report190531

team7

2019년 5월 31일

1.서론

점점 늘어나는 출국자 비율

2. 본론

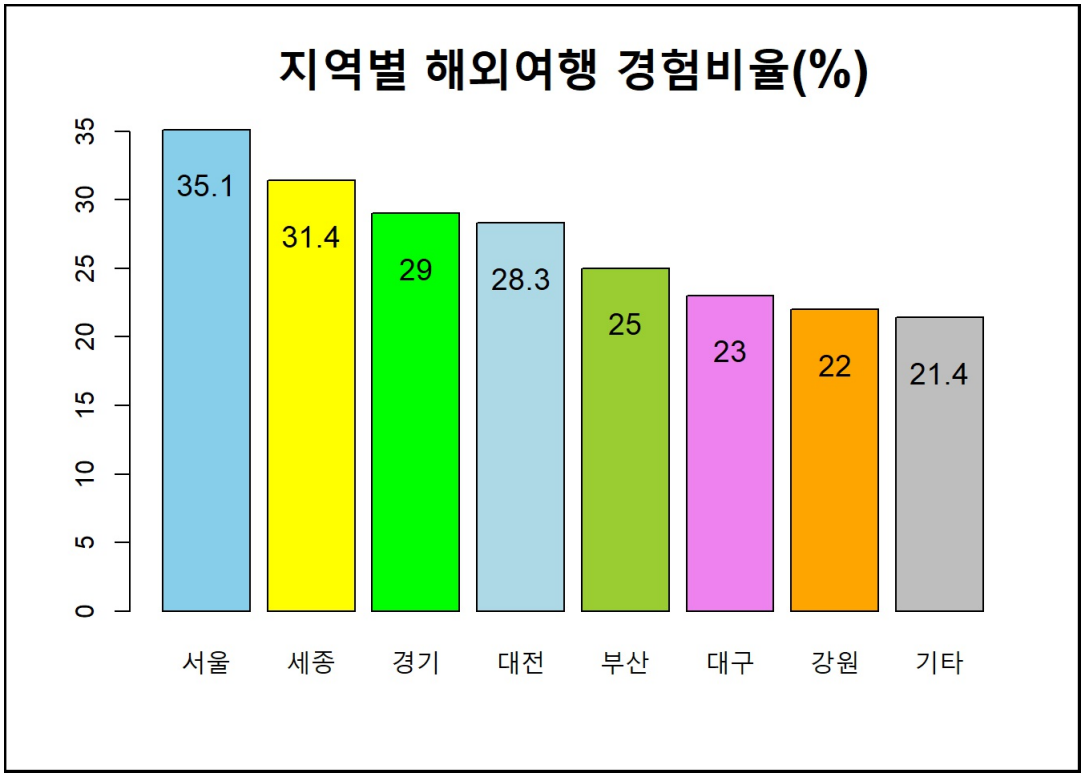
각 지역별 해외여행 경험 및 가장 많이 여행가는 해외도시

1) 지역별 해외여행 비율

```
region <- c("서울", "세종", "경기", "대전", "부산", "대구", "강원", "기타")
rates <- c(35.1, 31.4, 29, 28.3, 25, 23, 22, 21.4)
party <- c("서울", "세종", "경기", "대전", "부산", "대구", "강원", "기타")
colour_party <- c("skyblue", "yellow", "green", "lightblue", "yellowgreen", "violet", "orange", "gray")

region_party <-  c("서울", "세종", "경기", "대전", "부산", "대구", "강원", "기타")

region_colour <- colour_party[match(region_party, party)]
```

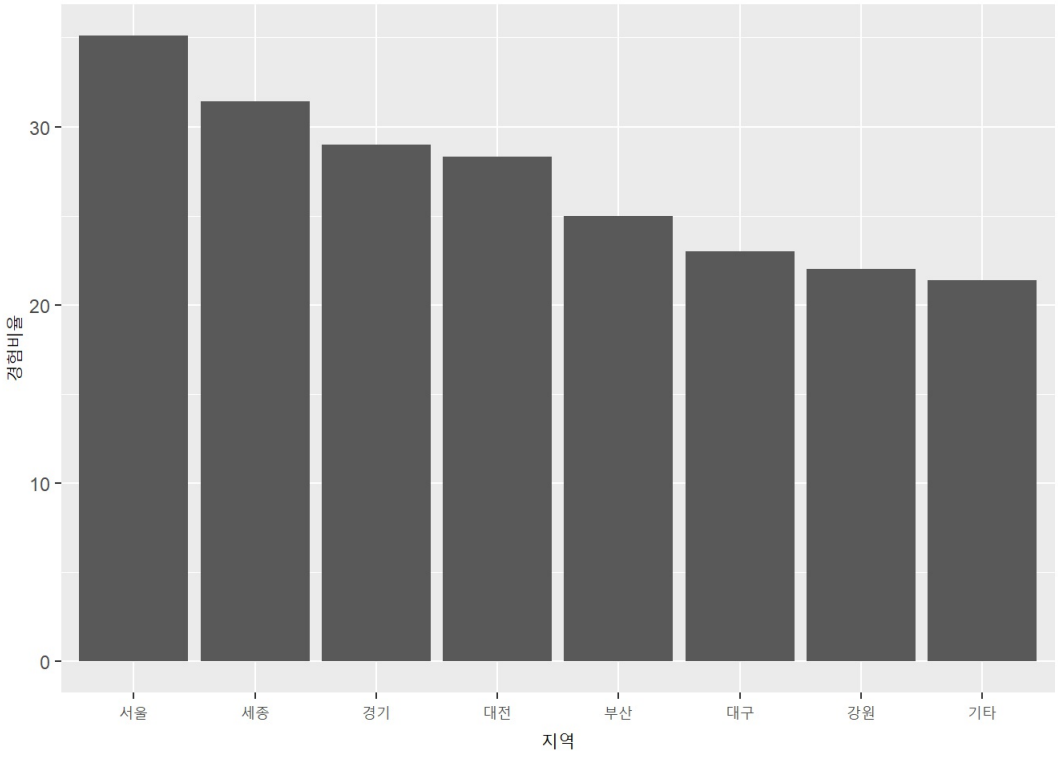
2) 막대그래프

```
b1 <- barplot(rates,
              axes = T,
              col = region_colour,
              names.arg = region,
              cex.names = 1.2)
text(x = b1, y = rates + c(rep(-4, 8), rep(1, 1)),
     labels = rates,
     cex = 1.2)
main_title <- "지역별 해외여행 경험비율(%)"
title(main = main_title,
      cex.main = 2)

box(which = "figure", lwd = 3)
```

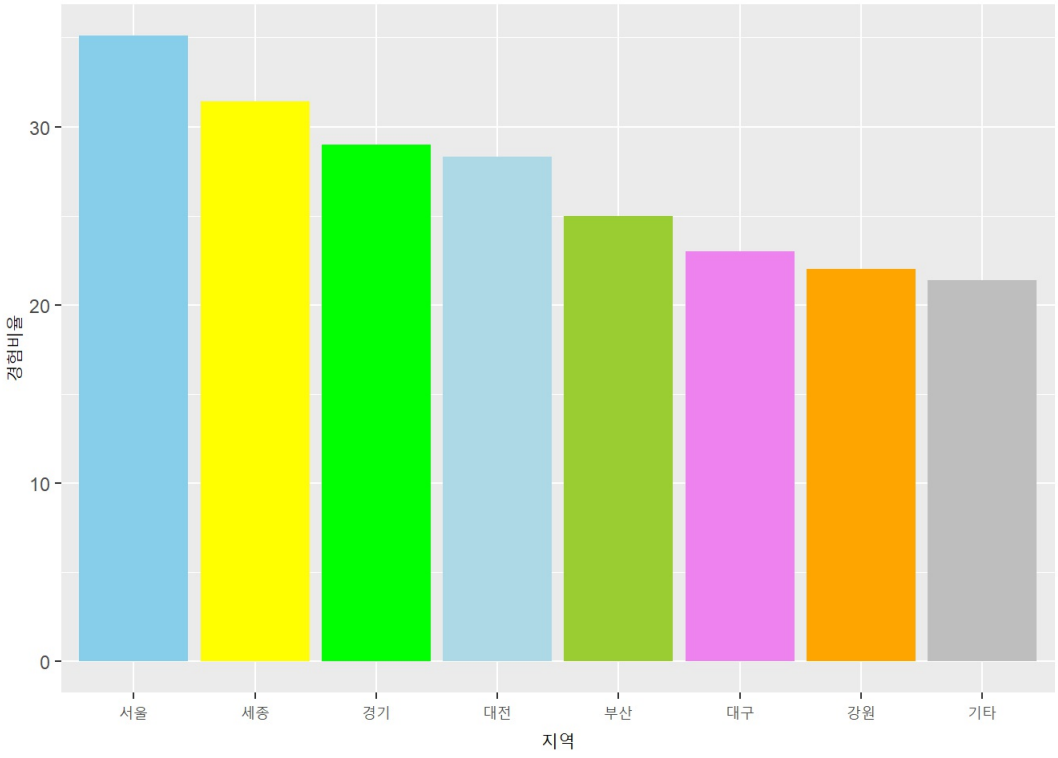


3) 막대그래프 그리는 과정

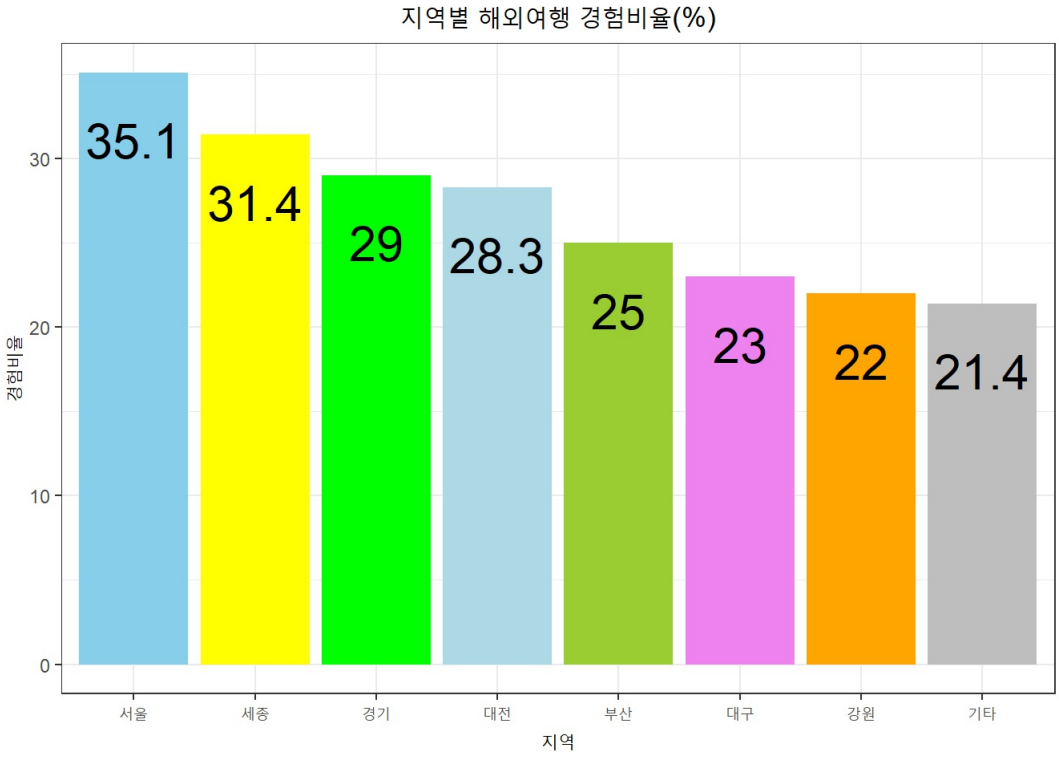
```
library(ggplot2)

region_f <- factor(region,
                   levels = region)
rates_df <- data.frame(지역 = region_f,
                       지역 = region_party,
                       색깔 = region_colour,
                       경험비율 = rates)


g1 <- ggplot(data = rates_df, mapping = aes(x = 지역, y = 경험비율))
(g2 <- g1 +
    geom_bar(stat = "identity"))
```



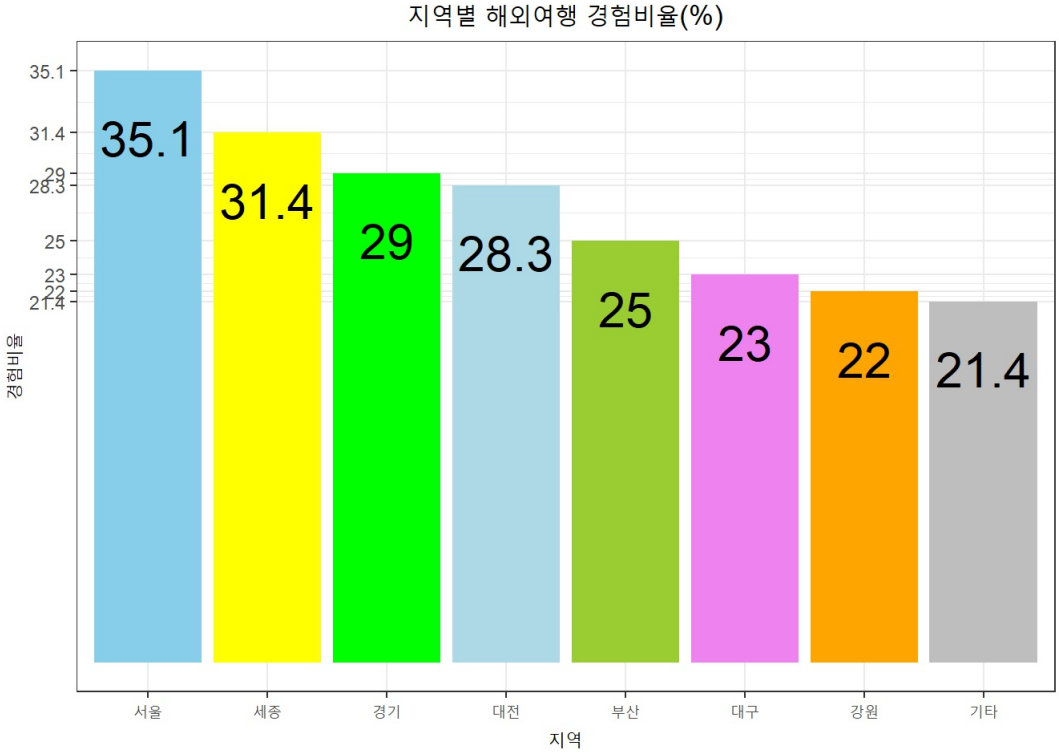

```
(g3 <- g2 +
    geom_bar(stat = "identity",
             fill =  region_colour))
```



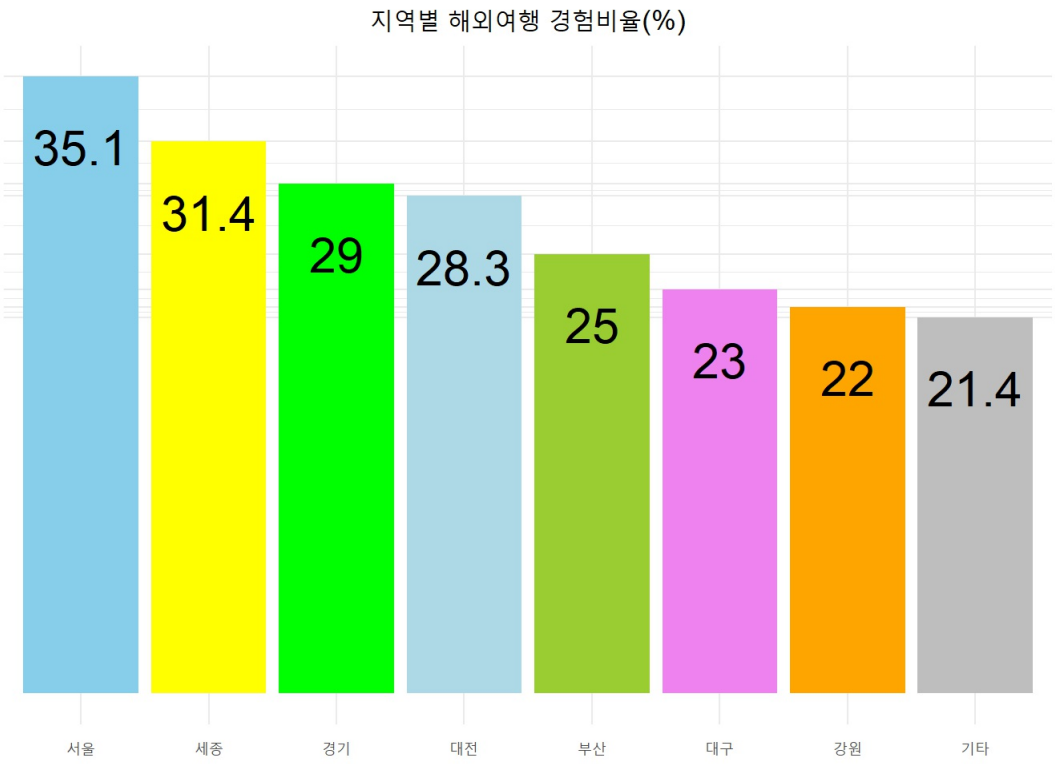
```
(g4 <- g3 +
    theme_bw() +
    geom_text(mapping = aes(x = 지역,
                            y = 경험비율+ c(rep(-4, 8)),
                            label = 경험비율),
              size = 8) +
    labs(title = main_title) +
    theme(plot.title = element_text(hjust = 0.5)))
```



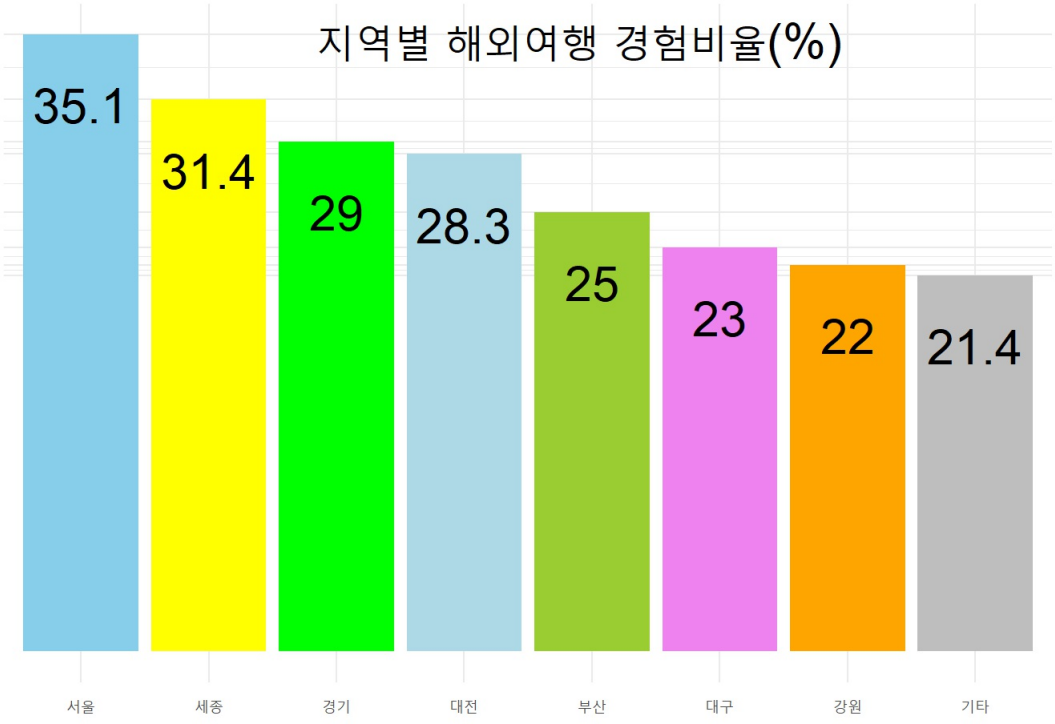

```
(g5 <- g4 +
    scale_y_continuous(breaks = rates, labels = rates))
```




```
(g6<- g5 +
    theme(panel.border = element_blank(),
          axis.title.x = element_blank(),
          axis.title.y = element_blank(),
          axis.text.x = element_text(vjust = 0),
          axis.ticks = element_blank(),
          axis.text.y = element_blank()))
```




```
(g7 <- g6 +
    ggtitle("") +
    annotate("text",
             x = mean(b1),
             y = Inf,
             label = main_title,
             vjust = 1.5,
             size = 8))
```



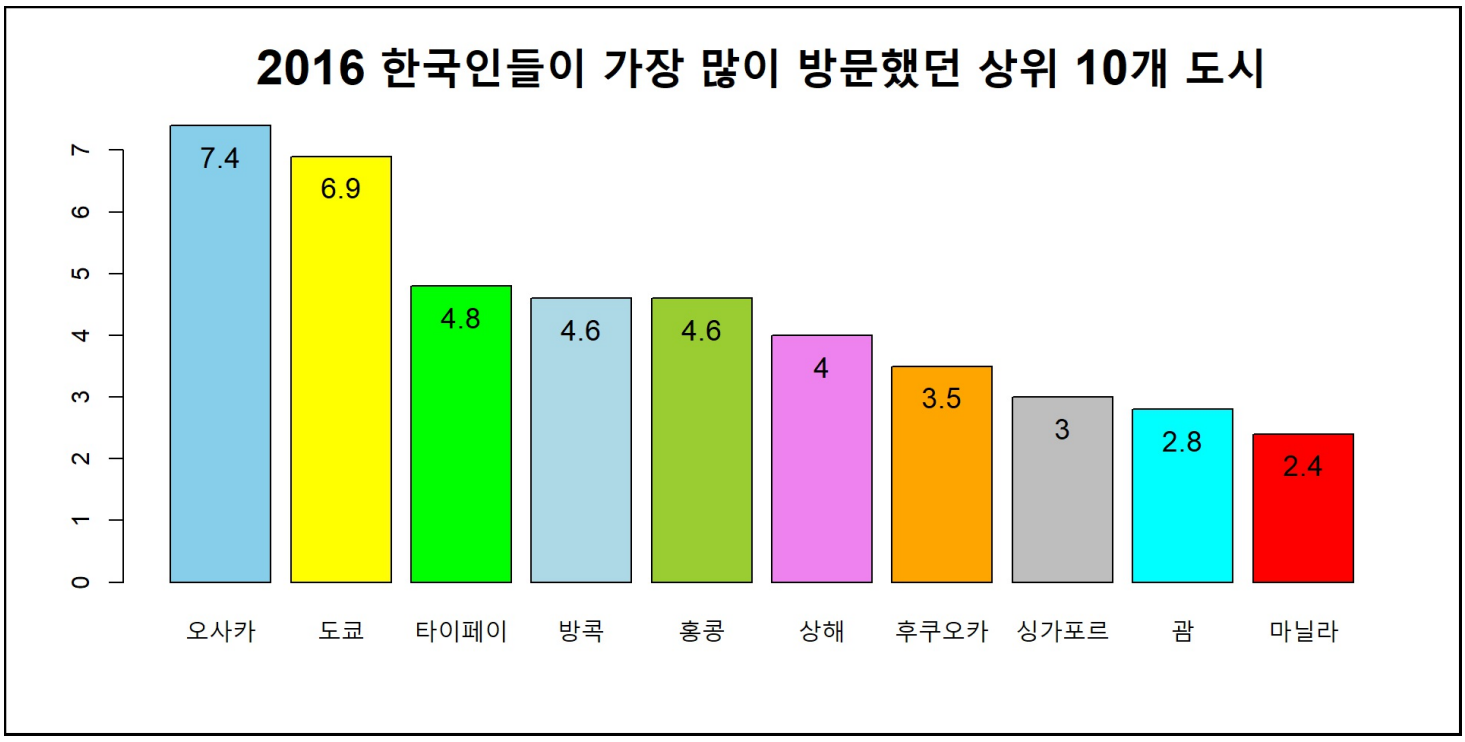
4) 한국인들이 가장 많이 방문했던 도시

```
place <- c("오사카", "도쿄", "타이페이", "방콕", "홍콩", "상해", "후쿠오카", "싱가포르", "괌", "마닐라")
poll <- c(7.4, 6.9, 4.8, 4.6, 4.6, 4.0, 3.5, 3.0, 2.8, 2.4)
party <- c("오사카", "도쿄", "타이페이", "방콕", "홍콩", "상해", "후쿠오카", "싱가포르", "괌", "마닐라")
colour_party <- c("skyblue", "yellow", "green", "lightblue", "yellowgreen", "violet", "orange", "gray", "cyan",
 "red")

place_party <-  c("오사카", "도쿄", "타이페이", "방콕", "홍콩", "상해", "후쿠오카", "싱가포르", "괌", "마닐라")

place_colour <- colour_party[match(place_party, party)]

poll.df <- data.frame(place, poll, stringsAsFactors = FALSE)
poll.df
```

```
##        place poll
## 1     오사카  7.4
## 2       도쿄  6.9
## 3   타이페이  4.8
## 4       방콕  4.6
## 5       홍콩  4.6
## 6       상해  4.0
## 7   후쿠오카  3.5
## 8   싱가포르  3.0
## 9        괌  2.8
## 10   마닐라  2.4
```

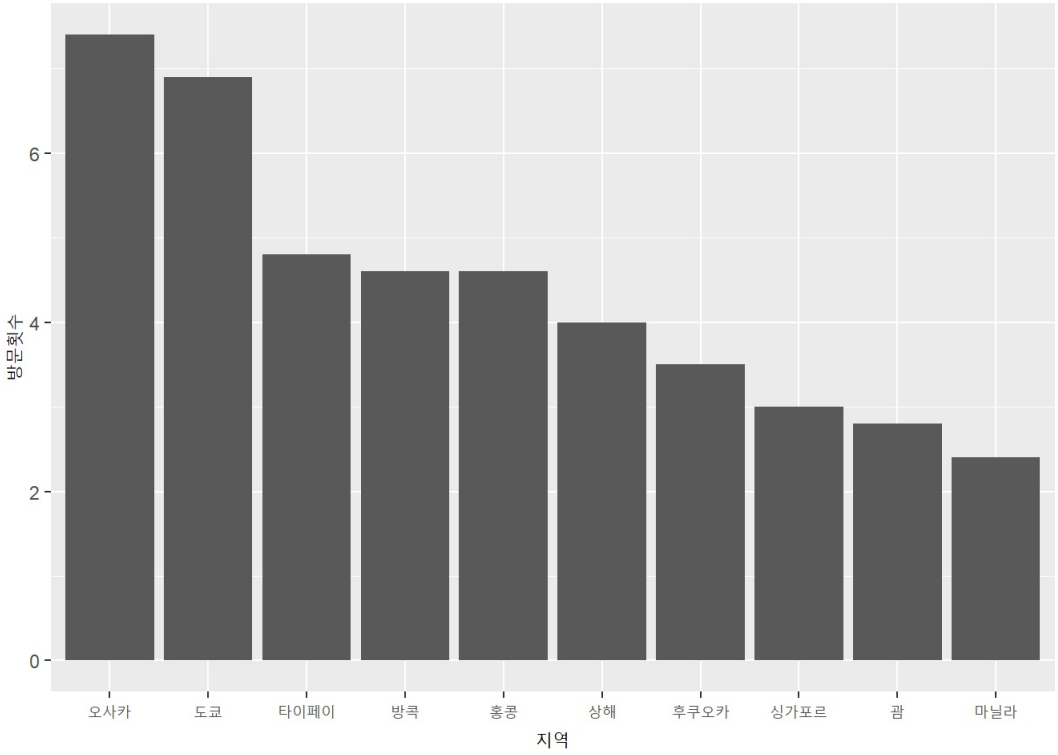
5) 막대그래프

```
b1 <- barplot(poll,
              axes = T,
              col = place_colour,
              names.arg = place,
              cex.names = 1.2)

text(x = b1, y = poll + c(rep(-0.5, 10)),
     labels = poll,
     cex = 1.2)
main_title <- "2016 한국인들이 가장 많이 방문했던 상위 10개 도시"
title(main = main_title,
      cex.main = 2)

box(which = "figure", lwd = 3)
```

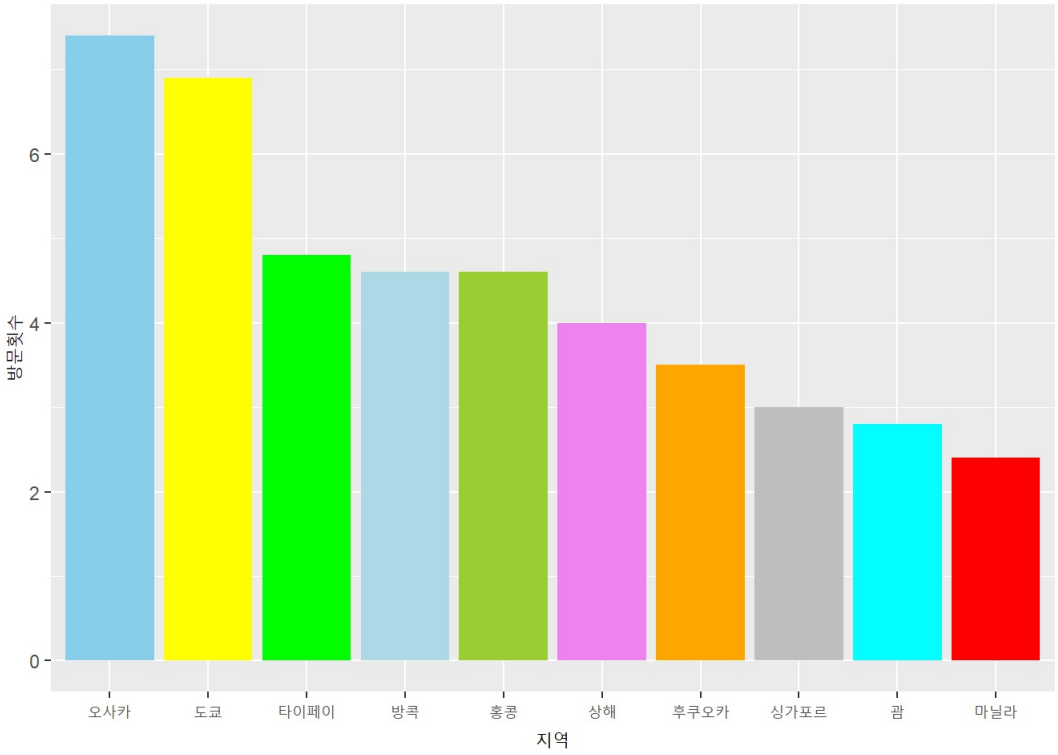


6) 막대그래프 그리는 과정

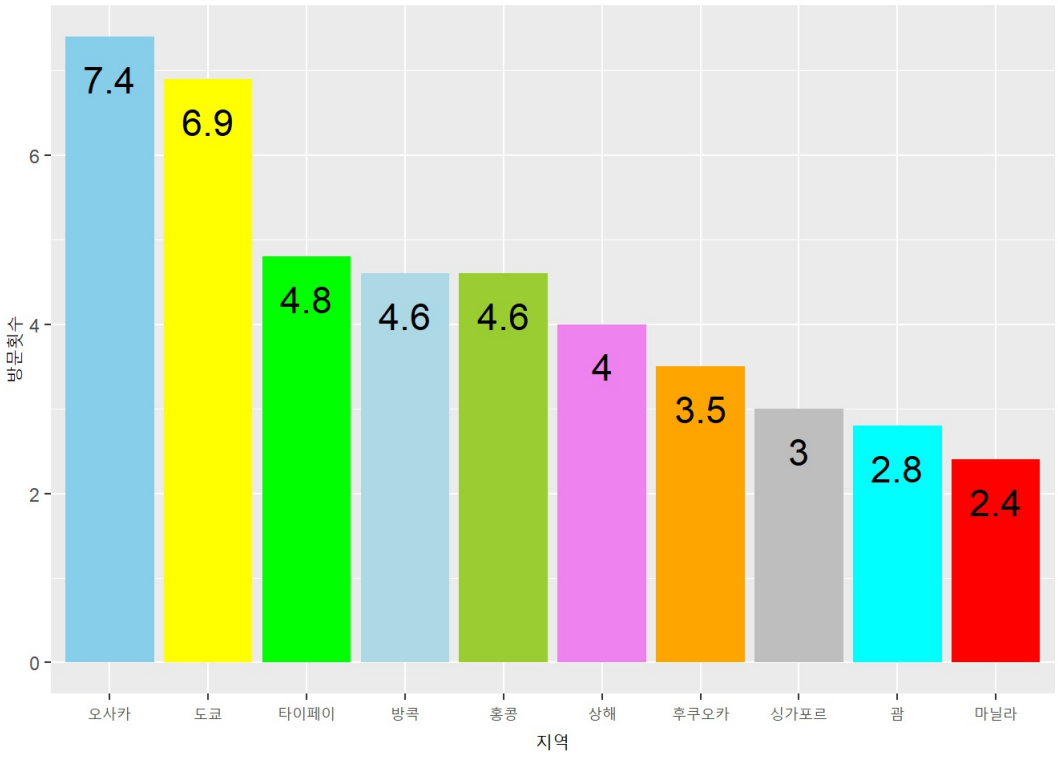
```
library(ggplot2)

place_f <- factor(place,
                  levels = place)
poll_df <- data.frame(지역 = place_f,
                      지역 = place_party,
                      색깔 = place_colour,
                      방문횟수 = poll)

g0 <- ggplot(data = poll_df,
             mapping = aes(x = 지역, y = 방문횟수))

g1 <- g0 +
  geom_bar(stat = "identity")
g1
```



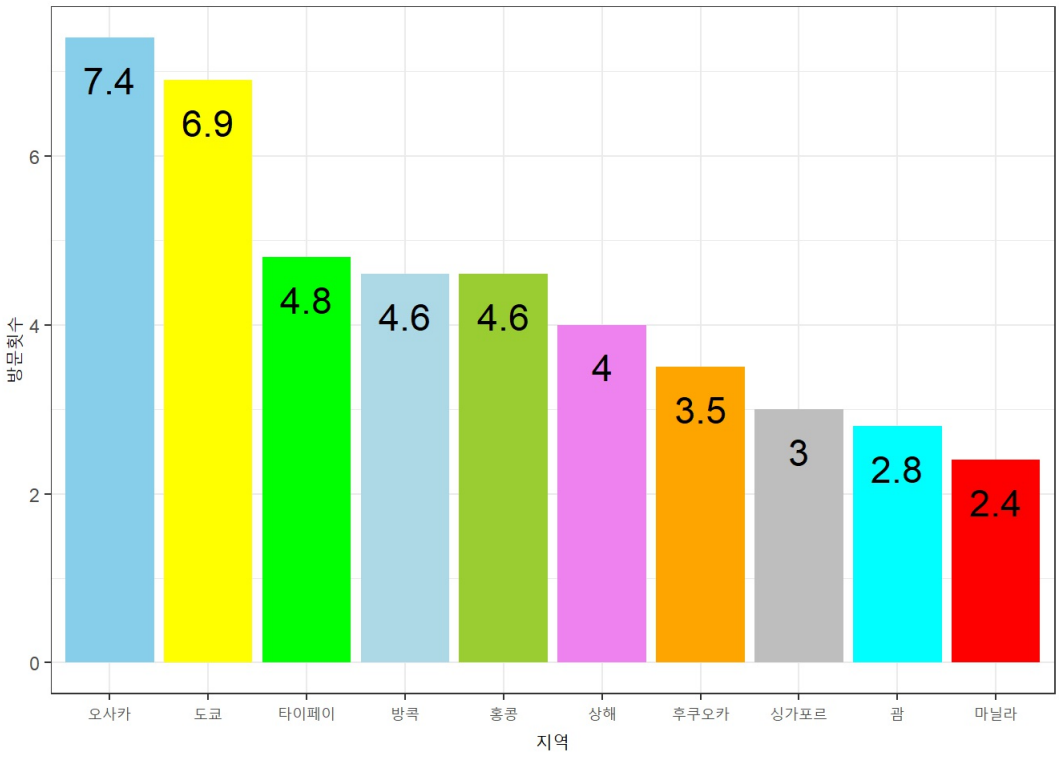

```
g2 <- g1 +
  geom_bar(stat = "identity",
fill =  place_colour)
g2
```



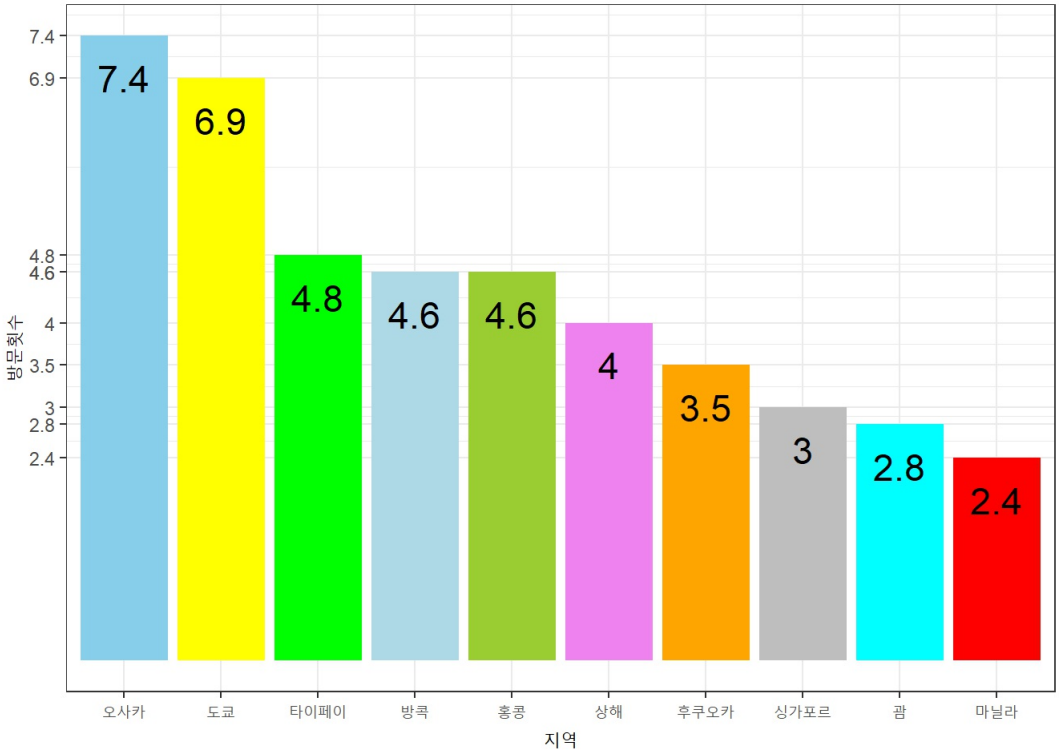

```
g3 <- g2 +
  geom_text(mapping = aes(x = 지역,
                          y = 방문횟수+ c(rep(-0.5, 10)),
                          label = 방문횟수),
            size = 6)
g3
```



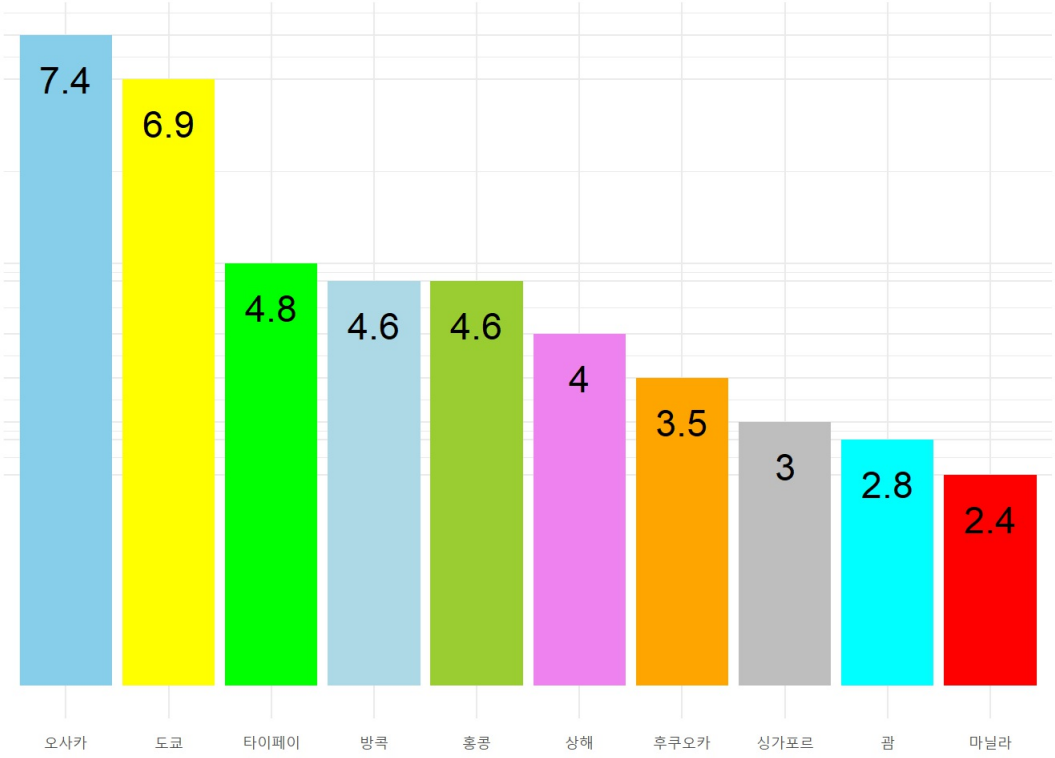

```
g4 <- g3 +
  theme_bw(base_family = "")
g4
```



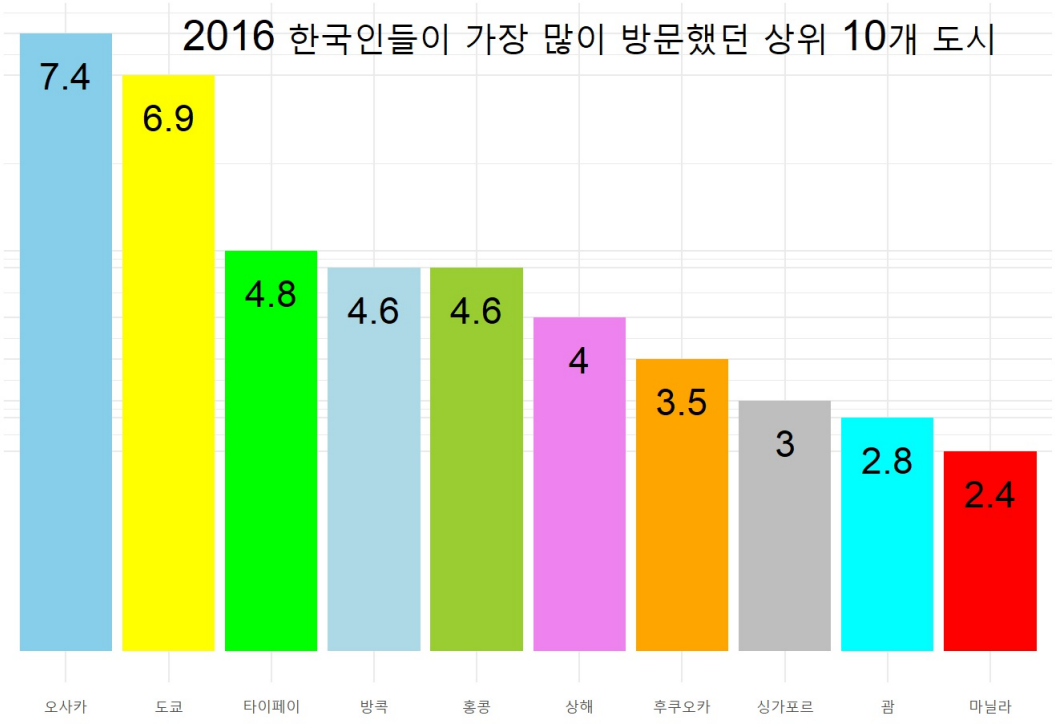

```
g5 <- g4 +
  scale_y_continuous(breaks = poll, labels = poll)
g5
```




```
g6 <- g5 +
  theme(panel.border = element_blank(),
        axis.title.x = element_blank(),
        axis.title.y = element_blank(),
        axis.text.x = element_text(vjust = 0),
        axis.ticks = element_blank(),
        axis.text.y = element_blank())
g6
```

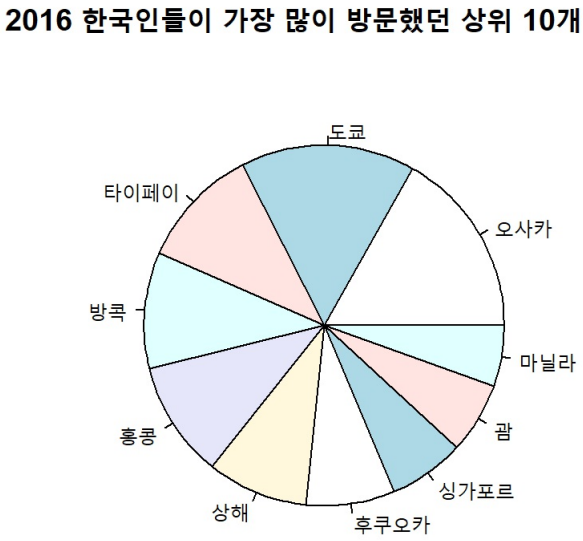



```
g7 <- g6 +
  ggtitle("") +
  annotate("text",
           x = mean(b1),
           y = Inf,
           label = main_title,
           vjust = 1.5,
           size = 7)
g7
```



7) 원형그래프 그리는 과정

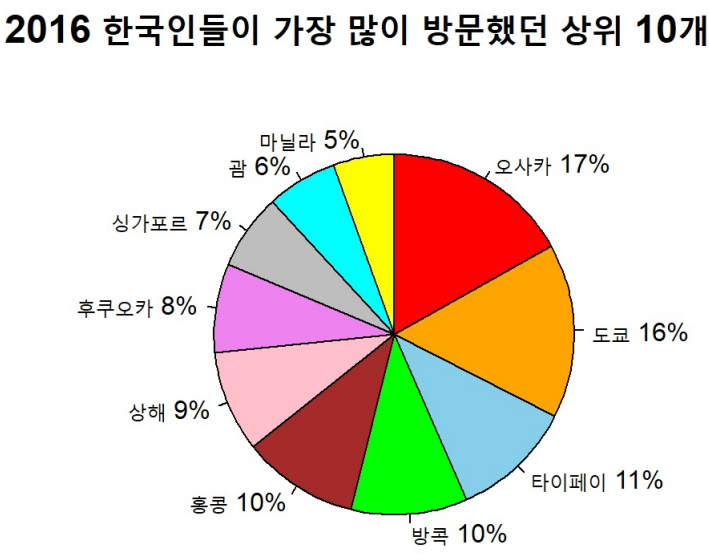
```
poll <- c(7.4, 6.9, 4.8, 4.6, 4.6, 4.0, 3.5, 3.0, 2.8, 2.4)
names(poll) <- c("오사카", "도쿄", "타이페이", "방콕", "홍콩", "상해", "후쿠오카", "싱가포르", "괌", "마닐라")

pie(poll,
    lables = names(poll),
    main=main_title)
```




```
pct <- round(poll/sum(poll)*100)
names(poll) <- paste(names(poll), pct)
names(poll) <- paste(names(poll), "%", sep = "")
```

8) 원형그래프

```
pie(poll,
    labels = names(poll),
    init.angle = 90,
    col = c("red","orange","skyblue",
            "green","brown", "pink",
            "violet", "gray", "cyan","yellow"),
    radius = 0.8,
    clockwise = T, main = main_title, cex.main = 1.5)
```



3. 결론

가장 인기있는 해외 도시

오사카시