paper*

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Abstract

Four sentences

1 Introduction

2 Data

```
## # A tibble: 7 x 2
##   character            sum
##   <fct>              <dbl>
## 1 Residence           3565
## 2 Region              3566
## 3 Mother's_education  3565
## 4 Work_status         3564
## 5 Occupation          3565
## 6 Employment_status   3563
## 7 Total               3564
```

Table **??** shows that 3,566 participated the survey, but there are 3 whom did not answer their employment status, etc.

*Code and data are available at: https://github.com/Pascal-304/dhs_analysis.

Table 1: A subset of key features

Background	No child under six	1+ child under six	Child's caretaker - respondent	Character
Urban	58.3	41.7	42.7	Residence
Rural	38.9	61.1	49.4	Residence
Western	44.2	55.8	63.6	Region
Central	47.5	52.5	59.7	Region
Greater_Accra	60.8	39.2	39.7	Region
Volta	42.9	57.1	46.1	Region
Eastern	44.8	55.2	44.1	Region
Ashanti	42.1	57.9	40.5	Region
Brong_Ahafo	38.9	61.1	50.0	Region
Northern	35.0	65.0	39.2	Region

3 Results

3.1 Mother's education

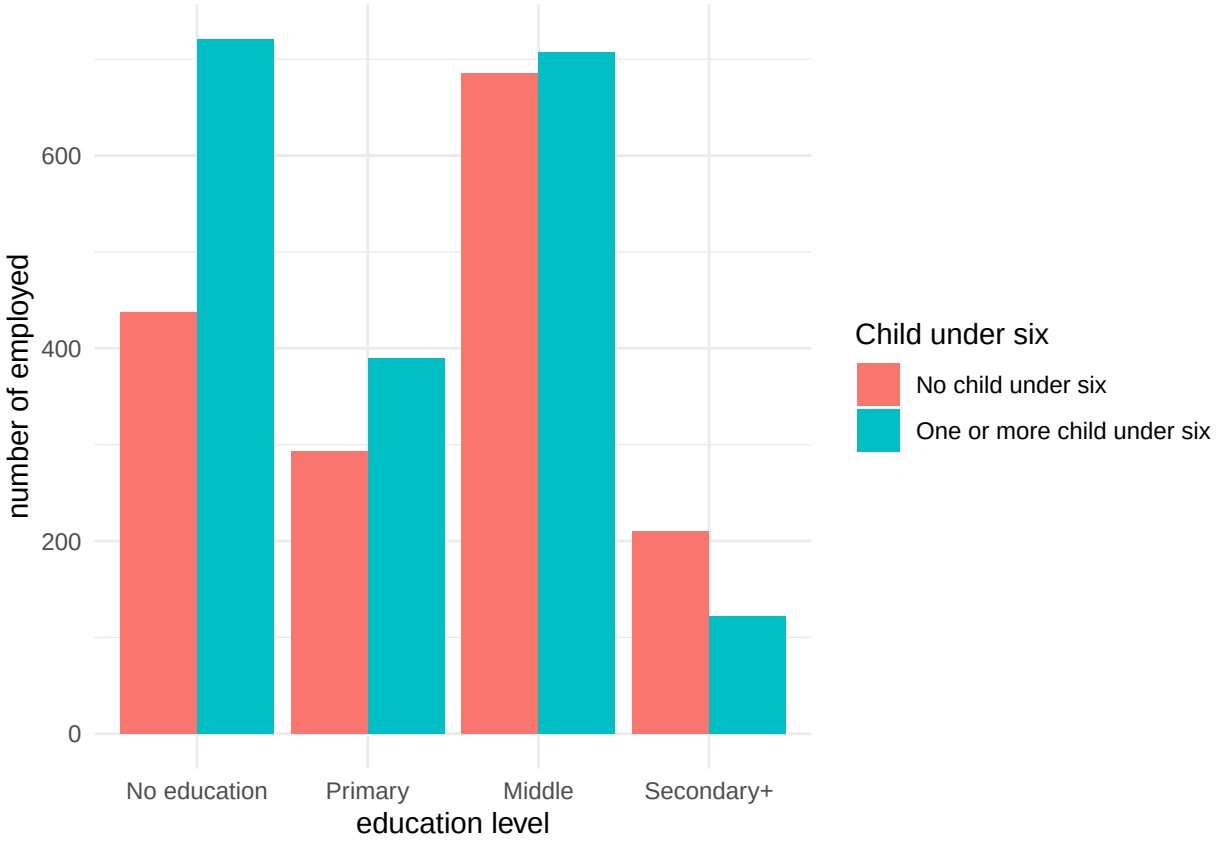


Figure 1: Mother's Education level

Figure 1 shows that there are less women who studied more than secondary school, and only the secondary+ turned out to be more likely to have no child under six.

3.2 Work status

Figure 3 shows that

3.3 Occupation

Figure 5 shows that

3.4 Employment status

Figure 7 shows that

```
## Linking to GEOS 3.9.1, GDAL 3.2.1, PROJ 7.2.1; sf_use_s2() is TRUE
```

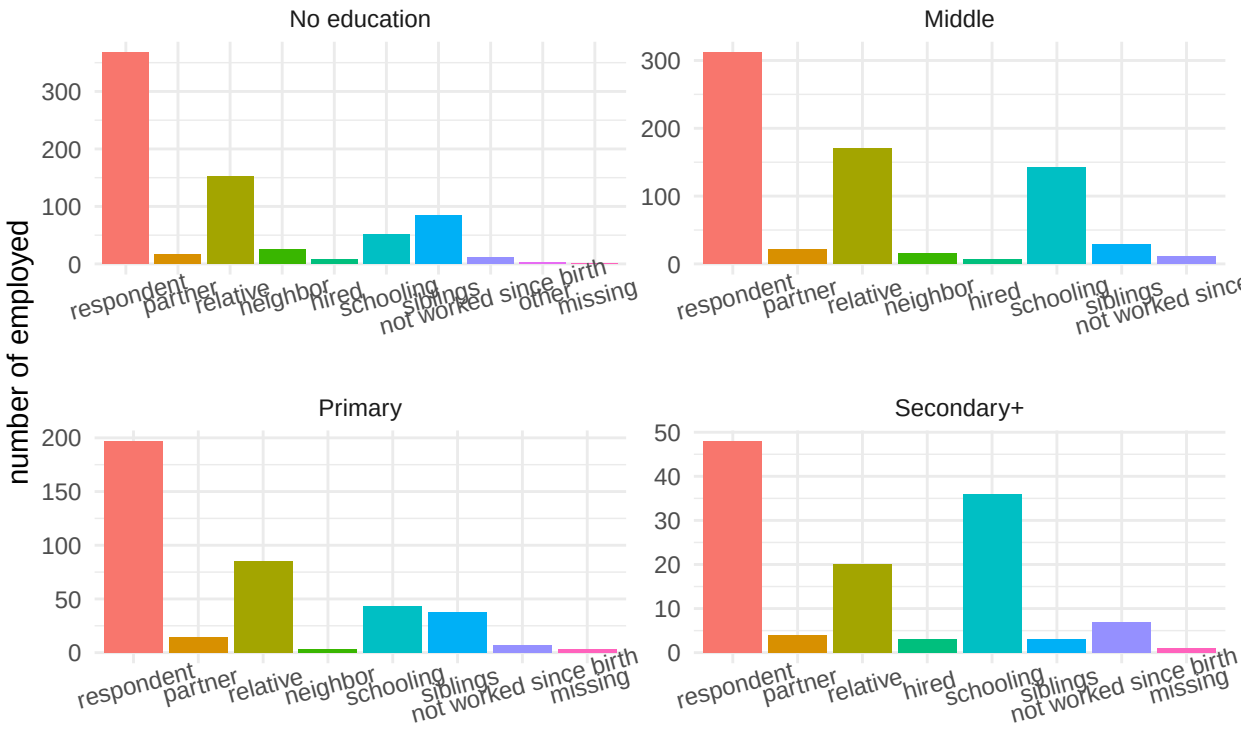


Figure 2: Distribution of child's caretaker by mother's education level

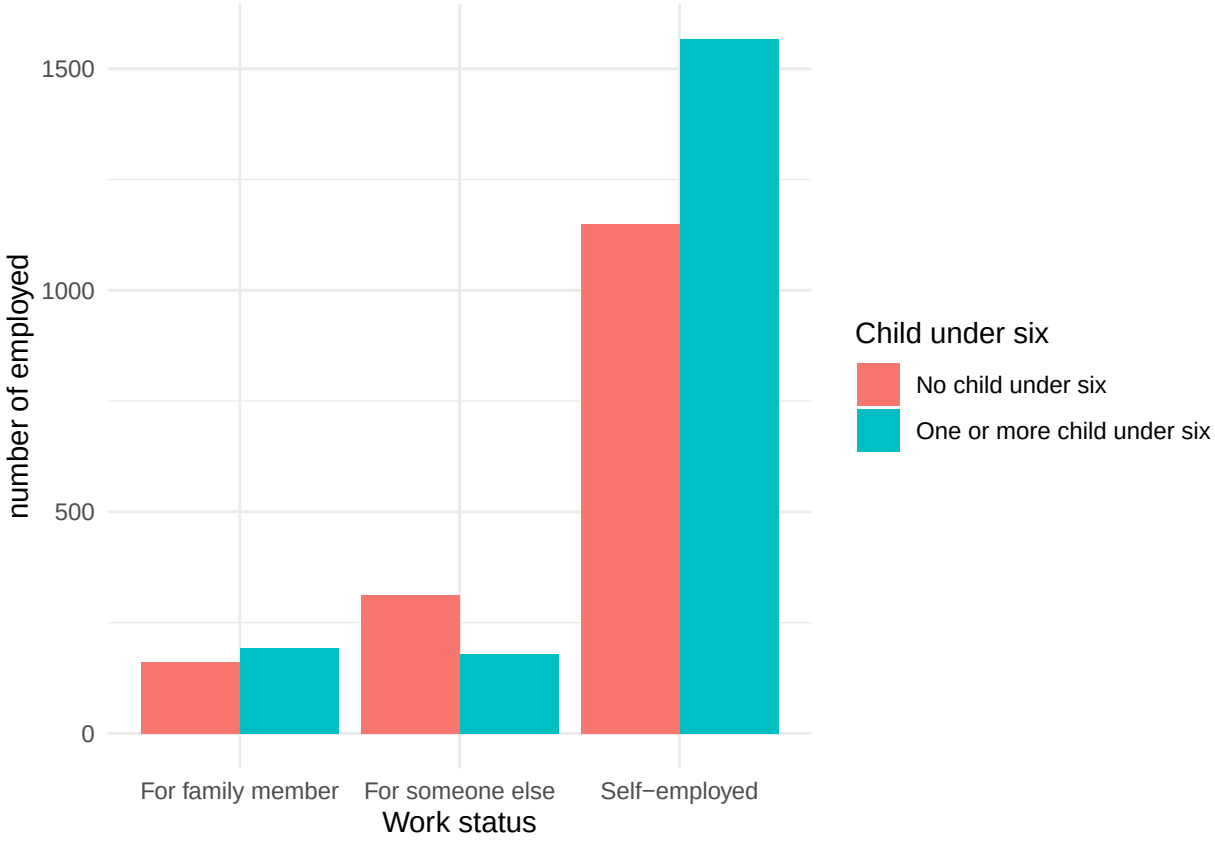


Figure 3: Work status

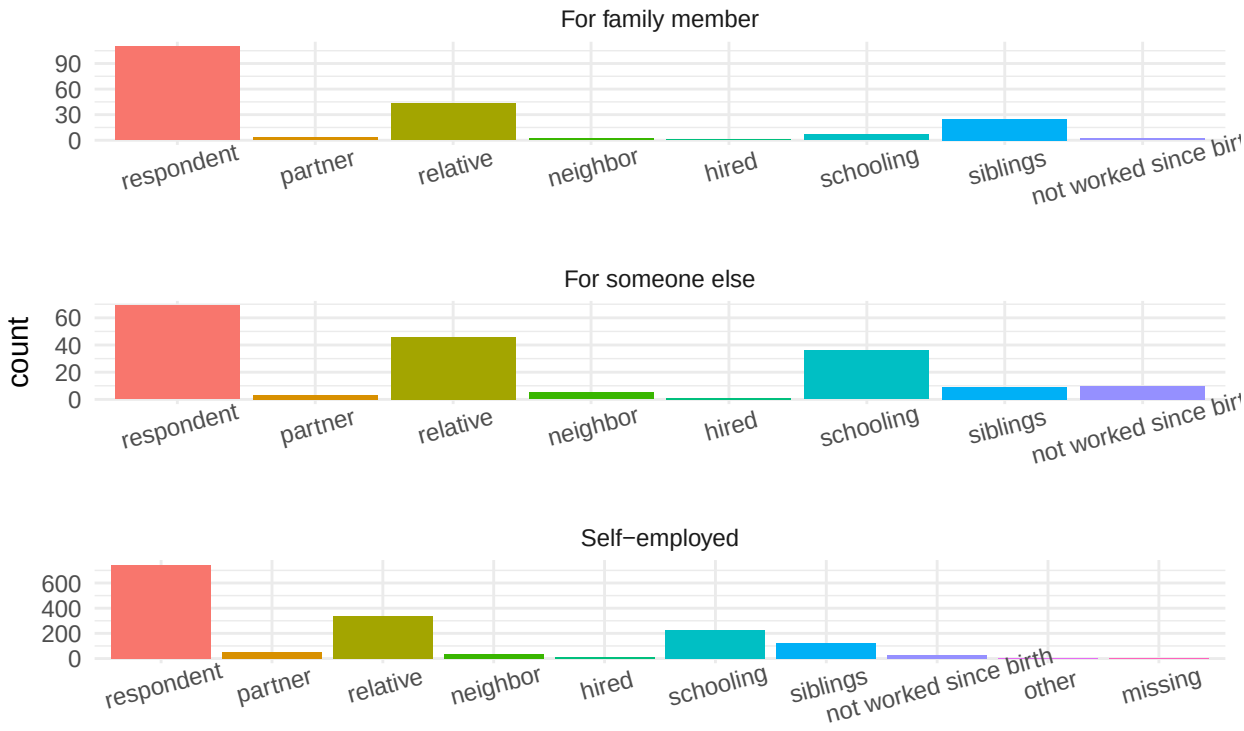


Figure 4: Distribution of child's caretaker by work status

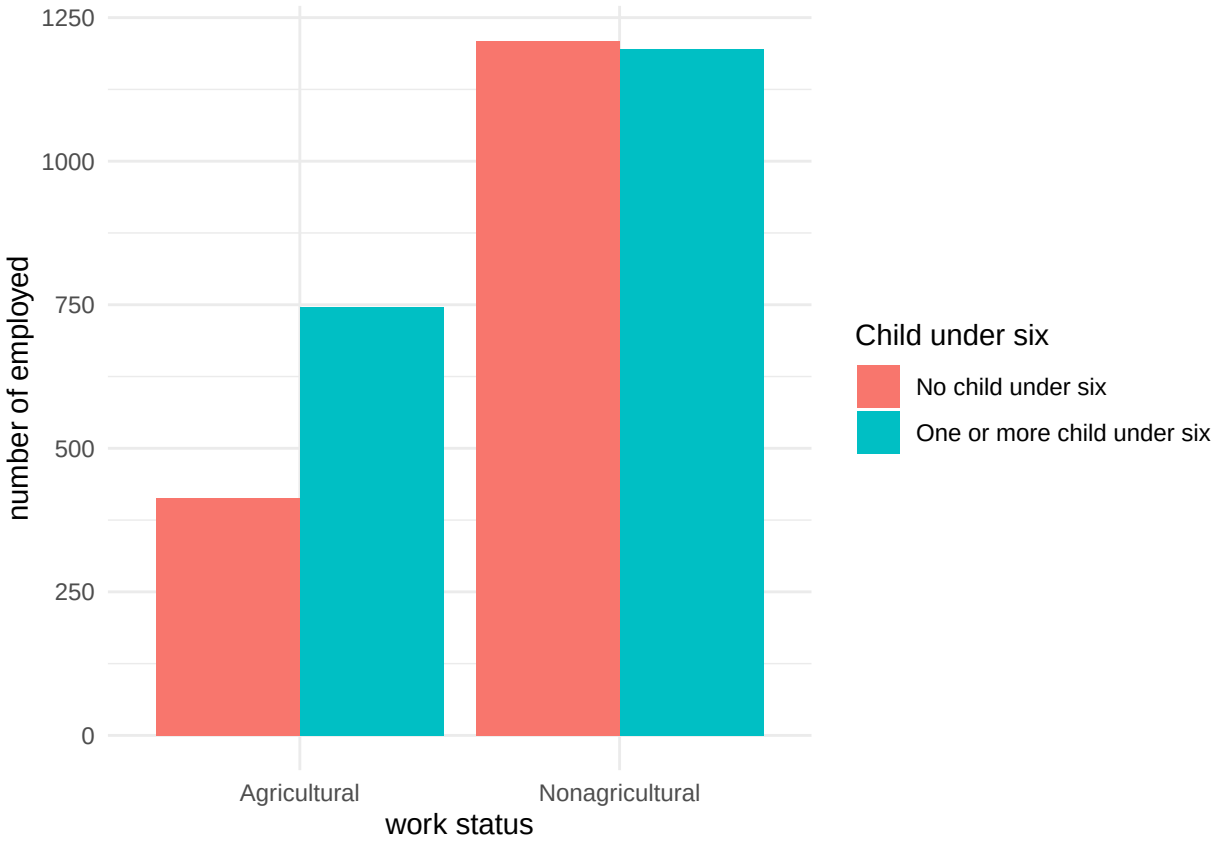


Figure 5: Occupation

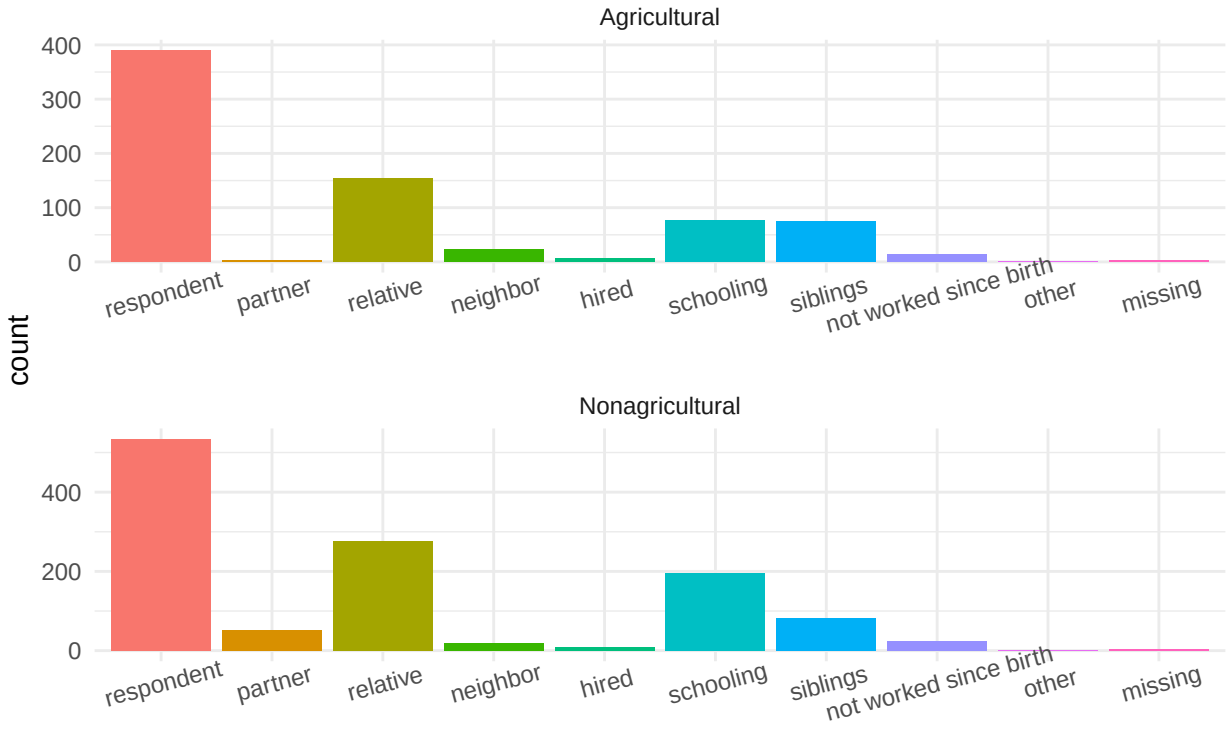


Figure 6: Distribution of child's caretaker by work status

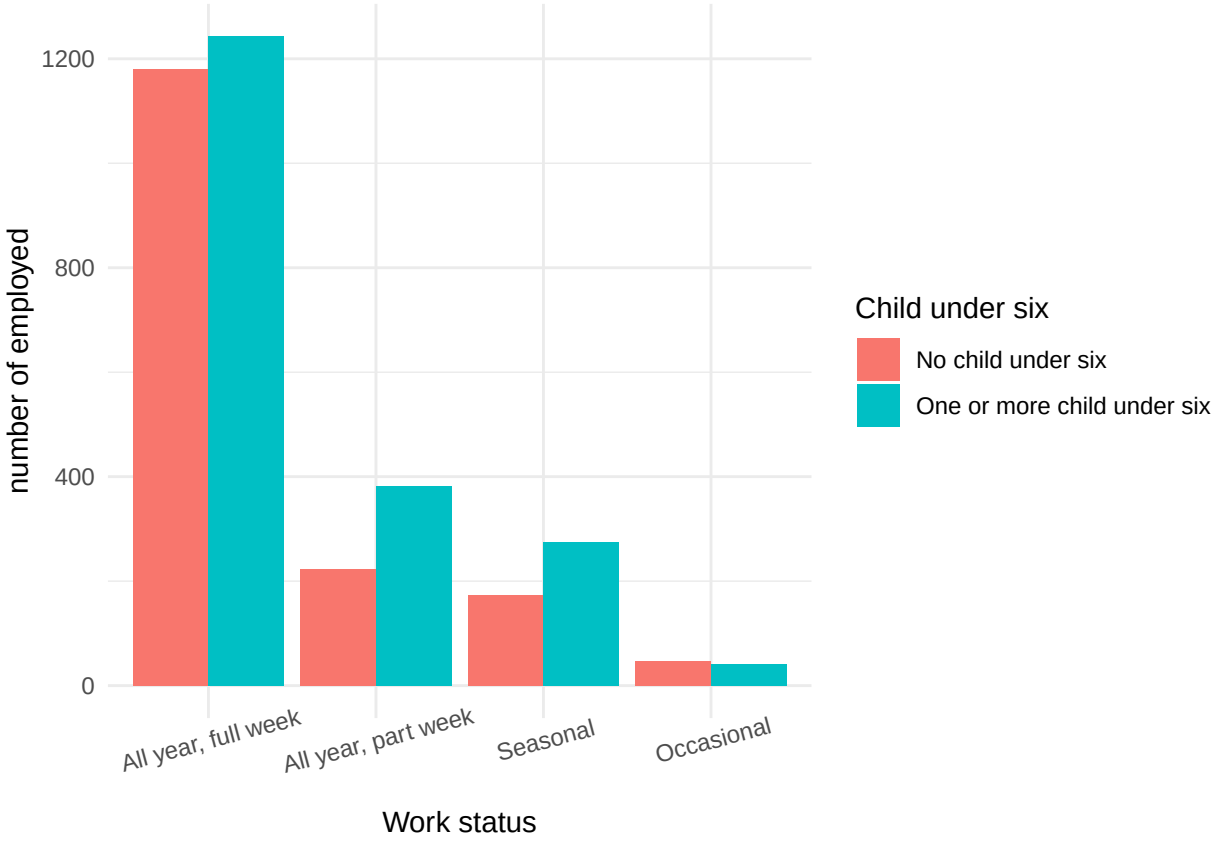


Figure 7: Employment status

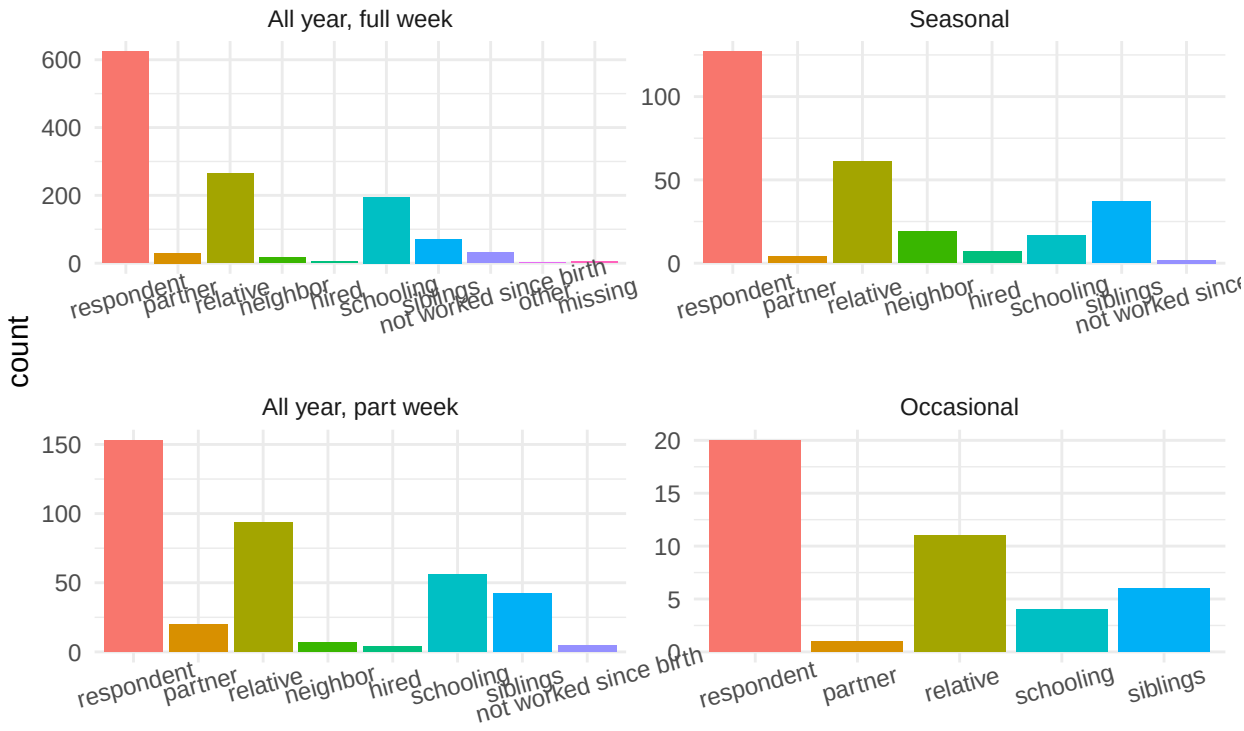
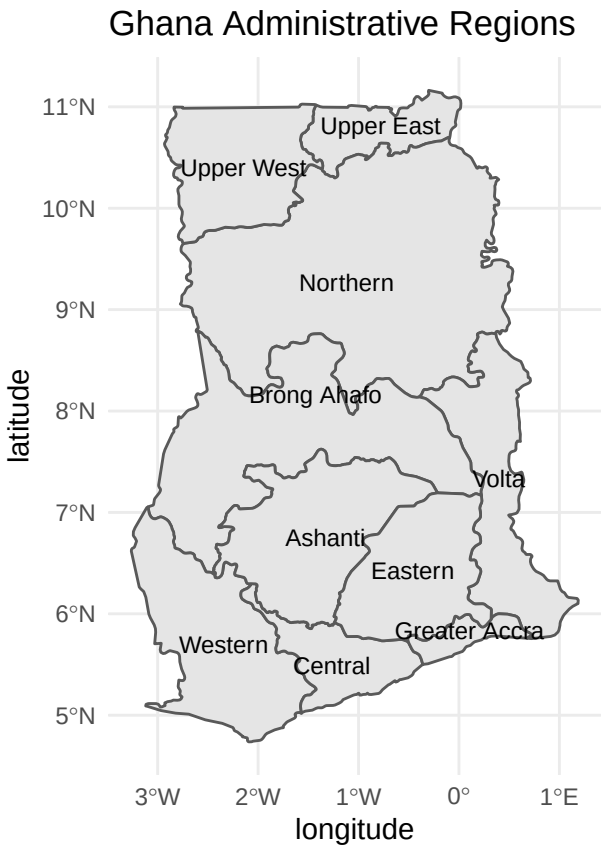
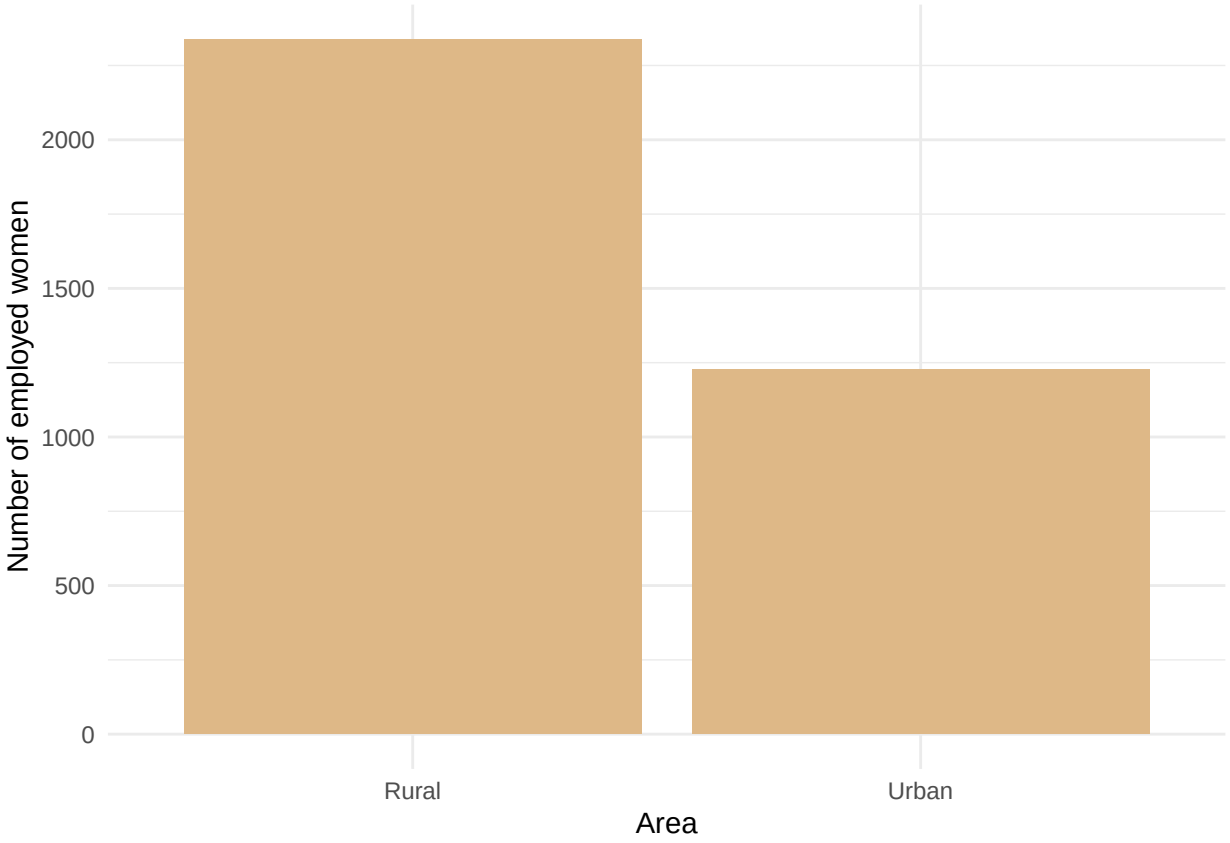
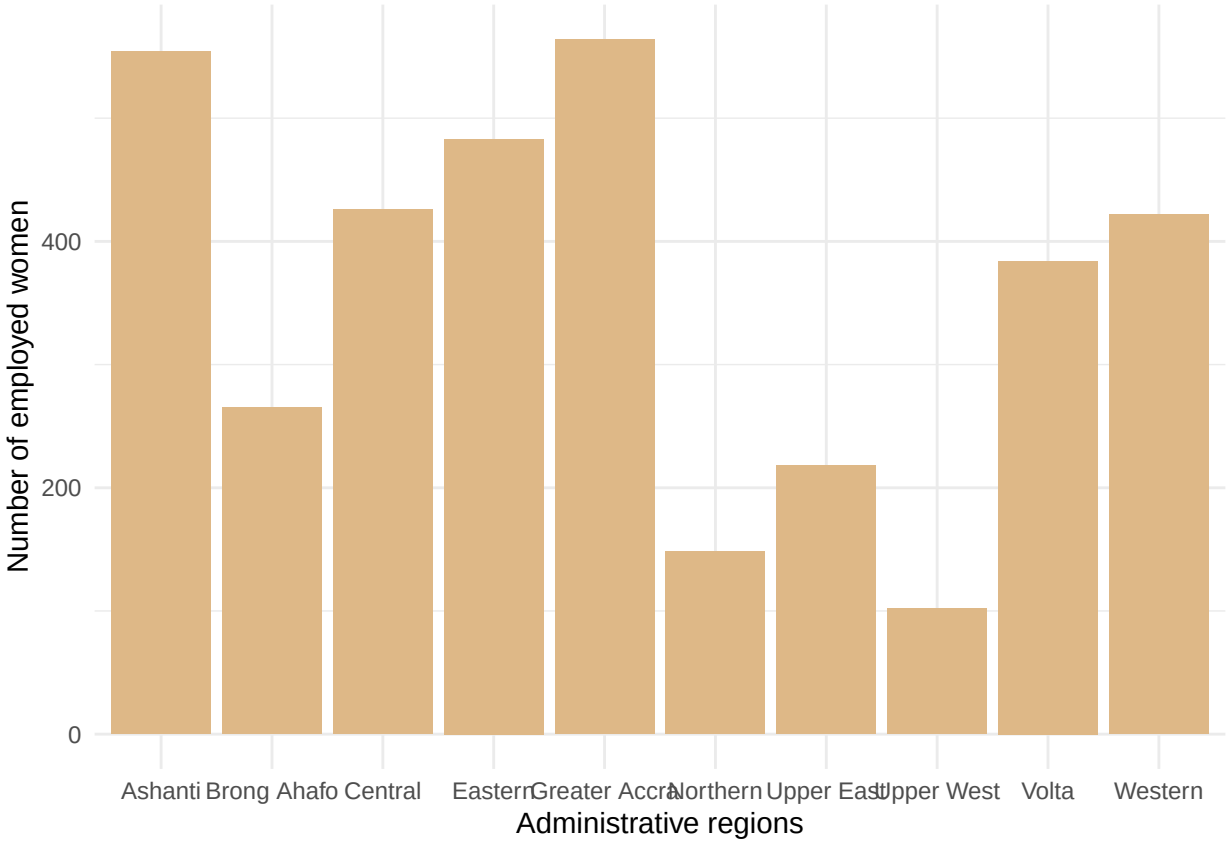
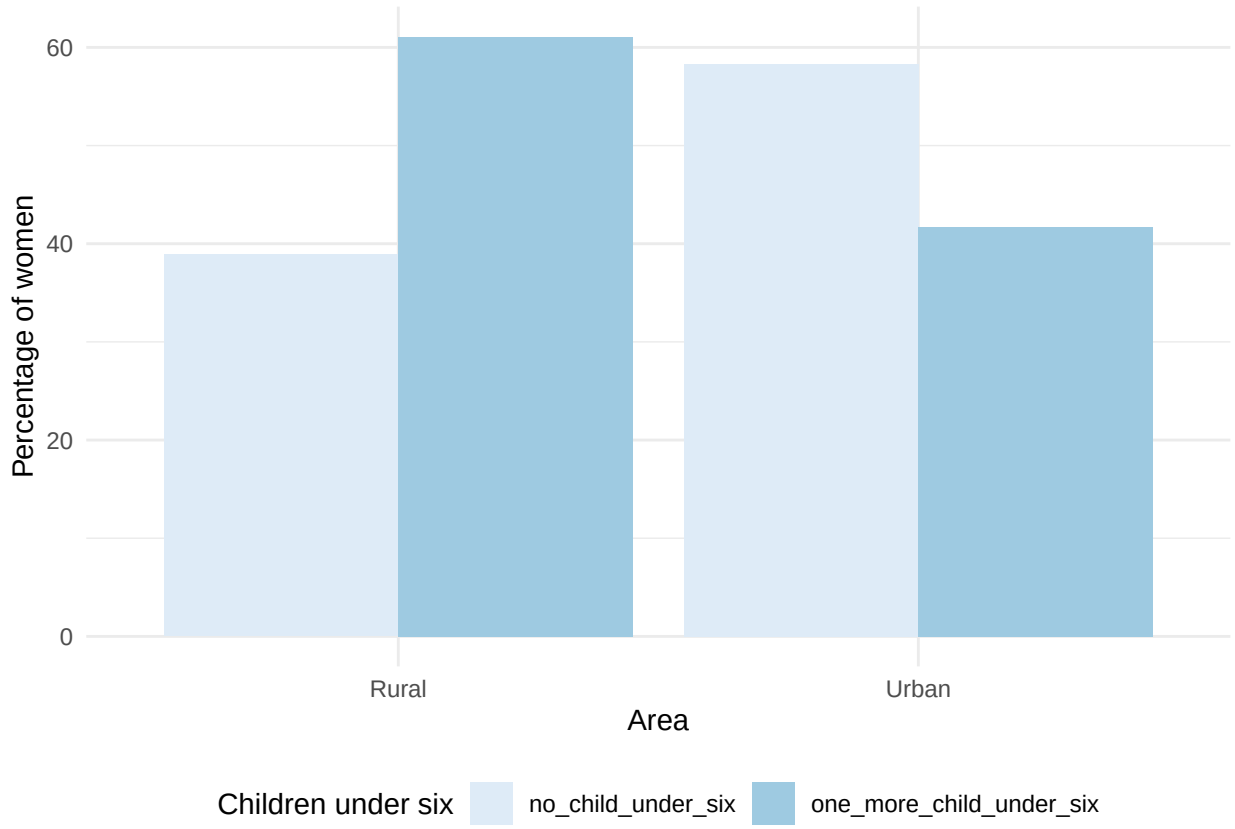


Figure 8: (#fig:employment_statuschildcare)Distribution of child's caretaker by work status


Ghana Administrative Regions
11°N
10°N
9°N
8°N
7°N
6°N
5°N
latitude
3°W
2°W
1°W
0°
1°E
longitude
Upper East
Upper West
Northern
Brong Ahafo
Volta
Ashanti
Eastern
Greater Accra
Western
Central

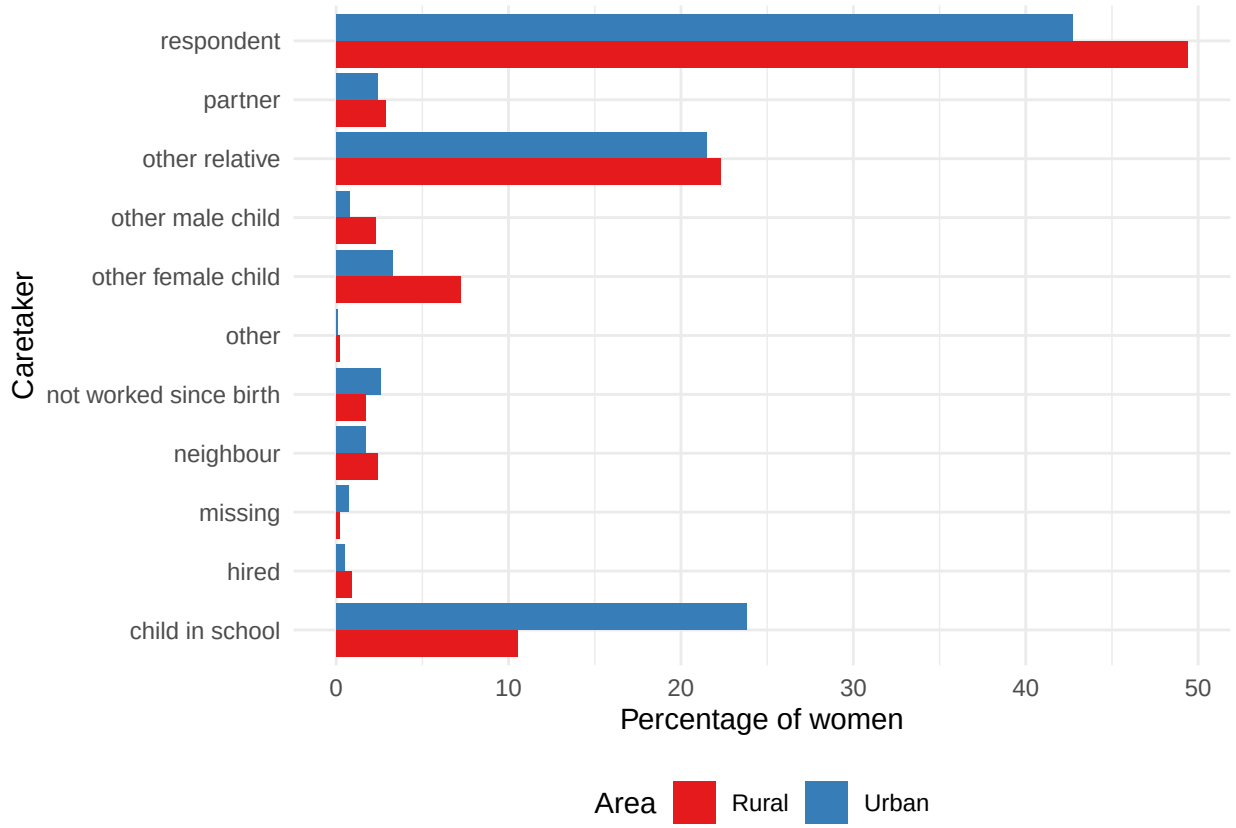

Number of employed women
2000
1500
1000
500
0
Rural
Urban
Area


Number of employed women
400
200
0
Ashanti
Brong Ahafo
Central
Eastern
Greater Accra
Northern
Upper East
Upper West
Volta
Western
Administrative regions



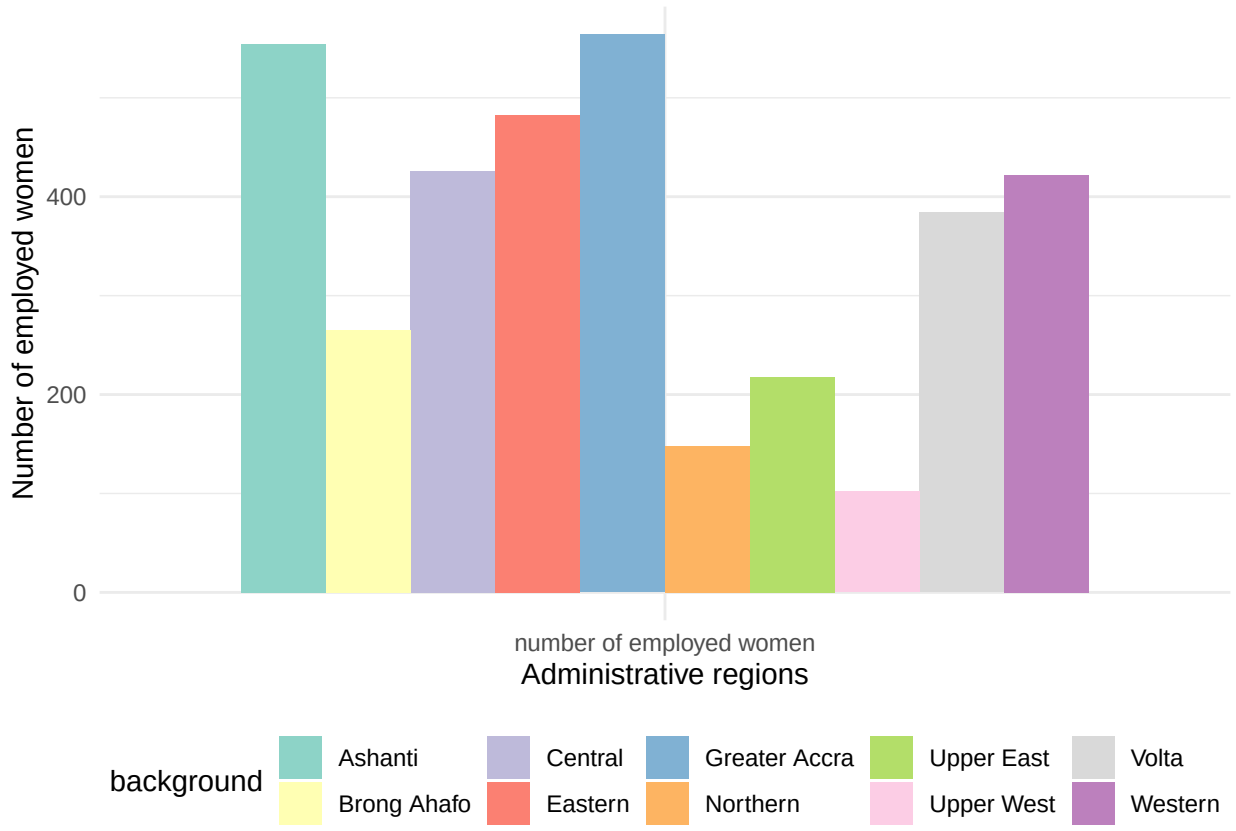

```
# caretaker aspect

# make dataset into long format
# rename
caretaker <- residence %>%
  select(-c(character, no_child_under_six, one_more_child_under_six, total, number_of_employed_women)) %
  pivot_longer(!background, names_to = "caretakers", values_to = "percentage") %>%
  mutate(caretakers = recode(caretakers,
                             'caretaker_respondent' = 'respondent',
                             'caretaker_partner' = 'partner',
                             'caretaker_other_relative' = 'other relative',
                             'caretaker_other_male_child' = 'other male child',
                             'caretaker_other_female_child' = 'other female child',
                             'caretaker_other' = 'other',
                             'caretaker_not_worked_since_birth' = 'not worked since birth',
                             'caretaker_neighbor' = 'neighbour',
                             'caretaker_missing' = 'missing',
                             'caretaker_hired' = 'hired',
                             'caretaker_child_in_school' = 'child in school'))

# plot bar graph
caretaker %>%
  ggplot(aes(x = caretakers,
             y = percentage,
             fill = background)) +
  geom_bar(stat = 'identity',
```

```
          position = "dodge") +
labs(x = "Caretaker",
     y = "Percentage of women",
     fill = "Area") +
theme_minimal() +
coord_flip() +
scale_fill_brewer(palette = "Set1") +
theme(legend.position = "bottom")
```

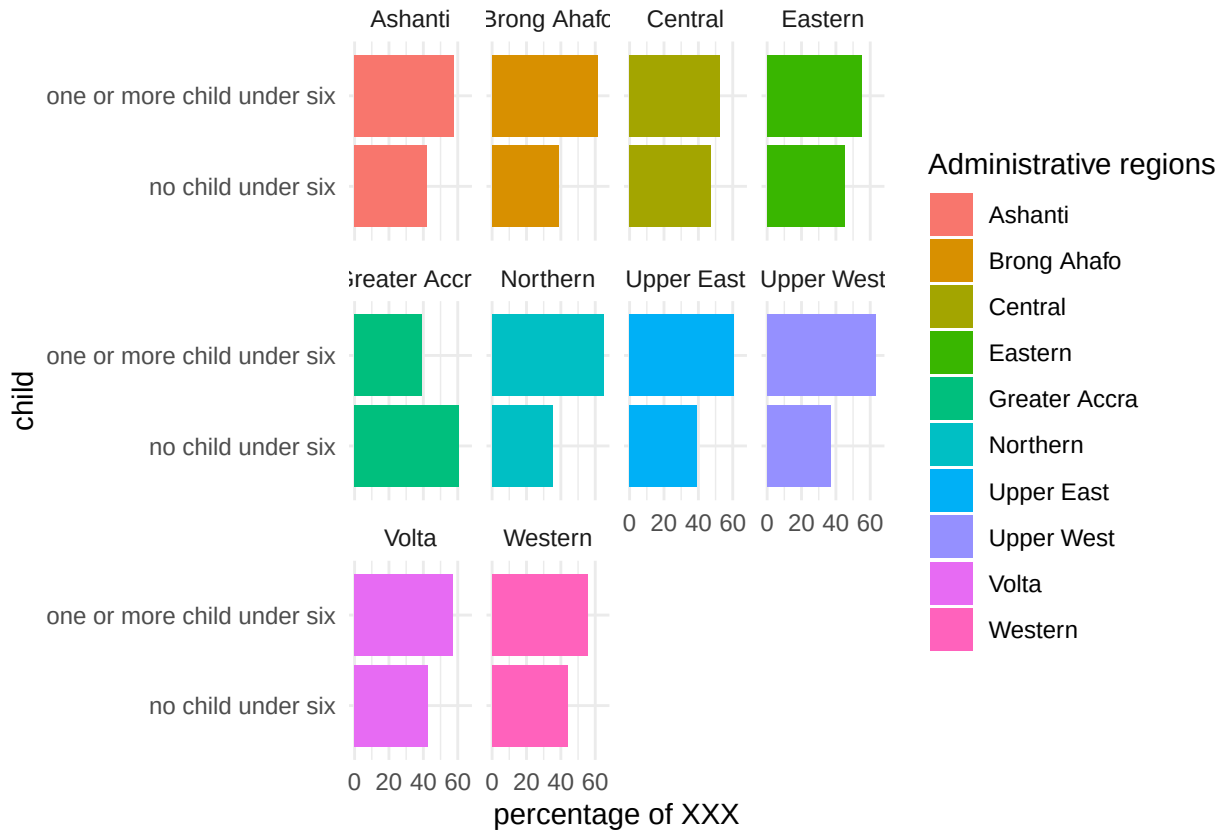


3.5 Also comparison among the different administrative regions

```
# number of employed women selected in the admiistrative regions
child %>%
  filter(x == "number of employed women") %>%
  ggplot(aes(x = x,
             y = percentage,
             fill = background)) +
  geom_bar(stat = 'identity',
           position = 'dodge') +
  labs(x = 'Administrative regions',
       y = 'Number of employed women') +
  theme_minimal() +
  scale_fill_brewer(palette = 'Set3') +
  theme(legend.position = "bottom")
```




```
# looking at the number of employed women selected in the different administrative regions
# with the child under six
child %>%
  filter(x == "no child under six" | x == "one or more child under six") %>%
  ggplot(aes(x = x,
             y = percentage,
             fill = background)) +
  geom_bar(stat = 'identity') +
  labs(x = "child",
       y = "percentage of XXX",
       fill = "Administrative regions") +
  theme_minimal() +
  coord_flip() +
  facet_wrap(~background)
```



4 Discussions

4.1 Limitation and weaknesses

The number does not add up to 100. (truncation error)

5 References