DHS_graph

Shan Jiang

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Contents

0.1 Table 1: Bar plot

```
library(tidyverse)
```

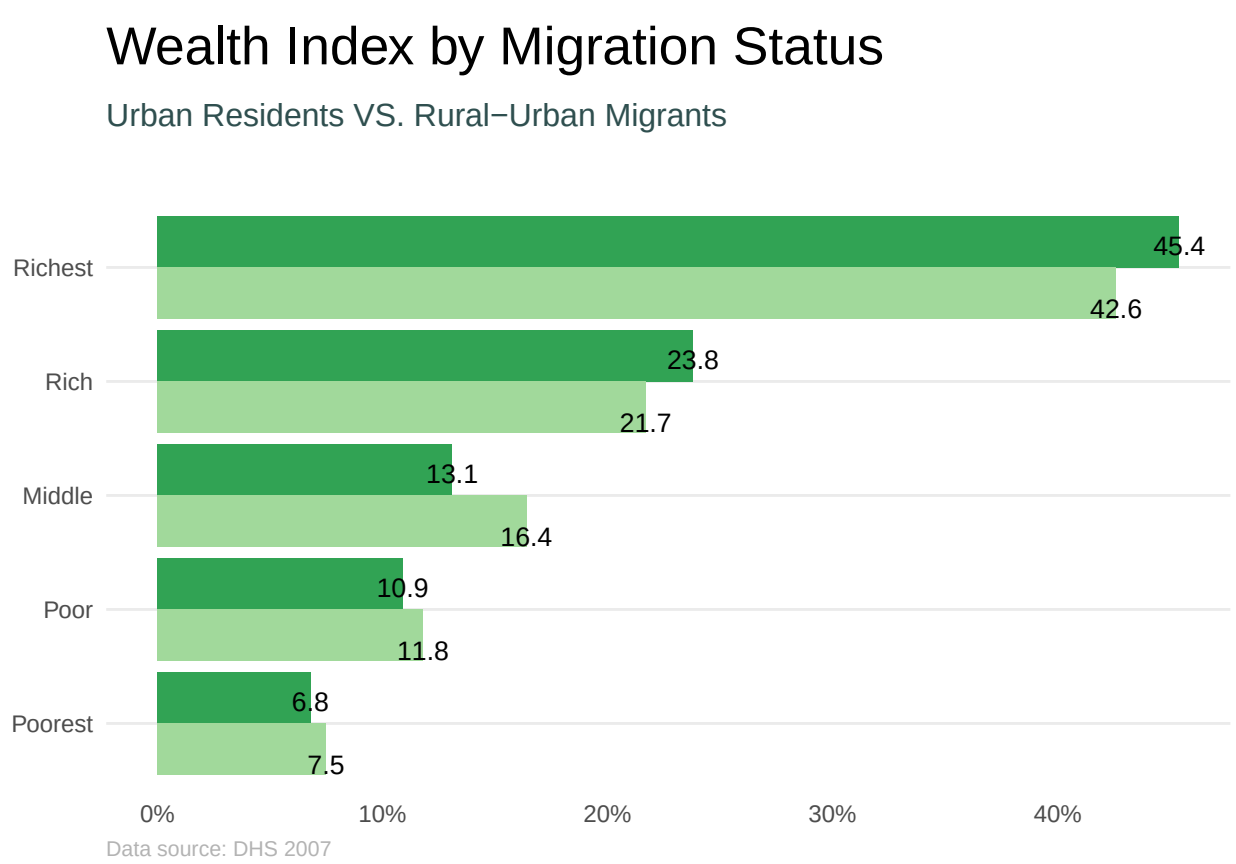
```
## -- Attaching packages -------- tidyverse 1.2.1 --

## v ggplot2 3.2.0     v purrr   0.3.2
## v tibble  2.1.3     v dplyr   0.8.3
## v tidyr   0.8.3     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.4.0

## -- Conflicts ----------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(ggplot2)
```

```
df1 = readxl::read_xlsx("./DHS/DHS_dv.xlsx", sheet = "table1")
df1 = df1 %>%   filter(Percentage != "N")

# Draw plot
ggplot(df1, aes(fill= factor(Status), y=Percentage, x= reorder(Wealth, Percentage))) +
    geom_bar(position="dodge", stat="identity") +
      scale_y_continuous(labels = function(x) paste0(x, "%")) +
      coord_flip() +
      labs(title="Wealth Index by Migration Status",
      subtitle="Urban Residents VS. Rural-Urban Migrants",
      caption="Data source: DHS 2007") +  scale_fill_manual(values = c("#a1d99b", "#31a354")) +
      geom_text(aes(label = round(Percentage, 1)), position = position_dodge(1.1),
                  vjust = 1.0, color = "black", size = 3.4) +
      theme(axis.text.x = element_text(angle=45, vjust=0.6)) +
      theme_minimal() +
        theme(axis.title = element_blank(),
              panel.grid.major.x = element_blank(),
              panel.grid.minor = element_blank(),
```

```
        legend.position = c(2,2), legend.justification = c(1,1),
        legend.background = element_blank(),
        legend.direction="horizontal",
        legend.title = element_blank(),
        plot.title = element_text(size = 20, margin = margin(b = 10)),
        plot.subtitle = element_text(size = 12, color = "darkslategrey",
                                     margin = margin(b = 25)),
        plot.caption = element_text(size = 8, margin = margin(t = 5),
                                    color = "grey70", hjust = 0))
```

```
## Warning: position_dodge requires non-overlapping x intervals
```

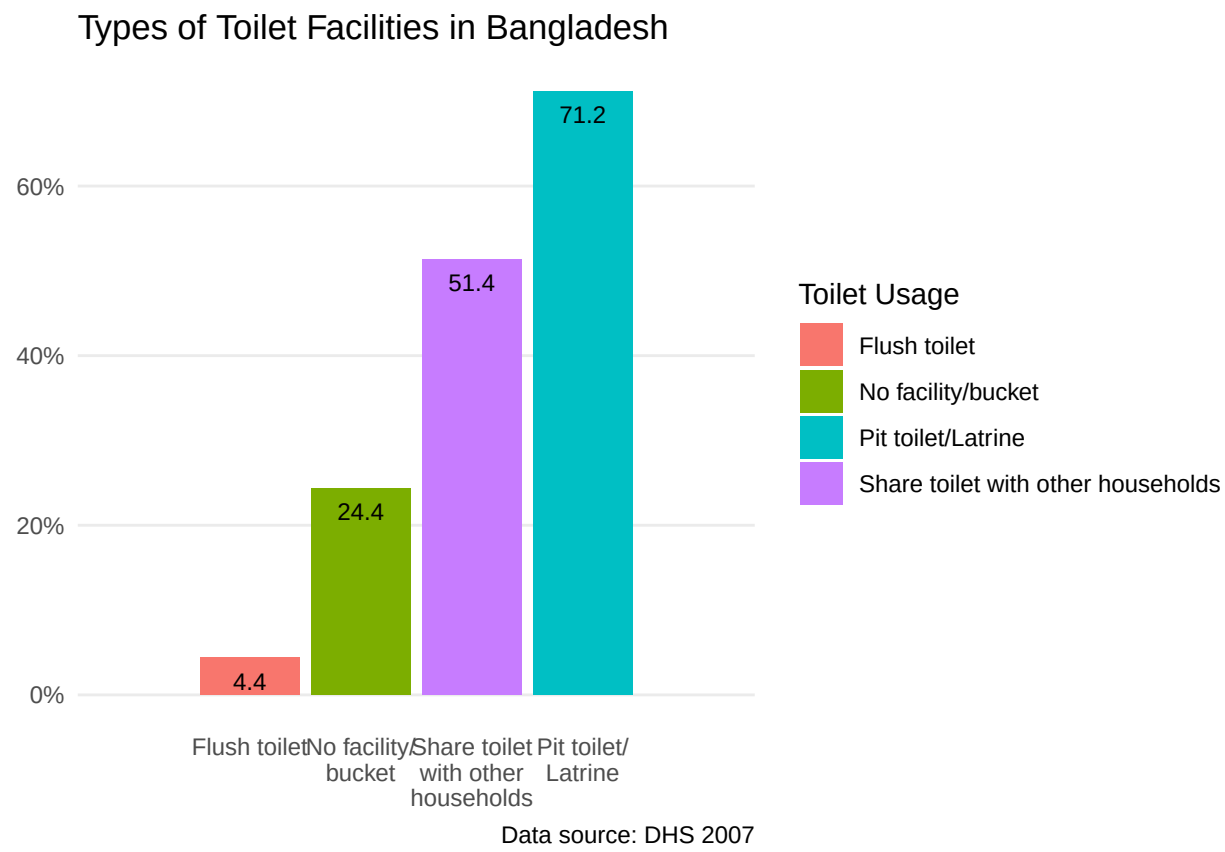


0.2 Table 3: Lollipop plot

```
df2 = readxl::read_xlsx("./DHS/DHS_dv.xlsx", sheet = "table3")

ggplot(df2,
       aes(x=reorder(`Toilet Usage`, Percentage), y= Percentage, fill =`Toilet Usage` ))  +
    geom_bar(position="dodge", stat="identity") +
   labs(title="Types of Toilet Facilities in Bangladesh",
        caption="Data source: DHS 2007") +
  theme(axis.text.x = element_text(vjust=0.6)) +
```

```
    geom_text(aes(label = round(Percentage, 1)),
                  position = position_dodge(3.1),
                  vjust = 1.88, color = "black",
                   size = 3.2) +
  theme_minimal() +
        theme(axis.title = element_blank(),
              panel.grid.major.x = element_blank(),
              panel.grid.minor = element_blank()) +
      scale_x_discrete(labels = function(x) str_wrap(x, width = 12)) +
      scale_y_continuous(labels = function(x) paste0(x, "%"))
```

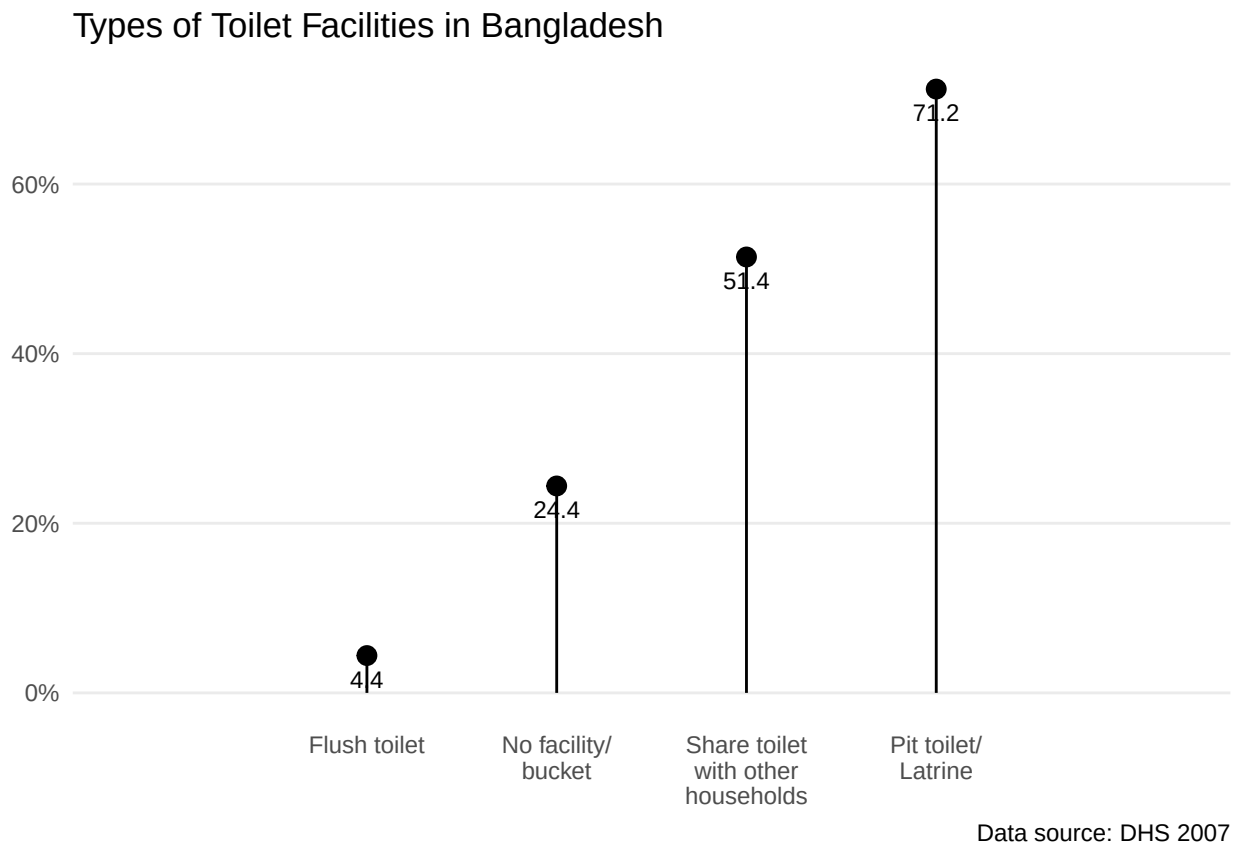
```
## Warning: position_dodge requires non-overlapping x intervals
```




```
# Plot
ggplot(df2,
       aes(x=reorder(`Toilet Usage`, Percentage), y= Percentage)) +
  geom_point(size=3) +
  geom_segment(aes(x=`Toilet Usage`,
                   xend= `Toilet Usage`,
                   y=0,
                   yend=Percentage)) +
  labs(title="Types of Toilet Facilities in Bangladesh",
       caption="Data source: DHS 2007") +
  theme(axis.text.x = element_text(vjust=0.6)) +
```

```
   geom_text(aes(label = round(Percentage, 1)),
                 position = position_dodge(3.1),
                 vjust = 1.88, color = "black",
                 size = 3.2) +
 theme_minimal() +
       theme(axis.title = element_blank(),
             panel.grid.major.x = element_blank(),
             panel.grid.minor = element_blank()) +
     scale_x_discrete(labels = function(x) str_wrap(x, width = 12)) +
     scale_y_continuous(labels = function(x) paste0(x, "%"))
```

```
## Warning: position_dodge requires non-overlapping x intervals
```



0.3 Table 6: Types of Toilet Facilities in Bangladesh by barplot

```
library(tidyverse)
library(viridis)
```

```
## Loading required package: viridisLite
```

```r
library(gridExtra)
```

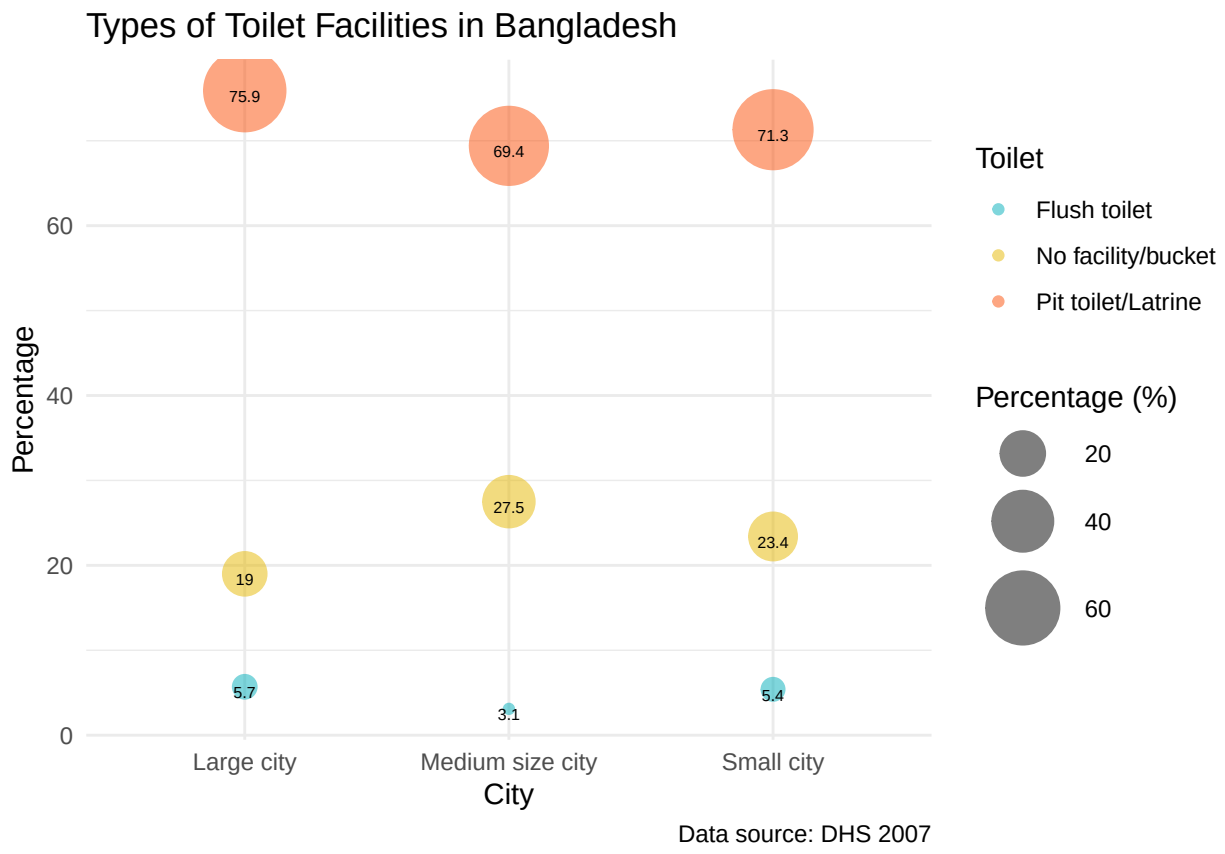
```
##
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':
##
##     combine
```

```r
library(ggrepel)
library(plotly)
```

```
##
## Attaching package: 'plotly'

## The following object is masked from 'package:ggplot2':
##
##     last_plot

## The following object is masked from 'package:stats':
##
##     filter

## The following object is masked from 'package:graphics':
##
##     layout
```

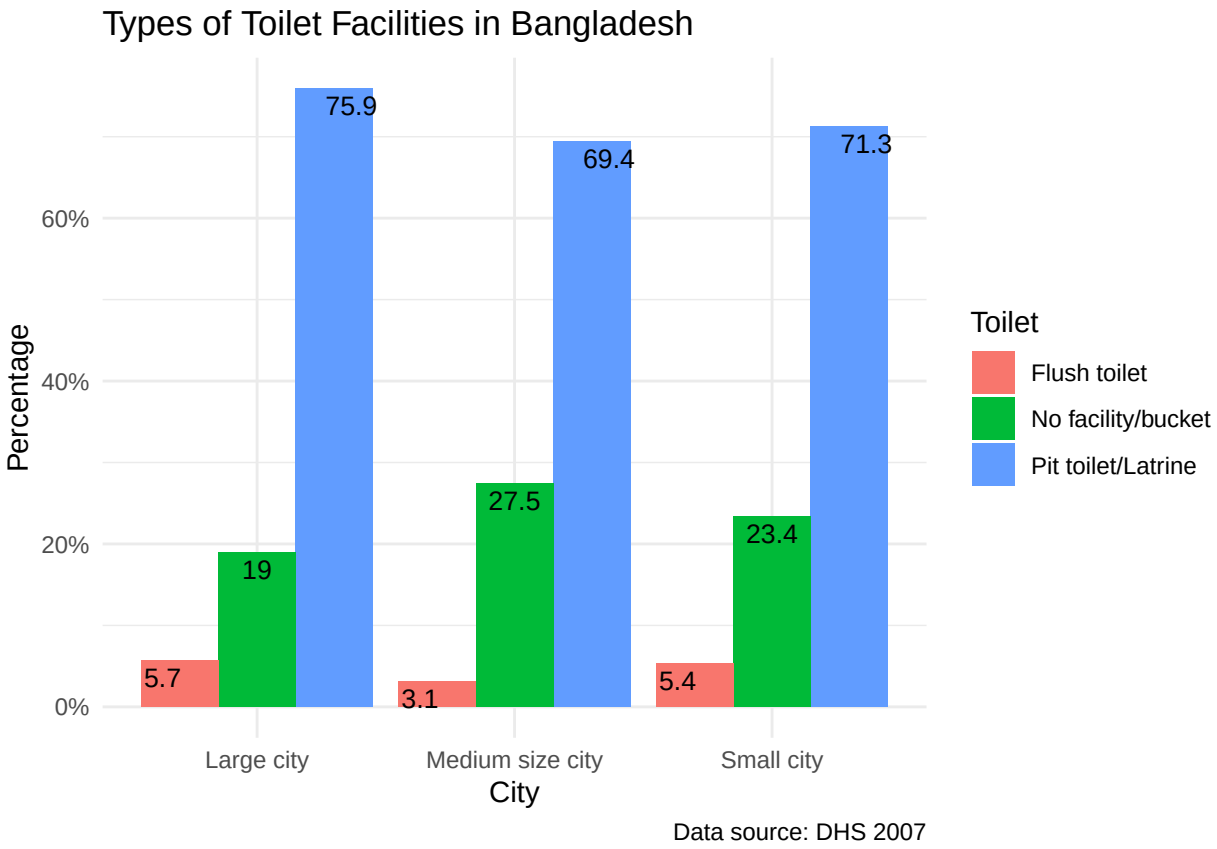
```r
df3 = readxl::read_xlsx("./DHS/DHS_dv.xlsx", sheet = "table6")

# Plot
ggplot(df3, aes(x= City, y= Percentage)) +
    geom_point(aes(color = Toilet, size = Percentage), alpha=0.5) +
    scale_color_manual(values = c("#00AFBB", "#E7B800", "#FC4E07")) +
    scale_size(range = c(1.5, 14), name="Percentage (%)") +
    theme(legend.position="right") +
    labs(title="Types of Toilet Facilities in Bangladesh",
         caption="Data source: DHS 2007") +
    geom_text(aes(label = round(Percentage, 1)), position = position_dodge(1.1),
                  vjust = 1.0, color = "black",  size = 2.2) +
        theme_minimal()
```

```
## Warning: position_dodge requires non-overlapping x intervals
```




```
ggplot(df3, aes(x= City, y= Percentage, group = Toilet,
                fill= Toilet)) +
    geom_bar(position="dodge", stat="identity") +
    labs(title="Types of Toilet Facilities in Bangladesh",
       caption="Data source: DHS 2007") +
    scale_color_manual(values = c("#00AFBB", "#E7B800", "#FC4E07")) +
    theme(legend.position="right") +
    labs(title="Types of Toilet Facilities in Bangladesh",
         caption="Data source: DHS 2007") +
    geom_text(aes(label = round(Percentage, 1)), position = position_dodge(1.1),
                vjust = 1.4, color = "black",size = 3.4) +
       theme_minimal() +
      scale_y_continuous(labels = function(x) paste0(x, "%"))
```

```
## Warning: position_dodge requires non-overlapping x intervals
```


Types of Toilet Facilities in Bangladesh
Percentage
60%
40%
20%
0%
75.9
69.4
71.3
27.5
23.4
19
5.7
3.1
5.4
Large city
Medium size city
Small city
City
Toilet
Flush toilet
No facility/bucket
Pit toilet/Latrine
Data source: DHS 2007