ANALYSIS ON CORRELATION BETWEEN FIRST BORN AND NATURAL BORN LEADERS

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Abstract

* This is a simple analysis to validate a common saying: “First babies are natural-born leaders.” Data of 70 well recognized leaders are collected from public information channels and validated. The data is analyzed using CRISP-DM method. A conclusion is drawn based on the findings.

## Business/Case understanding

There is a common saying that “First babies are natural-born leaders.” Not sure where it comes from. A google search: “how many leaders are first born” returns this result from media business insider: “First-born kids are poised for success. They also may be inclined to assume leadership positions. In a 2007 survey of 1,582 chief executives, 43% reported that they are the first born. “

When resources and opportunities were limited, and with the tradition that the first born will inherit the family wealth, it is understandable to give first born more attention and cultivate them to be leaders. However, in the 21st century, with the help of computers and data, there are many more resources and opportunities, the growth paths are also more diversified as well, it is interesting to validate if this survey result back in 2007 still holds true.

## Data understanding

To collect data, first the definition of first born and leaders need to be defined. For this analysis, I removed the case of single baby, which do not have sibling to compete with. I keep the case of half/step siblings since they also share the same family resource and culture as well. For leader, I will limit the target to people who lead a group, not just famous. For example, a famous actor, who may have substantial influence power but does not lead anyone, will not meet my criteria.

## Data preparation

From internet search engines like Google or wiki, I sampled one leader. Joe Biden, the current US president. A lot of features return, including his birthdate, his early life, political path, and families. I soon realized that multiple resources or search keywords are needed to grab the wanted information. For example, keyword Joe Biden will not return his sibling info, but family of joe Biden will. Sometimes, information about a leader from a difficult country is only available in the native language.

Also is/is not first born may not directly available, in a few cases, the information needs to be drawn from the family tree or even from the family photos to tell if the feature is the eldest.

Another factor to consider is how big the data I want to use. I found no single website can pull this data directly, which means that I need to manually pull the information from the internet. For the leader list, I selected the leaders from the top 15 powerful countries, then selected the Fortune 50 greatest leaders. I also used Fortune 500 companies list to get CEO list in case some names from first 2 list yield nothing.

## Modeling

Since all searches and data extraction are done manually, no data modeling was applied. I tried to follow CRISP-DM process since CRISP-DM is currently the most popular and is the methodology most widely referenced.

## Evaluation

70 people are selected, covering different professional fields, geographic areas and age groups. 18 were removed due to famous but no leadership role, 17 more yielded no sibling information. Left 35 with confirmed sibling information. Only 10 out of 35 are first born. Which leads to 28.5%. It was a drop from 43% reported by Business Insider in 2007.

## Conclusion

Based on limited data, less leaders are from first born. The reason behind it is unknown. A further study could be conducted if more data resources were available, and more computer algorithms could be applied to assist the search.

References

world top 15 countries leaders since 1970

<https://www.visualcapitalist.com/visualized-world-leaders-in-positions-of-power/>

US News ranking of most influencial countries

<https://www.usnews.com/news/best-countries/rankings/a-leader>

world leader approval rate

<https://morningconsult.com/global-leader-approval/>

Top 50 leaders

https://fortune.com/worlds-greatest-leaders/

Sample data Tables

Table 1 leader first born information (only first 6 rows shown)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Field | Continent | First born |
| Sundar Pichai | Computer Data | US | Yes |
| John Stankey | Communication | US | No |
| Xi JinPing | Politics | Asia | No |
| Narendra Modi | Politics | Asia | No |
| Angela Markel | Politics | Europe | Yes |
| Jeff Bezos | E-commerce | USA | No |