Top 50 US Tech Company Data Analysis

The analysis of the top 50 US tech companies of 2022 - 2023 provides valuable insights into the current state and trends of the technology industry. Through careful examination of various factors such as market capitalization, revenue, Sector, and industry dominance, we have gained a comprehensive understanding of the leading players in this dynamic sector.

One key observation from the data analysis is the remarkable growth trajectory of these top tech companies. The consistent rise in market capitalization and revenue showcases their ability to innovate, adapt, and meet the evolving demands of the digital age. The sheer size and influence of these companies not only solidify their positions within the industry but also have a profound impact on the global economy.

Import required Libraries

In [16]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
```

Creating "Tech_comp" DataFrame For Tech Companies

In [17]:

```
tech_comp = pd.read_csv(r'C:\Users\hp\Desktop\Top 50 US Tech Companies 2022 - 2023.csv')
```

In [18]:

```
tech_comp.head()
```

Out[18]:

	Company Name	Industry	Sector	HQ State	Founding Year	Annual Revenue 2022-2023 (USD in Billions)	Market Cap (USD in Trillions)	Stock Name	Annual Income Tax in 2022-2023 (USD in Billions)	Employee Size
0	Apple Inc.	Technology	Consumer Electronics	California	1976	387.53	2.520	AAPL	18.314	164000
1	Microsoft Corporation	Technology	Software Infrastructure	Washington	1975	204.09	2.037	MSFT	15.139	221000
2	Alphabet (Google)	Technology	Software Infrastructure	California	1998	282.83	1.350	GOOG	11.356	190234
3	Amazon	Technology	Software Application	Washington	1994	513.98	1.030	AMZN	-3.217	1541000
4	NVIDIA Corporation	Technology	Semiconductors	California	1993	26.97	0.653	NVDA	0.189	22473

In [19]:

```
tech_comp.tail()
```

Out[19]:

	Company Name	Industry	Sector	HQ State	Founding Year	Annual Revenue 2022-2023 (USD in Billions)	Market Cap (USD in Trillions)	Stock Name	Annual Income Tax in 2022-2023 (USD in Billions)	Employee Size
45	GlobalFoundries	Technology	Semiconductors	New York	2009	8.10	0.038	GFS	0.086	14600
46	IQVIA Holdings	Technology	Software Application	North Carolina	1982	14.41	0.037	IQV	0.260	85000
47	Marvell Technology Inc.	Technology	Semiconductors	California	1995	5.91	0.035	MRVL	0.249	6695
48	Dell Technologies Inc.	Technology	Computer Hardware	Texas	1984	102.30	0.028	DELL	0.981	133000
49	HP Inc.	Technology	Computer Hardware	California	1939	59.78	0.028	HPQ	1.238	51000

Checking information about the Dataset

In [20]:

```
tech_comp.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 50 entries, 0 to 49
Data columns (total 10 columns):
 #   Column                                        Non-Null Count  Dtype
---  ------                                        --------------  -----
 0   Company Name                                  50 non-null     object
 1   Industry                                      50 non-null     object
 2   Sector                                        50 non-null     object
 3   HQ State                                      50 non-null     object
 4   Founding Year                                 50 non-null     int64
 5   Annual Revenue 2022-2023 (USD in Billions)    50 non-null     float64
 6   Market Cap (USD in Trillions)                 50 non-null     float64
 7   Stock Name                                    50 non-null     object
 8   Annual Income Tax in 2022-2023 (USD in Billions)  50 non-null  float64
 9   Employee Size                                 50 non-null     int64
dtypes: float64(3), int64(2), object(5)
memory usage: 4.0+ KB
```

In [21]:

```
tech_comp.shape
```

Out[21]:

```
(50, 10)
```

In [22]:

```
tech_comp.size
```

Out[22]:

```
500
```

In [23]:

```
# Checking Of Null Values
tech_comp.isnull().sum()
```

Out[23]:

```
Company Name                                  0
Industry                                      0
Sector                                        0
HQ State                                      0
Founding Year                                 0
Annual Revenue 2022-2023 (USD in Billions)    0
Market Cap (USD in Trillions)                 0
Stock Name                                    0
Annual Income Tax in 2022-2023 (USD in Billions)  0
Employee Size                                 0
dtype: int64
```

In [24]:

```
tech_comp.describe().T
```

Out[24]:

	count	mean	std	min	25%	50%	75%	max
Founding Year	50.0	1984.14000	24.988985	1890.000	1977.25000	1988.5000	1999.75000	2012.000
Annual Revenue 2022-2023 (USD in Billions)	50.0	51.20440	97.412880	2.060	7.65250	17.6650	40.81500	513.980
Market Cap (USD in Trillions)	50.0	0.25216	0.490377	0.028	0.05125	0.0825	0.16025	2.520
Annual Income Tax in 2022-2023 (USD in Billions)	50.0	1.38678	3.687916	-3.217	0.09875	0.2805	0.94500	18.314
Employee Size	50.0	83249.62000	220586.929174	2993.000	14150.00000	24725.0000	70155.75000	1541000.000

Total Company Sectors

In [57]:

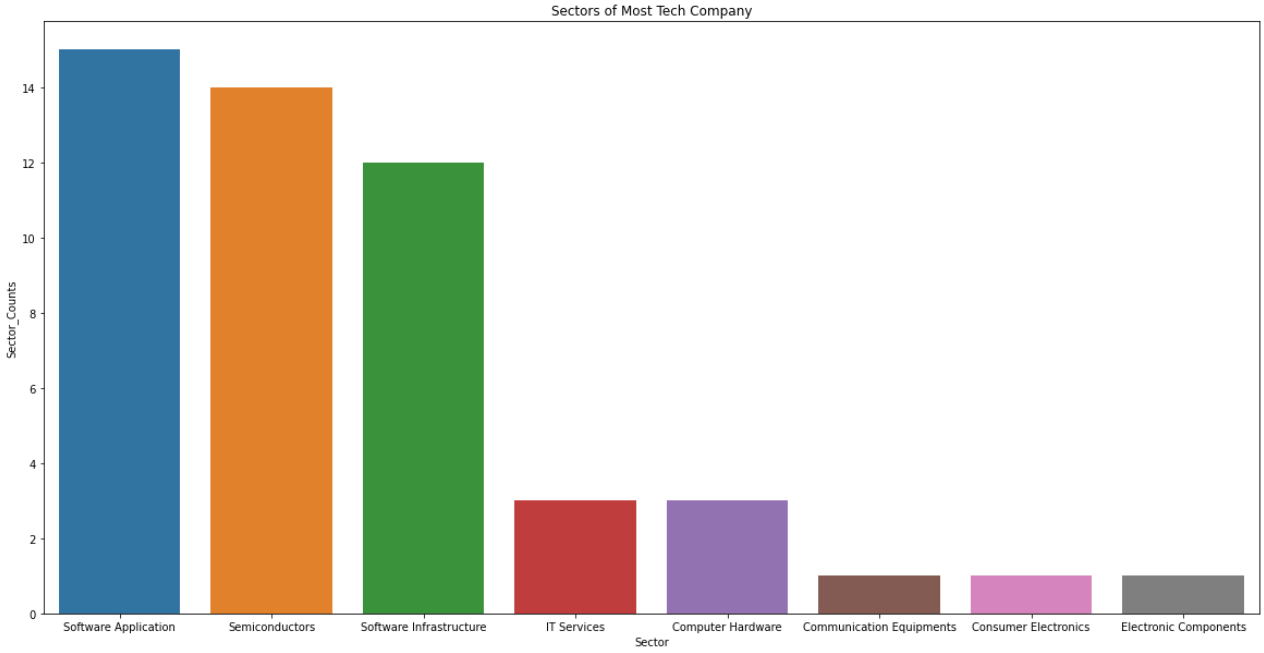
```
tech_comp['Sector'].value_counts()
```

Out[57]:

```
Software Application        15
Semiconductors              14
Software Infrastructure     12
IT Services                  3
Computer Hardware            3
Communication Equipments     1
Consumer Electronics         1
Electronic Components        1
Name: Sector, dtype: int64
```

In [28]:

```
plt.figure(figsize=(20,10))
plt.title("Sectors of Most Tech Company")
sns.countplot(x="Sector", data=tech_comp, order=tech_comp['Sector'].value_counts().index)
plt.xlabel('Sector')
plt.ylabel('Sector_Counts')
plt.show()
```



Headquarter states

In [33]:

```
tech_comp['HQ State'].value_counts()
```

Out[33]:

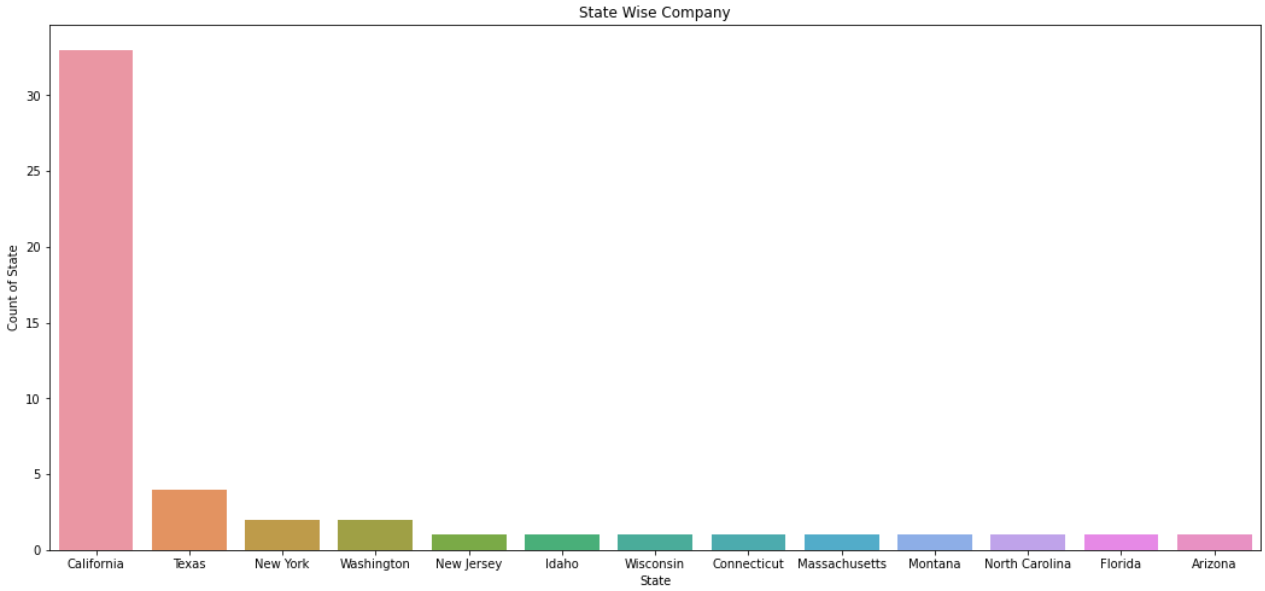
```
California        33
Texas              4
New York           2
Washington         2
New Jersey         1
Idaho              1
Wisconsin          1
Connecticut        1
Massachusetts      1
Montana            1
North Carolina     1
Florida            1
Arizona            1
Name: HQ State, dtype: int64
```

In [36]:

```
plt.figure(figsize=(18,8))
plt.title("State Wise Company")
sns.countplot(x='HQ State', data= tech_comp, order=tech_comp['HQ State'].value_counts().index)
plt.xlabel("State")
plt.ylabel("Count of State")
```

Out[36]:

```
Text(0, 0.5, 'Count of State')
```



Top 10 companies with higher revenue

In [40]:

```
ten = tech_comp[['Company Name', 'Annual Revenue 2022-2023 (USD in Billions)']].nlargest(10,'Annual Revenue 2022-2023 (USD in Billions)')
ten
```

Out[40]:

	Company Name	Annual Revenue 2022-2023 (USD in Billions)
3	Amazon	513.98
0	Apple Inc.	387.53
2	Alphabet (Google)	282.83
1	Microsoft Corporation	204.09
6	Meta Platforms	116.60
48	Dell Technologies Inc.	102.30
5	Tesla	81.46
16	Intel Corporation	63.05
18	IBM Corporation	60.52
49	HP Inc.	59.78

Top 10 highest Market Caps

In [43]:

```
top_mcaps = tech_comp[['Company Name', 'Market Cap (USD in Trillions)']].nlargest(10,'Market Cap (USD in Trillions)')
top_mcaps
```

Out[43]:

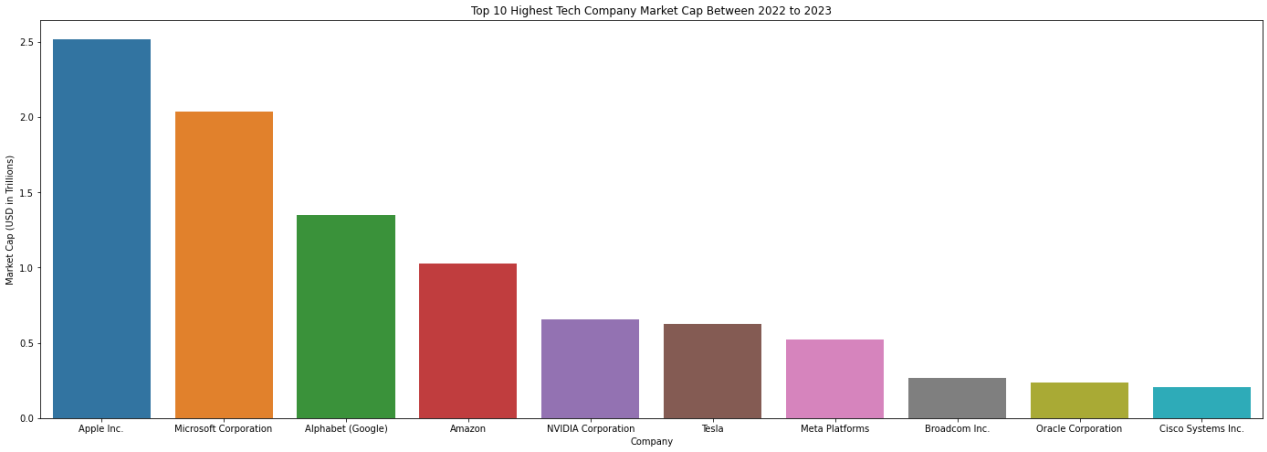
	Company Name	Market Cap (USD in Trillions)
0	Apple Inc.	2.520
1	Microsoft Corporation	2.037
2	Alphabet (Google)	1.350
3	Amazon	1.030
4	NVIDIA Corporation	0.653
5	Tesla	0.625
6	Meta Platforms	0.524
7	Broadcom Inc.	0.266
8	Oracle Corporation	0.236
9	Cisco Systems Inc.	0.208

In [44]:

```
plt.figure(figsize=(24,8))
plt.title("Top 10 Highest Tech Company Market Cap Between 2022 to 2023")
sns.barplot(x=top_mcaps['Company Name'], y=top_mcaps['Market Cap (USD in Trillions)'])
plt.xlabel("Company")
plt.ylabel("Market Cap (USD in Trillions)")
```

Out[44]:

```
Text(0, 0.5, 'Market Cap (USD in Trillions)')
```



Top 10 highest annual income tax

In [47]:

```
top_ten_tax = tech_comp[['Company Name', 'Annual Income Tax in 2022-2023 (USD in Billions)']].nlargest(10,'Annual Income Tax in 2022-2023
top_ten_tax
```

Out[47]:

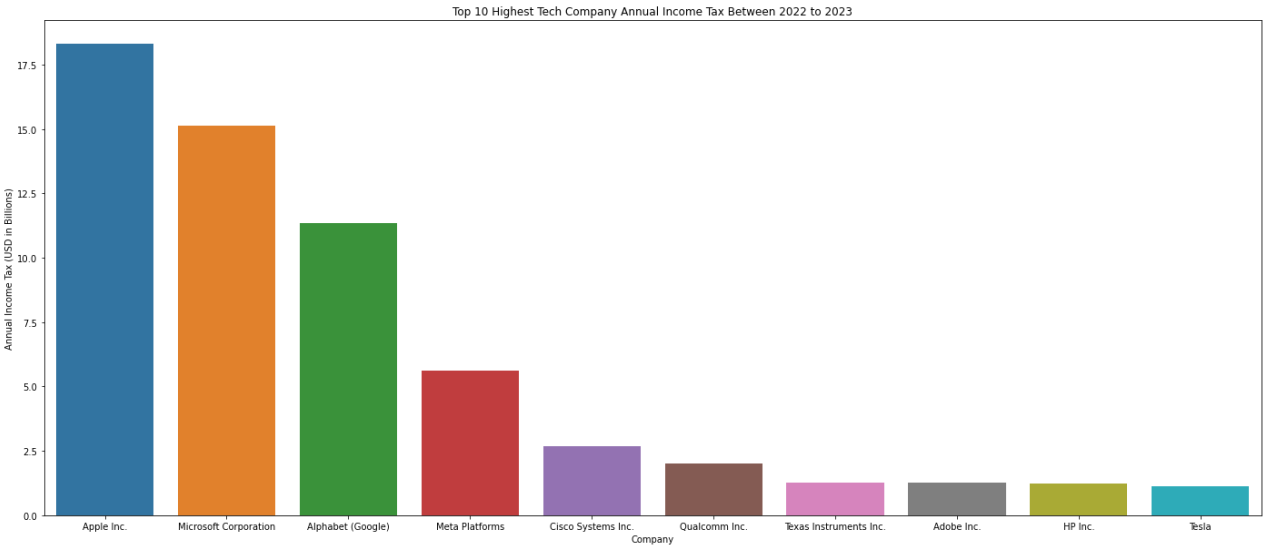
	Company Name	Annual Income Tax in 2022-2023 (USD in Billions)
0	Apple Inc.	18.314
1	Microsoft Corporation	15.139
2	Alphabet (Google)	11.356
6	Meta Platforms	5.619
9	Cisco Systems Inc.	2.665
14	Qualcomm Inc.	2.012
12	Texas Instruments Inc.	1.283
11	Adobe Inc.	1.252
49	HP Inc.	1.238
5	Tesla	1.132

In [48]:

```
plt.figure(figsize=(24,10))
plt.title("Top 10 Highest Tech Company Annual Income Tax Between 2022 to 2023")
sns.barplot(x=top_ten_tax['Company Name'], y=top_ten_tax['Annual Income Tax in 2022-2023 (USD in Billions)'])
plt.xlabel("Company")
plt.ylabel("Annual Income Tax (USD in Billions)")
```

Out[48]:

```
Text(0, 0.5, 'Annual Income Tax (USD in Billions)')
```



Oldest technology company

In [49]:

```
tech_comp[tech_comp['Founding Year'] == tech_comp['Founding Year'].min()]
```

Out[49]:

	Company Name	Industry	Sector	HQ State	Founding Year	Annual Revenue 2022-2023 (USD in Billions)	Market Cap (USD in Trillions)	Stock Name	Annual Income Tax in 2022-2023 (USD in Billions)	Employee Size
42	Roper Technologies	Technology	Electronic Components	Florida	1890	5.61	0.046	ROP	0.296	19300

Newest technology company

In [50]:

```
tech_comp[tech_comp['Founding Year'] == tech_comp['Founding Year'].max()]
```

Out[50]:

	Company Name	Industry	Sector	HQ State	Founding Year	Annual Revenue 2022-2023 (USD in Billions)	Market Cap (USD in Trillions)	Stock Name	Annual Income Tax in 2022-2023 (USD in Billions)	Employee Size
41	Snowflake Inc.	Technology	Software Application	Montana	2012	2.06	0.046	SNOW	0.003	4991

Top 10 highest number of employees in each company

In [51]:

```
top_emp = tech_comp[['Company Name', 'Employee Size']].nlargest(10,'Employee Size')
top_emp
```

Out[51]:

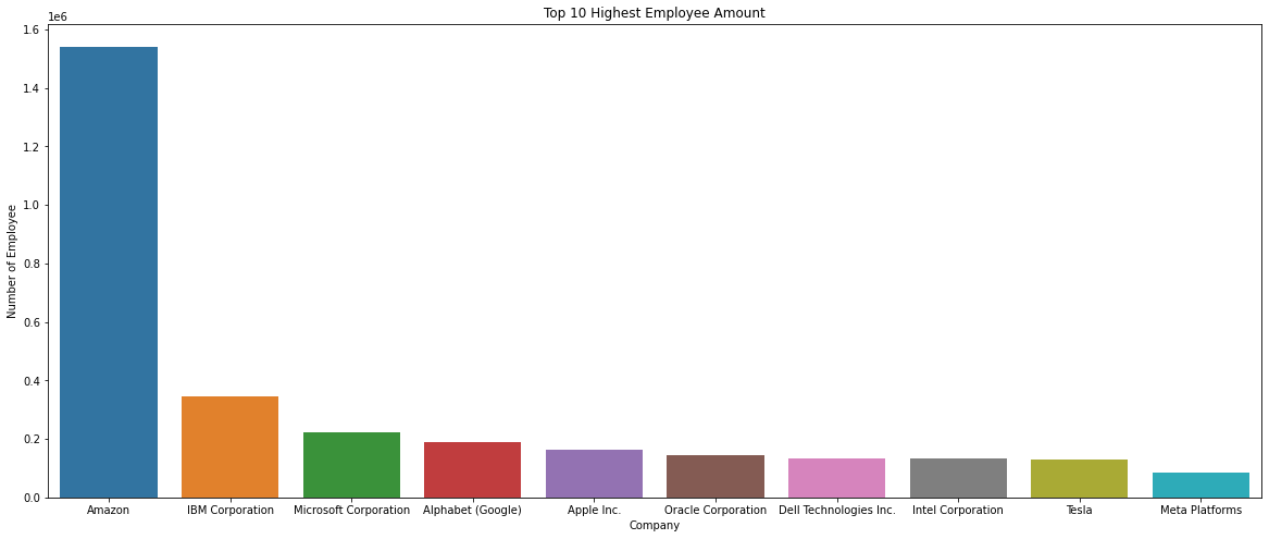
	Company Name	Employee Size
3	Amazon	1541000
18	IBM Corporation	345000
1	Microsoft Corporation	221000
2	Alphabet (Google)	190234
0	Apple Inc.	164000
8	Oracle Corporation	143000
48	Dell Technologies Inc.	133000
16	Intel Corporation	131900
5	Tesla	127855
6	Meta Platforms	86482

In [52]:

```
plt.figure(figsize=(20,8))
plt.title("Top 10 Highest Employee Amount")
sns.barplot(x=top_emp['Company Name'], y=top_emp['Employee Size'])
plt.xlabel("Company")
plt.ylabel("Number of Employee")
```

Out[52]:

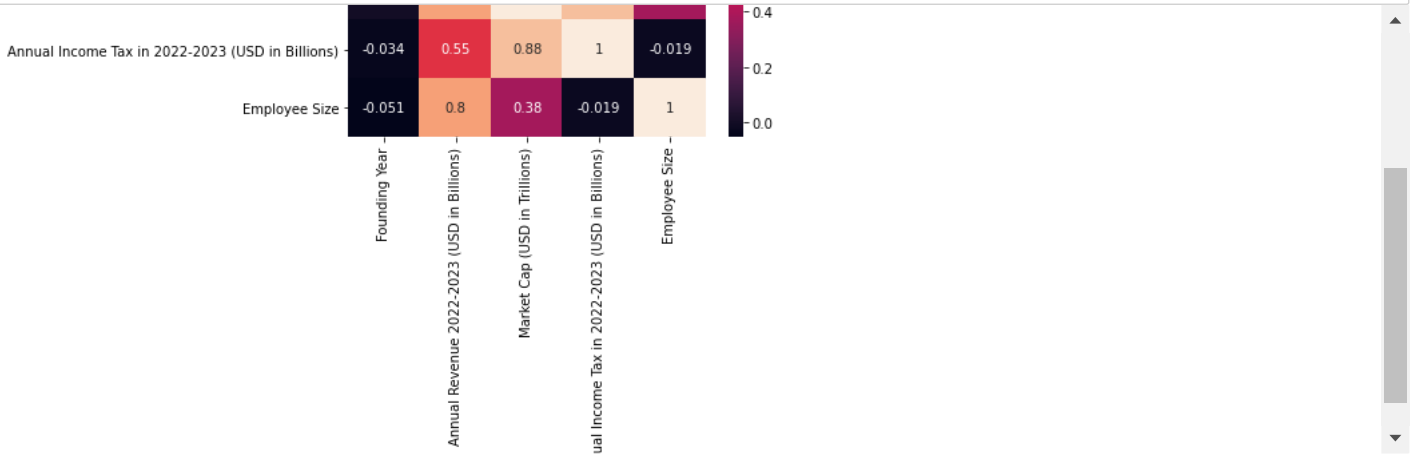
```
Text(0, 0.5, 'Number of Employee')
```



Correlation

In [54]:

```
sns.heatmap(data = tech_comp.corr(), annot = True)
```



Insights

```
After analyze the whole data I have find some useful insights about Top 50 Tech company of United States.

1. Maximum No. of Company Comes form Software Application and Semiconductors Sector that is 15 and 14.
2. Maximum companies Headquarters are situated in California
3. Amazon has the highest annual Revenue 513.98 (USD in Billions) in 2022-2023
4. Apple Inc. has the Highest Market cap 2.520 (USD in Trillions)
5. Apple has the the highest Annual Income Tax in 2022-2023 (USD in Billions)
6. Roper Technologies is the oldest tech company, its founding year is 1890
7. Snowflake Inc. is the Newest Tech company, Its founding year is 2012
8. Amazon has maximum no of Employee size
```