

R PROGRAMMING INTERNAL ASSESSMENT PROJECT



MERGERS & ACQUISITIONS BY TECH GIANTS

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Covered Today

A brief outline

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INTRODUCTION

Acquisition can simply be seen as a big company taking over smaller growing companies in order to share their revenue and improve its own position in the market. One such example is Disney which acquired Hotstar in 2019 through a \$71.3 billion deal for most of its 20th Century Fox's assets and hence became a streaming service more popularly known as Disney+Hotstar.





OBJECTIVE

Every year, billions upon billions of dollars change hands in service of corporate consolidation. New blockbuster tech deals reshape the landscape so often that we decided to take a look at the trends of these big mergers and acquisitions starting from late 1950s. This will help us understand the world of tech, understand how the sudden boom of this industry came to be and predict its future.

THE DATABASE (1455 Rows, 10 Columns)

ID	Parent Company	Acquisition Year	Acquisition Month	Acquired Company
1	Apple	1988	Mar	Network Innovations
2	Apple	1988	Jun	Orion Network Systems
3	Apple	1988	Jun	Styleware
4	Apple	1988	Jul	Nashoba Systems
5	Apple	1989	Jan	Coral Software
6	Apple	1997	Feb	NeXT
7	Apple	1997	Sep	Power Computing Corporation
8	Apple	1999	Jan	Xemplar Education
9	Apple	1999	Nov	Raycer Graphics
10	Apple	2000	Jan	NetSelector

	Business	Country	Acquisition Price	Category	Derived Products
	Software	-	-	-	-
	Computer Software	-	-	-	-
	Computer software	-	-	-	-
	Computer software	-	-	-	-
	Computer software	-	-	-	-
	Unix-like hardware and software platform	-	404000000	-	-
	Macintosh clones	-	110000000	-	-
	Software	-	4926000	-	-
	Computer graphic chips	-	15000000	-	-
	Internet software	-	-	-	-

THE DATABASE

The database extracted from Kaggle, originally consisted of 14 Parent Companies and provided details of Acquisitions made by them starting from the year 1957 till 2021.

The 14 parent companies are as follows:

- Apple
- Twitter
- Amazon
- Hp
- Google
- Blackberry
- Microsoft
- Ebay
- Ibm
- Adobe
- Facebook
- Redhat
- Disney
- Citrix

DATA TRANSFORMATION & CLEANING

REMOVE "CATEGORY" COLUMN

COUNT NUMBER OF MISSING
VALUES IN EACH ROW

REMOVE ROWS WITH 3 OR
MORE N/A VALUES

REPLACE MISSING VALUES
WITH "N/A"

RESULT: 826 Rows with only 2 or less N/A values remain in the dataset

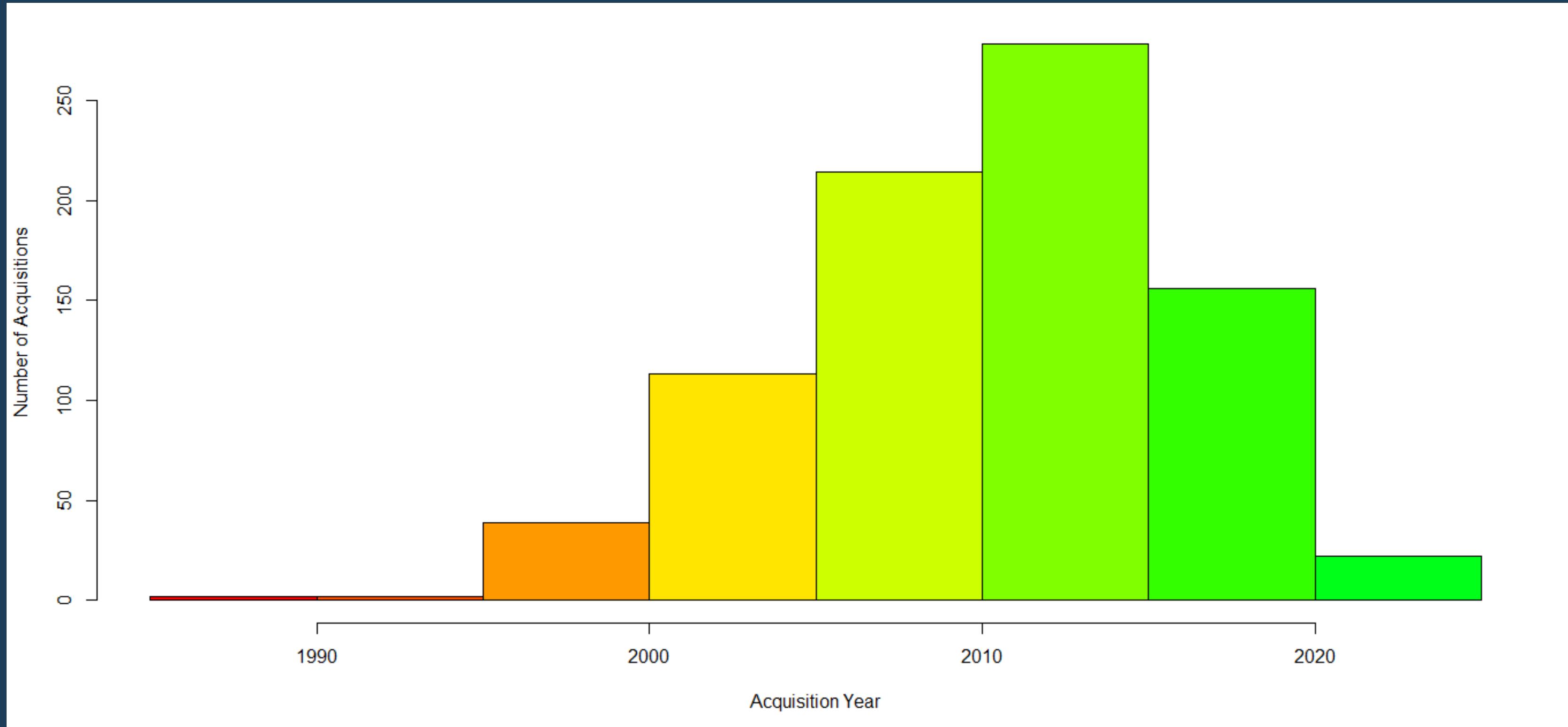
DATA ANALYSIS



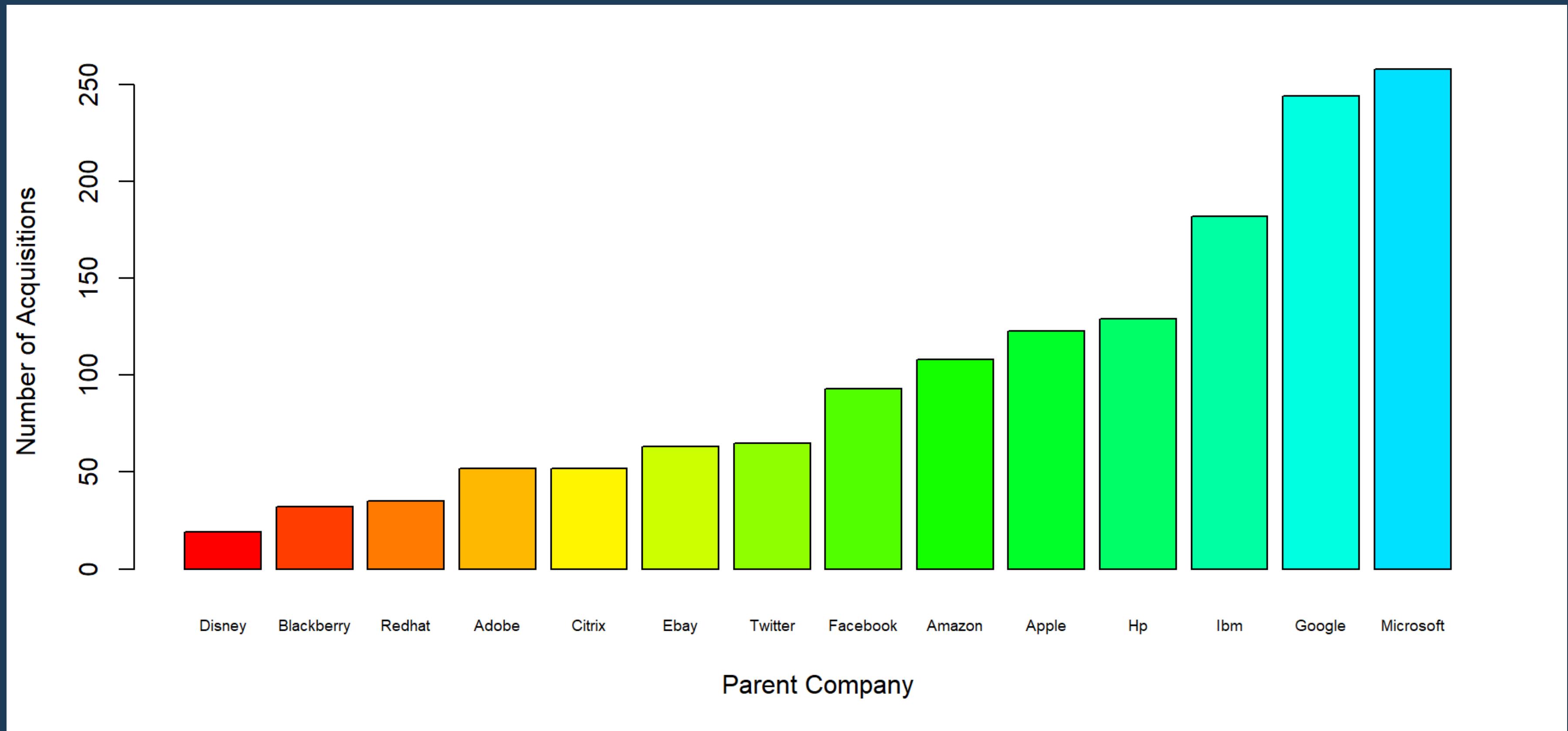
TRENDS IN MERGERS & ACQUISITIONS

Plots and Visualizations of the given data

HOW HAVE THE NUMBER OF ACQUISITIONS INCREASED OVER THE YEARS?



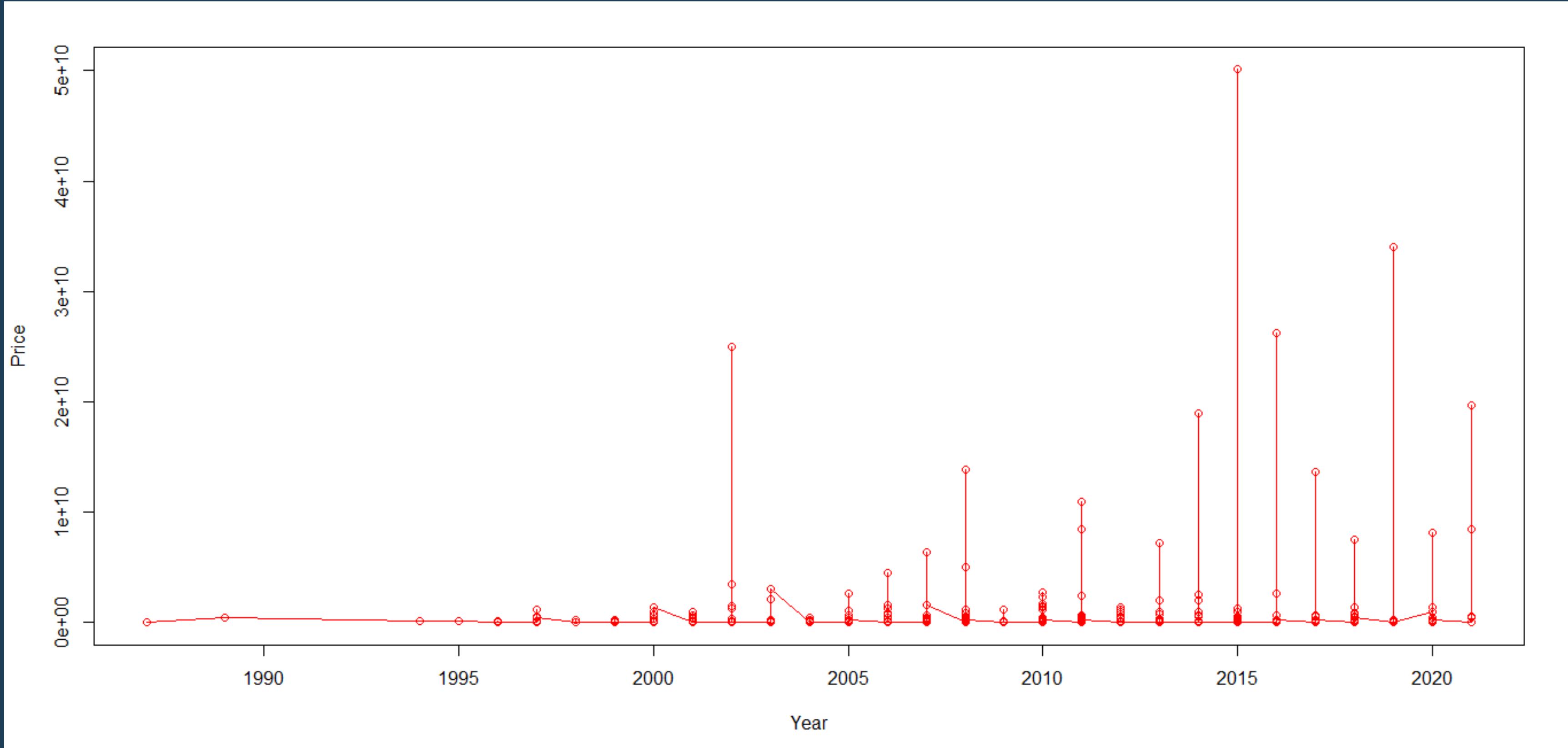
WHICH COMPANIES HAVE THE HIGHEST NUMBER OF ACQUISITIONS?



WHAT ARE THE MOST POPULAR BUSINESSES TO ACQUIRE?



THE TREND OF ACQUISITION PRICE



MOST EXPENSIVE BUSINESS TO ACQUIRE

Parent.Company	Acquisition.Year	Acquisition.Month	Acquired.Company	Acquisition.Price
Twitter	2015	Mar	Periscope	5.01e+10
Ibm	2019	Jul	Red Hat	3.40e+10
Microsoft	2016	Dec	LinkedIn	2.62e+10
Hp	2002	May	Compaq	2.50e+10
Microsoft	2021	Apr	Nuance Communications	1.97e+10
Hp	2008	Aug	Electronic Data Systems	1.39e+10
Amazon	2017	Jun	Whole Foods Market	1.37e+10
Hp	2011	Oct	Autonomy Corporation	1.10e+10
Microsoft	2011	May	Skype Technologies	8.50e+09
Amazon	2021	May	Metro-Goldwyn-Mayer	8.45e+09

AVERAGE SPEND OF EACH PARENT COMPANY ON ALL ACQUISITIONS

	Parent Company	Acquisition Price
	<chr>	<dbl>
1	Adobe	320821981.
2	Amazon	303942593.
3	Apple	42609967.
4	Blackberry	75597656.
5	Citrix	0
6	Disney	5996087500
7	Ebay	228238095.
8	Facebook	260910753.
9	Google	34689344.
10	Hp	589491302.
11	Ibm	386087912.
12	Microsoft	392488620.
13	Redhat	67660600
14	Twitter	795894923.



THANK YOU!