

Data Analysis - Retail Store @ Ion Orchard





Agenda

- Why do we analyse this
- Cleaning the data
- Presenting the Dashboards
- Findings and Recommendations



Why do we analyse this

Context:

Havaianas ION Orchard is a now-closed retail branch in Singapore of the popular footwear brand. In order to better understand the parameters of their business, the managerial team of the branch took upon the task of compiling in an analysis-ready tabular format their store's daily revenue, alongside information on cost.

Objective of this analysis:

To analyse the data for information on what can be done to prevent the and recommend some actions to take.

Source:

<https://www.kaggle.com/datasets/aroodai/havaianas-ion-orchard-singapore-sales-dashboard>



Data cleaning

Clean data is required to identify and fix errors, duplicates, and irrelevant data from a raw dataset.

Data Cleaning

- Add month, weekend, Transaction bracket - for deeper analysis
- Remove data that has header but no details at all - unnecessary information
- Remove data that has limited data - as it would skew overall analysis
- Remove 1x Aug data as there is only 1 data point - not useful

Sheet1 - Power Query Editor

File Home Transform Add Column View

Group By Use First Row as Headers Count Rows Table

Transpose Reverse Rows Detect Data Type Fill Pivot Column Rename Move Convert to List Split Column Format Text Column Merge Columns Extract Parse Statistics Standard Scientific Rounding Trigonometry Information Date Time Duration Expand Aggregate Extract Values Create Data Type Structured Column

Query Settings

PROPERTIES

Name Sheet1

All Properties

APPLIED STEPS

Source

Navigation

Promoted Headers

Changed Type

Removed Columns

Duplicated Column

Reordered Columns

Renamed Columns

Extracted Month Name

week_day	date	month	revenue	units_sold	num_transactions	basket_size	avg_transaction
Monday	1/1/2018 12:00:00 am	January	5668.3	143	110	1.3	
Tuesday	2/1/2018 12:00:00 am	January	2662.1	73	61	1.196721311	
Wednesday	3/1/2018 12:00:00 am	January	2759.3	74	72	1.027777778	
Thursday	4/1/2018 12:00:00 am	January	1784.24	31	38	0.815789474	
Friday	5/1/2018 12:00:00 am	January	3375.66	72	62	1.161290323	
Saturday	6/1/2018 12:00:00 am	January	5294.8	127	120	1.058333333	
Sunday	7/1/2018 12:00:00 am	January	4103.4	97	93	1.043010753	
Monday	8/1/2018 12:00:00 am	January	1540.85	33	30	1.1	
Tuesday	9/1/2018 12:00:00 am	January	2129.72	32	42	0.761904762	
Wednesday	10/1/2018 12:00:00 am	January	1736.55	38	36	1.055555556	
Thursday	11/1/2018 12:00:00 am	January	1439.26	29	28	1.035714286	
Friday	12/1/2018 12:00:00 am	January	1828.62	33	27	1.222222222	

Data Cleaning

=IF(WEEKDAY(B2,2)<6, "Weekday", "Weekend")				
B	C	D	E	F
date	Weekend	month	revenue	units_sold
018-07-31 00:00:00	Weekday	Jul		
018-07-30 00:00:00	Weekday	Jul		
018-07-29 00:00:00	Weekend	Jul	4099.7	12
018-07-28 00:00:00	Weekend	Jul	3286.6	11
018-07-27 00:00:00	Weekday	Jul	1962.4	6
018-07-26 00:00:00	Weekday	Jul	2105.4	8
01			1.7	8
01			1.2	
01			1.5	

Q	R	S	T	U	V	W	X	Y	Z	AA
monthly rent	profit	unnamed 1	total staff	total staff hours	avg_basepay_perhour	avg_incentive_perstaff	total staff traincost	hrs_perconhour	perhour	pervs
45000	1709.3									
45000	-386.9									
45000	-302.7									
45000	-718.76									
45000	339.66									
45000	1543.8									
45000	742.4									
45000	-988.16									
45000	-386.28									
45000	-857.45									
45000	-1037.74									

=IF(I2<40, "Less than \$40", IF(I2<50, "Between \$40 and \$50", IF(I2<60, "Between \$50 and \$60", "More than \$60")))									
	C	D	E	F	G	H	I	J	K
	Weekend	month	revenue	units sold	num transactions	basket size	avg transaction value	Transaction bracket	avg unit
1:00:00 Weekday	Jul							Less than \$40	
1:00:00 Weekday	Jul							Less than \$40	
1:00:00 Weekday	Jul		4099.7	124	79	1.569620253	51.89493671	Between \$50 and \$60	33.06
1:00:00 Weekend	Jul		3286.6	110	70	1.571428571	46.95142857	Between \$40 and \$50	29.87
1:00:00 Weekday	Jul		1962.4	61	45	1.355555556	43.60888889	Between \$40 and \$50	32.1
1:00:00 Weekday	Jul		2105.4	84	59	1.423728814	35.68474576	Less than \$40	25.06
1:00:00 Weekday	Jul		2213.7	86	60	1.433333333	36.895	Less than \$40	25.74
1:00:00 Weekday	Jul		2515.2	102	67	1.52238806	37.54029851	Less than \$40	24.61
1:00:00 Weekday	Jul		1958.5	75	53	1.41509434	36.95263019	Less than \$40	26.11
1:00:00 Weekend	Jul		4391.8	148	120	1.233333333	36.59833333	Less than \$40	26.67

46000	-44.77									
46000	347.85									
46000	2207									
46000	1957.4									
46000	144.8									
46000	1948.7									
46000	-411.2									
46000	1912.83									
46000	1301.4									
46000	2912.4									
46000	2625.4									
46000	971.4									
46000	1626.5									
46000	3584.1									
46000	-311.7									
46000	444.1	3	24	304.083333	45.957	0.158192	5.75			
46000	3584.9	3	24	304.083333	45.36	0.243504	11			
46000	1564.84	3	24	304.083333	45.36	0.2472103	8.66667			
46000	215.3	2	16	304.083333	45.36	0.1668222	5.625			
46000	-7.5	3	24	304.083333	45.36	0.239026	4.64833			
46000	344.35	3	24	304.083333	45.36	0.1461863	2.875			
						0.188109	4.66667			
						0.172171	3.625			
						0.178442	3.3975			
						0.154657	3.54987			
						0.152017	1.975			
						0.148544	3.3125			

=TEXT(B2,"mmm")				
B	C	D	E	F
date	Weekend	month	revenue	units_sold
2018-07-31 00:00:00	Weekday	Jul		
2018-07-30 00:00:00	Weekday	Jul		
2018-07-29 00:00:00	Weekend	Jul	4099.7	12
2018-07-28 00:00:00	Weekend	Jul	3286.6	11
2018-07-27 00:00:00	Weekday	Jul	1962.4	6
2018-07-26 00:00:00	Weekday	Jul	2105.4	8
2018-07-25 00:00:00	Weekday	Jul	2213.7	8
2018-07-24 00:00:00	Weekday	Jul	2515.2	10
2018-07-23 00:00:00	Weekday	Jul	1958.5	7
2018-07-22 00:00:00	Weekend	Jul	4391.8	14
2018-07-21 00:00:00	Weekend	Jul	4877.4	18
2018-07-20 00:00:00	Weekday	Jul	2644.2	8
2018-07-19 00:00:00	Weekday	Jul	1965.4	7



Presenting the dashboard

Revenue

- Monthly, Daily
- Profit and Profit %

Customer Spending patterns

- Weekend vs Weekday
- Transaction buckets

Presenting the databoard

Overall

- Revenue
- Profit
- Profit %
- Top Sales day

Monthly Revenue

(can filter by Weekday)

- Revenue
- Profit
- Loss



Presenting the databoard

Daily Revenue

- Daily revenue
- Daily Profit

Daily Revenue

(can filter by
Month and
Weekday)

- Revenue
- Profit
- Loss



Presenting the databoard



Customer Spending

- Weekend vs Weekday
- Transaction Buckets

Transaction Buckets

(can filter by Month and Weekday)

- # Trans < \$40
- # Trans > \$40 < \$50
- # Trans > \$50 < \$60
- # Trans > \$60



Presenting the findings

Revenue and Profit

- 683K, Profit was 2.4%
- Out of 7 months, 3 months were negative profits (Jan, Mar, July)



Presenting the findings

Best Revenue and profit % is May

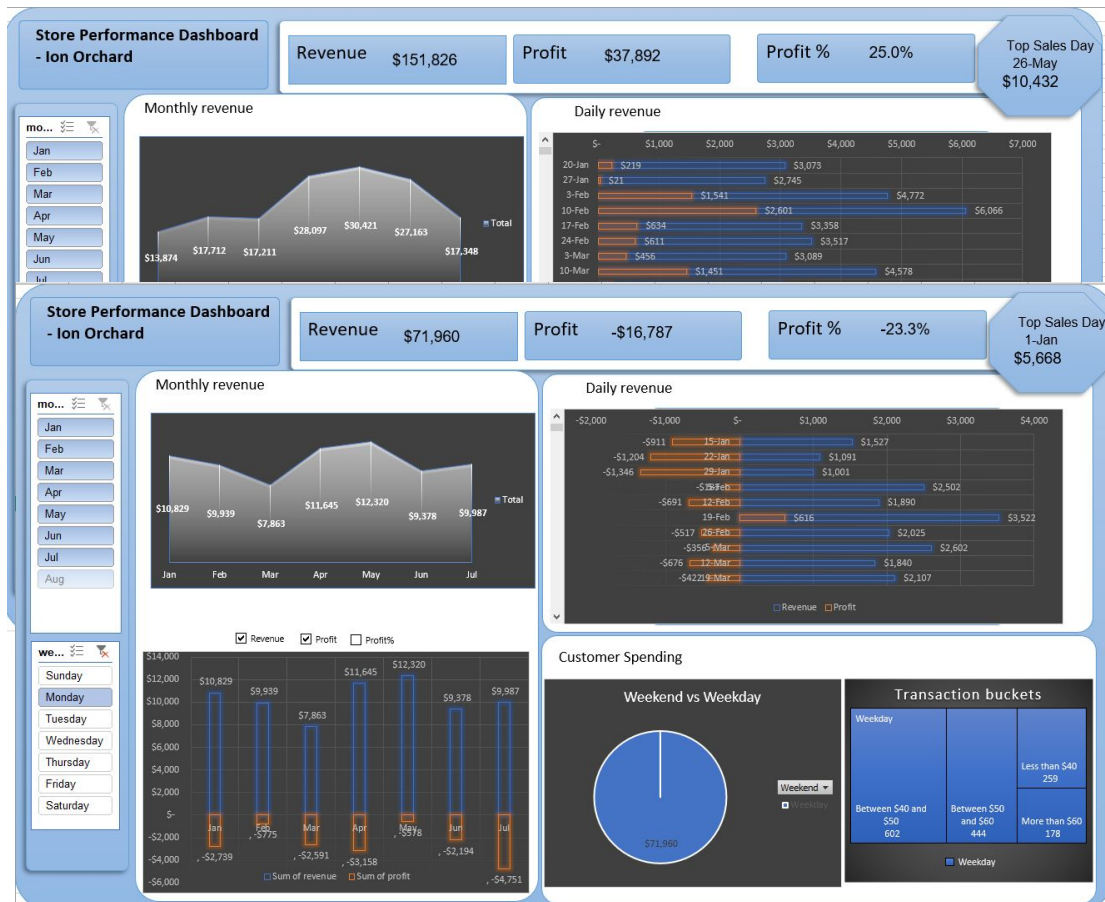
- Revenue of 146.6K
- Profit of 19.6%
- Top sales for the month is 26 May, \$10.4K



Presenting the findings

Only weekends were making profit

- Best Day is Saturday (+25%)
- Worst Day is Monday (-23.3%)



Presenting the findings

Customer Spending behaviour

- Revenue and Traffic for weekends are more than 50% vs weekdays
- Most customers spend between \$40 and \$50 on weekends
- More customers spend > \$60 on weekdays (786) than weekends (159)



Recommendation



Increase Revenue

- 1) Deep dive into traffic drivers for best month (May) for best practices
- 2) Increase promotion for weekdays to increase traffic

Reduce cost

- 1) Fixed cost drivers were high at 441 K over 7 mths (64% of Revenue)
 - i) Rent - 45K per month
 - ii) Staff cost - 18K per month

Suggestion as follows

Rental - sublet tenancy, reduce footprint on weekday

Staff cost - Stagger working hours based on Customer footprint on weekdays