LIFE EXPECTANCY EXPLORATION

COMPARING FIVE COUNTRIES

—FRANCE, NORWAY, SPAIN, SWEDEN, DENMARK—

WITH THE GAPMINDER DATA FRAME

OUT OF THE FIVE COUNTRIES CHOSEN, WHICH FIVE HAS THE LOWEST/HIGHEST PER CAPITA GDP IN 1952?

- The country with the lowest per capita GDP is Spain.
- The country with the highest per capita GDP is Norway.

	country	year	lifeExp	gdpPercap
1	Spain	1952	64.94	3834.035
2	France	1952	67.41	7029.809
3	Sweden	1952	71.86	8527.845
4	Denmark	1952	70.78	9692.385
5	Norway	1952	72.67	10095.422

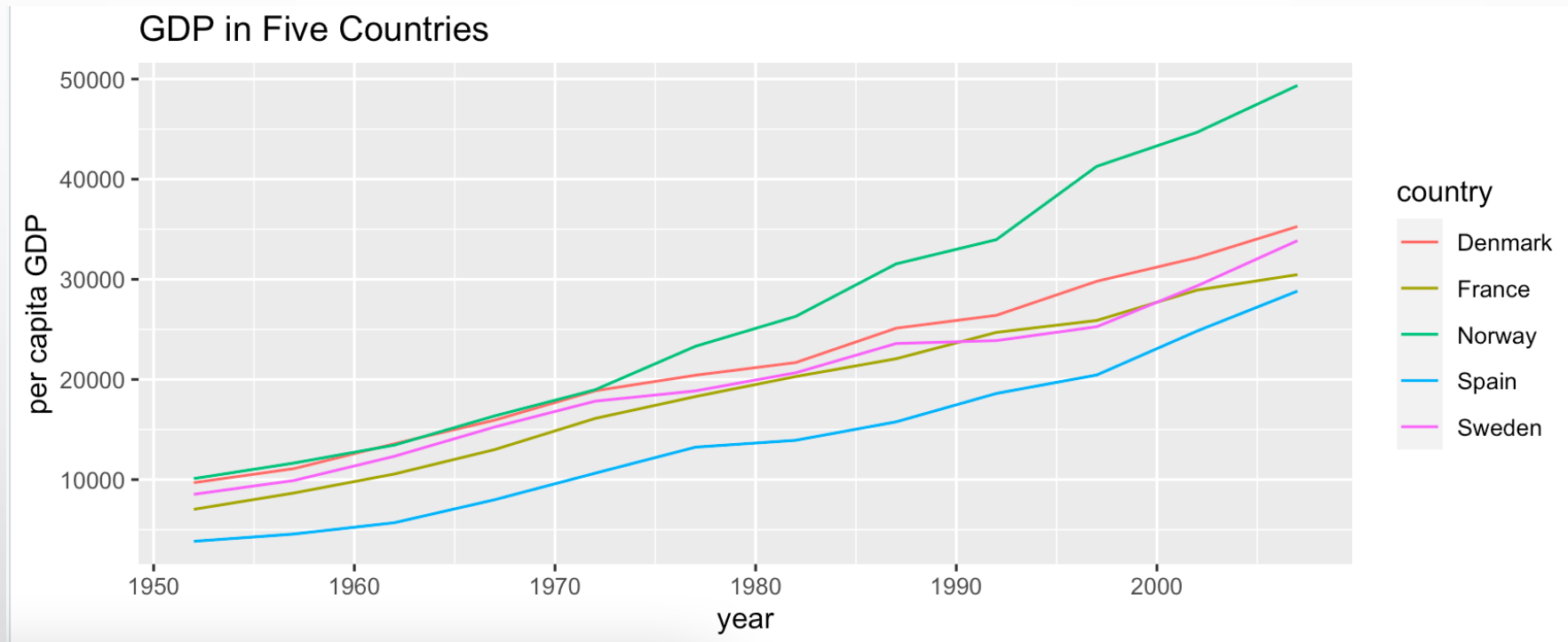- Gm_lowest1952 <- gm_five %>% filter(year==1952) %>% arrange(gdppercap)

OUT OF THE FIVE COUNTRIES CHOSEN, WHICH FIVE HAS THE LOWEST/HIGHEST PER CAPITA GDP IN 2007?

- The country with the lowest per capita GDP is Spain.
- The country with the highest per capita GDP is Norway.

	country	year	lifeExp	gdpPercap
1	Spain	2007	80.941	28821.06
2	France	2007	80.657	30470.02
3	Sweden	2007	80.884	33859.75
4	Denmark	2007	78.332	35278.42
5	Norway	2007	80.196	49357.19

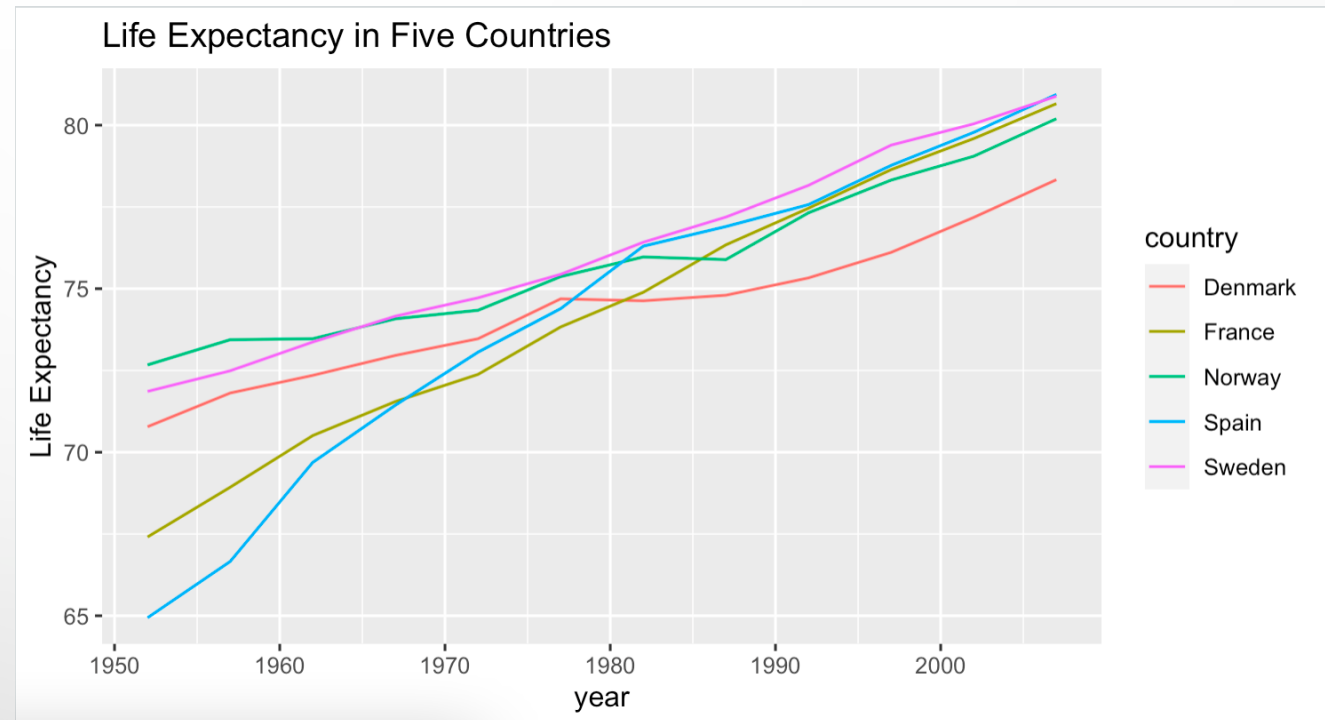- Gm_lowest2007<- gm_five %>% filter(year==2007) %>% arrange(gdppercap)

LINE GRAPH OF GDP IN THE FIVE COUNTRIES


```
ggplot(gm_five) + geom_line(aes(x = year, y = gdpPercap, color = country)) +
ylab("per capita GDP") + ggtitle("GDP in Five Countries")
```
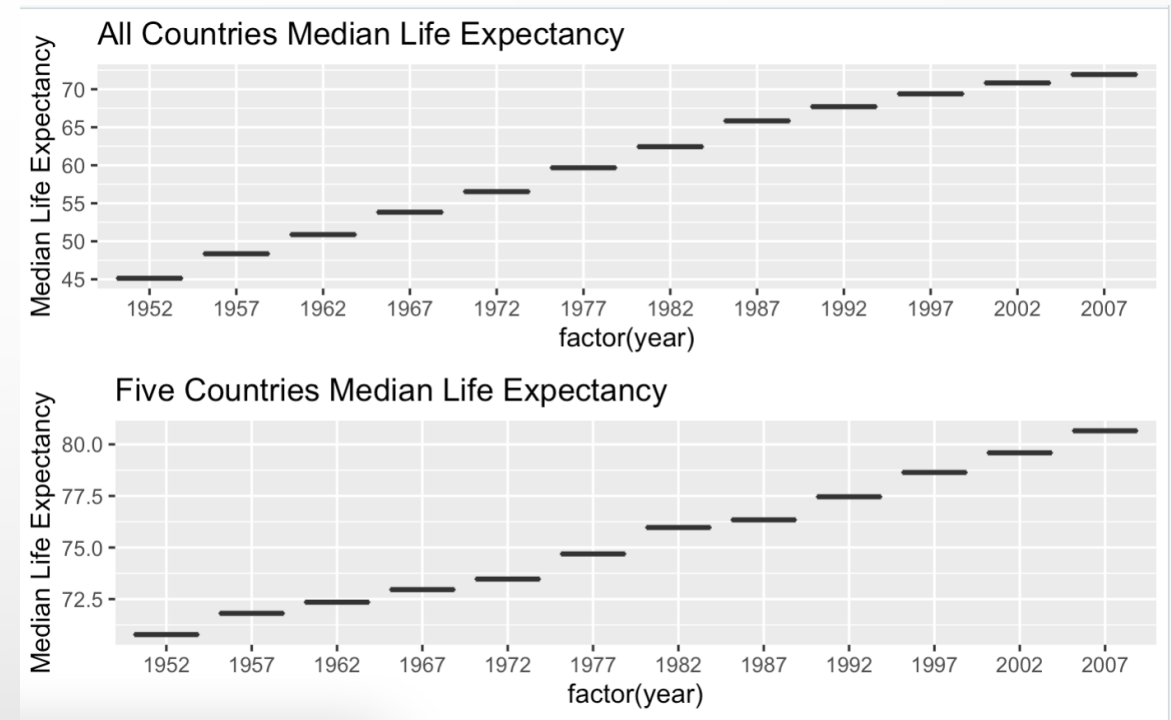
LIFE EXPECTANCY IN FIVE COUNTRIES

- Starting in 1952, Spain shows the lowest life expectancy out of the five countries that were chosen, probably as a consequence of the civil war that some believe didn't, in fact, end in 1939 but in 1952. Norway shows the highest life expectancy in 1952 out of the five countries chosen. Ending in 2007, Spain's life expectancy has dramatically increased and has nearly taken over as the highest along with Sweden. Denmark's life expectancy has not had as much of a dramatic increase from 1952-2007, thus is the lowest out of the five countries in 2007.

ggplot(gm_five) + geom_line(aes(x = year, y = lifeExp, color = country)) + ylab("Life Expectancy") + ggtitle("Life Expectancy in Five Countries")

COMPARING: ENTIRE GAPMINDER DATA FRAME VS. FIVE COUNTRIES CHOSEN

- Without even looking at each of the years from 1952-2007 and just looking at the ages that the y-axis is organized with, one can see that the overall median ages for the five countries selected have a dramatic higher average than the overall medians of the countries when calculated all together.


```
life.boxplot <- ggplot(life, aes(x = factor(year), y = life.med)) + geom_boxplot() + ylab("Median Life Expectancy")
+
  ggtitle("All Countries Median Life Expectancy")
gm_fivemedians.boxplot <- ggplot(gm_fivemedians, aes(x = factor(year), y = life_med)) + geom_boxplot() +
  ylab("Median Life Expectancy") + ggtitle("Five Countries Median Life Expectancy")
grid.arrange(life.boxplot, gm_fivemedians.boxplot, ncol = 1)
```