**Introduction – Business Problem**

The problem is as follows: We are contacted by a small coffee shop franchise that wants to open up a new location. As they are adventurous people, they are willing to put this shop anywhere in the world. The primary concern – as is the case with most businesses – is to choose a location that optimizes profits. To figure out where to open this shop, we will have to consider a number of factors, namely:

1. What places (cities) consume the most coffee?
2. What are the population, GDP, and GDP per capita in these cities?
3. How saturated is the coffee shop market in these cities?

I will elaborate on the relevance of each of these items in the following (Data) section. But the main idea is outlined below:

As we don’t have the bandwidth to look into every city in the world, we will look at the capital cities of roughly the top 50 countries in terms of coffee consumption per capita. Then we will see roughly how many coffee shops already exist in the center (5 km radius) of each of these capital cities. This will give us a sense of roughly how many customers a coffee shop in this area would have. Making adjustments for on-premise vs. off-premise consumption of coffee, we will hopefully get a decent sense of how much coffee each shop would sell in a year. It’s quite possible that the Foursquare API won’t give us all destinations that sell coffee, in which case, we will at least be able to comment on the relative amounts of coffee that could be sold in shops in different countries. This is all we really need, as we just want to determine WHERE we can maximize profits and not WHAT that margin might be. For the sake of this analysis, we assume startup and operational costs are the same everywhere, so really this is a revenue optimization problem.

Essentially, once we understand which places present the best opportunity based on the aforementioned points, we will devise a recommendation as to which city our client should choose for their new shop.