SCHOOL OF DATA SCIENCE AND FORECASTING

DAVV, INDORE

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MARKETING ANALYTICS

ASSIGNMENT: CASE STUDY ON HOW ORGANIZATIONS USE ALGORITHMS IN MARKETING.

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ABSTRACT

“In the digital age, marketers can’t win without mastering data, analytics and automation.”

The Digital marketing industry is employing machine learning algorithms to boost customer engagement through personalization and customization of marketing journeys. Machine learning has been an important tool for marketers to capture campaign data and turn it into experiences that maximize consumer happiness and company profits.

This report shows how multinational organizations, Hasbro and Starbucks use different techniques to enhance their customer engagements and improve ROI and customer satisfaction.

Hasbro uses purchase analysis, behaviour analysis and attribution analysis to boost their customer engagements and improve their ROI.

Starbucks, in turn uses Customer lifetime value to enhance customer satisfaction.

HASBRO CASE STUDY

Industry: Entertainment.

Founded: 1923.

Founders: Henry Hassenfeld, Hillel Hassenfeld, and Herman Hassenfeld.

Headquarters: Rhode Island, US State in New England.

Area Served: Worldwide.

Products: Toys,

Puzzles,

Board games,

Wargames,

RPG,

Sports equipment,

Electronic games.

Website: www.hashbro.com

About the Company:

Hasbro, Inc. (Hasbro) is a play and entertainment company. The Company's operating segments include the U.S. and Canada, International, and Entertainment and Licensing. From toys and games to content development, including television programming, motion pictures, digital gaming and a consumer products licensing program, Hasbro fulfils the fundamental need for play and connection for children and families around the world. The Company's U.S. and Canada segment is engaged in the marketing and sale of its products in the United States and Canada. The International segment is engaged in the marketing and sale of the Company's product categories to retailers and wholesalers in most countries in Europe, Latin and South America, and the Asia Pacific region and through distributors in those countries where it has no direct presence. The Entertainment and Licensing segment includes the Company's consumer products licensing, digital gaming, television, and movie entertainment operations.

How Hasbro enhance its customer engagement and improved its ROI?

Amp Agency worked with Hasbro on managing both paid and organic search (SEO and SEM), creative online advertising, global analytics reporting, and analysis across all digital platforms (media, search, site, and social) for 25 Hasbro brands. They also figured out what was working and what wasn't in their marketing spend to help improve ROI.

Their goals were the following:

- Gain more clarity on the impact of the main touch points that influence shoppers before, during, and after they engage with the brand online.
- Find patterns in engagements that correlate with conversions.
- Understand how investments in specific channels affect performance on other channels.

To come up with some actionable insights for Hasbro, **Amp put together this 3-part plan:**

Step 1: Path to purchase analysis

- Amp was able to put statisticians to work on Hasbro for more precise and high-level behavioural analyses.
- Amp used third-party data to analyse browsing behaviour of customers before they bought from the toy company. This way, they were able to better understand the factors that influence people to buy from a company like Hasbro.
- By understanding the different aspects of the customer journey before transactions take place, Hasbro was able to get a much clearer picture as to where to put their marketing dollars.

Step 2: High-value behaviour analysis

- From there, Amp analysed what customers did on Hasbro's site. They analysed the content that customers were engaging with, the content that preceded conversions, the content that reduced conversions, etc.
- They used advanced predictive modelling techniques to analyse customer behaviour across Hasbro sites to figure out exactly which types of content to create in order to guide customers through the purchase process more effectively.
- This helped Hasbro understand what they needed to change about their content strategy, UX, and design to get the most conversions.

Step 3: Attribution analysis

- Amp then used econometric modelling techniques to analyse media investment, which resulted in insights into the ROI of various marketing channels.
- This helped Hasbro see how all the marketing channels work together to help generate conversions on the site.
- The results achieved by the agency here include better understanding for their client about the entire end-to-end customer journey.
- By knowing the behavioural patterns of customers before they interact with the Hasbro brand, the patterns of customer interactions with the site before making a purchase, and how all the marketing channels work together, Hasbro was able to optimize their marketing spend to get better ROI.

Questions –

1. How can you measure your customer experience?
2. Are your customers aware of all the features, products, and services that you offer?
3. What do they like and dislike about the way you present your product or service?
4. How do users interact with your company on their smartphone, desktop, tablet, and in person?
5. What are your users talking about on social media?
6. What is the mindset of someone who is encountering your ads for the first time?

STARBUCKS CASE STUDY

Industry: Coffee shop.

Founded: 1971.

Founders: Jerry Baldwin, Zev Siegl, and Gordon Bowker.

Headquarters: Seattle, Washington.

Area Served: Worldwide.

Products: Coffee beverages,

Smoothies,

Tea,

Baked goods,

Sandwiches.

Website: www.starbucks.com

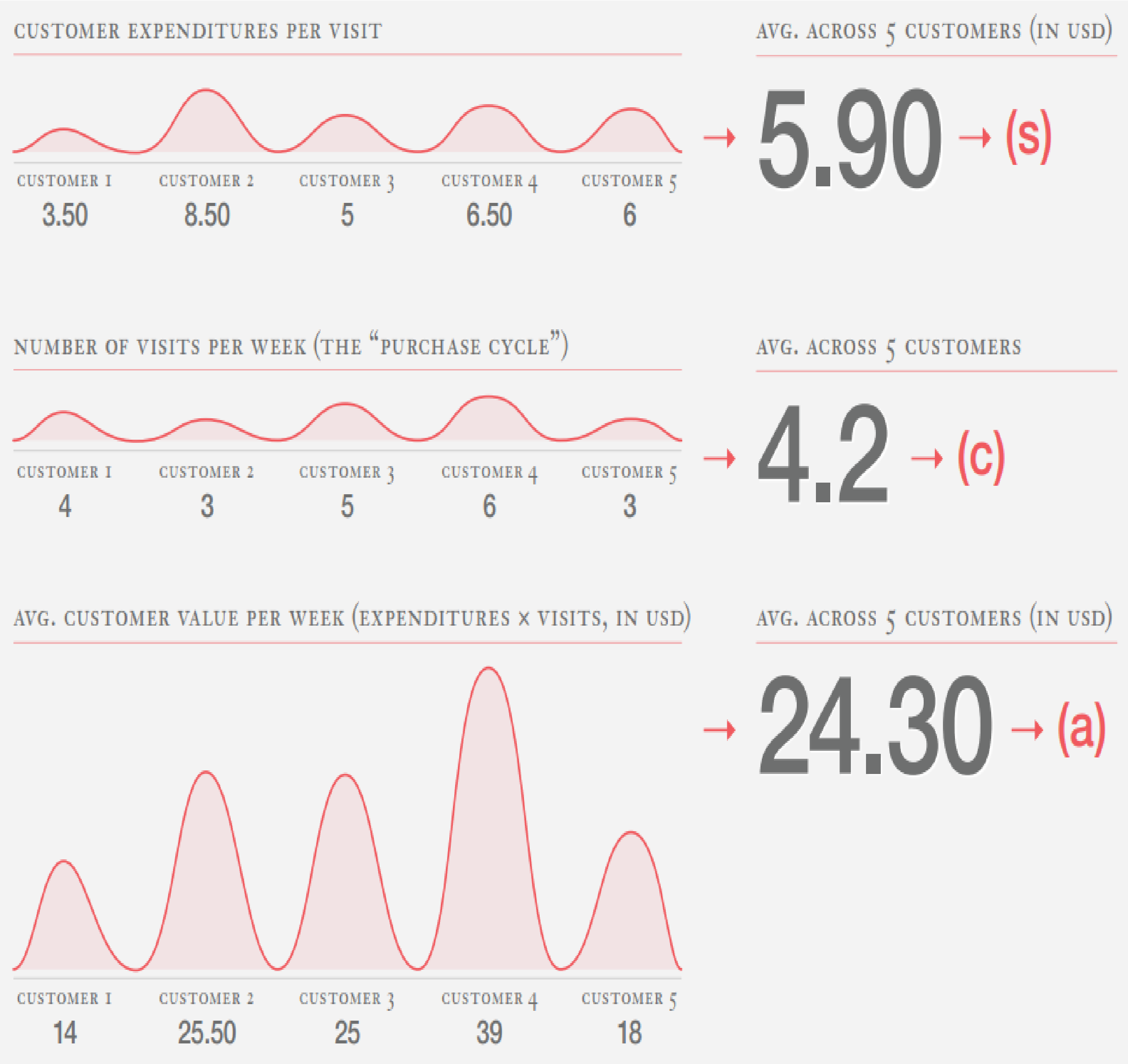
About the Company: Starbucks Corporation is an American multinational chain of coffeehouses and roastery reserves headquartered in Seattle, Washington. As the world's largest coffeehouse chain, Starbucks is seen to be the main representation of the United States' second wave of coffee culture. Starbucks was founded by Jerry Baldwin, Gordon Bowker, and Zev Siegl, opening its first store in 1971 near the historic Pike Place Market in Seattle. The three Starbucks founders had two things in common; they were all coming from academia, and they all loved coffee and tea. They invested and borrowed some money to open the first store in Seattle and named it “Starbucks” after the first mate in Herman Melville’s classic novel *Moby Dick*.

How Starbucks managed to open new stores around the world, despite of the shaky economy?

One way to analyse acquisition strategy and estimate marketing costs is to calculate the Lifetime Value ("LTV") of a customer. Roughly defined, LTV is the projected revenue that a customer will generate during their lifetime.

Despite the shaky economy, Starbucks is opening new stores around the world. In 2012, Starbucks expects to open 600 new locations internationally, about 25 percent of which will be in China. It is no secret that Starbucks' acquisition strategy is closely scrutinized and routinely copied. Using rough sales figures from 2004, we are able to estimate the LTV of an average Starbucks customer. The sales data from Starbucks may not reflect current marketing trends and is only provided to illustrate the steps necessary to calculate LTV.

Step 1: Average Your Variables

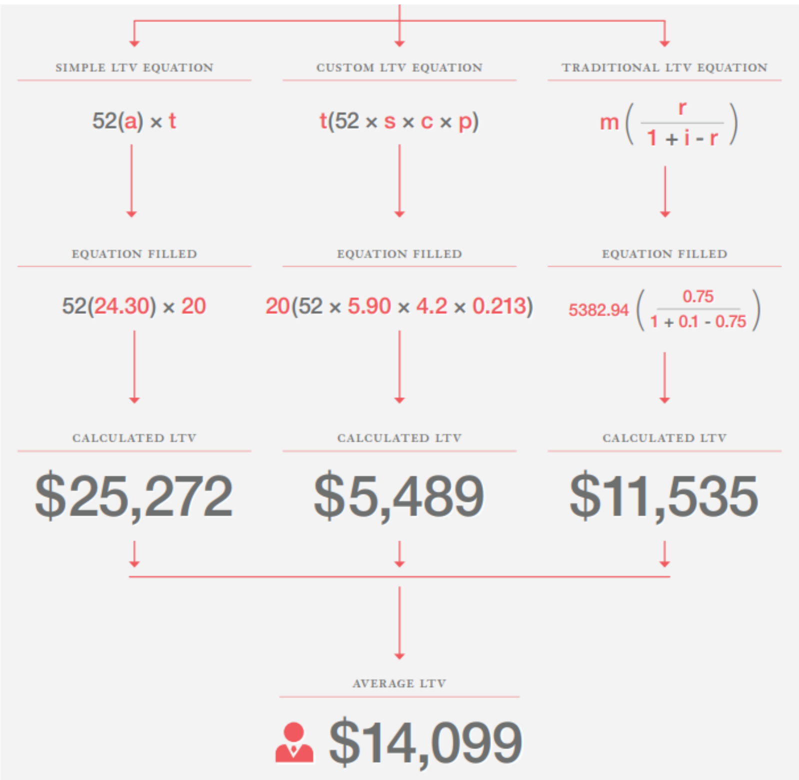


Step 2: Calculate Lifetime Value (LTV)

Constants –

1. **t** - The Average Customer Lifespan (how long someone remains a customer). In the case of Starbucks, the average customer lifespan is 20 years.
2. **i** - The Rate of Discount. The "rate of discount" is the interest rate used in discounted cash flow analysis to determine the present value of future cash flows. Usually, this number falls between 8% and 15%. For Starbucks, it is 10%.
3. **r** - Customer Retention Rate. The percentage of customers, who, over a given period of time, repurchase, when compared to an equal and preceding period of time. For Starbucks, it is 75%.
4. **p** - Profit Margin per Customer. For Starbucks, it is 21.3%.
5. **m** - Avg. Gross Margin per Customer Lifespan. Starbucks has a profit margin of 21.3% (see constant "p"). If the average customer spends $25,272 (see the "Simple LTV Equation" results below) during their time as a customer ("t"), Starbucks has gross margin per customer lifespan of $5382.94.

Different ways to calculate LTV - Companies like Starbucks will typically use several different equations to calculate the LTV. We've included 3 common LTV equations below. Companies will typically use these equations (separate or in combination) to help determine their marketing budgets, and, ultimately, the cost of acquisition.



By calculating the LTV of an average customer, Starbucks can now begin to estimate the maximum acquisition cost of a new customer. Using our estimate (an average of several LTV equation results), Starbucks must spend less than $14,099 to acquire new customers. If Starbucks spends more than $14,099 per acquisition over the course of an average customer lifespan (20 years), there's a chance that they could be losing money.

Customer Lifetime Value (CLV) Worksheet | B2C (High Volume, Low Margin)

Cycle: 1 week

Customer	Average Sale	Number of Repeat Sales	Average Cost of Goods Sold	Expected Retention Time	Total Sales per Cycle	Profit Margin	CLV
Example - John Cappuccino	$ 6.50	1.00	$ 5.10	780.00	$ 6.50	21.54%	$ 1,092.00
Example - Susan Latte	$ 5.90	4.00	$ 4.65	1,040.00	$ 23.60	21.19%	$ 5,200.00
Example - Stacey Espresso	$ 5.75	0.25	$ 4.20	936.00	$ 1.44	26.96%	$ 362.70

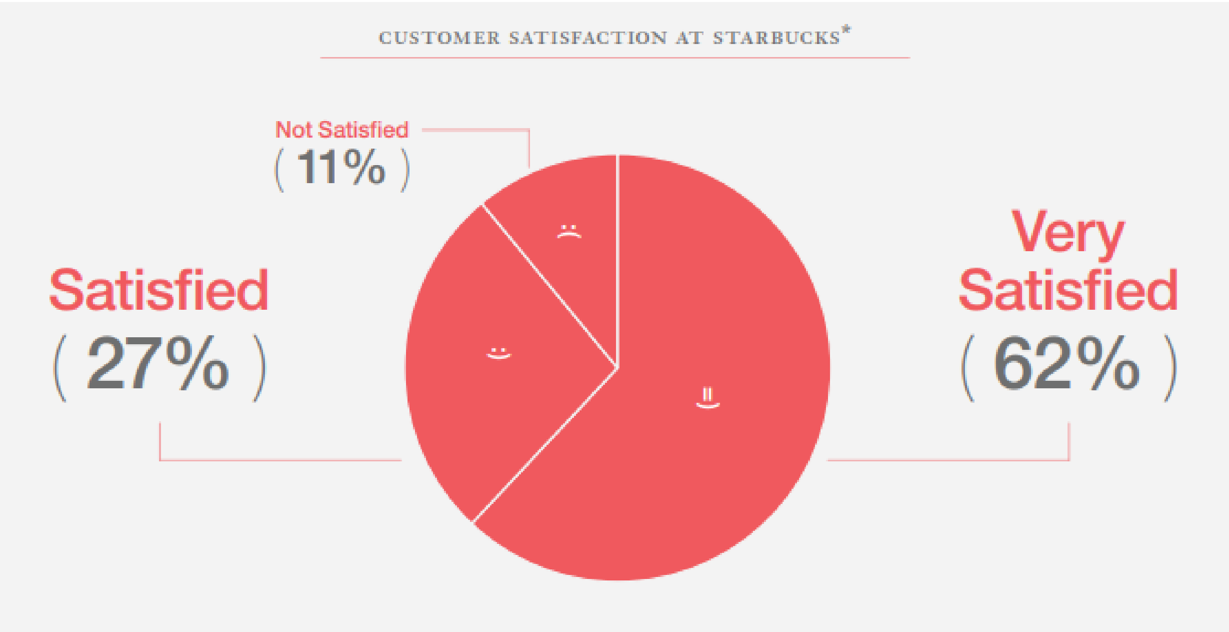
Breaking Down LTV Further –

1. LTV will be different for different kinds of customers.
    a. Step 2 in this graphic is intended to help you determine LTV as a total average (an average of all your customers).
    b. To do this, companies will typically average the data from randomly chosen customers (as shown in Step 1 above).
    c. Sometimes it's helpful to break down the average further and perform separate LTV calculations for different kinds of customers.
    d. Try and segment your customer base by total purchases over a long time period, and it will help you determine the LTV of a "good" customer versus an "average" one.
    e. This type of analysis will help you determine how much more you should pay in order to acquire a "good" customer.
2. Investing in "good" customers.
    a. Companies should be worried about the lasting impact of "buying cheap customers."
    b. How likely are these customers to buy another product, or hang around for a few years? Sometimes it pays to invest in "good" customers.
    c. "Good" customers might cost more to acquire, but they'll likely be more profitable as well.
    d. Let's say that the LTV of an "average" customer is $8,000, and the LTV of a "good" customer is $10,000. By subtracting the two LTVs, you can see that you might expect to pay $2,000 more to acquire "good" customers.

High Value Customers	Good Customers	"Meh" Customers
Most profitable, most loyal customers with a small attrition rate, low acquisition cost and a very high lifetime value. These are the customers you want.	*Customers who stick around for a while, are somewhat profitable and have a decent lifetime value. These are the customers that you want to eventually convert into HVCs.*	*Keeping these customers around is often more expensive than it is worth. They have a high attrition rate and are not profitable.*

Customer Satisfaction Boosts LTV –

One of the most effective ways to boost LTV is to increase customer satisfaction. Research has found that a 5% increase in customer retention can increase profits by 25% to 95%. The same study found that it costs six to seven times more to gain a new customer than to keep an existing one. The success of Starbucks could be attributed to its high customer satisfaction rate.



Questions –

1. How to Calculate Customer Lifetime Value (CLV) to Market to High Value Customers?
2. Who Are Your High Value Customers?
3. What is Customer Lifetime Value (CLV)?
4. How valuable are your customers in relation to one another?
5. How Much is a Customer Worth?

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