Introduction

What is a Financial Centre? It is an area with a high concentration and diversity of financial services. Some of those services are:

- Banking services (commercial, investments, securities exchanges)

- Insurance

- Tax planning

- Fund management

The Financial Institutions (FI) that populate those areas have on their liabilities, funds from suppliers located in various part of the world. Moreover, their counterparties (to whom they lend money, for example) are indistinguishable between resident and non-resident. In other words, on both sides of their balance sheet, the external exposure has a higher weight than the domestic one. The IMF (International Monetary Funds) defines three categories of FC:

- International Financial Centres (IFC): are large international **full-service** centers with **advanced settlement and payments systems**, supporting large domestic economies, with deep and liquid markets where both **the sources and uses of funds are diverse**, and where legal and regulatory frameworks are adequate to safeguard the integrity of principal-agent relationships and supervisory functions.
- Regional Financial Centres (RFC):differ from the first category, in that they have developed financial markets and infrastructure and intermediate funds in and out of their region, but have relatively small domestic economies.
- Offshore Financial Centres (OFC): can be defined as a third category that are mainly much smaller, and provide more limited specialist services.

So according to this definition, three traits make a Financial Centre: full-service, advanced settlement and payments systems and a high diversity of the sources and uses of funds. From this definition, we can already identify some IFC and RFC. On one hand, London, New York and Tokyo would be classify as IFC. On the other hand, Hong Kong (香港) and Singapore (新加坡) would be classify as RFC due to their small domestic economies. *(for the remainder of this analysis, we will not distinguish IFC and RFC by calling both of them IFC)*

However, some disrupting events have fallen upon some of these IFCs specifically. Indeed, we can mention the **Brexit** which may (or may not) put an end to the hegemony of London among the European IFCs; or the Hong Kong protests which could undermine the "fragance harbor". And what about the consequences of the health crisis we are currently facing? Will it provoke some cities to fall from the IFC status and other to fall from it?

The Global Financial Centres Index identifies five (5) axis (Business environment, Human Capital, Infrastructure, Financial Sector development and Reputation) along which the IFCs can be compared. The objectif of this article is to understand one aspect of the Human Capital: the level of quality of life, in order to assess whether there is a disparity between those IFCs.

Even though the quality of life does not give a full picture, I think it may give to financial profesionnals and strategic planner (in Financial Institutions) an insight on where they should increase their presence.

Data sourcing

In order to assess the quality of life in the IFCs, we will have to identify which are those IFCs. For that, we will use the report on the Global Financial Centres Index (March 2020). It presents all the IFCs and rank them.

Once we have the IFCs, we will use the **Geopy** to access the location of the center of each cities.

Finally, for the quality of life we will use two databases:

1. the **Foursquare API** to get all the amenities present in the cities.

2. the OECD Better Life Index 2017 will give us an idea on the affordability of housing, the crime rate and the life expectancy

Methodology

Once I downloaded the dataset from Foursquare, I tried to assess the diversity of venues from the Cities by plotting a **bar plot**
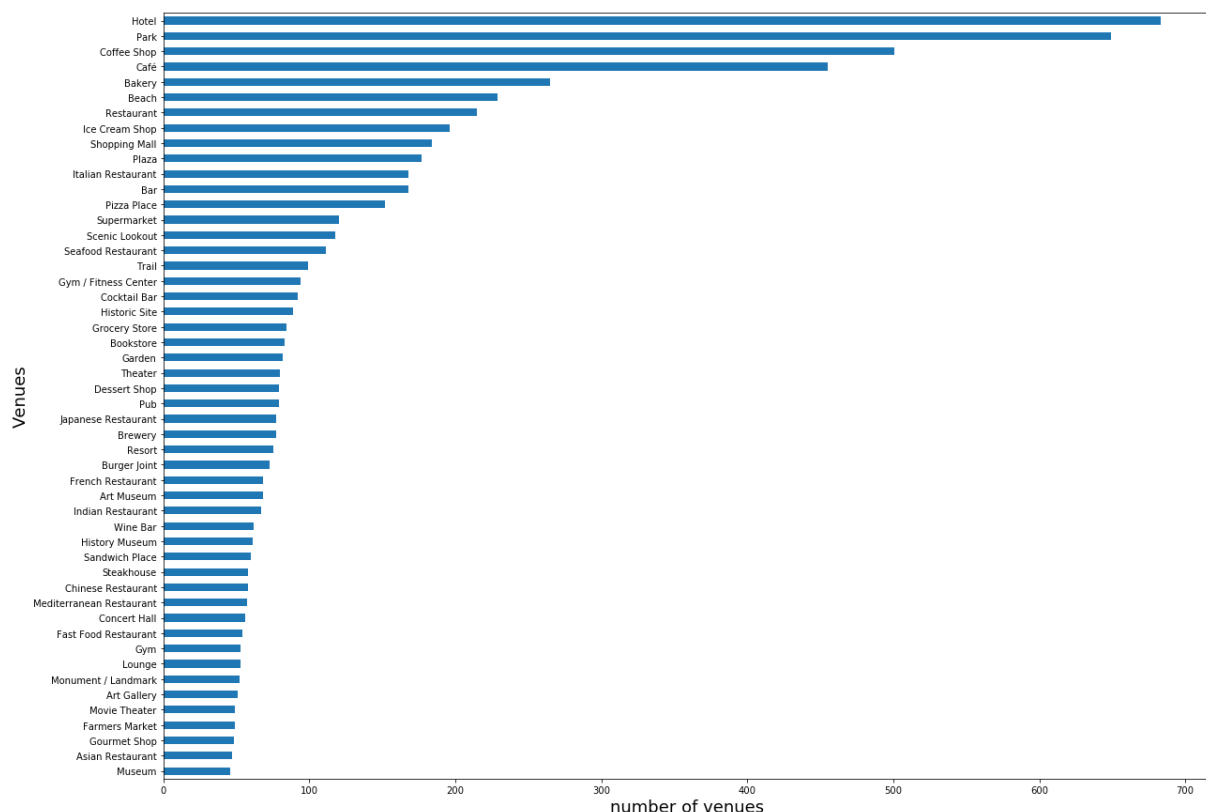

Then for each city, I computed the proportion of each venue. Those proportions help me to get around 200 variables. Those were to much to put in a data analysis so I tried two methods of dimension reduction, i.e Principal Component Analysis (PCA) and Multiple Component Analysis (MCA).

PCA

The PCA did not give me enough insight. The graph below presents a color map of the coordinates of the components.
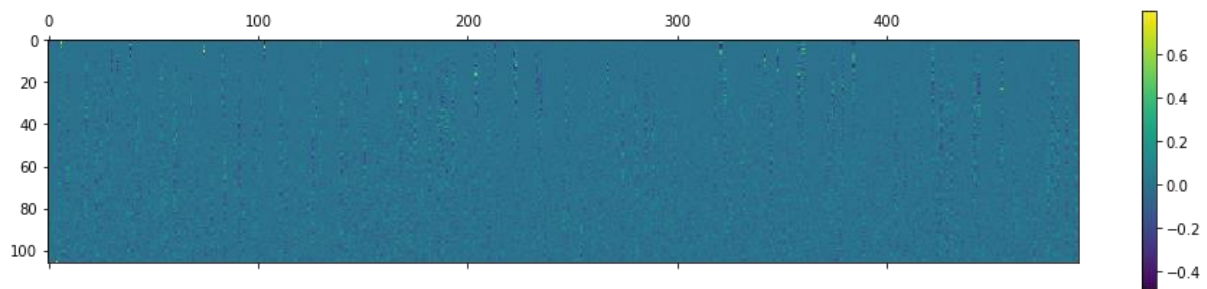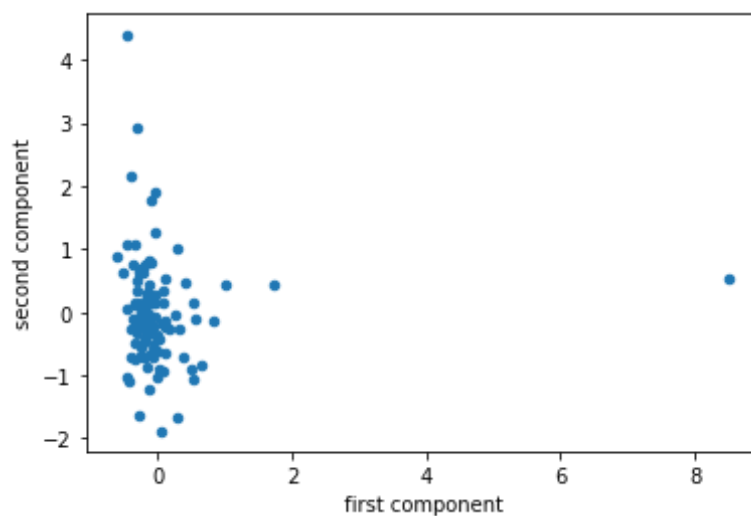

Moreover, the explained variance of the first component is very low as we can see in the graph below:
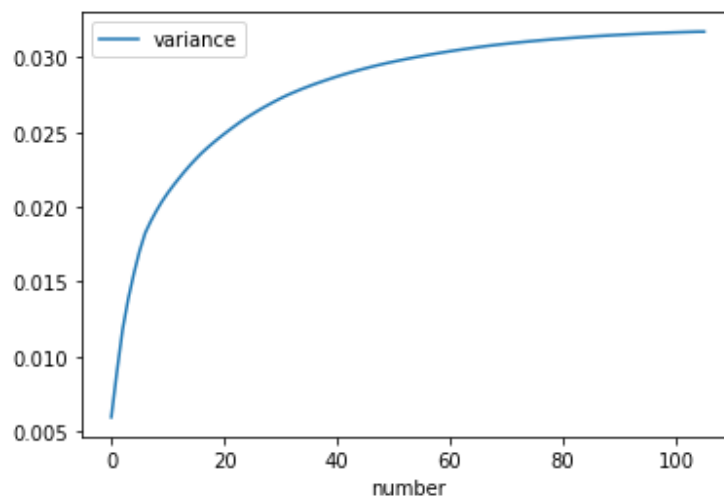
MCA:

The MCA, however, help me to identify Tokyo as a special case in terms of venues.

Indeed on the two first components, Tokyo clearly stands out. This is because Tokyo is extremely different from the other cities. the venues present in Tokyo like Tonkatsu Restaurant are not present elsewhere.

Kmeans

I use Kmeans on the components of the MCA and the some variable from the OECD database in order to identify some groups.

Results:

The result of my analysis is a rather homogeneous set of cities. The Cities seem to have the same sets of characteristics.

Class	# of cities
0	17
1	88
2	1

Discussion:

We can go further in our analysis:

➢ The venues categories could be aggregate
➢ The chosen number of components (MCA) could also be analysis in order to choose the optimal one

Conclusion

In conclusion to our analysis, we can say that with regards to the quality of life the International Financial Centre are similar. However, We can say that in terms of venues the Japan stands out as it has a lot of exceptional restaurants.