

# **Rockbuster Video**

## **Business Analysis**

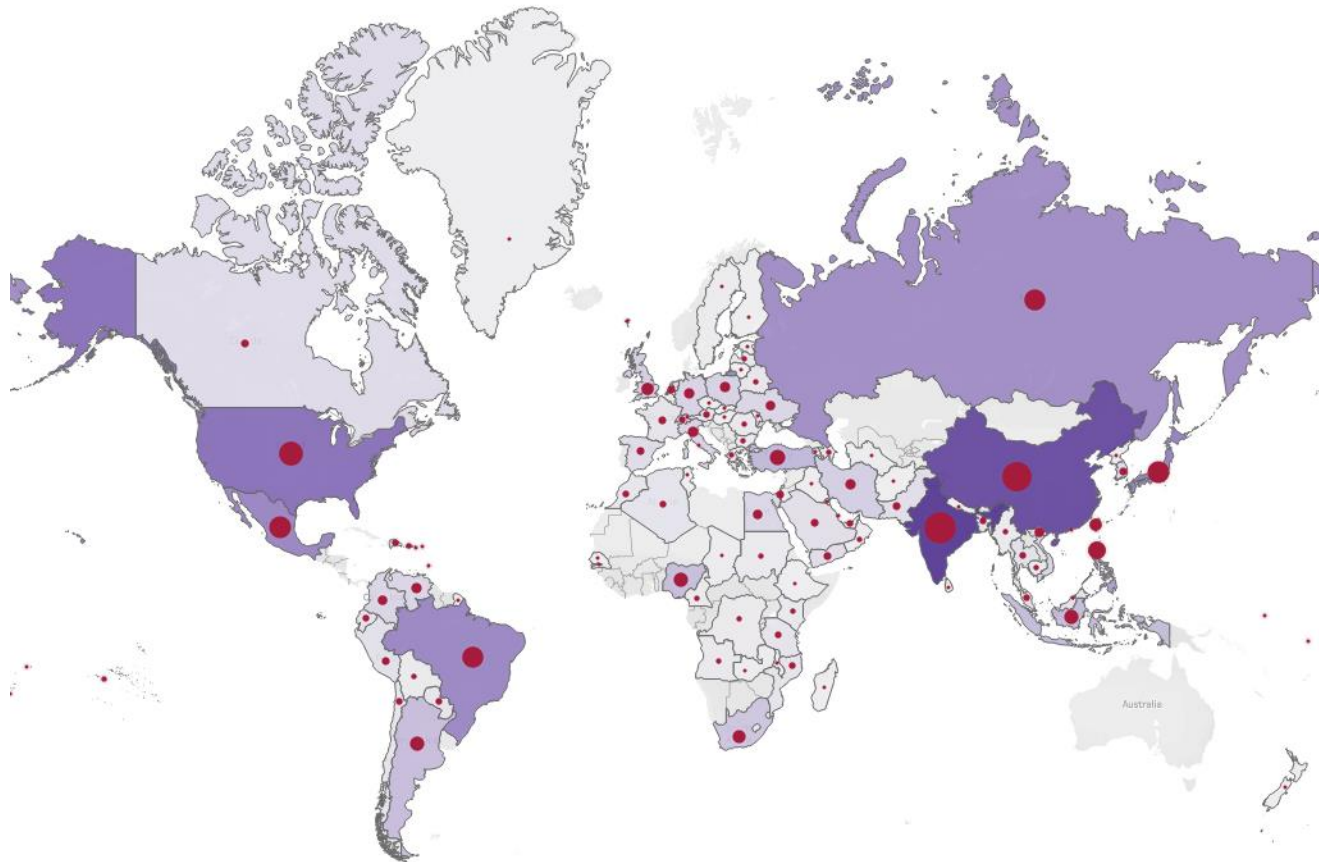
# Summary Statistics

Minimum Rental Price	-	<b>\$0.99</b>	Minimum Rental Duration	-	<b>3 Days</b>
Maximum Rental Price	-	<b>\$4.99</b>	Maximum Rental Duration	-	<b>7 Days</b>
Average Rental Price	-	<b>\$2.98</b>	Average Rental Duration	-	<b>5 Days</b>
Total Inventory	-	<b>4581</b>	Number of Customers	-	<b>599</b>
Unique Titles	-	<b>1000</b>	Number of Rentals	-	<b>16044</b>

Our company is quite small in terms of inventory and number of customers, but those customers are extremely active, averaging about 27 rentals each across the roughly three months we have on file.

# Spatial Analysis

## Countries by Gross Revenue and Number of Customers



Darker = Higher Revenue, Larger Circle = More Customers

We have customers in 108 countries including the Vatican, North Korea, and Yugoslavia – a country that hasn’t existed since 1992 – but none in Australia, where one of our two stores is located.

## Top Ten Countries by Average Lifetime Value

Country	Average Lifetime Value
Thailand	\$133.69
Ecuador	\$123.06
Yemen	\$118.48
Bangladesh	\$117.73
Algeria	\$116.39
Taiwan	\$115.51
Vietnam	\$112.74
Ukraine	\$112.59
Canada	\$111.94
Netherlands	\$111.55

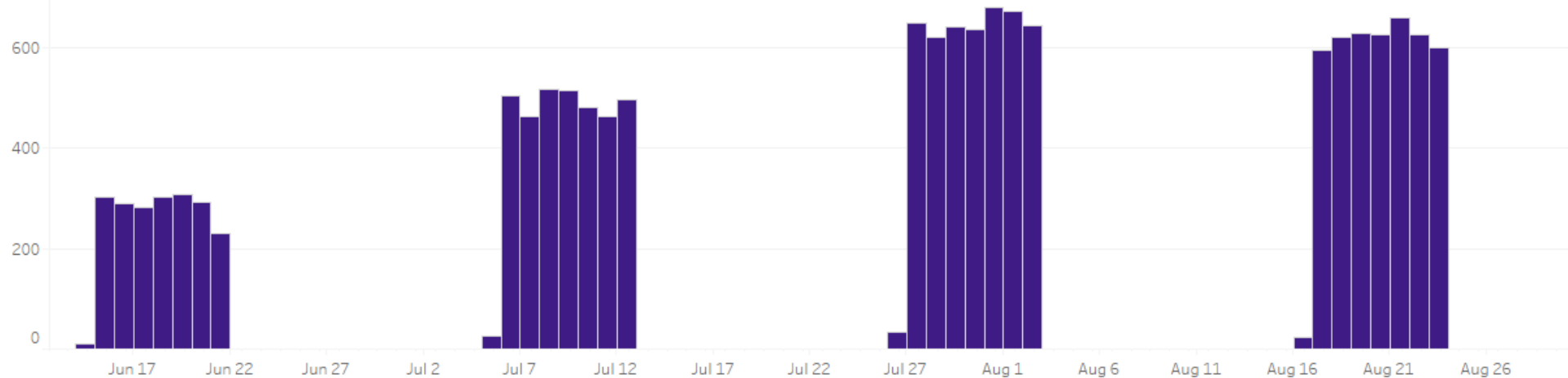
Only countries with at least 3 customers included

## Top Five Customers by Total Lifetime Value

Name	City	Country	Total Paid
Eleanor Hunt	Saint-Denis	Réunion	\$211.55
Karl Seal	Cape Coral	USA	\$208.58
Marion Snyder	Santa Bárbara d'Oeste	Brazil	\$194.61
Rhonda Kennedy	Apeldoorn	Netherlands	\$191.62
Clara Shaw	Molodetno	Belarus	\$189.60

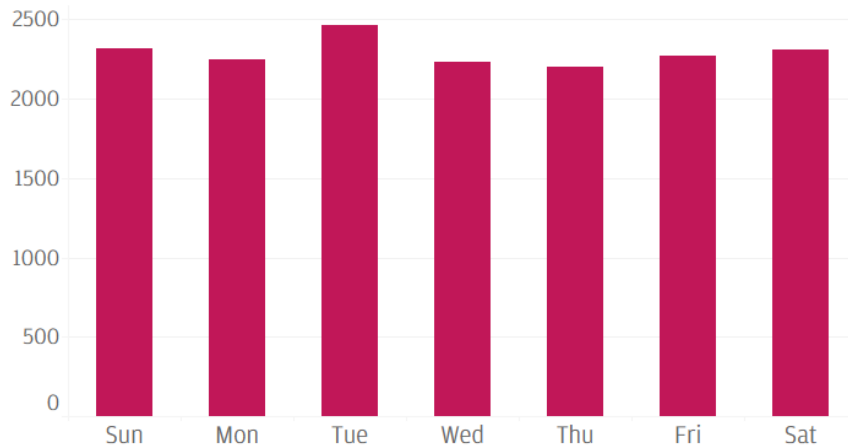
# Temporal Analysis

## Rentals by Date (2005)



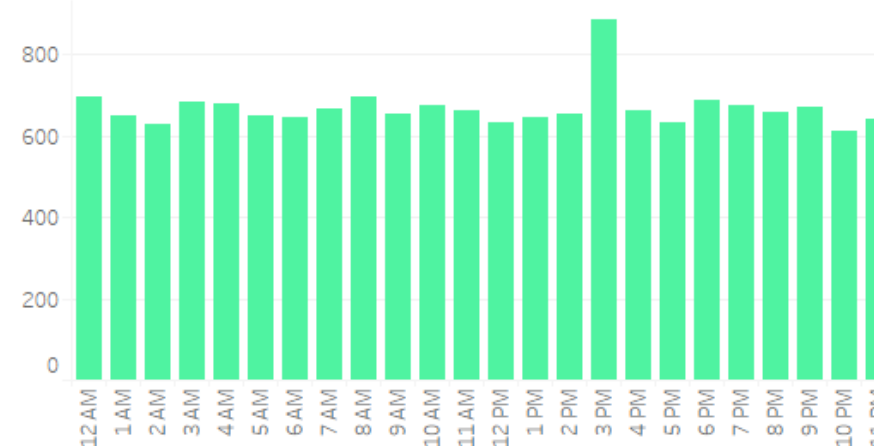
Our stores operate on a very unusual schedule - closed for two weeks then open for one - but it appears to be working as sales have grown steadily.

## Rentals by Day of Week



Sales are very consistent throughout the week although our busiest day is typically Tuesday.

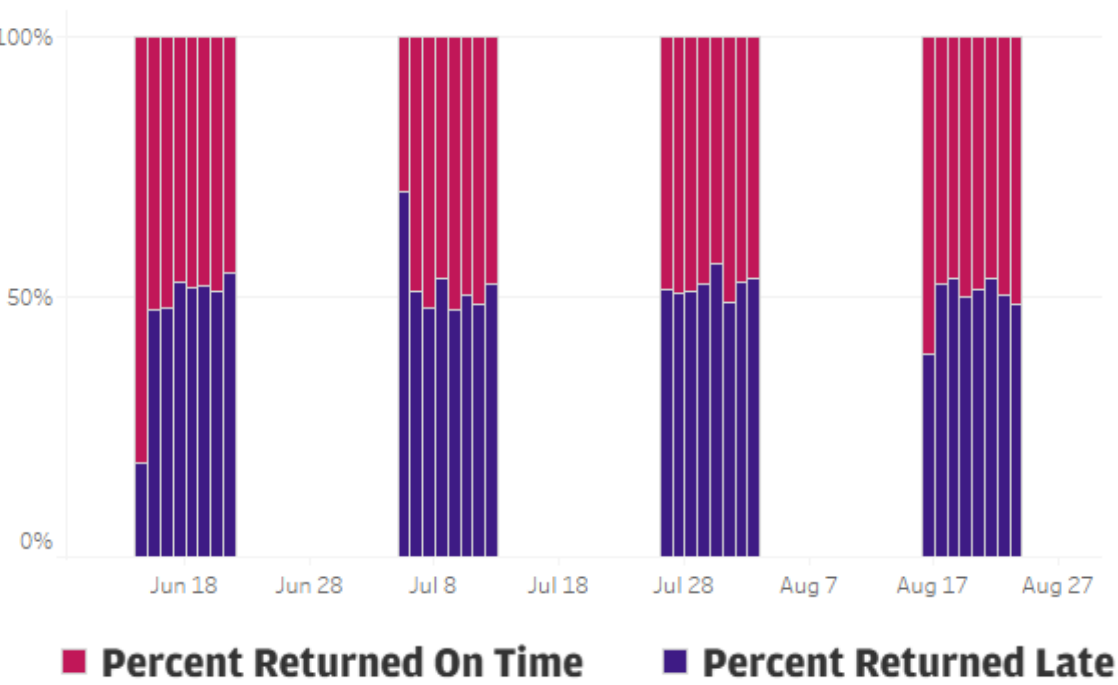
## Rentals by Hour of Day



Our stores operate 24 hours a day and sales are extremely consistent throughout, except at 3:00 PM when they peak.

# Business Analysis

Overdue rentals mean lost revenue from unavailable inventory, increased unpredictability, and worsened customer experience.



Just over half of all rentals are returned late.

Every customer on file has at least one late return.

Late rentals are returned, on average, three days past their due date.

The most overdue rental was returned 6 days late.

rental_id	rental_rate	payment amount	days_late
1296	\$0.99	\$1.99	1
1297	\$4.99	\$4.99	0
1299	\$4.99	\$4.99	0
1300	\$2.99	\$2.99	0
1301	\$4.99	\$10.99	6
1303	\$0.99	\$1.99	1
1304	\$2.99	\$4.99	2
1305	\$2.99	\$2.99	0
1306	\$0.99	\$1.99	1
1307	\$4.99	\$4.99	0
1308	\$2.99	\$5.99	3

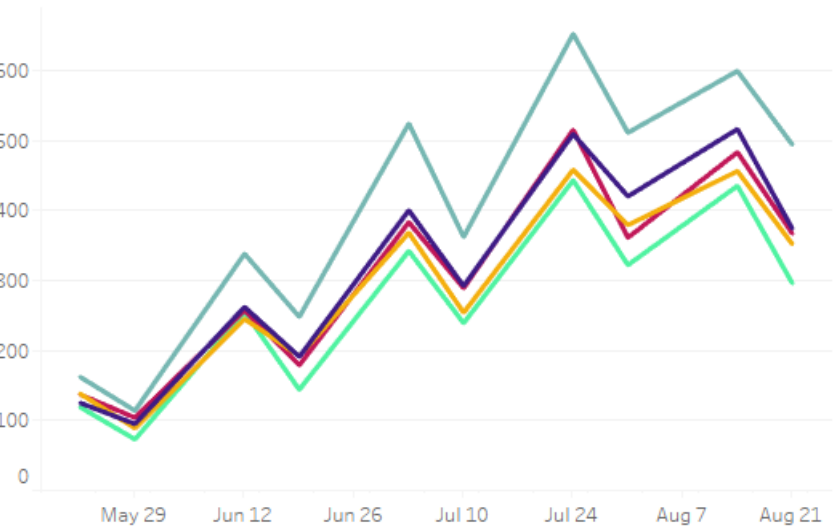
Exploratory data analysis shows we charge late fees of \$1.00/day

rental_rate	average_daily_rate
\$0.99	\$0.21
\$2.99	\$0.59
\$4.99	\$1.02

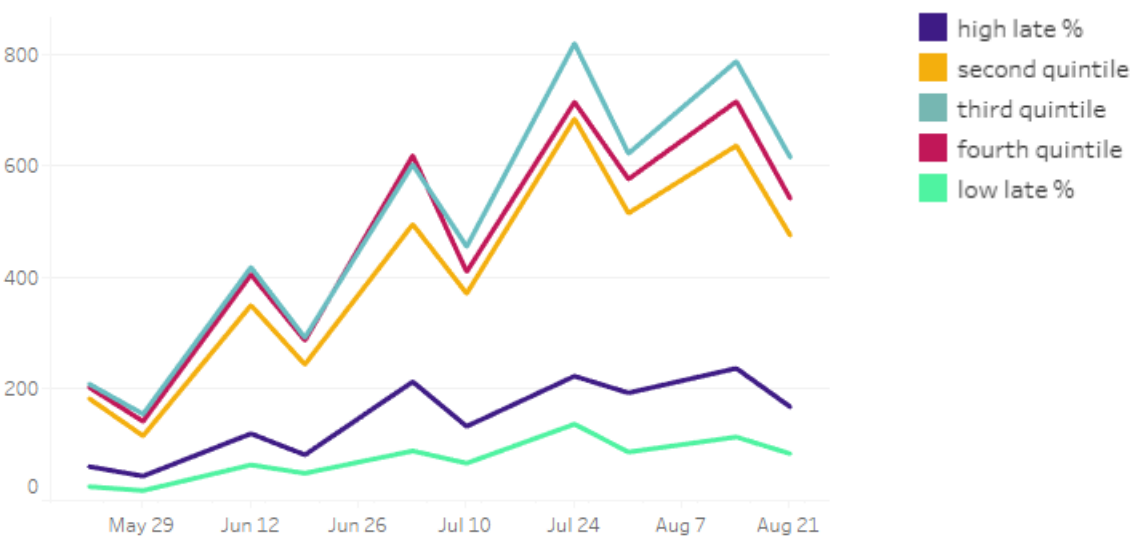
Our daily late fee rate is less than the average daily rate for our \$4.99 rentals.

# Potential Drivers of Sales Growth

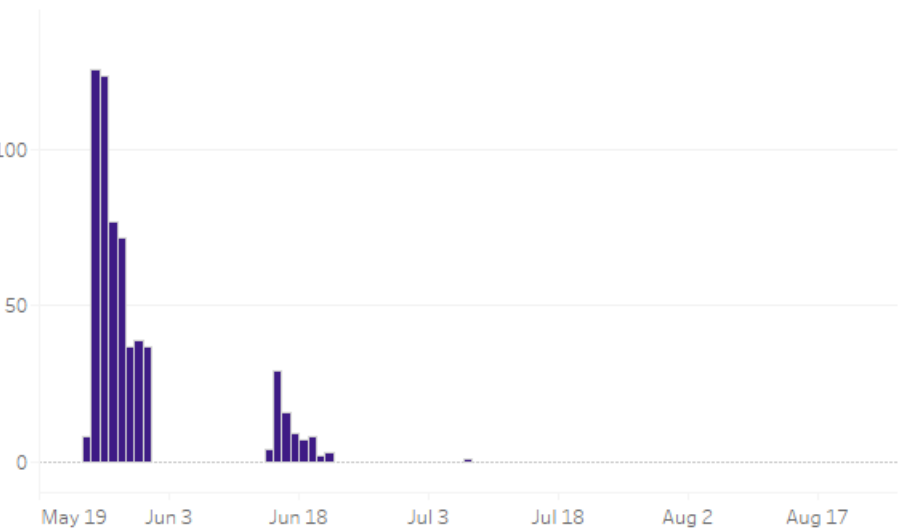
## Rentals by Genre Over Time



## Rentals by Country Over Time



## First Time Renters by Date



The underlying causes of our growing sales could affect trends in overdue returns.

The growth is not due to any increase in users.

The increase is consistent across both genres and countries regardless of differences in average timeliness within those categories.

From this analysis, it seems that the increase in sales is simply driven by our existing customers making more rentals.

# Conclusion

Our late fees are too low.

Increasing our late fees to \$2.50 per day will improve customer experience, increase efficiency, and could increase our revenues by up to 45% annually.

	out_rentals	customer_id	pct_returns_overdue	avg_days_late	expected_old_late_fees	expected_new_late_fees
1	3	75	51%	3	\$4.59	\$11.48
2	2	284	50%	3	\$3.00	\$7.50
3	2	228	33%	3	\$1.98	\$4.95
4	2	361	42%	3	\$2.52	\$6.30
5	2	448	62%	3	\$3.72	\$9.30
...	...	...	...	...	...	...
154	1	80	67%	3	\$2.01	\$5.03
155	1	83	44%	3	\$1.32	\$3.30
156	1	87	50%	4	\$2.00	\$5.00
157	1	91	43%	3	\$1.29	\$3.23
158	1	94	52%	3	\$1.56	\$3.90

Expected Late Fees from Outstanding Rentals at \$1.00/day :	\$259.72
At \$2.50/day:	\$649.51