

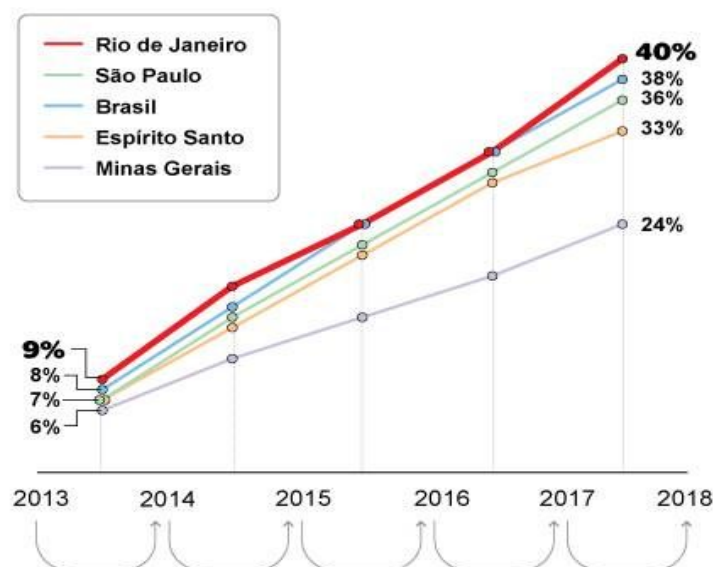
Introduction/Business Problem

BACKGROUND :

In recent years, Brazil went through a severe political-economic crisis due a serie of events but mainly this period is attributed to a strong economic recession and a corrupt government that was involved with corruption schemes and money laundering. In this time period, Brazil's economy was declining and politics were unstable making investors scared and more conservative with their investments. This scenario resulted in one of highest unemployment rates recorded in the country, with low purchasing power of families and consequently small incomes for companies and even bankruptcy in some cases. Until this day, brazil economy is still recovering from the impacts caused by this time. Although this crisis have impacted all the industry sectors of Brazil some have recovered and are back in their tracks growing faster than before, one notorious case is the pharmacy retailers of Brazil.

The brazilian pharmacy retail business have grown immensely in these recent years turning it into a very lucrative and, nowadays, a competitive business investment. In this period, most of the brazilian cities have experienced a big increase of the number of pharmacies in their neighbourhoods. Even with this competitive market, investors still want to invest, because Brazil is gradually recovering from the crisis, families are spending more money with medication, the growing number of medication sold, improvement in citizens life expectancy and the ageing of the population. Some interesting media headlines and statistics that reinforce this perspective are:

- Projection says medications sales in Brazil will be between US\$ 38 billions e US\$ 42 billions in 2022.
- In 2017, Brazil became the sixth largest pharmacy market in the world and it is expected to surpass France and becoming the fifth in 2022.
- Aging of the Brazilian population and growth of life expectancy.
- The largest pharmacy retail growth was in the southeast region of Brazil above the average of Brazil Growth 38,5%.



Number of pharmacies in the states of southeast region of Brazil [3]

Our IBM Data Science team was hired by Drogasil S.A, one of the largest retailers of medicine in Brazil, to help them with their next decision. This company is investing in new strategies to improve their customer relations as well as intelligent marketing and fast product delivery in order to make them more competitive and attractive to the population. But recently this year, their biggest competitor Drogaria SP invested heavily in the city of Rio de Janeiro, opening new pharmacies around the city of Rio with similar strategies. With this in mind and the possibility of losing market share in one of the largest cities of Brazil, Drogasil S.A wants as soon possible to establish new pharmacies around the city combined with their new strategies. Because of the urgency of the matter they hired our expert Data Science team to find the best places to establish their new pharmacies.

PROBLEM :

The company Drogasil S.A hired our Data Science Team to make a project to help them clarify the question : **In which neighbourhoods of Rio de Janeiro should they establish their new pharmacies ?**

After an intense research on articles and discussions with our clients we captured some key aspects that our team should have in mind while building this project. In order to build a new lucrative pharmacy, we should always look into 3 important pillars : The local market that corresponds to the Location, The numbers that relates to business Revenues and expenses and The business that relates to the strategies used and how is the management of the business. Two of theses pillars are out scope of this project so the IBM team should focus on extracting as much information as it can about the local markets of each neighbourhood in Rio.

REFERENCES :

- 1-<https://www.interfarma.org.br/public/files/biblioteca/guia-interfarma-2019-interfarma-2.pdf>
- 2-<https://fia.com.br/blog/varejo-farmaceutico/>
- 3-<https://extra.globo.com/noticias/economia/em-cinco-anos-total-de-farmacias-cresce-40-no-rio-de-janeiro-23527454.html>