Netflix the battle for your free time: Strategy guided by customer lifetime value

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ABSTRACT

This spreadsheet-based case study introduces students to calculating customer lifetime value (CLV) and assessing proposed marketing strategies based on their CLV impact. Key terms and calculations are introduced and illustrated using Netflix data. Students are encouraged to recreate the worked example within the case. The assignment uses current Netflix data to assess proposed strategies involving potential changes to price, content, cross selling, marketing spending, and introducing commercials. This case is intended for undergraduate marketing students who have completed Principles of Marketing and have basic spreadsheet skills. After completing this case, students should be able to:

1. Explain customer lifetime value and the key terms that are associated with its calculation.
2. Calculate customer lifetime value using a spreadsheet-based process.
3. Assess the customer lifetime value impact of proposed marketing strategies.
4. Recommend a marketing strategy given the customer lifetime value analyses of proposed strategies.

Keywords: customer lifetime value, marketing strategy analysis, spreadsheets, Netflix

INTRODUCTION

What do you do during your free time? For nearly half of American households and millions of international subscribers, Netflix provides an attractive value proposition. Commercial free streaming of TV, movies, and video Netflix provides a real bargain in video entertainment. Netflix's business model is simple: acquire the rights to distribute relevant content from TV and movie corporations and stream it over the internet to paying customers. As long as the revenue from customers exceeds the cost to acquire and keep them, plus content cost, Netflix is successful.

The competitive landscape is rapidly changing with content producers like Disney, CBS, and HBO now offering direct streaming of their content. Distributors of content, such as cable's Comcast Corp., Charter Communications and satellite businesses DirecTV and Dish, are also starting to create their own content, as well as the merger of companies in both industries such as ATT and Time Warner. Competitors outside these traditional media and distribution industries, such as Amazon and Apple, are also emerging. Will content now owned by direct Netflix competitors still be available in the future? Will internet service providers like ATT slow down streaming speeds and/or increase the cost of broadband to make their streaming services more attractive? As the competitive rivalry heats up (200+ streaming US companies), the US market is also maturing (Netflix 49% weekly user penetration) suggesting the cost to acquire new customers will increase as well as the costs to deliver content.

Given the competitive US market, Netflix is expanding rapidly into international markets. Each new market presents its own programing and delivery challenges and Netflix has been investing in local content through local broadcasters. Their content strategy seems to be working as their third quarter international streaming revenue grew by 49%, compared to 25% domestically. In addition to US and International Streaming divisions, Netflix still offers its domestic DVD mail order option.

"Our job is to make Netflix stand out so that when consumers have free time, they choose to spend it with our service." Netflix, Inc

Enhancing Netflix's Value Proposition

What are the key elements of Netflix's value proposition and how can it be enhanced to remain on top of the streaming industry? At the core of Netflix's value proposition are the algorithms that mine the viewing data of subscribers (Likewhere Blog Post). In order to provide personalized recommendations and a curated organization to the tremendous number of programing options, they save the subscriber time and develop a sense of affiliation with the Netflix community of watchers. This viewing data also provides a clear direction for Netflix by purchasing relevant content and in creating its own content. Netflix spent over $12 billion on content in 2018, shifting more to original programing and relying less on licensed programing from rival competitors (Ramachandran and Maidenberg, 2018). Covering these rapidly growing content costs creates the imperative of an in-depth understanding of how to attract and retain its customers. Examining potential value proposition strategies should include an assessment of the strategies effect on subscribers current and future relationship with Netflix. The monetary value of a customer can be summarized as Customer Lifetime Value. Will proposed strategies enhance or diminish Customer Lifetime Value? What is a Netflix subscriber worth?

CUSTOMER LIFETIME VALUE CALCULATION

Graphic 1 conceptually displays the CLV concept and there are various methods and formulas that can be used to estimate CLV. They vary in assumptions, data requirements and calculations. The method illustrated in this case follows the traditional income statement format and utilizes Excel (Figure 4). The following Customer Lifetime Value illustration and spreadsheet utilize Total Streaming data from Netflix's 2017 Income State provided in Figure 5 (Netflix Annual Report, 2018). Regardless of calculation method, CLV is an estimate of the profitability of one customer over his/her relationship with the company.

Customer Acquisition Cost (CAC)

The cost to obtain new Netflix subscribers can be estimated by dividing the amount spent on marketing by the number of new customers acquired. CAC may also be referred to as Marketing Acquisition Cost (MAC). Most companies readily know the total budget spent on marketing but must make an assumption on the percent attracting new customers versus retaining existing customers. Netflix offers free trial periods, examples presented in Graphic 2, to attract new customers, spends more than $1 billion on digital and traditional advertising campaigns, and compensates partners for signing up new subscribers. In addition, spending on new content also attracts new subscribers and is critical for its success. From Figure 5, Netflix's income statement provides the amount spent on marketing ($1,436,281,000 for 2017), whereas, the cost of content is listed in the cost of revenues. For simplicity in this case analysis we will assume 90% of the total marketing spending was to acquire new customers and the remaining 10% was to retain existing customers (referred to as Customer or Marketing Retention Costs).

An estimate of the number of new customers is also needed to calculate CAC. Netflix provides new and total membership data but does not publish Churn Rates (number of customers lost). An independent research company, Parks Associates (2015), estimates Churn rates for this streaming industry as presented in figure 2. Netflix's 9% Churn Rate estimate can be varied to see its effect on lifetime value.

Netflix reports Paid Members, Paid net member additions, as well as Free Trials in the Income Statement (Figure 5). Because the one-month free trials often result in cancelations and no revenue is generated they are not considered new members until they actually start paying. Netflix ended 2017 with Paid Members of 110,644,000 an increase of 21,554,00 over 2016. However, it also had to replace the customers who dropped during the year (9% churn); therefore, an additional 8,018,100 (9% of 2016 Paid Members 89,090,000) new customers had to have been acquired. Thus, for 2017, Netflix acquired 29,572,100 (8,018,100 + 21,544,000) new customers. In Figure 4, this is calculated in cell B9.

Customer Acquisition Cost for 2017 can be estimated as 90% of the Total Streaming Marketing budget divided by the number of new customers (90% X $1,436,281,000 / 29,562,100 = $43.71). In Figure 4, this is calculated in cell B15. Thus, Netflix's spends $44 to acquire a new customer. Typically, CAC increases as a market matures thus the domestic streaming market may be quite different from the international market. Acquiring new customers, at reasonable costs, and managing Churn is the key challenge that all subscription-based businesses face.

Revenue per Customer

Graphic 3 displays the three different Netflix pricing plans with different monthly prices primarily differentiated by number of users simultaneously streaming per account and HD content. Prices were raised in January 2019. The average annual revenue per paying membership is the Total Streaming Revenue divided by the Number of Paid Members ($11,242,216,000 / 110,644,000 = $101.61), Figure 4 cell C13.

Gross Profit per Customer (GPM)

Revenue minus Cost of Revenue equals Gross Profits. Gross Profit can be expressed as a percent of Revenue, referred to as Gross Profit Margin (GPM). For the Total Stream division in 2017, GPM = ($11,242,216,000 - $7,830,475,000) / $11,242,216,000 = 30.35%). The GPM can then be multiplied by average revenue per member to calculate yearly gross profit per membership ($101.61 X 30.35% = $30.84), Figure 4 cell C14.

Marketing Retention Cost (MRC)

The cost to maintain and keep the customer is also referred to as Customer Retention Costs (CRC). Examples include reminder advertising, billing, customer service, and communications of new programming to existing customers. Recall that this case analysis assumed 10% of the marketing budget was specifically targeted at keeping existing customers (10% X $1,436,281,000 / 110,644,000 = $1.30 per customer per year), Figure 4 cell C16. Netflix might also consider some of the content creation as retention costs; however, all of the content costs is included in the Costs of Revenues.

Retention Rate (RR)

Retention Rate is the percent of customers who remain loyal and continue to subscribe from time period to time period. The Retention Rate is the complement to Churn. Retention Rate = 1 – Churn Rate. Our estimate of 9% Churn for Netflix implies that the Retention Rate is 91%. Retention rates are a reaction to the value proposition after customers have tried Netflix service. For subscription-based businesses, this is very high indicating their value proposition meets or exceeds customer expectations. The first time period retention is always 100%, cell C17. Each time period afterwards is the retention rate times the previous time period's retention rate. Year 2 is 91% times 100% = 91%, cell D17; year 3 is 91% times 91% = 83%, cell E17; year 4 is 91% times 83% = 75%, cell F17; etc.

Customer Lifetime (LT)

A common assumption in calculating CLV is that the lifetime of a customer is estimated by LT = 1 / (1- Retention Rate). For Netflix, this implies an 11.1-year life (1 / (1-.91)). Parks Associates estimates average length of time subscribing to Netflix at 42 months, Figure 3. Given uncertainty in the competitive marketplace, many companies will cap estimates of customer lifetimes at some reasonable time such as 3 to 5 years even if they generate high retention rates. In this case example we will assume a 4-year life time.

Net Marketing Contribution (NMC)

Gross Profit minus the Marketing Retention Costs provides Net Marketing Contribution, which is adjusted for retention rates by multiplying it times the time period's retention rate. (Year 1: NMC = ($30.84 - $1.30) X 100% = $29.54, cell C18; Year 2: NMC = ($30.84 - $1.30) X 91% = $26.88, cell D18; etc.).

Net Present Value (NPV)

CLV is an estimate of the forecasted profit of customers in the future. Given the time value of money, Net Present Value allows us to discount future profits back into today's dollars (Net Present Value = Net Marketing Contribution / (1 + Discount Rate) ^ time period). The Discount rate is the cost of capital for a particular company. It can be found online for most public companies, e.g. gurufocus.com lists Netflix's weighted average cost of capital as 9.75%. Using this discount rate the NPV for Year 1 = ($29.54) / (1+.0975) ^ 1 = $26.91), cell C19. Thus, the net marketing contribution of $29.54 received after year 1 is worth $26.91 in today's dollars. Year 2 = ($26.88) / (1+.0975) ^ 2 = $22.32), cell D19.

Customer Lifetime Value (CLV)

CLV is the cumulated sum of the discounted future profits over the life time of the customer, minus the cost of acquiring the customer. The CLV spreadsheet in figure 4 follows the company's income statement format, providing a complete listing of the factors impacting CLV, and provides flexibility in varying the different elements impacting the value proposition. The last row in the spreadsheet adds the NPV from one time period to the CLV from the previous time period; therefore, the final time period is a sum of the all the NPVs, which is the CLV. If we assume constant revenue and margins over the customer's 4-year life, the spreadsheet in Figure 4 can be used to estimate the 2017 Total Streaming division's CLV = $39.36, cell F20.

Customer Equity (CE)

CLV is the worth of one customer; whereas, Customer Equity is the sum of all the company's customer lifetime values. CE represents the company's future earning potential based on its Customer Relationship Management strategy and capability (Multiply the CLV times the number of customers). It can be calculated for the company overall or for each customer segment and then summed. Netflix's 2017 Total Streaming CLV was $39.36 with 110,644,000 subscribers thus providing CE = $4,355,068,000, cell B22.

Figure 4 presents the above concepts in the form of an Excel spreadsheet. The numbers in the top box are from Figure 5: 2017 Income Statement for Total Streaming and also from the assumptions previously stated in the case. The bottom part of the spreadsheet utilizes formulas to calculate the values based on the numbers in the top box. Once the spreadsheet is created it is easy to change the numbers in the top box to examine alternative strategies and have the resulting CLV and CE automatically recalculated, if formulas are used in the bottom rather than typing in the numbers. Time period 0 represents the time before a person becomes a paying member; therefore, it has no revenue and represents the marketing expenditures (MAC or CAC) needed to acquire the customer. The following time periods represent years the customer remains a Netflix subscriber. It is also common to estimate CLV on a monthly basis for many products and services.

THE CHALLENGE AND REQUIRED QUESTIONS

Netflix's future success will be based on their effectiveness in understanding likely impacts of changes in their marketing strategies. As a market analyst you have been tasked with analyzing proposed changes to Netflix's basic marketing strategy. Re-create the spreadsheet in Figure 4 in order to check that your spreadsheet correctly calculates CLV & CE. Once you have created the spreadsheet you can then use it as a template and modify it with the appropriate 2018 data, from Figure 5, to analyze the CLV impact of proposed strategies and make your recommendation.

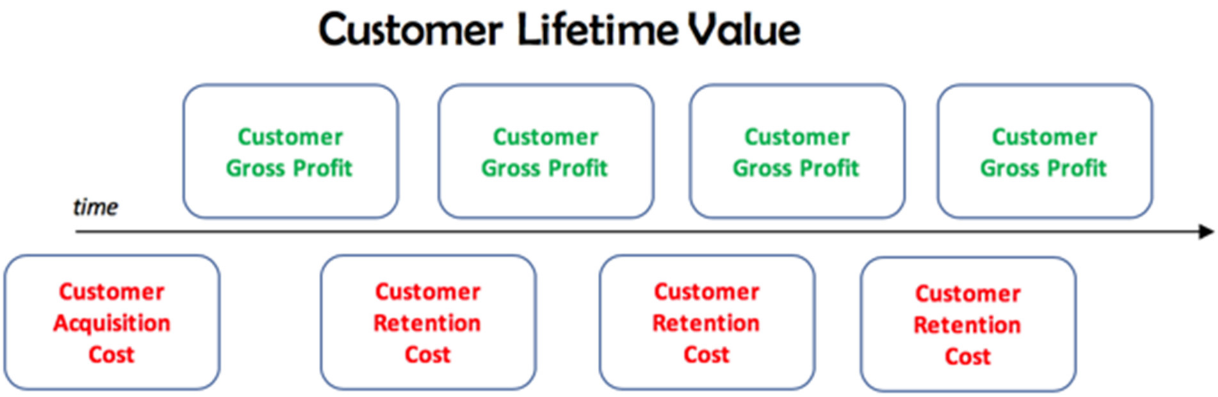
1. Customer Lifetime Value Analysis: Create CLV spreadsheets for both the 2018 Domestic and the International Streaming Netflix divisions. Display the yearly CLVs in a column graph for each segment. Use red columns for negative CLVs and green columns for positive values.

2. Marketing Strategy Analysis: Using the CLV spreadsheets, calculate the likely effect each of the proposed strategies would have on CLV and CE in each of the 2 divisions:
   a. a price increase that raised the average monthly revenue per customer by $.75 in each market. Assume the price increase would also increase the Churn Rate from 9.0% to 10.0%
   b. creating more original content? Assume the content enhancement would decrease the Churn Rate to 8% but increase the Cost of Revenues by $.5 billion in each market (no change in price).
   c. cross selling the subscribers access to a library of unlimited magazine readership. Assume 20% of its current subscribers sign up at an additional $1 per month and the Cost of Revenue increases $.50 per month for these subscribers. Assume the Churn Rate doesn't change (no change in price or content).
   d. shifting marketing spending from customer retention to new customer acquisition? Assume a reduction to 5% of the marketing budget for retention and an increase in Churn to 9.5% (no change in price, content, or subscription).
   e. including commercials during the streaming of Netflix? Assume the Churn Rate would increase by 20%, offset by ad revenue of $1 billion in each market (no change in price, content, or subscription).

3. Strategy Recommendation: Create a summary table with the CLV and CE results from the proposed strategies. Which value proposition enhancing strategy would you recommend and why?

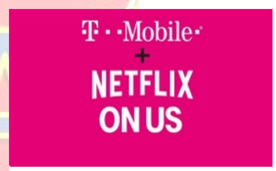
APPENDIX

Graphic 1: Customer Lifetime Value



Graphic 2: Netflix Customer Acquisition Promotions

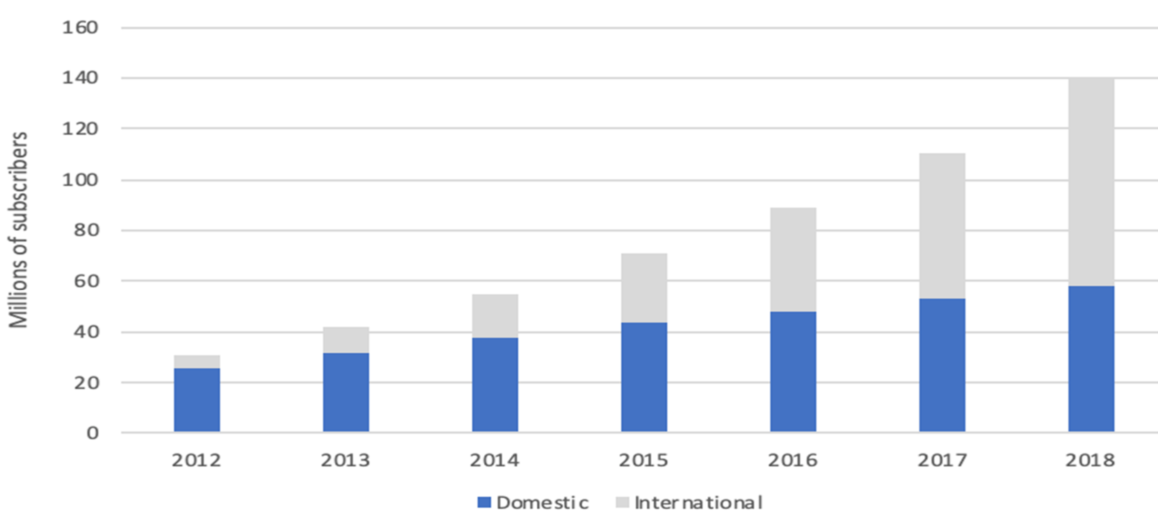
Source: Netflix



Source: T-Mobile

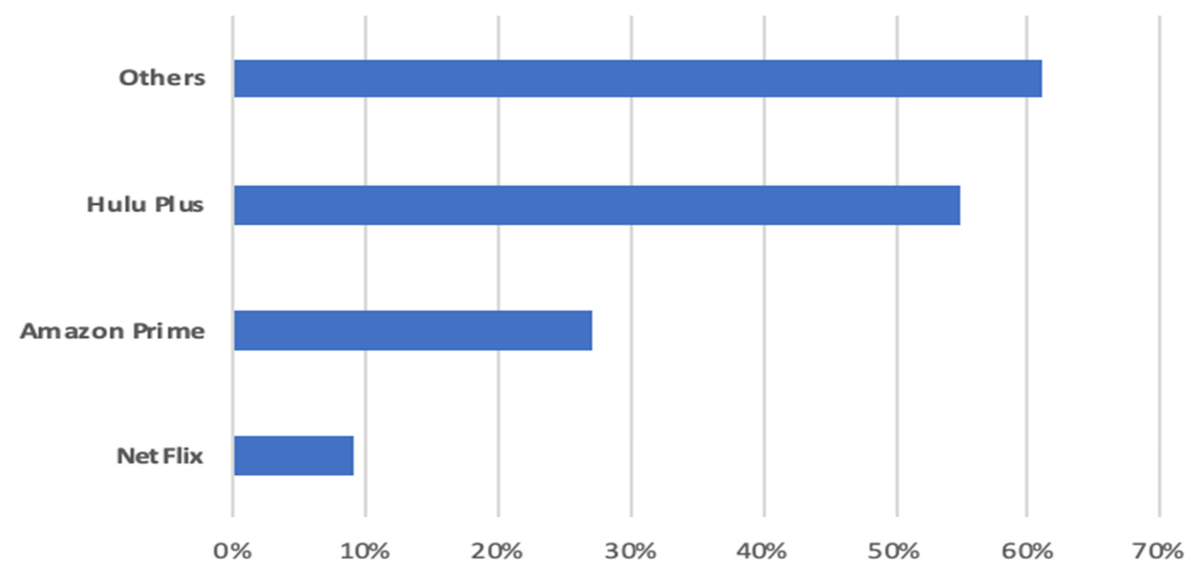
Graphic 3: Netflix Pricing Plans

Figure 1: Netflix Subscribers



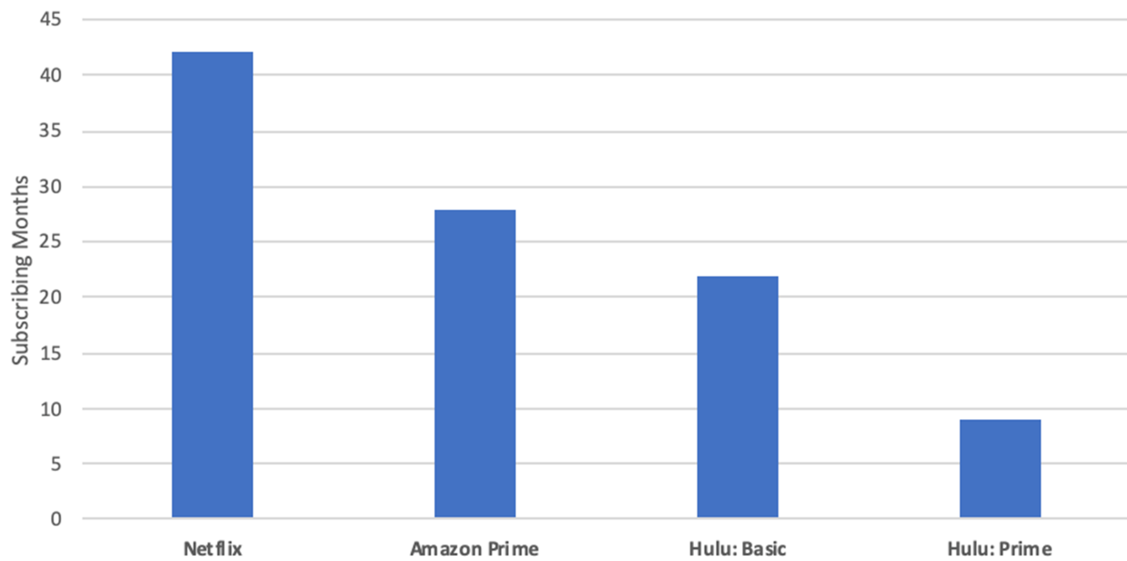
Source: Netflix Annual Report

Figure 2: Churn Cancelation Rates



Source: Parks Associates

Figure 3: Average Subscription Time



Source: Parks Associates

Figure 4: Customer Lifetime Value Spreadsheet

	A	B	C	D	E	F
1	2017 Total Streaming	(000)				
2	Revenue	$ 11,242,216				
3	Cost of Revenue	$ 7,830,475				
4	Marketing Expense	$ 1,436,281				
5	Marketing Acqusition Cost %	90%				
6	Churn Rate	9%				
7	Paid Members 2017	110,644				
8	Paid Members 2016	89,090				
9	Calculated New Customers	29,572				
10	Discount Rate	9.75%				
11						
12	Years	0	1	2	3	4
13	Revenue	$0	$ 101.61	$ 101.61	$ 101.61	$ 101.61
14	Gross Profit	$0	$ 30.84	$ 30.84	$ 30.84	$ 30.84
15	Marketing Acquisition Costs	$ 43.71	0	0	0	0
16	Marketing Retention Costs	$0	$ 1.30	$ 1.30	$ 1.30	$ 1.30
17	Rention Rate	-	100%	91%	83%	75%
18	Net Marketing Contribution	$ (43.71)	$ 29.54	$ 26.88	$ 24.46	$ 22.26
19	Net Present Value	$ (43.71)	$ 26.91	$ 22.32	$ 18.50	$ 15.34
20	Customer Lifetime Value	$ (43.71)	$ (16.80)	$ 5.52	$ 24.02	$ 39.36
21						
22	Customer Equity (000)	$ 4,355,068				
23				Customer Lifetime Value		
24						

Figure 5: Netflix, Inc. Income Statement by Segments

	A	B	C	D	E	F
1		(000)	Months Ended	Twelve Months Ended	Nine Months Ended	
2			December 31,	December 31,	September 30,	
3	**Domestic Streaming**		2016	2017	2018	
4	Paid net membership additions		4,504	4,905	4,147	
5	Paid memberships at end of period		47,905	52,810	56,957	
6	Total memberships at end of period		49,431	54,750	58,464	
7	Average monthly revenue per paying membersh		$ 9.21	$ 10.18		
8						
9	Revenues		$ 5,077,307	$ 6,153,025	$ 5,650,555	
10	Cost of revenues		2,855,789	3,319,230	2,812,399	
11	Marketing		382,832	553,331	639,504	
12	Contribution profit		1,838,686	2,280,464	2,198,652	
13	Contribution margin		36.2%	37.1%	38.9%	
14						
15	**International Streaming**					
16	Paid net membership additions		13,747	16,649	15,631	
17	Paid memberships at end of period		41,185	57,834	73,465	
18	Total memberships at end of period		44,365	62,832	78,635	
19	Average monthly revenue per paying membersh		$ 7.81	$ 8.66		
20						
21	Revenues		$ 3,211,095	$ 5,089,191	$ 5,676,513	
22	Cost of revenues		2,911,370	4,137,911	3,966,471	
23	Marketing		608,246	724,691	801,767	
24	Contribution profit (loss)		(308,521)	226,589	908,275	
25	Contribution margin		-9.6%	4.5%	16.0%	
26					Data used in text and Figure 4	
27	**Total Streaming**					
28	Paid net membership additions		18,251	21,554	19,778	
29	Paid memberships at end of period		89,090	110,644	130,422	
30	Total memberships at end of period		93,796	117,582	137,099	
31	Average monthly revenue per paying membersh		$ 8.61	$ 9.43		
32						
33	Revenue		$ 8,288,402	$ 11,242,216	$ 11,327,068	
34	Cost of revenues		5,767,159	7,457,141	6,778,870	
35	Marketing		991,078	1,278,022	1,441,271	
36	Contribution profit		1,530,165	2,507,053	3,106,927	
37	Contribution margin		18.5%	22.3%	27.4%	
38	Source: Netflix Annual Report					

TEACHING NOTE

This case is intended for undergraduate marketing students who have completed Principles of Marketing and have basic spreadsheet skills. Spreadsheet skills should include entering data, basic formulas and formatting. Asking the students to recreate the illustrated spreadsheet in Figure 4 provides a good worked example with a known solution for the students. This case can be a good team-based assignment, which allows students strong in Excel to assist those who may struggle with basic spreadsheet operations. The case includes two market segments to analyze which provides several potential learning opportunities. Each student can be asked to complete the analysis on one of the segments and then present and review the solution in class. The second segment can then be assigned for reinforcement and practice. Alternatively, teams maybe assigned the case with the analysis of each segment divided among team members.

Learning Objectives:

After completing this case, students should be able to:

1. Explain customer lifetime value and the key terms that are associated with its calculation.
2. Calculate customer lifetime value using a spreadsheet-based process.
3. Assess the customer lifetime value impact of proposed marketing strategies.
4. Recommend a marketing strategy given the customer lifetime value analyses of proposed strategies.

Solutions and an Excel file will be made available to instructors upon request.

REFERENCES

"Adding Value: Netflix's Winning Formula." [Blog Post]. Retrieved from https://www.likewhere.com/post/adding-value-netflix-winning-formula .

Parks Associates. (2015). "Subscriptions and Churn in OTT Video Services." Retrieved from https://www.parksassociates.com/marketfocus/subscriptions-churn-ott.

Ramachandran, Shalini, and Micah Maidenberg. "Netflix Reports Strong Growth in New Subscribers." *The Wall Street Journal*, Dow Jones & Company, 16 Oct. 2018, https://www.wsj.com/articles/netflix-reports-strong-growth-in-new-users-1539720594 .

Netflix Annual Report. (2018). Retrieved from https://www.netflixinvestor.com/financials/annual-reports-and-proxies/default.aspx.