Formatting, Latex, plot and table samples

output: Rmarkdown PDF

Fabian Koch

```r
library(tidyverse) # import/wrangle
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.0 --

## v ggplot2 3.3.3     v purrr   0.3.4
## v tibble  3.0.4     v dplyr   1.0.2
## v tidyr   1.1.2     v stringr 1.4.0
## v readr   1.4.0     v forcats 0.5.0

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

```r
library(ggplot2) # plot/maps
library(tmap) # Dataset/Maps
library(kableExtra) # tables
```

```
##
## Attaching package: 'kableExtra'

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

```r
library(viridis) # palettes
```

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

Mögliche Packages

rtcles

Mögliche Lösungen für 2 Spalten: https://github.com/yihui/rmarkdown-cookbook/issues/19

Text

Headline 1

Headline 2

Headline 3

Headline 4

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Data

```
data("World")

# Data mit geometry
WorldGeom <- World
# Data ohne
WorldData <- World %>%
  sf::st_drop_geometry()
```

Map

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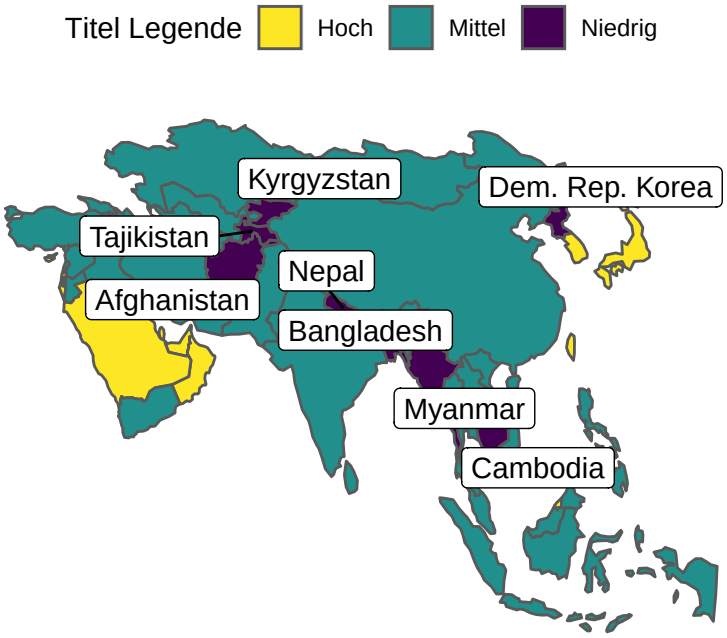
```
# Data
mapData <- WorldGeom %>%
  select(
    name,
    continent,
    pop_est,
    income_grp,
    geometry) %>%
  filter(continent == "Asia") %>%
  mutate(
    # Vereinigung der 5 Kategorien zu 3
    income_grp = forcats::fct_collapse(income_grp,
      Hoch = c("1. High income: OECD", "2. High income: nonOECD"),
      Mittel = c("3. Upper middle income", "4. Lower middle income"),
      Niedrig = c("5. Low income")))




# Plot
map <-  ggplot() +
    geom_sf(
```

```r
  data = mapData,
  aes(fill = income_grp)) +
# Externe Farbpalette, Beispiel viridis
# https://www.rdocumentation.org/packages/viridis/versions/0.5.1/topics/scale_color_viridis
viridis::scale_fill_viridis(
  # Diskrete Variable (Einkommensgruppen)
  discrete = TRUE,
  # Umkehr der Palette, damit dunkel = low income
  direction = -1) +
labs(
  title = "Titel",
  subtitle = "Untertitel",
  caption = "Fußnote",
  tag = "label",
  fill = "Titel Legende") +
xlab("Beschriftung x") +
ylab("Beschriftung y") +
ggrepel::geom_label_repel(
  data = subset(mapData, income_grp == "Niedrig"),
  stat = "sf_coordinates",
  aes(
    geometry = geometry,
    label = name)) +
# geom_sf_label(data = subset(mapData, income_grp == "5. Low income"), aes(label = name)) +
theme(
  legend.position = "top",
  # keine Achsenlinien
  axis.line=element_blank(),
  # keine Achsentitel
  axis.title.x=element_blank(),
  axis.title.y=element_blank(),
  # keine Achsen-Markierungen
  axis.ticks=element_blank(),
  # kein Achsentext
  axis.text.x=element_blank(),
  axis.text.y=element_blank(),
  # kein Hintergrund
  panel.background=element_blank(),
  # kein Hilfslinien
  panel.grid.major=element_blank(),
  panel.grid.minor=element_blank(),
  # kein Hintergrund
  plot.background=element_blank())
```

label

Titel

Untertitel



Fußnote

Scatter

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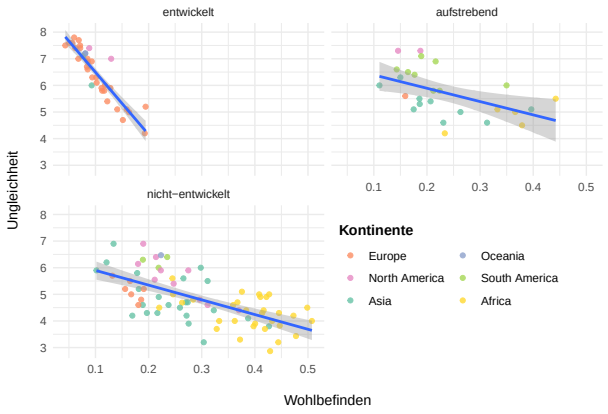
```
## `geom_smooth()` using formula 'y ~ x'
```



kableExtra

```
kableData <- WorldData %>%
  select(
    continent,
    pop_est_dens,
    gdp_cap_est,
    life_exp,
    well_being,
    inequality,
    HPI) %>%
  group_by(continent) %>%
  summarise(
    across(
      pop_est_dens:HPI,
      ~round(
        mean(., na.rm = TRUE)
        ,1))) %>%
  filter(!is.na(well_being))
```

```
## `summarise()` ungrouping output (override with `.groups` argument)
```

```
  kableExtra::kbl(kableData,
    col.names = c(
      "Kontinent",
      "Bevölkerungsdichte",
      "BIP (pro Kopf)",
      "Lebenserwartung",
      "Wohlbefinden",
      "Ungleichheit",
      "Happy Planet"),
    booktabs = T) %>%
  kableExtra::add_header_above(c(
    " " = 4,
    "Index" = 3)) %>%
  kableExtra::kable_styling(latex_options = c(
    "striped",
    "scale_down",
    "reapeat_header"))
```

				Index		
Kontinent	Bevölkerungsdichte	BIP (pro Kopf)	Lebenserwartung	Wohlbefinden	Ungleichheit	Happy Planet
Africa	60.4	3391.9	59.8	4.4	0.4	19.9
Asia	176.0	13605.7	71.7	5.1	0.2	27.9
Europe	114.6	25960.5	77.9	6.1	0.1	27.2
North America	136.3	14725.4	73.9	6.1	0.2	32.2
Oceania	19.4	13074.2	78.3	7.0	0.1	31.0
South America	20.6	11045.6	74.2	6.3	0.2	32.3