# Using kmeans to assign a cluster to each row (i.e., customer)

```
library(ggplot2)
library(scales)
```

```
##              Country Sports.in.Bilion.dollar. Sports.in.Bilion.euro.
## 1              Japan                 3.510143                 2.9497
## 2          Hong Kong                 2.000390                 1.6810
## 3                 UK                 1.973853                 1.6587
## 4      United States                 1.512609                 1.2711
## 5              China                 1.393252                 1.1708
## 6          Australia                 1.175244                 0.9876
## 7             France                 0.685083                 0.5757
## 8             Sweden                 0.514318                 0.4322
## 9            Germany                 0.468622                 0.3938
## 10       South Korea                 0.323918                 0.2722
## 11             Italy                 0.312613                 0.2627
## 12             Spain                 0.285005                 0.2395
## 13            Canada                 0.248234                 0.2086
## 14         Singapore                 0.242760                 0.2040
## 15            Norway                 0.242760                 0.2040
## 16           Ireland                 0.234787                 0.1973
## 17          Czech Rep                 0.195874                 0.1646
## 18          Malaysia                 0.190400                 0.1600
## 19            Russia                 0.172907                 0.1453
## 20           Austria                 0.164339                 0.1381
##    Sports.in.Milion.euro. No..of.Sports.Popular.Worldwide
## 1                  2949.7                               4
## 2                  1681.0                               3
## 3                  1658.7                               4
## 4                  1271.1                               4
## 5                  1170.8                               6
## 6                   987.6                               3
## 7                   575.7                               2
## 8                   432.2                               3
## 9                   393.8                               4
## 10                  272.2                               1
## 11                  262.7                               3
## 12                  239.5                               3
## 13                  208.6                               2
## 14                  204.0                               2
## 15                  204.0                               0
## 16                  197.3                               0
## 17                  164.6                               2
## 18                  160.0                               3
## 19                  145.3                               4
## 20                  138.1                               1
##    No..of..Popular.Sport.Bet.Online After.Includeing.Horse.racing
```

```
## 1                                                    3                 2
## 2                                                    1                 2
## 3                                                    5                 6
## 4                                                    4                 5
## 5                                                    2                 2
## 6                                                    4                 5
## 7                                                    1                 2
## 8                                                    1                 1
## 9                                                    4                NA
## 10                                                   1                NA
## 11                                                   2                NA
## 12                                                   4                NA
## 13                                                   2                NA
## 14                                                   4                NA
## 15                                                   1                NA
## 16                                                   6                NA
## 17                                                   2                NA
## 18                                                   3                 4
## 19                                                   3                NA
## 20                                                   1                NA
##                                                            Link.1
## 1                                 https://www.asiabet.org/japan/
## 2                       https://www.sbo.net/country/hong-kong/
## 3                                     http://www.oddsshark.com/uk
## 4                                    http://www.oddsshark.com/usa
## 5                                 https://www.asiabet.org/china/
## 6                              http://www.oddsshark.com/australia
## 7        https://www.bookmakers.bet/9602/betting-sites-france/
## 8          http://www.onlinebettingsites.com/countries/sweden/
## 9      https://www.interwetten.com/en/sportsbook/default.aspx
## 10                               https://www.bet365.com/#/HO/
## 11                             https://www.sbo.net/country/italy/
## 12                             https://www.sbo.net/country/spain/
## 13                                  http://www.oddsshark.com/canada
## 14                             https://www.asiabet.org/singapore/
## 15                             https://www.norsk-tipping.no/sport
## 16           https://en.wikipedia.org/wiki/Sport_in_Ireland
## 17 https://www.sbo.net/country/betting-online-czech-republic/
## 18                             https://www.asiabet.org/malaysia/
## 19    http://www.gamingzion.com/sportsbook/russian-federation
## 20                             https://www.sbo.net/country/austria/
##                                                            Link.2
## 1                          https://en.wikipedia.org/wiki/Sport_in_Japan
## 2                       https://en.wikipedia.org/wiki/Sport_in_Hong_Kong
## 3                      https://en.wikipedia.org/wiki/Sport_in_England
## 4          https://en.wikipedia.org/wiki/Sports_in_the_United_States
## 5
## 6
## 7
## 8
```

```
## 9             https://www.movingto-germany.com/top-10-sports-in-germany/
## 10                                        https://www.asiabet.org/korea/
## 11
## 12                          https://en.wikipedia.org/wiki/Sport_in_Spain
## 13 https://en.wikipedia.org/wiki/Sport_in_Canada#Professional_sports
## 14                                       https://sports.intertops.eu/en/
## 15                    https://en.wikipedia.org/wiki/Football_in_Norway
## 16                       http://www.gamingzion.com/sportsbook/ireland
## 17          https://en.wikipedia.org/wiki/Sport_in_the_Czech_Republic
## 18          http://www.topendsports.com/world/countries/malaysia.htm
## 19                                        https://www.ligastavok.ru/
## 20                    https://en.wikipedia.org/wiki/Sport_in_Austria
## 
                                            Link.3
## 1
## 2
## 3
## 4
## 5
## 6
## 7
## 8
## 9          http://www.gamingzion.com/sportsbook/germany
## 10 https://en.wikipedia.org/wiki/Sport_in_South_Korea
## 11
## 12
## 13
## 14    https://en.wikipedia.org/wiki/Sport_in_Singapore
## 15
## 16                      http://www.paddypower.com/bet
## 17
## 18
## 19       https://en.wikipedia.org/wiki/Sport_in_Russia
## 20
## 
                          X
## 1
## 2
## 3
## 4
## 5
## 6
## 7
## 8
## 9
## 10
## 11
## 12
## 13
## 14
## 15
## 16 http://www.boylesports.com/
```

```
## 17
## 18
## 19
## 20
```
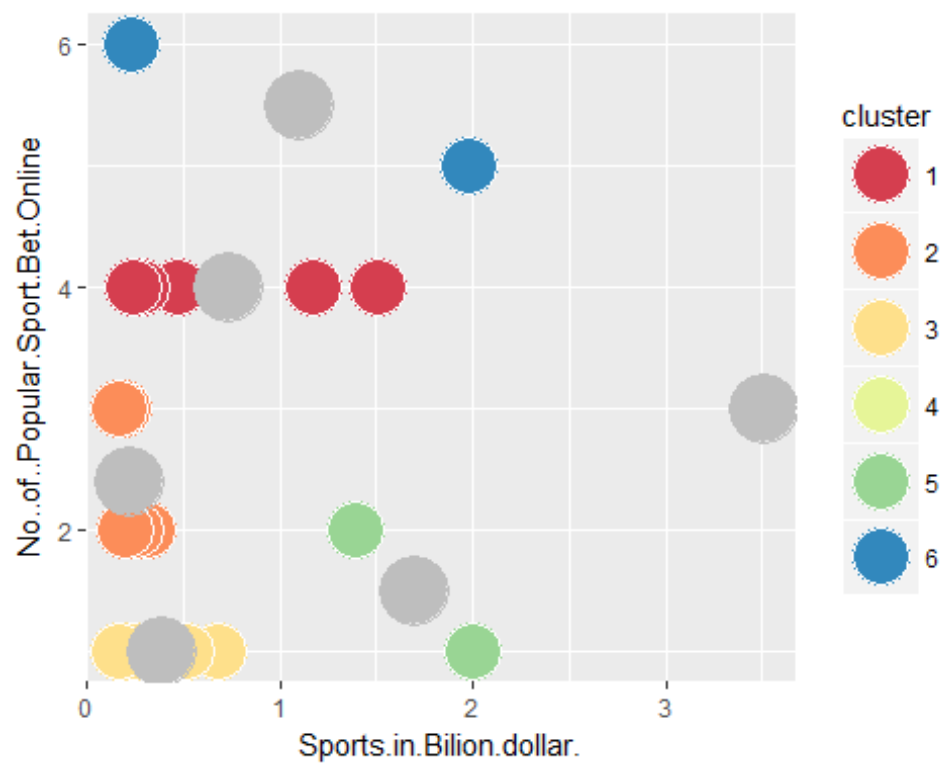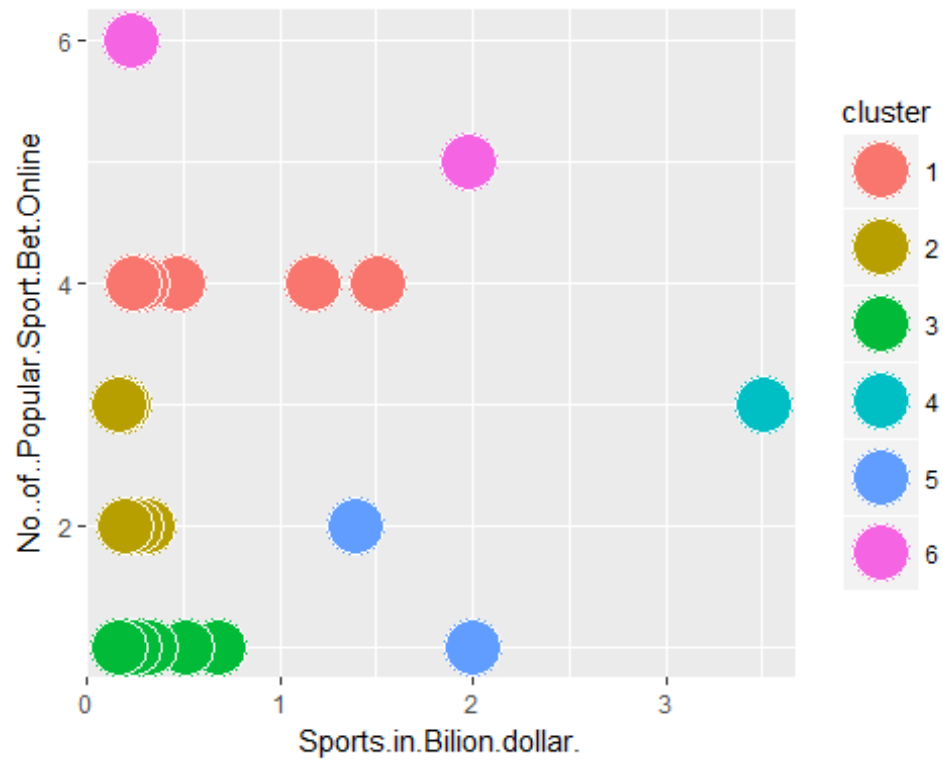
```
## Warning: Removed 2 rows containing missing values (geom_segment).

## Warning: Removed 2 rows containing missing values (geom_point).

## Warning: Removed 1 rows containing missing values (geom_point).

## Warning: Removed 2 rows containing missing values (geom_text).
```

Best Country to Pitch-in