## lab2\_fifa\_sophie

## 2022-04-01

Note that the echo = FALSE prevent printing of the R code that generated the plot.

```
library(tidyverse)
## -- Attaching packages ---
                                                ----- tidyverse 1.3.1 --
## v ggplot2 3.3.5
                    v purrr
                               0.3.4
## v tibble 3.1.6 v dplyr
                              1.0.8
          1.2.0 v stringr 1.4.0
## v tidyr
## v readr
          2.1.2
                    v forcats 0.5.1
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()
                   masks stats::lag()
library(magrittr)
##
## Attaching package: 'magrittr'
## The following object is masked from 'package:purrr':
##
##
      set_names
## The following object is masked from 'package:tidyr':
##
##
library(ggplot2)
library(patchwork)
library(sandwich)
library(lmtest)
## Loading required package: zoo
## Attaching package: 'zoo'
## The following objects are masked from 'package:base':
##
      as.Date, as.Date.numeric
##
library(fec16)
library(stargazer)
## Please cite as:
## Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables.
## R package version 5.2.3. https://CRAN.R-project.org/package=stargazer
```

```
library(nnet)
data <- read.csv('data/external/FIFA22_official_data.csv')</pre>
df <- (filter(data, Best.Position == "GK"))</pre>
na.omit(df)
## [1] ID
                                  Name
                                                            Age
## [4] Photo
                                  Nationality
                                                            Flag
## [7] Overall
                                  Potential
                                                            Club
## [10] Club.Logo
                                  Value
                                                            Wage
## [13] Special
                                 Preferred.Foot
                                                            International.Reputation
## [16] Weak.Foot
                                  Skill.Moves
                                                           Work.Rate
## [19] Body.Type
                                 Real.Face
                                                           Position
## [22] Jersey.Number
                                  Joined
                                                           Loaned.From
## [25] Contract. Valid. Until
                                 Height
                                                           Weight
## [28] Crossing
                                  Finishing
                                                           HeadingAccuracy
## [31] ShortPassing
                                  Volleys
                                                           Dribbling
## [34] Curve
                                  FKAccuracy
                                                           LongPassing
## [37] BallControl
                                  Acceleration
                                                            SprintSpeed
## [40] Agility
                                  Reactions
                                                           Balance
## [43] ShotPower
                                                           Stamina
                                  Jumping
## [46] Strength
                                  LongShots
                                                           Aggression
## [49] Interceptions
                                  Positioning
                                                           Vision
## [52] Penalties
                                  Composure
                                                           Marking
## [55] StandingTackle
                                  SlidingTackle
                                                            GKDiving
## [58] GKHandling
                                                            GKPositioning
                                  GKKicking
## [61] GKReflexes
                                  Best.Position
                                                           Best.Overall.Rating
## [64] Release.Clause
                                  DefensiveAwareness
## <0 rows> (or 0-length row.names)
money_formatter <- function(x) {</pre>
 x <- gsub("€", "", x)
 x <- case_when(
    grepl("K", x, fixed=TRUE) ~ as.numeric(gsub("K", "", x))*1e3,
    grepl("M", x, fixed=TRUE) ~ as.numeric(gsub("M", "", x))*1e6,
    TRUE ~ as.numeric(x)
  )
  return(x)
weight_formatter <- function(x) {</pre>
  x <- case_when(
    grepl("kg", x, fixed=TRUE) ~ as.numeric(gsub("kg", "", x)),
    grepl("cm", x, fixed=TRUE) ~ as.numeric(gsub("cm", "", x)),
    TRUE ~ as.numeric(x)
 )
 return(x)
}
df$Value <- money_formatter(df$Value)</pre>
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
```

## Warning in eval\_tidy(pair\$rhs, env = default\_env): NAs introduced by coercion

```
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
df$Wage <- money_formatter(df$Wage)</pre>
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
df$Height <- weight_formatter(df$Height)</pre>
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
df$Weight <- weight formatter(df$Weight)</pre>
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
## Warning in eval_tidy(pair$rhs, env = default_env): NAs introduced by coercion
model1 <- lm(Value ~ Age+
                     Nationality+
                     Overall+
                     Potential+
                     # Club+
                     Preferred.Foot+
                     International.Reputation+
                     Height+
                     Weight,
          data=df)
stargazer(model1)
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac
## \% Date and time: Fri, Apr 01, 2022 - 13:30:08
## \begin{table}[!htbp] \centering
    \caption{}
##
##
    \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
## & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] & Value \\
## \hline \\[-1.8ex]
## Age & $-$669,580.100$^{***}$ \\
   & (55,356.080) \\
##
##
    & \\
## NationalityAlgeria & $-$4,286,923.000 \\
   & (5,512,328.000) \\
##
    & \\
## NationalityArgentina & $-$1,949,336.000 \\
   & (4,344,069.000) \\
##
##
## NationalityArmenia & 713,296.900 \\
## & (7,423,080.000) \\
```

```
& \\
##
## NationalityAustralia & $-$205,217.000 \\
    & (4,518,505.000) \\
##
     & \\
## NationalityAustria & $-$2,510,043.000 \\
    & (4,465,540.000) \\
##
    & \\
## NationalityBelgium & $-$251,023.900 \\
##
    & (4,440,842.000) \\
##
    & \\
## NationalityBenin & $-$4,264,174.000 \\
##
    & (7,390,912.000) \\
##
    & \\
## NationalityBolivia & $-$1,886,023.000 \\
    & (6,049,724.000) \\
##
    & \\
## NationalityBosnia and Herzegovina & $-$3,152,518.000 \\
   & (4,933,872.000) \\
##
    & \\
## NationalityBrazil & $-$2,211,585.000 \\
##
    & (4,336,745.000) \\
## NationalityBulgaria & $-$1,448,125.000 \\
    & (5,243,687.000) \\
##
##
    & \\
## NationalityBurkina Faso & $-$5,503,306.000 \\
##
    & (7,391,597.000) \\
##
    & \\
## NationalityCameroon & $-$1,074,937.000 \\
   & (4,855,832.000) \\
##
##
    & \\
## NationalityCanada & $-$944,935.500 \\
   & (4,724,588.000) \\
##
##
    & \\
## NationalityChile & $-$3,399,650.000 \\
##
    & (4,649,523.000) \\
##
    & \\
## NationalityChina PR & 34,704.530 \
##
    & (4,742,674.000) \\
##
    & \\
## NationalityColombia & $-$3,297,739.000 \\
##
    & (4,591,610.000) \\
##
    & \\
## NationalityCongo & $-$4,746,287.000 \\
    & (7,390,824.000) \\
##
    & \\
## NationalityCongo DR & $-$5,595,849.000 \\
##
    & (7,405,237.000) \\
##
     & \\
## NationalityCosta Rica & $-$5,224,410.000 \\
##
    & (6,036,638.000) \\
##
    & \\
## NationalityCôte d'Ivoire & $-$1,930,868.000 \\
    & (5,063,018.000) \\
```

```
& \\
##
## NationalityCroatia & $-$3,357,560.000 \\
    & (4,511,911.000) \\
##
     & \\
## NationalityCuba & $-$5,128,631.000 \\
    & (7,395,088.000) \\
##
    & \\
## NationalityCuracao & $-$2,273,522.000 \\
##
     & (6,039,314.000) \\
##
    & \\
## NationalityCyprus & $-$2,154,695.000 \\
    & (7,442,023.000) \\
##
##
    & \\
## NationalityCzech Republic & $-$3,364,534.000 \\
    & (4,486,450.000) \\
##
    & \\
## NationalityDenmark & $-$2,939,634.000 \\
   & (4,463,638.000) \\
##
    & \\
## NationalityEcuador & $-$2,035,496.000 \\
##
    & (4,687,163.000) \\
## NationalityEgypt & $-$2,959,932.000 \\
##
    & (5,516,738.000) \\
##
    & \\
## NationalityEl Salvador & $-$3,551,566.000 \\
##
    & (7,399,202.000) \\
##
    & \\
## NationalityEngland & $-$1,353,285.000 \\
   & (4,304,826.000) \\
##
##
    & \\
## NationalityEstonia & $-$1,041,870.000 \\
##
   & (7,406,227.000) \\
##
    & \\
## NationalityFinland & $-$1,476,250.000 \\
##
    & (4,725,711.000) \\
##
## NationalityFrance & $-$4,062,604.000 \\
##
    & (4,323,825.000) \\
##
    & \\
## NationalityGeorgia & $-$2,722,357.000 \\
    & (6,029,474.000) \\
##
##
    & \\
## NationalityGermany & $-$2,780,009.000 \\
    & (4,305,945.000) \\
##
    & \\
## NationalityGhana & $-$2,842,633.000 \\
##
   & (5,231,101.000) \\
     & \\
## NationalityGreece & $-$3,074,792.000 \\
##
    & (4,543,879.000) \\
##
    & \\
## NationalityGuinea & $-$670,641.200 \\
    & (7,398,989.000) \\
```

```
& \\
##
## NationalityGuyana & 3,035,610.000 \\
    & (7,429,750.000) \\
     & \\
##
## NationalityHaiti & $-$121,457.800 \\
    & (7,418,218.000) \\
##
    & \\
## NationalityHonduras & $-$3,836,851.000 \\
##
    & (7,417,496.000) \\
##
    & \\
## NationalityHungary & $-$3,025,771.000 \\
    & (4,846,050.000) \\
##
##
    & \\
## NationalityIceland & $-$2,681,764.000 \\
    & (4,930,403.000) \\
##
    & \\
## NationalityIndia & 2,149,485.000 \\
   & (4,708,065.000) \\
##
    & \\
## NationalityIran & $-$4,270,774.000 \\
##
    & (6,033,921.000) \\
## NationalityIsrael & $-$1,611,786.000 \\
    & (6,041,571.000) \\
##
##
    & \\
## NationalityItaly & $-$1,041,318.000 \\
##
    & (4,334,763.000) \\
##
    & \\
## NationalityJamaica & $-$4,807,879.000 \\
   & (6,033,872.000) \\
##
##
    & \\
## NationalityJapan & $-$2,187,267.000 \\
   & (4,489,344.000) \\
##
##
     & \\
## NationalityKorea Republic & $-$1,539,906.000 \\
##
    & (4,511,783.000) \\
##
    & \\
## NationalityKosovo & $-$3,366,898.000 \\
##
    & (6,034,248.000) \\
##
    & \\
## NationalityLiechtenstein & $-$1,186,831.000 \\
##
    & (6,045,243.000) \\
##
    & \\
## NationalityLithuania & $-$3,420,247.000 \\
    & (7,392,539.000) \\
##
    & \\
## NationalityLuxembourg & $-$2,827,297.000 \\
##
    & (7,399,582.000) \\
##
     & \\
## NationalityMali & $-$3,823,145.000 \\
##
    & (7,389,272.000) \\
##
    & \\
## NationalityMexico & $-$2,228,960.000 \\
    & (4,396,381.000) \\
```

```
& \\
##
## NationalityMontenegro & $-$3,168,674.000 \\
    & (7,395,233.000) \\
     & \\
##
## NationalityMorocco & 2,669,008.000 \\
    & (5,507,043.000) \\
##
    & \\
## NationalityNetherlands & $-$3,454,798.000 \
##
    & (4,357,321.000) \\
##
    & \\
## NationalityNew Zealand & $-$2,800,121.000 \\
    & (4,935,648.000) \\
##
##
    & \\
## NationalityNigeria & $-$7,428,032.000 \\
    & (5,231,258.000) \\
##
    & \\
## NationalityNorth Macedonia & $-$2,856,928.000 \\
   & (5,506,728.000) \\
##
    & \\
## NationalityNorthern Ireland & 1,149,881.000 \\
##
    & (4,785,600.000) \\
## NationalityNorway & $-$2,209,644.000 \\
    & (4,522,471.000) \\
##
##
    & \\
## NationalityOman & $-$4,347,859.000 \\
##
    & (7,406,073.000) \\
##
    & \\
## NationalityPanama & $-$3,571,539.000 \\
   & (7,387,911.000) \\
##
    & \\
##
## NationalityParaguay & $-$2,717,932.000 \\
   & (4,939,408.000) \\
##
##
    & \\
## NationalityPeru & $-$1,362,080.000 \\
##
    & (5,061,234.000) \\
##
## NationalityPhilippines & $-$3,552,290.000 \\
##
    & (7,387,701.000) \\
##
    & \\
## NationalityPoland & $-$2,599,745.000 \\
##
    & (4,453,610.000) \\
##
    & \\
## NationalityPortugal & $-$2,356,689.000 \\
    & (4,406,983.000) \\
##
    & \\
## NationalityRepublic of Ireland & $-$426,376.800 \
##
   & (4,441,583.000) \\
##
     & \\
## NationalityRomania & $-$2,293,644.000 \\
##
    & (4,568,253.000) \\
##
    & \\
## NationalityRussia & $-$3,231,170.000 \\
    & (4,453,760.000) \\
```

```
& \\
##
## NationalitySaudi Arabia & 1,037,260.000 \\
    & (4,860,339.000) \\
##
    & \\
## NationalityScotland & $-$166,779.900 \\
    & (4,465,831.000) \\
##
    & \\
## NationalitySenegal & $-$1,991,546.000 \\
##
    & (4,642,940.000) \\
##
    & \\
## NationalitySerbia & $-$2,767,133.000 \\
    & (4,611,119.000) \\
##
##
    & \\
## NationalitySlovakia & $-$3,330,902.000 \\
   & (4,837,120.000) \\
##
    & \\
## NationalitySlovenia & 6,018,521.000 \\
   & (4,843,662.000) \\
##
    & \\
## NationalitySouth Africa & $-$2,081,935.000 \\
##
    & (4,945,030.000) \\
## NationalitySpain & $-$3,386,883.000 \\
    & (4,307,733.000) \\
##
##
    & \\
## NationalitySuriname & $-$3,004,108.000 \\
    & (7,391,019.000) \\
##
    & \\
## NationalitySweden & $-$2,605,080.000 \\
   & (4,429,770.000) \\
##
   & \\
##
## NationalitySwitzerland & $-$1,254,908.000 \\
   & (4,462,936.000) \\
##
##
    & \\
## NationalityThailand & $-$922,034.400 \\
##
    & (7,401,412.000) \\
##
    & \\
## NationalityTogo & $-$2,942,196.000 \\
##
    & (7,394,412.000) \\
##
    & \\
## NationalityTrinidad and Tobago & 2,055,671.000 \\
##
    & (7,411,826.000) \\
##
    & \\
## NationalityTunisia & $-$3,618,603.000 \\
   & (7,396,934.000) \\
##
    & \\
## NationalityTurkey & $-$2,881,104.000 \
##
   & (4,415,345.000) \\
##
    & \\
## NationalityUkraine & $-$4,603,839.000 \\
##
    & (4,719,918.000) \\
##
    & \\
## NationalityUnited Arab Emirates & $-$818,437.100 \\
   & (5,539,756.000) \\
```

```
& \\
##
## NationalityUnited States & $-$1,855,892.000 \\
    & (4,375,781.000) \\
    & \\
##
## NationalityUruguay & $-$4,068,209.000 \\
   & (4,487,055.000) \\
##
    & \\
## NationalityVenezuela & $-$3,301,800.000 \\
##
    & (4,844,864.000) \\
##
    & \\
## NationalityVietnam & $-$2,556,728.000 \\
##
   & (7,401,775.000) \\
##
    & \\
## NationalityWales & $-$2,419,309.000 \\
   & (4,729,313.000) \\
##
    & \\
## Overall & 718,489.800$^{***}$ \\
   & (55,928.310) \\
##
    & \\
## Potential & $-$158,673.100$^{**}$ \\
##
   & (62,079.910) \\
## Preferred.FootRight & $-$292,245.900 \\
##
    & (487,122.500) \\
##
    & \\
## International.Reputation & 5,756,134.000$^{***}$ \\
##
   & (400,414.100) \\
##
    & \\
## Height & $-$22,648.830 \\
   & (44,397.640) \\
##
##
   & \\
## Weight & 28,935.090 \\
## & (33,234.510) \\
##
   & \\
## Constant & $-$18,394,972.000$^{**}$ \\
   & (9,088,812.000) \\
##
    & \\
## \hline \\[-1.8ex]
## Observations & 1,546 \\
## R$^{2}$ & 0.447 \\
## Adjusted R$^{2}$ & 0.406 \\
## Residual Std. Error & 6,025,491.000 (df = 1440) \\
## F Statistic & 11.075$^{***}$ (df = 105; 1440) \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:} & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```