

Quarto Test

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About

Warning

This site is a test bed for migrating RMarkdown/Bookdown content into Quarto. It was last updated on 2022-09-30.

Part I

Part 1: Plots

1 ggplot

This page is a demonstration of a ggplot graph rendered in Quarto.

```
library(tidyverse)
library(scales)

oews_pct <- read_rds("data/oews_pct.rds")

ggplot(oews_pct,
       aes(x = pct_change,
           y = wage,
           fill = wage)) +
  geom_col() +
  geom_text(aes(label = label_percent(accuracy = 0.1)(pct_change),
               color = wage),
            nudge_x = 0.01) +
  labs(title = "Percent change in annual wage by wage percentile",
       subtitle = "Richmond, VA MSA | May 2019 to May 2021",
       caption = "Source: U.S. Bureau of Labor Statistics,
       Occupational Employment and Wage Statistics.") +
  scale_x_continuous(labels = label_percent()) +
  theme(axis.title = element_blank(),
        axis.ticks = element_blank(),
        panel.background = element_blank(),
        panel.grid.major.y = element_blank(),
        legend.position = "none",
        panel.grid.major.x = element_line(color = "grey95",
                                           size = 0.05))
```

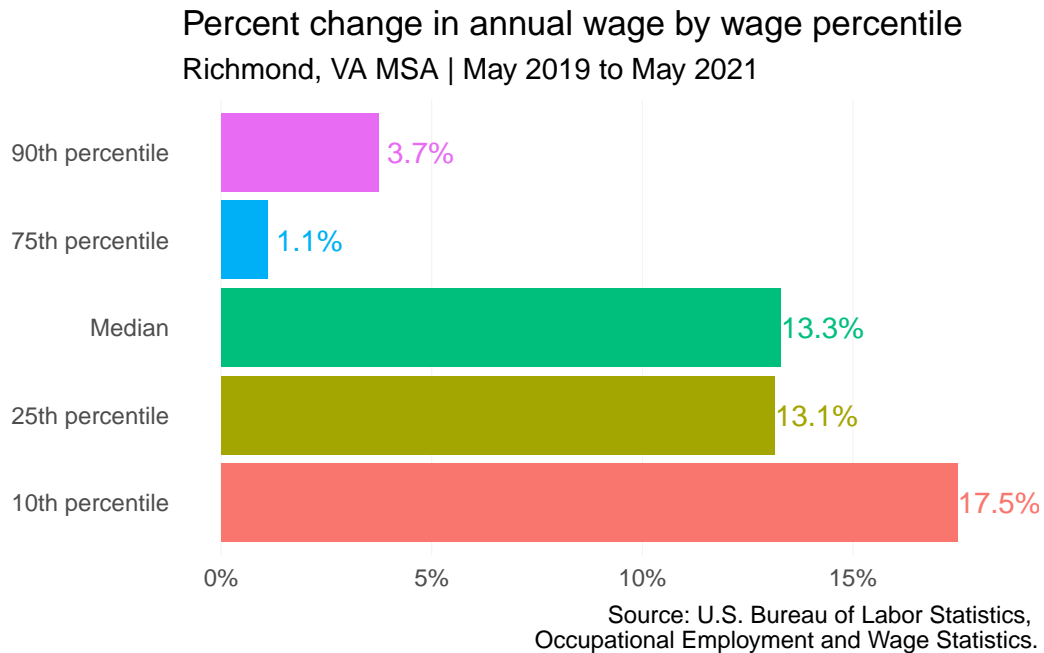


Figure 1.1: Percent change in annual wage by wage percentile

```
library(tidyverse)
library(scales)
library(plotly)

oews_pct <- read_rds("data/oews_pct.rds")

oewsBars <- ggplot(oews_pct,
  aes(x = pct_change,
      y = wage,
      fill = wage)) +
  geom_col() +
  geom_text(aes(label = label_percent(accuracy = 0.1)(pct_change),
      color = wage),
    nudge_x = 0.01) +
  labs(title = "Percent change in annual wage by wage percentile",
    subtitle = "Richmond, VA MSA | May 2019 to May 2021",
    caption = "Source: U.S. Bureau of Labor Statistics,
    Occupational Employment and Wage Statistics.") +
  scale_x_continuous(labels = label_percent()) +
  theme(axis.title = element_blank(),
```

```
axis.ticks = element_blank(),
panel.background = element_blank(),
panel.grid.major.y = element_blank(),
legend.position = "none",
panel.grid.major.x = element_line(color = "grey95",
                                   size = 0.05))
```

```
ggplotly(oews_bars)
```

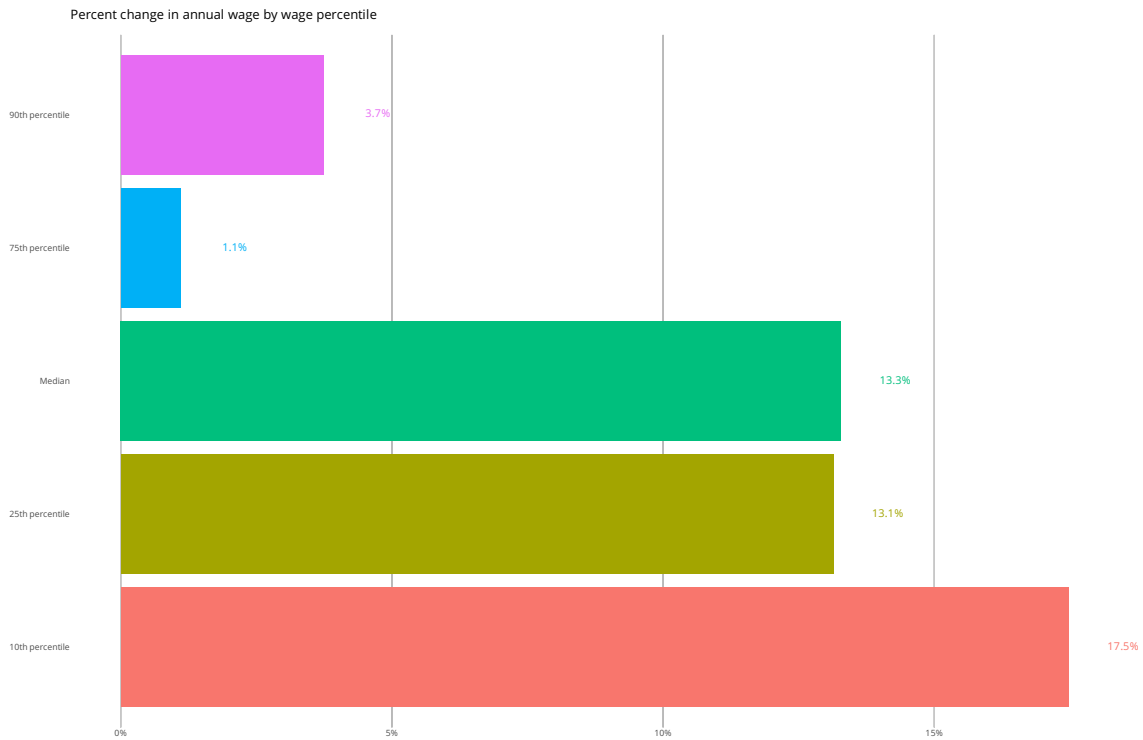


Figure 1.2: Percent change in annual wage by wage percentile

```
library(tidyverse)
library(scales)
library(ggiraph)

oews_pct <- read_rds("data/oews_pct.rds")

oews_bars <- ggplot(oews_pct,
  aes(x = pct_change,
```

```

      y = wage,
      fill = wage)) +
geom_col() +
# geom_text(aes(label = label_percent(accuracy = 0.1)(pct_change),
#               color = wage), nudge_x = 0.01) +
labs(title = "Percent change in annual wage by wage percentile",
      subtitle = "Richmond, VA MSA | May 2019 to May 2021",
      caption = "Source: U.S. Bureau of Labor Statistics,
      Occupational Employment and Wage Statistics.") +
scale_x_continuous(labels = label_percent()) +
theme(axis.title = element_blank(),
      axis.ticks = element_blank(),
      panel.background = element_blank(),
      panel.grid.major.y = element_blank(),
      legend.position = "none",
      panel.grid.major.x = element_line(color = "grey95",
      size = 0.05)) +
geom_col_interactive(aes(data_id = pct_change, tooltip = pct_change), size = 2)

bar <- girafe(ggobj = oews_bars)

bar

```

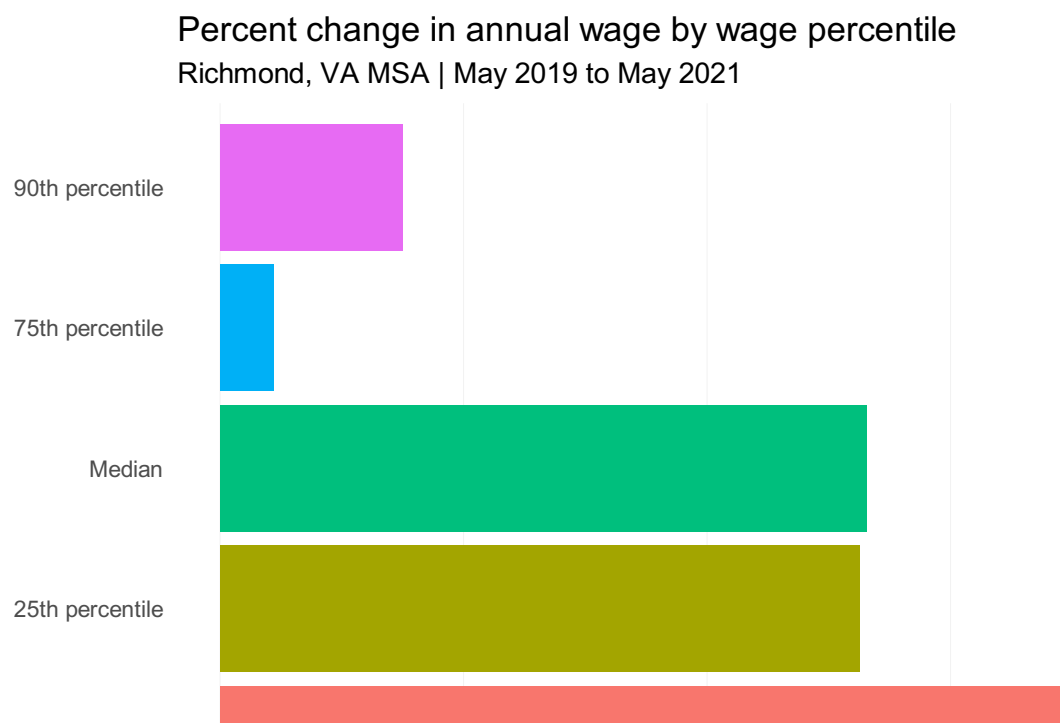



Figure 1.3: Percent change in annual wage by wage percentile

2 plotly

This page is a demonstration of a plotly graph rendered in Quarto.

```
library(tidyverse)
library(scales)
library(lubridate)
library(plotly)

pha_localities <- c("Richmond city", "Chesterfield County",
                   "Hanover County", "Henrico County")

mort_del <- read_csv("data/mortgage_del.csv") |>
  pivot_longer(
    cols = starts_with("2"),
    names_to = "period",
    values_to = "estimate"
  ) |>
  mutate(period = ym(period)) |>
  filter(State == "VA") |>
  subset(Name %in% pha_localities) |>
  mutate(estimate = (estimate/100))

plot <- ggplot(mort_del,
               aes(x = period,
                   y = estimate,
                   color = Name)) +
  geom_line(stat = "identity", size = 1) +
  scale_y_continuous(labels = label_percent(accuracy = 0.1),
                     expand = c(0,0), limits = c(0,0.055)) +
  scale_x_date(date_breaks = "2 years", date_labels = "%Y") +
  labs(title = "Mortgage delinquency rate by locality",
       subtitle = "Mortgages 90 or more days delinquent: 2008 to 2021",
       color = "Locality",
       caption = "Source: Consumer Financial Protection Bureau,
Mortgage Performance Trends.") +
```

```

theme(axis.title = element_blank(),
      axis.ticks = element_blank(),
      panel.background = element_blank(),
      legend.title = element_blank(),
      legend.key = element_blank(),
      axis.line.x = element_line(color = "grey50",
                                size = 0.1),
      panel.grid.major.y = element_line(color = "grey95",
                                         size = 0.05))

```

```

plotly::ggplotly(plot)

```

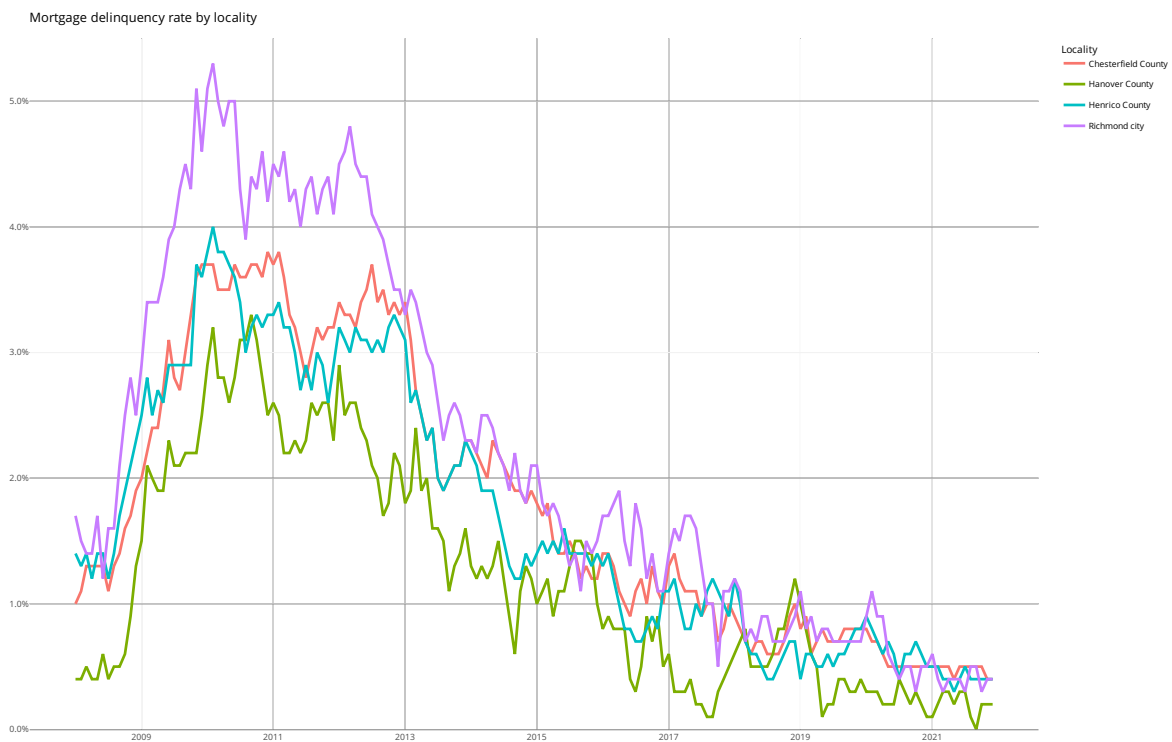


Figure 2.1: Mortgage delinquency rate by locality

Part II

Part 2: Maps

3 Leaflet

This page is a demonstration of an interactive Leaflet map rendered in Quarto.

```
library(tidyverse)
library(janitor)
library(leaflet)

nhpd <- read_csv("data/nhpd_chesterfield.csv") |>
  clean_names() |>
  filter(subsidy_status != "Inactive")

pal <- colorFactor(palette = c("blue", "red", "green", "orange"),
                  levels = c("LIHTC", "Section 8", "HUD Insured",
                           "Section 202 or Section 236"))

leaflet(nhpd) |>
  addProviderTiles(providers$CartoDB.Positron) |>
  addCircleMarkers(
    lng = ~long,
    lat = ~lat,
    radius = 4,
    color = ~pal(subsidy),
    stroke = FALSE, fillOpacity = 0.5
  ) |>
  addLegend("bottomright", pal = pal, values = ~subsidy,
           title = "Federal program", opacity = 1)
```

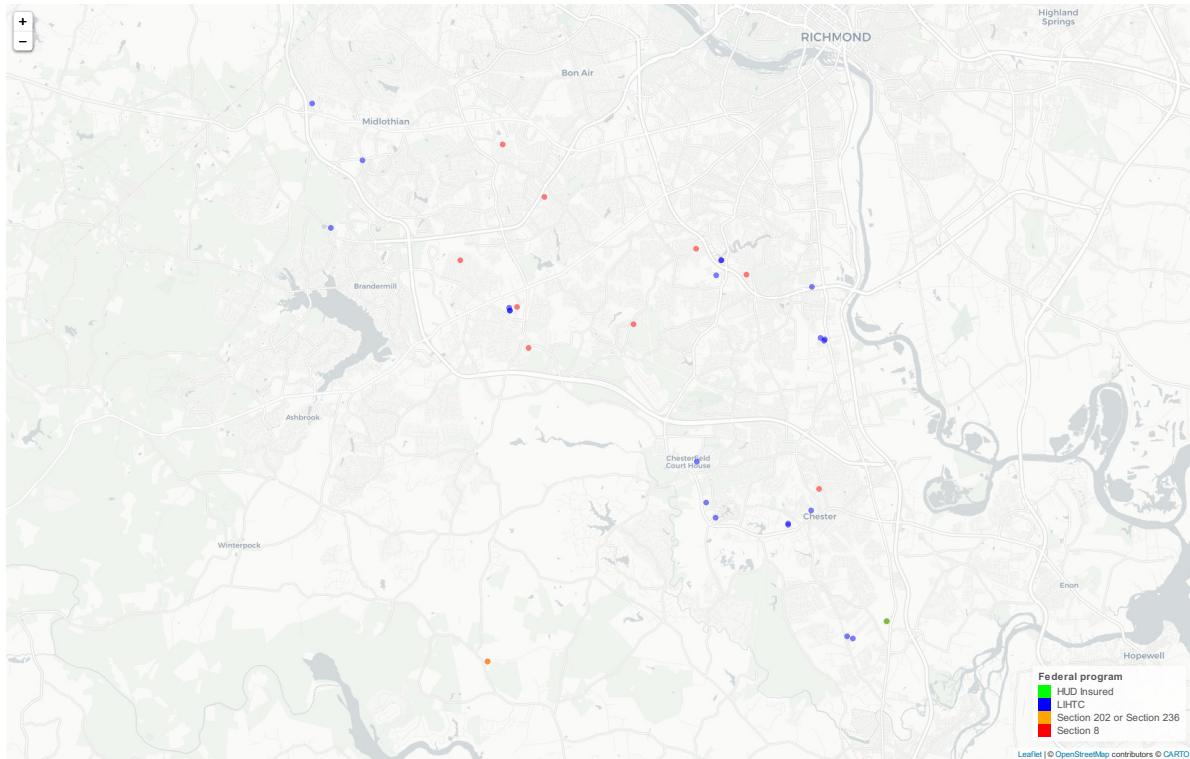


Figure 3.1: Federally assisted rental properties in Chesterfield County

4 mapview

This page is a demonstration of an interactive mapview map rendered in Quarto.

```
library(mapview)
library(sf)
library(tidyverse)

# Load in data (manually downloaded from HUD eGIS site) and select only relevant columns

hud_insured <- read_csv("data/chesterfield_hud_insured.csv") |>
  select(1,2,9,10,15,16,18,57,60,74,111,133,140,141)

# Create spatial object using the lat/long coordinate fields

hud_insured_pts <- hud_insured |>
  st_as_sf(coords = c("X", "Y"),
           crs = 4326) %>%
  st_transform(6440)

# Create map

mapview(
  hud_insured_pts,
  label = "PROPERTY_NAME_TEXT",
  legend = F,
  popup = F,
  burst = F,
  layer.name = "HUD insured multifamily properties"
)
```

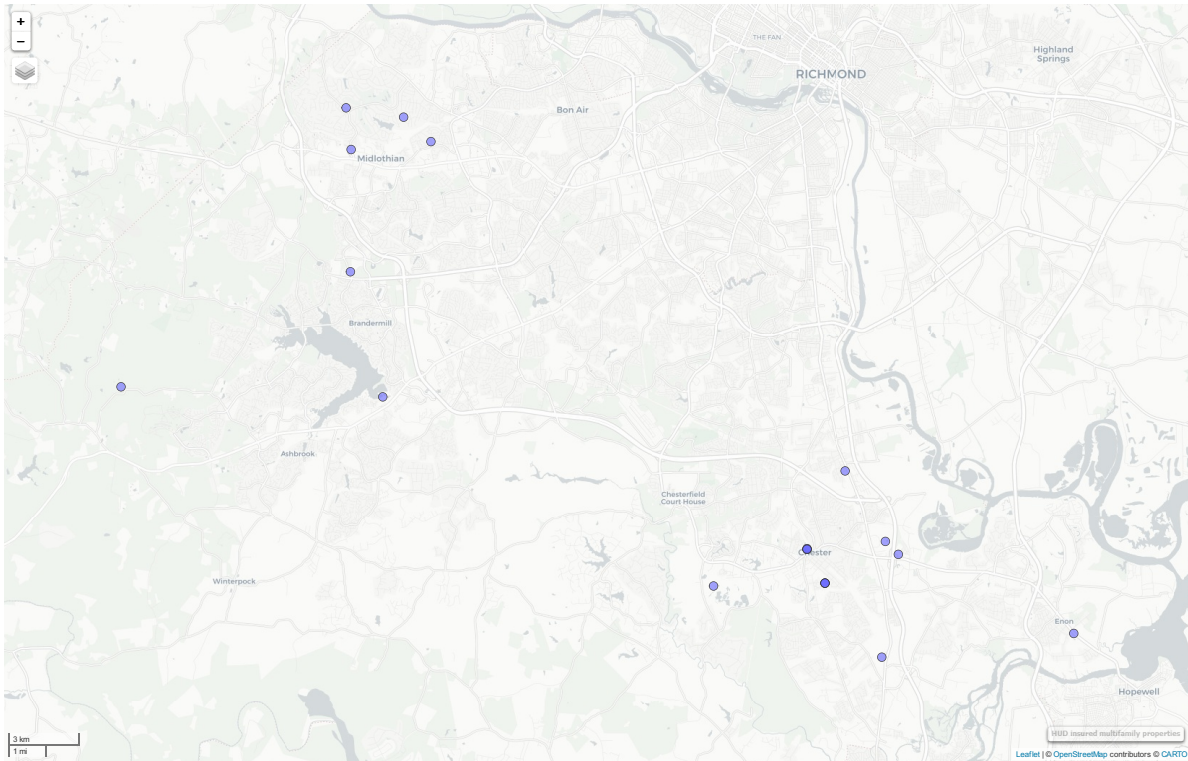


Figure 4.1: HUD insured multifamily properties