2 The Financial Problem: "Revenue Leakage"

The number of viewers is going up, but the actual income for these platforms is not growing at the same speed as the increase in viewers. The most probable reason behind this is "Credential Sharing". Credential Sharing means when one person pays for a subscription but he/she shares username and password with friends, cousins, or colleagues living in different houses. In the world of Forensic Accounting, we consider this as "Revenue Leakage". Just like buying one movie ticket and going with three friends into the theatre using the back door. Due to this the company theatre bears the cost of serving four people against one ticket. (Netflix, 2022) officially admitted that over 100 million households globally are using shared passwords. This results in billions of dollars of lost sales. For an auditor or a forensic accountant, this is a serious issue because it creates a gap between the "actual viewers" and the "paying customers".

1.3 The Research Gap and Theory

Most companies try to stop this using technology, like sending OTPs or tracking locations. However, the problem is not just technical; it is psychological too. Why honest, educated people feel it is okay to steal digital content? To answer this question, this paper uses the "Fraud Triangle Theory" which was created by Donald (Cressey, 1953). He argued in theory that ordinary people commit fraud only when three specific things happen together:

Pressure: They feel a financial burden or need.

Opportunity: They see an open door to commit the act easily.

Rationalization: They convince themselves that "it is not a crime." This paper explores these three factors to understand the mind of the Indian Over-The-Top consumer.

2.Literature Review

2.1The Shift from Hardware to Cloud

To understand the fraud, we must first understand the technology. Traditional cable TV was safe from piracy because it was tied to a physical "Set-Top Box" and a smart card inside the house. You could not take your cable connection to a friend's house. However, Over-The-Top is different. It is based on the internet and cloud technology. (Lotz, 2018) Explains in his book, that Over-The-Top services are "device-agnostic" means it will work on any phone, any laptop, or any Smart TV anywhere in the world. This flexibility is great for the users, but for the companies it is a like nightmare for internal control. Because it is very difficult for the company to verify. To verify that if the person watching is the actual subscriber or an unauthorized user.

2.2 Credential Sharing:

As "Soft Fraud" Many users do not see password sharing as a crime. They see it as "helping a friend." However, academic literature views this differently. (Chen, 2023) Categorizes this behaviour as "Soft Fraud." It is different from "Hard Fraud" like hacking a bank account because the user does not feel malicious. However, the financial impact is real. In Forensic Accounting, we focus on "Subscription Fraud." When a user violates the "Terms of Service" to avoid payment, it affects the company's valuation. When any company claims that it has 10 million viewers, but in reality only 2 million of them are paying one, the financial statements do not show the true picture. This creates a risk for investors and stakeholders.

2.3 Analysing the Fraud Triangle:

We can break down fraud triangle behaviour using three elements of (Cressey, 1953):

Factor 1: Pressure: The Financial Incentive

In India, customers are very "price-sensitive". (Kevin Westcott, 2022) Found a trend known as "Subscription Fatigue". An individual may pay for single app. But when it comes to paying for so many app for different type of content like paying for Netflix, Prime, JioHotstar, SonyLIV etc. at once it usually becomes very expensive for single person to afford entertainment of his choice. The monthly cost of all these apps can be more than a cable bill. Due to this high cost it will creates the "Pressure" on individuals which leads to share expenses between each. So users form different groups where one person pays for Netflix, another person pays for Prime, and they swap passwords to each other and try to save money.

Factor 2: Opportunity: The Loophole

It is very obvious that fraud happens only when it is possible and easy to do. Most Over-The-Top platforms offer "Family Plans" or "Multi-screen" options. Which allow 2 or 4 screens to watch at the same time. The platforms intended this for a family living in one house, so that every member can easily access through same credential. However, they rarely enforce strict location checks. This lack of security provides the "Opportunity". Now users know that the app will not block them if they share the password with a friend in another city.

Factor 3: Rationalization: The Justification

This is the most important psychological factor. (Sykes, 1957) Describes "Techniques of Neutralization". This means the fraudster makes excuses to feel innocent. Common rationalizations include:

- "Netflix is a billion-dollar company, my ₹500 won't hurt them."
- "I am promoting them by letting my friend watch it."
- "Everyone does it, so why shouldn't I?"
- These excuses allow users to commit the fraud without feeling guilty about "stealing" a service.

3. Research Methodology

3.4 Research Design:

This study uses a Descriptive Research Design. The main goal is to describe the behavior of Over-The-Top subscribers in Anand and nearby areas and understand the psychological reasons behind password sharing. The study applies the Fraud Triangle Theory (Pressure, Opportunity, and Rationalization) to analyze this behavior.

3.5 Sources of Data:

Primary Data: For the study we collected primary data using a structured questionnaire via Google Forms. We circulated the google form link to residents of Anand and nearby areas for data collection.

Secondary Data: For this available research papers, news reports and websites were explored to support the study.

3.6 Sampling:

Method: Convenience sampling method is used.

Sample Size: Collected responses from 100 respondents of Anand and nearby areas.

Target Audience: The survey focuses on students, faculty members, working professionals, businessman and homemaker who use Over-The-Top platforms.

Data Analysis Tools Used: The collected data analyzed using Microsoft Excel. We use the Percentage Analysis, t-test and ANOVA.

3.7 Objectives of the study.

1. To understand whether males and females differ in how they experience financial pressure, perceive opportunities, and justify fraudulent behaviour
2. To explore how people from different occupational groups vary in terms of financial pressure, perceived opportunity, and rationalization of such acts.

3.8 Research Hypotheses

Based on the literature and objectives, the following Null Hypotheses are formed and tested.

H₀₁: There is no significant difference between Males and Females regarding Financial Pressure.

H₀₂: There is no significant difference between Males and Females regarding the perception of Opportunity.

H₀₃: There is no significant difference between Males and Females regarding the Rationalization of the act.

H₀₄: There is no significant difference in Financial Pressure across occupation groups.

H₀₅: There is no significant difference in the perception of Opportunity across occupation groups.

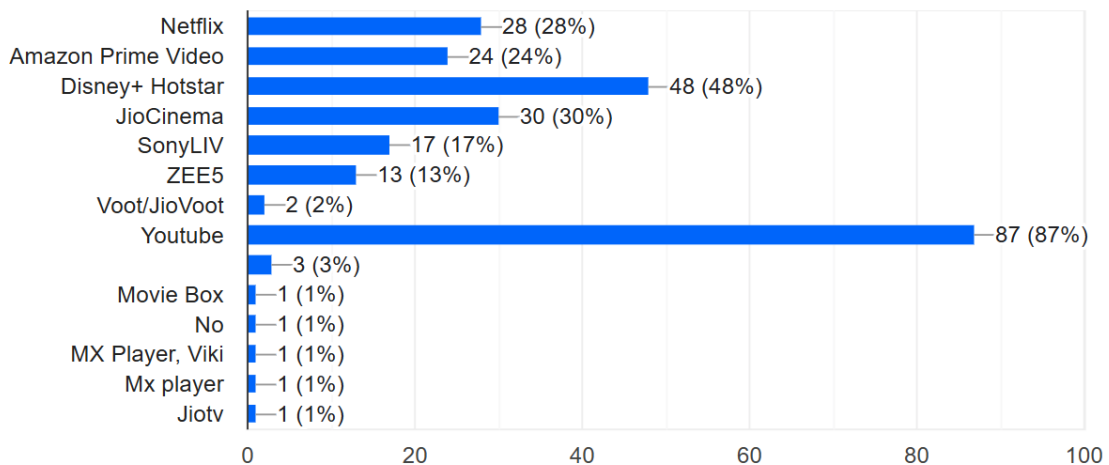
H₀₆: There is no significant difference in Rationalization across occupation groups.

3.9 Data Analysis:

3.9.1 Most Used Over-The-Top Platform:

To know which platform is being mostly used by users we asked Which Over-The-Top platforms do you currently use? and received following response:

100 responses



We find out that YouTube is the absolute favourite with 87% of respondents using it. Disney+ Hotstar follows it at 48% users using it. Interestingly, local apps like JioCinema having 30% users are actually ahead of global giants like Netflix having 28% responded using it. Amazon Prime Video is being used by 24% of the respondents. This suggests that while people enjoy premium international shows, they still prefer free or more affordable platforms.

3.9.2 Demographic Profile of Respondents:

Demographic Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	55	55.0%
	Female	45	45.0%
Age Group	18 - 25 Years	79	79.0%
	26 - 35 Years	15	15.0%
	Above 35 Years	6	6.0%
Occupation	Student	54	54.0%
	Service / Job	24	24.0%
	Business	8	8.0%
	Others / Homemaker	14	14.0%
Monthly Family Income	Low (< ₹25,000)	55	55.0%
	Middle (₹25k - ₹50k)	29	29.0%
	High (> ₹50,000)	16	16.0%

Table 1 Demographics

Interpretation: The survey represents a balanced mix of genders. Males make up 55% of the sample, while females account for 45%. Most respondents are young. Specifically, 79% are between 18 and 25 years old. This age group represents "Gen-Z" consumers, who are the most active users of streaming apps (EMARKETER Editors, 2026). Economically, more than half (55%) come from lower-income families earning less than ₹25,000 per month. This high number helped to test the "Financial Pressure" element of the Fraud Triangle theory.

3.9.3 How Many People Share Passwords? (Revenue Leakage)

We wanted to study how much money companies are losing. So, we asked two direct questions first is relating to Active Sharing: Do you give your password to others? And other is relating to passive Sharing: Do you watch on someone else's account? And we found following details.

Question	Answer	Count	Percentage (%)
Do you share your password with friends outside your home?	Yes	33	33.0%
	No	67	67.0%
Do you use an account paid for by someone else?	Yes	25	25.0%
	No	75	75.0%

Table 2 Passwords Sharing

Interpretation: The results show a big problem. 33% of users admitted they share their passwords with friends or relatives living in other houses. Also, 25% said they watch shows on an account they did not pay for. This means one out of every three users is getting the service without paying the full price. For Over-The-Top companies, this is a direct loss of revenue.

3.9.10 Why Do They Do It? (The Fraud Triangle)

We used the Fraud Triangle Theory to find the reason. We asked users to rate their feelings on a scale of 1 to 5. In which 1 means "Strongly Disagree" and 5 means "Strongly Agree".

Reason (Factor)	Statement Asked	Mean (Average score out of 5)	Rank
1. Pressure	"Subscriptions are too expensive for me."	3.91	1st
2. Rationalization	"It is not stealing because it is already paid for."	3.62	2nd
3. Opportunity	"It is easy because the app does not block me."	3.44	3rd

Table 3: The Three Main Reasons

Interpretation: The results clearly show that Money (Pressure) is the biggest problem. It has the highest score of 3.91. Users feel that paying for Netflix, Prime, and JioHotstar all at once is very expensive. The second factor is Mindset (Rationalization) with a score of 3.62. Users do not feel guilty about sharing. They convince themselves that they are right. They think, "I already paid for this account, so I own it and I can share it with anyone". The last factor is Opportunity (Ease of Use) with a score of 3.44. This means people share passwords simply because it is easy. The apps do not stop them, so they take advantage of the system.

4.. Hypothesis Testing

We performed two statistical tests using the available data.

Firstly we used Independent Samples t-test for Gender Analysis. We run independent t test in Microsoft excel and found following results.

Fraud Factor	Gender	Mean Score	F-Test (Variance)	t-value	p-value	Result
1. Pressure (Is it too expensive?)	Male	3.85	Equal (p=0.16)	0.588	0.557	Fail to reject H₀₁
	Female	4.00				
2. Opportunity (Is it easy to share?)	Male	3.43	Unequal (p=0.024)	0.106	0.916	Fail to reject H₀₂
	Female	3.45				
3. Rationalization (Is it okay to share?)	Male	3.70	Equal (p=0.10)	-0.752	0.453	Fail to reject H₀₃
	Female	3.52				

Table 4 Independent Samples t-test for Gender Analysis

Interpretation: An independent samples t-test was conducted to determine if there were significant differences between male and female respondents regarding the three components of the Fraud Triangle; Pressure (Cost), Opportunity (Ease of Sharing), and Rationalization (Ethical Perception). First we used F-Test in Microsoft excel to know equality of variances, it indicated that variances were equal for Pressure (p = 0.16) and Rationalization (p = 0.10). However, variances were significantly different for Opportunity (p = 0.024); therefore, the t-test for this variable was calculated assuming unequal variances. The results indicate no statistically significant difference between genders for any of the three factors of fraud triangle. For Pressure H₀₁: There is no significant difference in perceived financial pressure between males (M=3.85) and females (M=4.00) for t(97) = 0.588, p = 0.557.

For Opportunity H₀₂: Perceptions of how easy it is to share accounts did not differ significantly between males (M=3.43) and females (M=3.45); t(96) = 0.106, p = 0.916.

For Rationalization H₀₃: There was no significant difference in the rationalization of sharing accounts between males (M=3.70) and females (M=3.52); $t(98) = -0.752, p = 0.453$.

Conclusion: The study fails to reject all null hypotheses, it fail to reject H₀₁, H₀₂, and H₀₃. Which means gender does not play a significant role in influencing Pressure, Opportunity, or Rationalization factors of fraud on Over-The-Top platforms. Both male and female have similar view with the cost, ease of sharing passwords, and ethical implications.

5. Test 2: Difference by Occupation using One-way ANOVA

To understand if a person's job changes their ethical behaviour, the study compared three groups: Students, Service Employees, and Business Owners. The analysis checked all three factors for each group.

Fraud Factor	Occupation	Mean Score	F-value	p-value	Result
1. Pressure (Is it too expensive?)	Student	3.83	0.327	0.859	Fail to reject H₀₄
	Service	4.07			
	Business	3.75			
2. Opportunity (Is it easy to share?)	Student	3.42	0.474	0.755	Fail to reject H₀₅
	Service	3.33			
	Business	3.38			
3. Rationalization (Is it okay to share?)	Student	3.67	0.364	0.834	Fail to reject H₀₆
	Service	3.52			
	Business	3.88			

Table 5: Impact of Occupation on Fraud Factors using ANOVA

The One-way ANOVA test was used for this analysis. The goal was to check if a person's job (Occupation) changes their opinion on the three fraud factors: Pressure, Opportunity, and Rationalization. The results indicate that occupation does not play a significant role in any of the three factors:

Financial Pressure (H₀₄): There was no statistically significant difference in perceived financial pressure across the different occupation groups ($F(4, 95) = 0.327, p = 0.859$). The result 0.859 is bigger than 0.05. It means there is no difference. Students, business people, and employees all feel the same way about the price.

Opportunity (H₀₅): The perception of opportunity (ease of sharing) did not differ significantly based on occupation ($F(4, 95) = 0.474, p = 0.755$). The result 0.755. This is not significant. It shows that occupation does not change a person's view on this. Everyone sees the opportunity the same way.

Rationalization (H₀₆): No significant difference was found in the rationalization of subscription sharing across occupation groups ($F(4, 95) = 0.364, p = 0.834$). The result is 0.834. This also shows no difference. People explain or justify their behaviour in the same way, no matter what work they do.

6. Conclusion:

Does Occupation Affect Fraud Factors?

The study fails to reject the all three null hypotheses H₀₄, H₀₅ and H₀₆. This suggests that a user's occupation whether Student, Service, Business, etc. is not a significant factor of their likelihood to rationalize, feel pressured, or perceive opportunities for subscription fraud. It means that whether someone is a student, has a job, or runs a business, their mind set about Over-Thr-Top subscription sharing is the same

7. Limitations of the Study

Every research has some limits. The limitations of this study can be considered as below:

- **Small Sample Size:** We surveyed only 100 people. This is a small number to represent the whole country.
- **Limited Area:** We collected data only from Anand and nearby areas. People from other areas might think different.
- **Honesty Factor:** In this study we asked sensitive questions directly about "stealing" content. Some respondents may not answer honestly due to fear or embarrassment.

- **Young Audience:** The study had most of young respondents who is studying. We have less data from older people whose age is above 35 years.

Future Scope for Researchers

Other researchers can extend this study in the following ways:

- **Cover More Cities:** In future studies one should survey people from metro cities like Mumbai and Bangalore to get a better picture.
- **Test Solutions:** A new study can check if "lower prices" actually stop piracy or not.
- **Interview Users:** Instead of just a survey form like this study, researchers can personally visit and conduct interviews for better understanding of the "psychology" of the user in detail.

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