Script for Machine Learning Implementation in Cameroon’s Case (Version 2)

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## Introduction

This machine learning script is based on the “Practical guide to implement machine learning with CARET in R” suggested by Saurav Kaushik in the Analytics Vidhya website: <https://www.analyticsvidhya.com/blog/2016/12/practical-guide-to-implement-machine-learning-with-caret-package-in-r-with-practice-problem/> (December 8, 2016).

The Caret package solves many problems in the implementation of machine learning process, and make it much easier to execute, even for beginners like the autors of this book. As Kaushik puts it, “This package [i.e., CARET package] alone is all you need to know for solve almost any supervised machine learning problem. It provides a uniform interface to several machine learning algorithms and standardizes various other tasks such as Data splitting, Pre-processing, Feature selection, Variable importance estimation, etc.”

The different steps suggested by Saurav Kaushik include the following:

1. Getting started with loading the package and looking at the data
2. Pre-processing the data using Caret
3. Splitting the data using Caret
4. Feature selection using Caret
5. Training models using Caret
6. Parameter tuning using Caret
7. Variable importance estimation using Caret
8. Making predictions using Caret

## 1. Getting started with loading the package and looking at the data

Installing and loading the Caret package and its dependencies:

Reading the data in R and looking at its structure

# Reading the data  
train2 <- read\_sav("cam\_r7\_data\_eng.sav")  
train2 <- tbl\_df(train2)  
  
# Looking at its structure  
str(train2)

## Classes 'tbl\_df', 'tbl' and 'data.frame': 1204 obs. of 358 variables:  
## $ RESPNO : chr "CAM0001" "CAM0002" "CAM0003" "CAM0004" ...  
## ..- attr(\*, "label")= chr "Respondent number"  
## ..- attr(\*, "format.spss")= chr "A8"  
## $ URBRUR : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "Urban or Rural Primary Sampling Unit"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num 1 2  
## .. ..- attr(\*, "names")= chr "Urban" "Rural"  
## $ REGION : 'haven\_labelled' num 1220 1220 1220 1229 1229 ...  
## ..- attr(\*, "label")= chr "Province or region"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 11  
## ..- attr(\*, "labels")= Named num 1220 1221 1222 1223 1224 ...  
## .. ..- attr(\*, "names")= chr "MFOUNDI" "WOURI" "ADAMAOUA" "CENTRE" ...  
## $ EA\_SVC\_A : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-SVC-A. Electricity grid in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_SVC\_B : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-SVC-B. Piped water system in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_SVC\_C : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-SVC-C. Sewage system in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_SVC\_D : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-SVC-D. Cell phone service in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_A : 'haven\_labelled' num 1 1 1 0 0 0 0 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-A. Post office in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_B : 'haven\_labelled' num 1 1 1 9 9 9 9 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-B. School in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_C : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-C. Police station in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_D : 'haven\_labelled' num 1 1 1 0 0 0 0 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-D. Health Clinic in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_E : 'haven\_labelled' num 1 1 1 0 0 0 0 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-E. Market stalls in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_F : 'haven\_labelled' num 1 1 1 0 0 0 0 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-F. Bank in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_FAC\_G : 'haven\_labelled' num 1 1 1 1 1 1 1 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-FAC-G. Paid transport in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Can't determine"  
## $ EA\_SEC\_A : 'haven\_labelled' num 1 1 1 0 0 0 0 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-SEC-A. Police in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Don't know"  
## $ EA\_SEC\_B : 'haven\_labelled' num 1 1 1 0 0 0 0 1 1 1 ...  
## ..- attr(\*, "label")= chr "EA-SEC-B. Soldiers/army in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Don't know"  
## $ EA\_SEC\_C : 'haven\_labelled' num 0 0 0 0 0 0 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "EA-SEC-C. Roadblocks by police/army in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Don't know"  
## $ EA\_SEC\_D : 'haven\_labelled' num 0 0 0 0 0 0 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "EA-SEC-D. Customs checkpoints in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Don't know"  
## $ EA\_SEC\_E : 'haven\_labelled' num 0 0 0 0 0 0 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "EA-SEC-E. Roadblocks by private security/local community in the PSU/EA"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Don't know"  
## $ EA\_ROAD\_A : 'haven\_labelled' num 5 5 5 1 1 1 1 5 5 5 ...  
## ..- attr(\*, "label")= chr "EA-ROAD-A. Road surface at start point"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 6  
## .. ..- attr(\*, "names")= chr "Missing" "Earth" "Gravel" "Stone" ...  
## $ EA\_ROAD\_B : 'haven\_labelled' num 5 5 5 6 6 6 6 5 5 5 ...  
## ..- attr(\*, "label")= chr "EA-ROAD-B. Road surface last 5 km"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 6  
## .. ..- attr(\*, "names")= chr "Missing" "Earth" "Gravel" "Stone" ...  
## $ EA\_ROAD\_C : 'haven\_labelled' num 5 5 5 4 4 4 4 5 5 5 ...  
## ..- attr(\*, "label")= chr "EA-ROAD-C. Road condition last 5 km"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 6  
## .. ..- attr(\*, "names")= chr "Missing" "Impassable" "Very poor" "Poor" ...  
## $ NOCALL\_1 : 'haven\_labelled' num 9997 9997 5 9997 1 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 1"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 13  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_2 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 2"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 11  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_3 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 3"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 9  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_4 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 4"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 9  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_5 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 5"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 10  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_6 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 6"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 9  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_7 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 7"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 10  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ NOCALL\_8 : 'haven\_labelled' num 9997 9997 9997 9997 9997 ...  
## ..- attr(\*, "label")= chr "Reason for Unsuccessful Call Household 8"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 11  
## ..- attr(\*, "labels")= Named num 1 2 3 4 5 ...  
## .. ..- attr(\*, "names")= chr "Refused to be interviewed" "Person selected was never at home" "Household/Premises empty for the survey period" "Not a citizen/Spoke only a foreign language" ...  
## $ THISINT : 'haven\_labelled' num 1 1 1 1 1 1 2 2 2 2 ...  
## ..- attr(\*, "label")= chr "This interview, gender"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num 1 2  
## .. ..- attr(\*, "names")= chr "Male" "Female"  
## $ ADULT\_CT : num 1 4 4 1 1 1 4 1 2 2 ...  
## ..- attr(\*, "label")= chr "Number of adults in household"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## $ CALLS : num 1 1 1 1 1 1 2 1 1 1 ...  
## ..- attr(\*, "label")= chr "Number of calls"  
## ..- attr(\*, "format.spss")= chr "F1.0"  
## ..- attr(\*, "display\_width")= int 7  
## $ DATEINTR : Date, format: "2018-05-07" "2018-05-07" ...  
## $ STRTIME : 'hms' num 07:55:15.901 07:57:25.347 07:58:15.743 08:15:53.680 ...  
## ..- attr(\*, "label")= chr "Time interview started"  
## ..- attr(\*, "units")= chr "secs"  
## ..- attr(\*, "format.spss")= chr "TIME5"  
## ..- attr(\*, "display\_width")= int 10  
## ..- attr(\*, "labels")= Named num -3600  
## .. ..- attr(\*, "names")= chr "Missing"  
## $ Q1 : 'haven\_labelled' num 30 55 19 62 56 30 26 37 24 32 ...  
## ..- attr(\*, "label")= chr "Q1. Age"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 998 999  
## .. ..- attr(\*, "names")= chr "Missing" "Refused" "Don't know"  
## $ Q2A : 'haven\_labelled' num 1244 2221 1222 1229 1229 ...  
## ..- attr(\*, "label")= chr "Q2a. Respondent's mother tongue"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "display\_width")= int 11  
## ..- attr(\*, "labels")= Named num -1 1 2 1220 1221 ...  
## .. ..- attr(\*, "names")= chr "Missing" "English" "French" "Foufouldé" ...  
## $ Q2AOTHER : chr "" "" "" "" ...  
## ..- attr(\*, "label")= chr "Q2aother. Respondent's mother tongue (verbatim)"  
## ..- attr(\*, "format.spss")= chr "A50"  
## ..- attr(\*, "display\_width")= int 21  
## $ Q2B : 'haven\_labelled' num 1244 2 2 9995 1229 ...  
## ..- attr(\*, "label")= chr "Q2b. Language spoken in home"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 1220 1221 ...  
## .. ..- attr(\*, "names")= chr "Missing" "English" "French" "Foufouldé" ...  
## $ Q2BOTHER : chr "" "" "" "BAYANGAM" ...  
## ..- attr(\*, "label")= chr "Q2bother. Language spoken in home (verbatim)"  
## ..- attr(\*, "format.spss")= chr "A50"  
## ..- attr(\*, "display\_width")= int 30  
## $ Q3 : 'haven\_labelled' num 2 9 1 1 1 9 1 1 2 2 ...  
## ..- attr(\*, "label")= chr "Q3. Overall direction of the country"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Going in the wrong direction" "Going in the right direction" "Refused" ...  
## $ Q4A : 'haven\_labelled' num 4 4 1 4 2 2 4 4 4 2 ...  
## ..- attr(\*, "label")= chr "Q4a. Country’s present economic condition"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Very Bad" "Fairly Bad" "Neither good nor bad" ...  
## $ Q4B : 'haven\_labelled' num 4 3 2 3 2 3 4 4 5 2 ...  
## ..- attr(\*, "label")= chr "Q4b. Your present living conditions"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Very Bad" "Fairly Bad" "Neither good nor bad" ...  
## $ Q5 : 'haven\_labelled' num 4 4 2 5 4 5 4 2 4 4 ...  
## ..- attr(\*, "label")= chr "Q5. Your living conditions vs. others"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much worse" "Worse" "Same" ...  
## $ Q6 : 'haven\_labelled' num 4 3 2 3 3 4 4 2 4 2 ...  
## ..- attr(\*, "label")= chr "Q6. Country’s economic condition compared to 12 months ago"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much worse" "Worse" "Same" ...  
## $ Q7 : 'haven\_labelled' num 5 3 2 3 2 4 2 4 4 4 ...  
## ..- attr(\*, "label")= chr "Q7. Country’s economic condition in 12 months’ time"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much worse" "Worse" "Same" ...  
## $ Q8A : 'haven\_labelled' num 2 9 3 0 0 0 1 2 3 2 ...  
## ..- attr(\*, "label")= chr "Q8a. How often gone without food"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q8B : 'haven\_labelled' num 0 0 3 1 1 2 1 2 3 2 ...  
## ..- attr(\*, "label")= chr "Q8b. How often gone without water"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q8C : 'haven\_labelled' num 2 0 3 0 0 2 1 2 1 1 ...  
## ..- attr(\*, "label")= chr "Q8c. How often gone without medical care"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q8D : 'haven\_labelled' num 0 0 3 1 0 4 1 2 2 0 ...  
## ..- attr(\*, "label")= chr "Q8d. How often gone without cooking fuel"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q8E : 'haven\_labelled' num 2 2 3 1 0 2 1 4 9 2 ...  
## ..- attr(\*, "label")= chr "Q8e. How often gone without cash income"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q8F : 'haven\_labelled' num 2 6 2 7 7 1 7 2 5 2 ...  
## ..- attr(\*, "label")= chr "Q8f. Frequency going without basic necessities"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 6 7 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "About once every two or three months" "About once a month" "Two or three times a month" ...  
## $ Q9 : 'haven\_labelled' num 0 0 0 0 0 2 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "Q9. How dependent on receiving remittances"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 7 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not at all / Does not receive remittances" "A little bit" "Somewhat" ...  
## $ Q10A : 'haven\_labelled' num 2 0 0 2 3 2 2 0 3 1 ...  
## ..- attr(\*, "label")= chr "Q10a. How often felt unsafe walking in neighbourhood"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q10B : 'haven\_labelled' num 0 3 0 0 3 2 0 2 0 0 ...  
## ..- attr(\*, "label")= chr "Q10b. How often feared crime in home"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Just once or twice" "Several times" ...  
## $ Q11A : 'haven\_labelled' num 0 0 3 0 3 1 0 3 0 3 ...  
## ..- attr(\*, "label")= chr "Q11a. Had something stolen from house"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes, once" "Yes, twice" ...  
## $ Q11B : 'haven\_labelled' num 0 1 2 0 0 0 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "Q11b. Have been physically attacked"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes, once" "Yes, twice" ...  
## $ Q12A : 'haven\_labelled' num 4 2 2 4 4 3 1 4 4 3 ...  
## ..- attr(\*, "label")= chr "Q12a. Radio news"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Less than once a month" "A few times a month" ...  
## $ Q12B : 'haven\_labelled' num 4 4 3 0 4 2 1 4 4 4 ...  
## ..- attr(\*, "label")= chr "Q12b. Television news"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Less than once a month" "A few times a month" ...  
## $ Q12C : 'haven\_labelled' num 4 4 1 3 1 1 0 3 4 1 ...  
## ..- attr(\*, "label")= chr "Q12c. Newspaper news"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Less than once a month" "A few times a month" ...  
## $ Q12D : 'haven\_labelled' num 0 4 2 1 3 4 1 3 3 3 ...  
## ..- attr(\*, "label")= chr "Q12d. Internet news"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Less than once a month" "A few times a month" ...  
## $ Q12E : 'haven\_labelled' num 0 4 2 0 0 2 0 3 2 3 ...  
## ..- attr(\*, "label")= chr "Q12e. Social media news"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Less than once a month" "A few times a month" ...  
## $ Q13 : 'haven\_labelled' num 0 2 1 0 1 1 0 1 0 1 ...  
## ..- attr(\*, "label")= chr "Q13. Discuss politics"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Occasionally" "Frequently" ...  
## $ Q14 : 'haven\_labelled' num 1 3 2 2 4 3 1 4 4 2 ...  
## ..- attr(\*, "label")= chr "Q14. Freedom to say what you think"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not at all free" "Not very free" "Somewhat free" ...  
## $ Q15 : 'haven\_labelled' num 4 9 4 1 4 2 3 3 3 5 ...  
## ..- attr(\*, "label")= chr "Q15. Government bans organizations vs. join any"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Agree very strongly with 1" "Agree with 1" "Agree with 2" ...  
## $ Q16 : 'haven\_labelled' num 3 3 3 4 1 4 3 3 4 4 ...  
## ..- attr(\*, "label")= chr "Q16. Men only as leaders vs. women leaders"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Agree very strongly with 1" "Agree with 1" "Agree with 2" ...  
## $ Q17 : 'haven\_labelled' num 3 2 1 4 3 3 4 3 9 2 ...  
## ..- attr(\*, "label")= chr "Q17. Newspapers free to publish vs. government control"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Agree very strongly with 1" "Agree with 1" "Agree with 2" ...  
## $ Q18A : 'haven\_labelled' num 9 0 2 1 9 0 2 3 1 0 ...  
## ..- attr(\*, "label")= chr "Q18a. Access to information: school budget"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not at all likely" "Not very likely" "Somewhat likely" ...  
## $ Q18B : 'haven\_labelled' num 3 2 1 0 3 2 3 2 2 2 ...  
## ..- attr(\*, "label")= chr "Q18b. Access to information: land ownership"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not at all likely" "Not very likely" "Somewhat likely" ...  
## $ Q18C : 'haven\_labelled' num 2 2 2 3 0 2 2 0 2 2 ...  
## ..- attr(\*, "label")= chr "Q18c. Access to information: local government development plan and budget"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not at all likely" "Not very likely" "Somewhat likely" ...  
## $ Q18D : 'haven\_labelled' num 1 3 3 3 3 3 3 2 1 2 ...  
## ..- attr(\*, "label")= chr "Q18d. Access to information: business registration"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not at all likely" "Not very likely" "Somewhat likely" ...  
## $ Q19A : 'haven\_labelled' num 4 4 4 1 5 4 1 4 5 4 ...  
## ..- attr(\*, "label")= chr "Q19a. Better or worse: freedom to say what you think"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much less freedom" "Somewhat less freedom" "Same" ...  
## $ Q19B : 'haven\_labelled' num 9 5 5 5 5 5 3 5 4 5 ...  
## ..- attr(\*, "label")= chr "Q19b. Better or worse: freedom to join political organizations"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much less freedom" "Somewhat less freedom" "Same" ...  
## $ Q19C : 'haven\_labelled' num 3 2 2 1 5 4 2 5 4 3 ...  
## ..- attr(\*, "label")= chr "Q19c. Better or worse: media freedom to investigate, report"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much less freedom" "Somewhat less freedom" "Same" ...  
## $ Q19D : 'haven\_labelled' num 3 4 2 5 5 3 2 5 4 4 ...  
## ..- attr(\*, "label")= chr "Q19d. Better or worse: freedom of NGOs/groups to speak, act"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much less freedom" "Somewhat less freedom" "Same" ...  
## $ Q19E : 'haven\_labelled' num 5 5 4 5 5 3 3 5 3 4 ...  
## ..- attr(\*, "label")= chr "Q19e. Better or worse: freedom of opposition to function"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Much less freedom" "Somewhat less freedom" "Same" ...  
## $ Q20A : 'haven\_labelled' num 2 0 1 0 3 0 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "Q20a. Member of religious group"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not a Member" "Inactive Member" "Active Member" ...  
## $ Q20B : 'haven\_labelled' num 2 0 0 3 0 0 0 0 2 0 ...  
## ..- attr(\*, "label")= chr "Q20b. Member of voluntary association or community group"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Not a Member" "Inactive Member" "Active Member" ...  
## $ Q21A : 'haven\_labelled' num 3 0 0 4 1 1 1 4 3 0 ...  
## ..- attr(\*, "label")= chr "Q21a. Attend a community meeting"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q21B : 'haven\_labelled' num 0 3 1 4 4 3 1 4 1 2 ...  
## ..- attr(\*, "label")= chr "Q21b. Join others to raise an issue"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q22 : 'haven\_labelled' num 1 0 8 2 1 1 5 1 8 1 ...  
## ..- attr(\*, "label")= chr "Q22. Voting in the most recent national election"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 5 6 7 8 ...  
## .. ..- attr(\*, "names")= chr "Missing" "You were not registered to vote" "You voted in the elections" "You decided not to vote" ...  
## $ Q23 : 'haven\_labelled' num 4 9 1 1 4 3 1 4 9 3 ...  
## ..- attr(\*, "label")= chr "Q23. Freeness and fairness of the last national election"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 8 9 98  
## .. ..- attr(\*, "names")= chr "Missing" "Not free and fair" "Free and fair, with major problems" "Free and fair, but with minor problems" ...  
## $ Q24A : 'haven\_labelled' num 1 0 0 0 0 0 0 1 0 0 ...  
## ..- attr(\*, "label")= chr "Q24a. Last national election: attend a campaign rally"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Refused" ...  
## $ Q24B : 'haven\_labelled' num 0 0 0 0 0 0 0 1 0 0 ...  
## ..- attr(\*, "label")= chr "Q24b. Last national election: work for a candidate or party"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No" "Yes" "Refused" ...  
## $ Q25A : 'haven\_labelled' num 0 0 0 2 0 0 0 0 0 0 ...  
## ..- attr(\*, "label")= chr "Q25a. Contact local government councillor"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Only once" "A few times" ...  
## $ Q25B : 'haven\_labelled' num 0 0 0 0 0 0 0 2 0 0 ...  
## ..- attr(\*, "label")= chr "Q25b. Contact MP"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Only once" "A few times" ...  
## $ Q25C : 'haven\_labelled' num 0 0 0 3 0 0 0 2 0 0 ...  
## ..- attr(\*, "label")= chr "Q25c. Contact official of a government agency"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Only once" "A few times" ...  
## $ Q25D : 'haven\_labelled' num 0 0 0 0 0 0 0 2 0 2 ...  
## ..- attr(\*, "label")= chr "Q25d. Contact political party official"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Only once" "A few times" ...  
## $ Q25E : 'haven\_labelled' num 0 0 2 3 0 0 0 2 1 0 ...  
## ..- attr(\*, "label")= chr "Q25e. Contact traditional leader"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Only once" "A few times" ...  
## $ Q25F : 'haven\_labelled' num 0 0 2 3 3 0 0 2 1 2 ...  
## ..- attr(\*, "label")= chr "Q25f. Contact religious leader"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Never" "Only once" "A few times" ...  
## $ Q26A : 'haven\_labelled' num 0 3 1 4 1 1 0 4 0 0 ...  
## ..- attr(\*, "label")= chr "Q26a. Join others to request government action"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q26B : 'haven\_labelled' num 0 3 1 0 4 2 0 3 1 2 ...  
## ..- attr(\*, "label")= chr "Q26b. Contact media"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q26C : 'haven\_labelled' num 0 3 1 4 0 1 0 3 9 1 ...  
## ..- attr(\*, "label")= chr "Q26c. Contact official for help"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q26D : 'haven\_labelled' num 0 1 0 0 0 0 0 3 0 0 ...  
## ..- attr(\*, "label")= chr "Q26d. Refuse to pay tax or fee to government"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q26E : 'haven\_labelled' num 3 1 0 0 0 1 0 3 0 1 ...  
## ..- attr(\*, "label")= chr "Q26e. Attend a demonstration or protest march"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 0 1 2 3 4 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "No, would never do this" "No, but would do if had the chance" "Yes, once or twice" ...  
## $ Q27A : 'haven\_labelled' num 5 2 1 1 2 1 2 2 2 1 ...  
## ..- attr(\*, "label")= chr "Q27a. Reject one-party rule"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Strongly Disapprove" "Disapprove" "Neither Approve Nor Disapprove" ...  
## $ Q27B : 'haven\_labelled' num 2 4 2 1 2 3 4 2 1 2 ...  
## ..- attr(\*, "label")= chr "Q27b. Reject military rule"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Strongly Disapprove" "Disapprove" "Neither Approve Nor Disapprove" ...  
## $ Q27C : 'haven\_labelled' num 8 2 1 1 2 1 2 5 9 1 ...  
## ..- attr(\*, "label")= chr "Q27c. Reject one-man rule"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 4 5 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "Strongly Disapprove" "Disapprove" "Neither Approve Nor Disapprove" ...  
## $ Q28 : 'haven\_labelled' num 9 2 3 2 3 3 1 9 1 3 ...  
## ..- attr(\*, "label")= chr "Q28. Support for democracy"  
## ..- attr(\*, "format.spss")= chr "F8.0"  
## ..- attr(\*, "labels")= Named num -1 1 2 3 8 9  
## .. ..- attr(\*, "names")= chr "Missing" "STATEMENT 3: Doesn't matter" "STATEMENT 2: Sometimes non-democratic preferable" "STATEMENT 1: Democracy preferable" ...  
## [list output truncated]

# Selecting the variables of interest  
  
train2 <- select(train2, URBRUR, REGION, EA\_SVC\_A, EA\_SVC\_B, EA\_SVC\_C, EA\_SVC\_D, EA\_FAC\_A, EA\_FAC\_B, EA\_FAC\_C, EA\_FAC\_D, EA\_FAC\_E, EA\_FAC\_F, EA\_FAC\_G, EA\_SEC\_A, EA\_SEC\_B, EA\_SEC\_C, EA\_SEC\_D, EA\_SEC\_E, EA\_ROAD\_A, EA\_ROAD\_B, EA\_ROAD\_C, Q1, Q2A, Q2AOTHER, Q2B, Q2BOTHER, Q3, Q4A, Q4B, Q5, Q6, Q7, Q8A, Q8B, Q8C, Q8D, Q8E, Q8F, Q9, Q10A, Q10B, Q11A, Q11B, Q12A, Q12B, Q12C, Q12D, Q12E, Q13, Q14, Q15, Q16, Q17, Q18A, Q18B, Q18C, Q18D, Q19A, Q19B, Q19C, Q19D, Q19E, Q20A, Q20B, Q21A, Q21B, Q22, Q23, Q24A, Q24B, Q25A, Q25B, Q25C, Q25D, Q25E, Q25F, Q26A, Q26B, Q26C, Q26D, Q26E, Q27A, Q27B, Q27C, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38A, Q38B, Q38C, Q38D, Q38E, Q38F, Q38G, Q39A, Q39B, Q39C, Q40, Q41, Q42A, Q42B, Q42C, Q42D, Q42E, Q42F, Q43A, Q43B, Q43C, Q43D, Q43E, Q43F, Q43G, Q43H, Q43I, Q43J, Q43K, Q43L\_CAM, Q43M\_CAM, Q44A, Q44B, Q44C, Q44D, Q44E, Q44F, Q44G, Q44H, Q44I, Q44J, Q44K\_CAM, Q44L\_CAM, Q44M\_CAM, Q44N\_CAM, Q45, Q46, Q47, Q48A, Q48B, Q48C, Q48D, Q48E, Q48F, Q49A, Q49B, Q49C, Q49D, Q49E, Q49F, Q49G, Q49H, Q49I, Q49J, Q49K, Q49L, Q49M, Q49N, Q49O, Q49P, Q49Q, Q49R, Q49S, Q49T, Q50, Q51, Q52, Q53A, Q53B, Q53C, Q54A, Q54B, Q55PT1, Q55PT1OTHER, Q55PT2, Q55PT2OTHER, Q55PT3, Q55PT3OTHER, Q56A, Q56B, Q56C, Q56D, Q56E, Q56F, Q56G, Q56H, Q56I, Q56J, Q56K, Q56L, Q56M, Q56N, Q56O, Q56P, Q56Q, Q56R, Q56S, Q57A, Q57B, Q57C, Q57D, Q57E, Q57F, Q57G, Q58A, Q58B, Q58C, Q58D, Q58E, Q59A, Q59B, Q59C, Q60A, Q60B, Q60C, Q60D, Q61A, Q61B, Q61C, Q62, Q63, Q64, Q65, Q66, Q67, Q68A, Q68B, Q69, Q70, Q70OTHER, Q71, Q72A, Q72B, Q73A, Q73B, Q74, Q75, Q76, Q77A, Q77B, Q77C, Q77D, Q78A, Q78B, Q79\_CAM, Q80\_CAM, Q81A\_CAM, Q81B\_CAM, Q81C\_CAM, Q81D\_CAM, Q82A\_CAM, Q82B\_CAM, Q82C\_CAM, Q82D\_CAM, Q84, Q84OTHER, Q85A, Q85B, Q86A, Q86B, Q86C, Q86D, Q87A, Q87B, Q87C, Q87D, Q88A,Q88B, Q88BOTHER, Q89A, Q89B, Q89C, Q89D, Q89E, Q89F, Q90, Q91A, Q91B, Q92A, Q92B, Q93, Q94, Q95A, Q95B, Q95C, Q96A, Q96B, Q97, Q98, Q98OTHER, Q99, Q99OTHER, Q100)  
  
# Changing the types of all variables to factor, except the variable "age" which is numeric  
train2 %<>%   
 mutate\_each(funs(if(is.numeric(.)) as.factor(.) else .))

## Warning: funs() is soft deprecated as of dplyr 0.8.0  
## please use list() instead  
##   
## # Before:  
## funs(name = f(.))  
##   
## # After:   
## list(name = ~ f(.))  
## This warning is displayed once per session.

train2$Q1 <- as.numeric(train2$Q1)  
  
# we need also to remove the variables that end with "OTHER" which create error in the machine learning implementation  
train2 <- select(train2, - c(Q2AOTHER, Q2BOTHER, Q88BOTHER, Q99OTHER, Q98OTHER, Q84OTHER, Q70OTHER, Q55PT3OTHER, Q55PT2OTHER, Q55PT1OTHER))  
  
str(train2)

## Classes 'tbl\_df', 'tbl' and 'data.frame': 1204 obs. of 287 variables:  
## $ URBRUR : Factor w/ 2 levels "1","2": 1 1 1 1 1 1 1 1 1 1 ...  
## $ REGION : Factor w/ 12 levels "1220","1221",..: 1 1 1 10 10 10 10 1 1 1 ...  
## $ EA\_SVC\_A : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SVC\_B : Factor w/ 3 levels "0","1","9": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SVC\_C : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SVC\_D : Factor w/ 3 levels "0","1","9": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_FAC\_A : Factor w/ 3 levels "0","1","9": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_B : Factor w/ 3 levels "0","1","9": 2 2 2 3 3 3 3 2 2 2 ...  
## $ EA\_FAC\_C : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_FAC\_D : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_E : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_F : Factor w/ 3 levels "0","1","9": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_G : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SEC\_A : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_SEC\_B : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_SEC\_C : Factor w/ 2 levels "0","1": 1 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_SEC\_D : Factor w/ 2 levels "0","1": 1 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_SEC\_E : Factor w/ 2 levels "0","1": 1 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_ROAD\_A: Factor w/ 5 levels "1","2","3","5",..: 4 4 4 1 1 1 1 4 4 4 ...  
## $ EA\_ROAD\_B: Factor w/ 6 levels "1","2","3","4",..: 5 5 5 6 6 6 6 5 5 5 ...  
## $ EA\_ROAD\_C: Factor w/ 6 levels "1","2","3","4",..: 5 5 5 4 4 4 4 5 5 5 ...  
## $ Q1 : num 13 38 2 45 39 13 9 20 7 15 ...  
## $ Q2A : Factor w/ 52 levels "1","2","1220",..: 27 43 5 12 12 6 50 5 1 50 ...  
## $ Q2B : Factor w/ 43 levels "1","2","1220",..: 24 2 2 41 12 2 41 2 41 41 ...  
## $ Q3 : Factor w/ 4 levels "1","2","8","9": 2 4 1 1 1 4 1 1 2 2 ...  
## $ Q4A : Factor w/ 7 levels "1","2","3","4",..: 4 4 1 4 2 2 4 4 4 2 ...  
## $ Q4B : Factor w/ 7 levels "1","2","3","4",..: 4 3 2 3 2 3 4 4 5 2 ...  
## $ Q5 : Factor w/ 7 levels "1","2","3","4",..: 4 4 2 5 4 5 4 2 4 4 ...  
## $ Q6 : Factor w/ 7 levels "1","2","3","4",..: 4 3 2 3 3 4 4 2 4 2 ...  
## $ Q7 : Factor w/ 7 levels "1","2","3","4",..: 5 3 2 3 2 4 2 4 4 4 ...  
## $ Q8A : Factor w/ 7 levels "0","1","2","3",..: 3 7 4 1 1 1 2 3 4 3 ...  
## $ Q8B : Factor w/ 6 levels "0","1","2","3",..: 1 1 4 2 2 3 2 3 4 3 ...  
## $ Q8C : Factor w/ 7 levels "0","1","2","3",..: 3 1 4 1 1 3 2 3 2 2 ...  
## $ Q8D : Factor w/ 7 levels "0","1","2","3",..: 1 1 4 2 1 5 2 3 3 1 ...  
## $ Q8E : Factor w/ 7 levels "0","1","2","3",..: 3 3 4 2 1 3 2 5 7 3 ...  
## $ Q8F : Factor w/ 8 levels "1","2","3","4",..: 2 6 2 7 7 1 7 2 5 2 ...  
## $ Q9 : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 3 1 1 1 1 ...  
## $ Q10A : Factor w/ 7 levels "0","1","2","3",..: 3 1 1 3 4 3 3 1 4 2 ...  
## $ Q10B : Factor w/ 7 levels "0","1","2","3",..: 1 4 1 1 4 3 1 3 1 1 ...  
## $ Q11A : Factor w/ 5 levels "0","1","2","3",..: 1 1 4 1 4 2 1 4 1 4 ...  
## $ Q11B : Factor w/ 6 levels "0","1","2","3",..: 1 2 3 1 1 1 1 1 1 1 ...  
## $ Q12A : Factor w/ 6 levels "0","1","2","3",..: 5 3 3 5 5 4 2 5 5 4 ...  
## $ Q12B : Factor w/ 7 levels "0","1","2","3",..: 5 5 4 1 5 3 2 5 5 5 ...  
## $ Q12C : Factor w/ 7 levels "0","1","2","3",..: 5 5 2 4 2 2 1 4 5 2 ...  
## $ Q12D : Factor w/ 7 levels "0","1","2","3",..: 1 5 3 2 4 5 2 4 4 4 ...  
## $ Q12E : Factor w/ 7 levels "0","1","2","3",..: 1 5 3 1 1 3 1 4 3 4 ...  
## $ Q13 : Factor w/ 5 levels "0","1","2","8",..: 1 3 2 1 2 2 1 2 1 2 ...  
## $ Q14 : Factor w/ 6 levels "1","2","3","4",..: 1 3 2 2 4 3 1 4 4 2 ...  
## $ Q15 : Factor w/ 7 levels "1","2","3","4",..: 4 7 4 1 4 2 3 3 3 5 ...  
## $ Q16 : Factor w/ 7 levels "1","2","3","4",..: 3 3 3 4 1 4 3 3 4 4 ...  
## $ Q17 : Factor w/ 7 levels "1","2","3","4",..: 3 2 1 4 3 3 4 3 7 2 ...  
## $ Q18A : Factor w/ 6 levels "0","1","2","3",..: 6 1 3 2 6 1 3 4 2 1 ...  
## $ Q18B : Factor w/ 6 levels "0","1","2","3",..: 4 3 2 1 4 3 4 3 3 3 ...  
## $ Q18C : Factor w/ 6 levels "0","1","2","3",..: 3 3 3 4 1 3 3 1 3 3 ...  
## $ Q18D : Factor w/ 6 levels "0","1","2","3",..: 2 4 4 4 4 4 4 3 2 3 ...  
## $ Q19A : Factor w/ 7 levels "1","2","3","4",..: 4 4 4 1 5 4 1 4 5 4 ...  
## $ Q19B : Factor w/ 7 levels "1","2","3","4",..: 7 5 5 5 5 5 3 5 4 5 ...  
## $ Q19C : Factor w/ 7 levels "1","2","3","4",..: 3 2 2 1 5 4 2 5 4 3 ...  
## $ Q19D : Factor w/ 7 levels "1","2","3","4",..: 3 4 2 5 5 3 2 5 4 4 ...  
## $ Q19E : Factor w/ 7 levels "1","2","3","4",..: 5 5 4 5 5 3 3 5 3 4 ...  
## $ Q20A : Factor w/ 6 levels "0","1","2","3",..: 3 1 2 1 4 1 1 1 1 1 ...  
## $ Q20B : Factor w/ 6 levels "0","1","2","3",..: 3 1 1 4 1 1 1 1 3 1 ...  
## $ Q21A : Factor w/ 7 levels "0","1","2","3",..: 4 1 1 5 2 2 2 5 4 1 ...  
## $ Q21B : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 5 5 4 2 5 2 3 ...  
## $ Q22 : Factor w/ 11 levels "0","1","2","3",..: 2 1 9 3 2 2 6 2 9 2 ...  
## $ Q23 : Factor w/ 7 levels "1","2","3","4",..: 4 6 1 1 4 3 1 4 6 3 ...  
## $ Q24A : Factor w/ 4 levels "0","1","8","9": 2 1 1 1 1 1 1 2 1 1 ...  
## $ Q24B : Factor w/ 4 levels "0","1","8","9": 1 1 1 1 1 1 1 2 1 1 ...  
## $ Q25A : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 3 1 1 1 1 1 1 ...  
## $ Q25B : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 3 1 1 ...  
## $ Q25C : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 4 1 1 1 3 1 1 ...  
## $ Q25D : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 3 1 3 ...  
## $ Q25E : Factor w/ 6 levels "0","1","2","3",..: 1 1 3 4 1 1 1 3 2 1 ...  
## $ Q25F : Factor w/ 5 levels "0","1","2","3",..: 1 1 3 4 4 1 1 3 2 3 ...  
## $ Q26A : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 5 2 2 1 5 1 1 ...  
## $ Q26B : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 1 5 3 1 4 2 3 ...  
## $ Q26C : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 5 1 2 1 4 7 2 ...  
## $ Q26D : Factor w/ 7 levels "0","1","2","3",..: 1 2 1 1 1 1 1 4 1 1 ...  
## $ Q26E : Factor w/ 7 levels "0","1","2","3",..: 4 2 1 1 1 2 1 4 1 2 ...  
## $ Q27A : Factor w/ 7 levels "1","2","3","4",..: 5 2 1 1 2 1 2 2 2 1 ...  
## $ Q27B : Factor w/ 7 levels "1","2","3","4",..: 2 4 2 1 2 3 4 2 1 2 ...  
## $ Q27C : Factor w/ 7 levels "1","2","3","4",..: 6 2 1 1 2 1 2 5 7 1 ...  
## $ Q28 : Factor w/ 5 levels "1","2","3","8",..: 5 2 3 2 3 3 1 5 1 3 ...  
## $ Q29 : Factor w/ 7 levels "1","2","3","4",..: 2 3 2 1 3 5 2 4 3 1 ...  
## $ Q30 : Factor w/ 7 levels "1","2","3","4",..: 2 1 2 1 1 1 3 2 1 2 ...  
## $ Q31 : Factor w/ 7 levels "1","2","3","4",..: 2 3 3 1 4 4 7 4 7 4 ...  
## $ Q32 : Factor w/ 7 levels "1","2","3","4",..: 1 2 4 5 1 1 2 4 2 1 ...  
## $ Q33 : Factor w/ 7 levels "1","2","3","4",..: 4 3 4 4 3 4 2 3 5 4 ...  
## $ Q34 : Factor w/ 7 levels "1","2","3","4",..: 3 2 2 2 3 1 2 3 3 1 ...  
## $ Q35 : Factor w/ 7 levels "1","2","3","4",..: 4 2 2 3 4 2 2 3 4 3 ...  
## $ Q36 : Factor w/ 7 levels "0","1","2","3",..: 5 2 3 2 5 3 3 4 3 3 ...  
## $ Q37 : Factor w/ 7 levels "1","2","3","4",..: 2 2 2 1 2 1 2 3 2 1 ...  
## $ Q38A : Factor w/ 7 levels "1","2","3","4",..: 7 5 2 1 5 5 2 4 4 2 ...  
## $ Q38B : Factor w/ 7 levels "1","2","3","4",..: 4 5 4 1 5 4 2 4 1 5 ...  
## $ Q38C : Factor w/ 7 levels "1","2","3","4",..: 7 4 5 5 5 5 1 4 7 5 ...  
## $ Q38D : Factor w/ 7 levels "1","2","3","4",..: 4 2 4 6 3 1 1 2 7 1 ...  
## $ Q38E : Factor w/ 7 levels "1","2","3","4",..: 2 4 4 1 4 4 5 5 4 5 ...  
## $ Q38F : Factor w/ 7 levels "1","2","3","4",..: 4 4 1 2 4 3 2 4 4 4 ...  
## $ Q38G : Factor w/ 7 levels "1","2","3","4",..: 7 3 1 1 2 1 2 2 7 3 ...  
## [list output truncated]

Defining the problem:

In this problem we want to predict the classification of Cameroonians into two categories: either they “approve” or “disapprove” the President’s job performance (Question Q58A in Afrobarometer Round 7 survey).

# We need to create a variable on approval, with 0 = "Disapprove", 1 = "Approve", 2 = "Don't know"  
train2 <- mutate(train2, approval = ifelse(Q58A == 1 | Q58A == 2, "Disapprove",  
 ifelse(Q58A == 3 | Q58A == 4, "Approve", "Don't know" )))  
train2$approval <- as.factor(train2$approval)  
# we remove Q58A from the dataset, as it is redundant with the new variable approval  
train2 <- select(train2, - Q58A)  
train\_transformed2 <- train2  
str(train\_transformed2)

## Classes 'tbl\_df', 'tbl' and 'data.frame': 1204 obs. of 287 variables:  
## $ URBRUR : Factor w/ 2 levels "1","2": 1 1 1 1 1 1 1 1 1 1 ...  
## $ REGION : Factor w/ 12 levels "1220","1221",..: 1 1 1 10 10 10 10 1 1 1 ...  
## $ EA\_SVC\_A : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SVC\_B : Factor w/ 3 levels "0","1","9": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SVC\_C : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SVC\_D : Factor w/ 3 levels "0","1","9": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_FAC\_A : Factor w/ 3 levels "0","1","9": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_B : Factor w/ 3 levels "0","1","9": 2 2 2 3 3 3 3 2 2 2 ...  
## $ EA\_FAC\_C : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_FAC\_D : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_E : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_F : Factor w/ 3 levels "0","1","9": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_FAC\_G : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SEC\_A : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_SEC\_B : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 2 2 2 ...  
## $ EA\_SEC\_C : Factor w/ 2 levels "0","1": 1 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_SEC\_D : Factor w/ 2 levels "0","1": 1 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_SEC\_E : Factor w/ 2 levels "0","1": 1 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_ROAD\_A: Factor w/ 5 levels "1","2","3","5",..: 4 4 4 1 1 1 1 4 4 4 ...  
## $ EA\_ROAD\_B: Factor w/ 6 levels "1","2","3","4",..: 5 5 5 6 6 6 6 5 5 5 ...  
## $ EA\_ROAD\_C: Factor w/ 6 levels "1","2","3","4",..: 5 5 5 4 4 4 4 5 5 5 ...  
## $ Q1 : num 13 38 2 45 39 13 9 20 7 15 ...  
## $ Q2A : Factor w/ 52 levels "1","2","1220",..: 27 43 5 12 12 6 50 5 1 50 ...  
## $ Q2B : Factor w/ 43 levels "1","2","1220",..: 24 2 2 41 12 2 41 2 41 41 ...  
## $ Q3 : Factor w/ 4 levels "1","2","8","9": 2 4 1 1 1 4 1 1 2 2 ...  
## $ Q4A : Factor w/ 7 levels "1","2","3","4",..: 4 4 1 4 2 2 4 4 4 2 ...  
## $ Q4B : Factor w/ 7 levels "1","2","3","4",..: 4 3 2 3 2 3 4 4 5 2 ...  
## $ Q5 : Factor w/ 7 levels "1","2","3","4",..: 4 4 2 5 4 5 4 2 4 4 ...  
## $ Q6 : Factor w/ 7 levels "1","2","3","4",..: 4 3 2 3 3 4 4 2 4 2 ...  
## $ Q7 : Factor w/ 7 levels "1","2","3","4",..: 5 3 2 3 2 4 2 4 4 4 ...  
## $ Q8A : Factor w/ 7 levels "0","1","2","3",..: 3 7 4 1 1 1 2 3 4 3 ...  
## $ Q8B : Factor w/ 6 levels "0","1","2","3",..: 1 1 4 2 2 3 2 3 4 3 ...  
## $ Q8C : Factor w/ 7 levels "0","1","2","3",..: 3 1 4 1 1 3 2 3 2 2 ...  
## $ Q8D : Factor w/ 7 levels "0","1","2","3",..: 1 1 4 2 1 5 2 3 3 1 ...  
## $ Q8E : Factor w/ 7 levels "0","1","2","3",..: 3 3 4 2 1 3 2 5 7 3 ...  
## $ Q8F : Factor w/ 8 levels "1","2","3","4",..: 2 6 2 7 7 1 7 2 5 2 ...  
## $ Q9 : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 3 1 1 1 1 ...  
## $ Q10A : Factor w/ 7 levels "0","1","2","3",..: 3 1 1 3 4 3 3 1 4 2 ...  
## $ Q10B : Factor w/ 7 levels "0","1","2","3",..: 1 4 1 1 4 3 1 3 1 1 ...  
## $ Q11A : Factor w/ 5 levels "0","1","2","3",..: 1 1 4 1 4 2 1 4 1 4 ...  
## $ Q11B : Factor w/ 6 levels "0","1","2","3",..: 1 2 3 1 1 1 1 1 1 1 ...  
## $ Q12A : Factor w/ 6 levels "0","1","2","3",..: 5 3 3 5 5 4 2 5 5 4 ...  
## $ Q12B : Factor w/ 7 levels "0","1","2","3",..: 5 5 4 1 5 3 2 5 5 5 ...  
## $ Q12C : Factor w/ 7 levels "0","1","2","3",..: 5 5 2 4 2 2 1 4 5 2 ...  
## $ Q12D : Factor w/ 7 levels "0","1","2","3",..: 1 5 3 2 4 5 2 4 4 4 ...  
## $ Q12E : Factor w/ 7 levels "0","1","2","3",..: 1 5 3 1 1 3 1 4 3 4 ...  
## $ Q13 : Factor w/ 5 levels "0","1","2","8",..: 1 3 2 1 2 2 1 2 1 2 ...  
## $ Q14 : Factor w/ 6 levels "1","2","3","4",..: 1 3 2 2 4 3 1 4 4 2 ...  
## $ Q15 : Factor w/ 7 levels "1","2","3","4",..: 4 7 4 1 4 2 3 3 3 5 ...  
## $ Q16 : Factor w/ 7 levels "1","2","3","4",..: 3 3 3 4 1 4 3 3 4 4 ...  
## $ Q17 : Factor w/ 7 levels "1","2","3","4",..: 3 2 1 4 3 3 4 3 7 2 ...  
## $ Q18A : Factor w/ 6 levels "0","1","2","3",..: 6 1 3 2 6 1 3 4 2 1 ...  
## $ Q18B : Factor w/ 6 levels "0","1","2","3",..: 4 3 2 1 4 3 4 3 3 3 ...  
## $ Q18C : Factor w/ 6 levels "0","1","2","3",..: 3 3 3 4 1 3 3 1 3 3 ...  
## $ Q18D : Factor w/ 6 levels "0","1","2","3",..: 2 4 4 4 4 4 4 3 2 3 ...  
## $ Q19A : Factor w/ 7 levels "1","2","3","4",..: 4 4 4 1 5 4 1 4 5 4 ...  
## $ Q19B : Factor w/ 7 levels "1","2","3","4",..: 7 5 5 5 5 5 3 5 4 5 ...  
## $ Q19C : Factor w/ 7 levels "1","2","3","4",..: 3 2 2 1 5 4 2 5 4 3 ...  
## $ Q19D : Factor w/ 7 levels "1","2","3","4",..: 3 4 2 5 5 3 2 5 4 4 ...  
## $ Q19E : Factor w/ 7 levels "1","2","3","4",..: 5 5 4 5 5 3 3 5 3 4 ...  
## $ Q20A : Factor w/ 6 levels "0","1","2","3",..: 3 1 2 1 4 1 1 1 1 1 ...  
## $ Q20B : Factor w/ 6 levels "0","1","2","3",..: 3 1 1 4 1 1 1 1 3 1 ...  
## $ Q21A : Factor w/ 7 levels "0","1","2","3",..: 4 1 1 5 2 2 2 5 4 1 ...  
## $ Q21B : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 5 5 4 2 5 2 3 ...  
## $ Q22 : Factor w/ 11 levels "0","1","2","3",..: 2 1 9 3 2 2 6 2 9 2 ...  
## $ Q23 : Factor w/ 7 levels "1","2","3","4",..: 4 6 1 1 4 3 1 4 6 3 ...  
## $ Q24A : Factor w/ 4 levels "0","1","8","9": 2 1 1 1 1 1 1 2 1 1 ...  
## $ Q24B : Factor w/ 4 levels "0","1","8","9": 1 1 1 1 1 1 1 2 1 1 ...  
## $ Q25A : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 3 1 1 1 1 1 1 ...  
## $ Q25B : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 3 1 1 ...  
## $ Q25C : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 4 1 1 1 3 1 1 ...  
## $ Q25D : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 3 1 3 ...  
## $ Q25E : Factor w/ 6 levels "0","1","2","3",..: 1 1 3 4 1 1 1 3 2 1 ...  
## $ Q25F : Factor w/ 5 levels "0","1","2","3",..: 1 1 3 4 4 1 1 3 2 3 ...  
## $ Q26A : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 5 2 2 1 5 1 1 ...  
## $ Q26B : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 1 5 3 1 4 2 3 ...  
## $ Q26C : Factor w/ 7 levels "0","1","2","3",..: 1 4 2 5 1 2 1 4 7 2 ...  
## $ Q26D : Factor w/ 7 levels "0","1","2","3",..: 1 2 1 1 1 1 1 4 1 1 ...  
## $ Q26E : Factor w/ 7 levels "0","1","2","3",..: 4 2 1 1 1 2 1 4 1 2 ...  
## $ Q27A : Factor w/ 7 levels "1","2","3","4",..: 5 2 1 1 2 1 2 2 2 1 ...  
## $ Q27B : Factor w/ 7 levels "1","2","3","4",..: 2 4 2 1 2 3 4 2 1 2 ...  
## $ Q27C : Factor w/ 7 levels "1","2","3","4",..: 6 2 1 1 2 1 2 5 7 1 ...  
## $ Q28 : Factor w/ 5 levels "1","2","3","8",..: 5 2 3 2 3 3 1 5 1 3 ...  
## $ Q29 : Factor w/ 7 levels "1","2","3","4",..: 2 3 2 1 3 5 2 4 3 1 ...  
## $ Q30 : Factor w/ 7 levels "1","2","3","4",..: 2 1 2 1 1 1 3 2 1 2 ...  
## $ Q31 : Factor w/ 7 levels "1","2","3","4",..: 2 3 3 1 4 4 7 4 7 4 ...  
## $ Q32 : Factor w/ 7 levels "1","2","3","4",..: 1 2 4 5 1 1 2 4 2 1 ...  
## $ Q33 : Factor w/ 7 levels "1","2","3","4",..: 4 3 4 4 3 4 2 3 5 4 ...  
## $ Q34 : Factor w/ 7 levels "1","2","3","4",..: 3 2 2 2 3 1 2 3 3 1 ...  
## $ Q35 : Factor w/ 7 levels "1","2","3","4",..: 4 2 2 3 4 2 2 3 4 3 ...  
## $ Q36 : Factor w/ 7 levels "0","1","2","3",..: 5 2 3 2 5 3 3 4 3 3 ...  
## $ Q37 : Factor w/ 7 levels "1","2","3","4",..: 2 2 2 1 2 1 2 3 2 1 ...  
## $ Q38A : Factor w/ 7 levels "1","2","3","4",..: 7 5 2 1 5 5 2 4 4 2 ...  
## $ Q38B : Factor w/ 7 levels "1","2","3","4",..: 4 5 4 1 5 4 2 4 1 5 ...  
## $ Q38C : Factor w/ 7 levels "1","2","3","4",..: 7 4 5 5 5 5 1 4 7 5 ...  
## $ Q38D : Factor w/ 7 levels "1","2","3","4",..: 4 2 4 6 3 1 1 2 7 1 ...  
## $ Q38E : Factor w/ 7 levels "1","2","3","4",..: 2 4 4 1 4 4 5 5 4 5 ...  
## $ Q38F : Factor w/ 7 levels "1","2","3","4",..: 4 4 1 2 4 3 2 4 4 4 ...  
## $ Q38G : Factor w/ 7 levels "1","2","3","4",..: 7 3 1 1 2 1 2 2 7 3 ...  
## [list output truncated]

## 2. Pre-processing the data using Caret

In this step, we only check for the missing values, and skipped the other procedures, such as centering, scaling, principal component analysis, and creation of “one hot encoding”.

sum(is.na(train\_transformed2))

## [1] 0

Since there is no missing value to remove, we can move to the next step, which is splitting the data.

## 3. Splitting the data using Caret

Since the dataset was initially arranged in a country-year format, it is a good idea to randomize the rows before splitting the dataset into trainSet and testSet.

# Randomizing the dataset  
set.seed(234)  
rows <- sample(nrow(train\_transformed2))  
train\_transformed2 <- train\_transformed2[rows,]  
  
#Spliting dataset into trainSet and testSet based on outcome with a ratio of 75% and 25%, using createDataPartition in Caret  
index <- createDataPartition(train\_transformed2$approval, p=0.75, list=FALSE)  
trainSet2 <- train\_transformed2[index,]  
testSet2 <- train\_transformed2[-index,]  
  
#Checking the structure of trainSet  
str(trainSet2)

## Classes 'tbl\_df', 'tbl' and 'data.frame': 905 obs. of 287 variables:  
## $ URBRUR : Factor w/ 2 levels "1","2": 1 1 1 2 1 2 2 2 1 2 ...  
## $ REGION : Factor w/ 12 levels "1220","1221",..: 7 1 9 6 1 8 9 9 8 3 ...  
## $ EA\_SVC\_A : Factor w/ 2 levels "0","1": 2 2 2 1 2 1 1 1 2 1 ...  
## $ EA\_SVC\_B : Factor w/ 3 levels "0","1","9": 2 2 2 1 2 2 1 2 2 2 ...  
## $ EA\_SVC\_C : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 1 2 1 ...  
## $ EA\_SVC\_D : Factor w/ 3 levels "0","1","9": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_FAC\_A : Factor w/ 3 levels "0","1","9": 2 1 1 1 1 1 1 1 1 1 ...  
## $ EA\_FAC\_B : Factor w/ 3 levels "0","1","9": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_FAC\_C : Factor w/ 2 levels "0","1": 2 2 1 1 1 2 1 1 1 1 ...  
## $ EA\_FAC\_D : Factor w/ 2 levels "0","1": 2 2 2 1 2 2 2 2 2 1 ...  
## $ EA\_FAC\_E : Factor w/ 2 levels "0","1": 2 2 2 1 2 2 2 2 2 2 ...  
## $ EA\_FAC\_F : Factor w/ 3 levels "0","1","9": 2 2 1 1 1 1 1 1 2 1 ...  
## $ EA\_FAC\_G : Factor w/ 2 levels "0","1": 2 2 2 2 2 2 2 2 2 2 ...  
## $ EA\_SEC\_A : Factor w/ 2 levels "0","1": 2 2 1 2 2 2 1 1 1 2 ...  
## $ EA\_SEC\_B : Factor w/ 2 levels "0","1": 1 1 1 2 1 2 1 1 1 2 ...  
## $ EA\_SEC\_C : Factor w/ 2 levels "0","1": 1 1 1 2 1 2 1 1 1 2 ...  
## $ EA\_SEC\_D : Factor w/ 2 levels "0","1": 1 1 1 1 1 2 1 1 1 1 ...  
## $ EA\_SEC\_E : Factor w/ 2 levels "0","1": 1 1 1 1 1 2 1 1 1 1 ...  
## $ EA\_ROAD\_A: Factor w/ 5 levels "1","2","3","5",..: 4 1 1 1 1 1 1 1 4 1 ...  
## $ EA\_ROAD\_B: Factor w/ 6 levels "1","2","3","4",..: 5 1 5 1 1 3 1 1 5 4 ...  
## $ EA\_ROAD\_C: Factor w/ 6 levels "1","2","3","4",..: 5 4 4 3 3 2 2 2 4 3 ...  
## $ Q1 : num 23 18 14 23 45 13 29 32 8 14 ...  
## $ Q2A : Factor w/ 52 levels "1","2","1220",..: 50 50 1 3 17 3 50 16 3 25 ...  
## $ Q2B : Factor w/ 43 levels "1","2","1220",..: 2 2 1 3 17 3 1 4 3 41 ...  
## $ Q3 : Factor w/ 4 levels "1","2","8","9": 4 2 4 2 1 1 1 1 1 2 ...  
## $ Q4A : Factor w/ 7 levels "1","2","3","4",..: 4 2 5 7 2 2 2 1 3 2 ...  
## $ Q4B : Factor w/ 7 levels "1","2","3","4",..: 3 4 3 1 2 3 1 1 2 4 ...  
## $ Q5 : Factor w/ 7 levels "1","2","3","4",..: 3 4 4 1 3 3 7 4 2 4 ...  
## $ Q6 : Factor w/ 7 levels "1","2","3","4",..: 2 2 1 3 3 7 2 4 2 2 ...  
## $ Q7 : Factor w/ 7 levels "1","2","3","4",..: 4 4 1 3 7 7 2 4 1 7 ...  
## $ Q8A : Factor w/ 7 levels "0","1","2","3",..: 4 1 1 4 4 1 1 1 5 5 ...  
## $ Q8B : Factor w/ 6 levels "0","1","2","3",..: 4 2 3 3 4 1 1 1 5 5 ...  
## $ Q8C : Factor w/ 7 levels "0","1","2","3",..: 4 1 1 1 2 1 3 1 4 1 ...  
## $ Q8D : Factor w/ 7 levels "0","1","2","3",..: 4 1 1 1 1 2 1 1 3 5 ...  
## $ Q8E : Factor w/ 7 levels "0","1","2","3",..: 4 2 1 5 4 4 3 2 5 1 ...  
## $ Q8F : Factor w/ 8 levels "1","2","3","4",..: 3 7 2 4 3 2 3 7 3 5 ...  
## $ Q9 : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 1 4 2 ...  
## $ Q10A : Factor w/ 7 levels "0","1","2","3",..: 1 1 3 1 1 1 1 1 5 4 ...  
## $ Q10B : Factor w/ 7 levels "0","1","2","3",..: 4 1 1 1 1 1 5 1 5 1 ...  
## $ Q11A : Factor w/ 5 levels "0","1","2","3",..: 1 4 1 1 3 1 1 1 4 1 ...  
## $ Q11B : Factor w/ 6 levels "0","1","2","3",..: 1 2 1 1 1 1 1 2 1 1 ...  
## $ Q12A : Factor w/ 6 levels "0","1","2","3",..: 5 4 5 1 2 5 4 1 5 5 ...  
## $ Q12B : Factor w/ 7 levels "0","1","2","3",..: 5 3 5 1 5 4 1 1 1 5 ...  
## $ Q12C : Factor w/ 7 levels "0","1","2","3",..: 5 1 1 1 2 3 2 1 1 4 ...  
## $ Q12D : Factor w/ 7 levels "0","1","2","3",..: 4 4 1 1 1 3 1 1 1 3 ...  
## $ Q12E : Factor w/ 7 levels "0","1","2","3",..: 4 5 1 1 1 3 1 1 1 3 ...  
## $ Q13 : Factor w/ 5 levels "0","1","2","8",..: 1 1 1 1 2 2 1 1 2 1 ...  
## $ Q14 : Factor w/ 6 levels "1","2","3","4",..: 3 2 6 3 2 2 1 2 2 2 ...  
## $ Q15 : Factor w/ 7 levels "1","2","3","4",..: 2 1 3 7 4 1 3 7 3 4 ...  
## $ Q16 : Factor w/ 7 levels "1","2","3","4",..: 4 4 3 1 4 4 3 3 3 5 ...  
## $ Q17 : Factor w/ 7 levels "1","2","3","4",..: 1 3 5 4 5 3 2 7 3 1 ...  
## $ Q18A : Factor w/ 6 levels "0","1","2","3",..: 3 2 2 4 1 2 1 2 4 4 ...  
## $ Q18B : Factor w/ 6 levels "0","1","2","3",..: 4 1 3 6 6 2 6 6 6 4 ...  
## $ Q18C : Factor w/ 6 levels "0","1","2","3",..: 4 1 1 4 2 1 1 1 4 4 ...  
## $ Q18D : Factor w/ 6 levels "0","1","2","3",..: 4 1 1 3 4 1 3 6 4 1 ...  
## $ Q19A : Factor w/ 7 levels "1","2","3","4",..: 3 1 4 1 5 4 1 1 4 3 ...  
## $ Q19B : Factor w/ 7 levels "1","2","3","4",..: 6 1 4 2 5 4 1 4 4 3 ...  
## $ Q19C : Factor w/ 7 levels "1","2","3","4",..: 4 4 2 7 5 5 2 7 4 3 ...  
## $ Q19D : Factor w/ 7 levels "1","2","3","4",..: 7 4 1 4 7 5 1 1 4 3 ...  
## $ Q19E : Factor w/ 7 levels "1","2","3","4",..: 3 3 4 7 3 4 3 5 4 3 ...  
## $ Q20A : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 2 2 2 4 2 1 2 ...  
## $ Q20B : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 2 1 1 ...  
## $ Q21A : Factor w/ 7 levels "0","1","2","3",..: 1 1 5 5 2 4 5 5 2 3 ...  
## $ Q21B : Factor w/ 7 levels "0","1","2","3",..: 1 1 1 5 2 4 4 5 2 4 ...  
## $ Q22 : Factor w/ 11 levels "0","1","2","3",..: 2 8 2 2 2 2 2 2 2 3 ...  
## $ Q23 : Factor w/ 7 levels "1","2","3","4",..: 4 2 4 4 6 2 3 6 4 4 ...  
## $ Q24A : Factor w/ 4 levels "0","1","8","9": 1 1 1 1 1 2 1 1 2 1 ...  
## $ Q24B : Factor w/ 4 levels "0","1","8","9": 1 1 1 1 2 1 1 1 2 1 ...  
## $ Q25A : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 1 4 1 ...  
## $ Q25B : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 1 1 4 1 ...  
## $ Q25C : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 1 4 1 1 1 ...  
## $ Q25D : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 1 1 3 1 1 4 1 ...  
## $ Q25E : Factor w/ 6 levels "0","1","2","3",..: 1 1 1 4 1 1 4 1 1 1 ...  
## $ Q25F : Factor w/ 5 levels "0","1","2","3",..: 1 1 2 4 1 4 4 1 1 1 ...  
## $ Q26A : Factor w/ 7 levels "0","1","2","3",..: 1 1 1 1 2 3 4 1 5 2 ...  
## $ Q26B : Factor w/ 7 levels "0","1","2","3",..: 1 1 1 1 2 3 2 1 5 2 ...  
## $ Q26C : Factor w/ 7 levels "0","1","2","3",..: 1 1 2 2 2 1 1 1 2 1 ...  
## $ Q26D : Factor w/ 7 levels "0","1","2","3",..: 1 1 1 1 1 2 1 1 2 1 ...  
## $ Q26E : Factor w/ 7 levels "0","1","2","3",..: 1 1 1 1 2 2 1 1 1 2 ...  
## $ Q27A : Factor w/ 7 levels "1","2","3","4",..: 1 1 2 2 1 3 7 2 5 1 ...  
## $ Q27B : Factor w/ 7 levels "1","2","3","4",..: 1 2 2 3 1 3 1 2 5 5 ...  
## $ Q27C : Factor w/ 7 levels "1","2","3","4",..: 5 1 2 1 1 3 7 7 1 5 ...  
## $ Q28 : Factor w/ 5 levels "1","2","3","8",..: 3 3 5 1 3 3 5 5 2 1 ...  
## $ Q29 : Factor w/ 7 levels "1","2","3","4",..: 1 4 7 1 3 1 3 2 1 2 ...  
## $ Q30 : Factor w/ 7 levels "1","2","3","4",..: 1 1 2 1 1 1 2 2 1 3 ...  
## $ Q31 : Factor w/ 7 levels "1","2","3","4",..: 4 4 4 3 2 2 3 3 4 3 ...  
## $ Q32 : Factor w/ 7 levels "1","2","3","4",..: 1 1 7 1 1 4 2 7 1 4 ...  
## $ Q33 : Factor w/ 7 levels "1","2","3","4",..: 1 4 7 3 4 4 3 3 3 3 ...  
## $ Q34 : Factor w/ 7 levels "1","2","3","4",..: 1 1 7 3 1 4 1 7 1 2 ...  
## $ Q35 : Factor w/ 7 levels "1","2","3","4",..: 2 2 2 6 2 2 2 6 2 2 ...  
## $ Q36 : Factor w/ 7 levels "0","1","2","3",..: 3 2 2 7 2 4 2 3 3 3 ...  
## $ Q37 : Factor w/ 7 levels "1","2","3","4",..: 1 1 7 3 2 2 2 7 1 4 ...  
## $ Q38A : Factor w/ 7 levels "1","2","3","4",..: 5 4 7 2 4 1 4 2 4 1 ...  
## $ Q38B : Factor w/ 7 levels "1","2","3","4",..: 5 4 2 4 4 4 4 2 4 5 ...  
## $ Q38C : Factor w/ 7 levels "1","2","3","4",..: 5 4 2 2 4 5 4 2 4 5 ...  
## $ Q38D : Factor w/ 7 levels "1","2","3","4",..: 1 1 4 4 1 4 1 4 4 5 ...  
## $ Q38E : Factor w/ 7 levels "1","2","3","4",..: 5 4 4 4 1 5 5 2 5 5 ...  
## $ Q38F : Factor w/ 7 levels "1","2","3","4",..: 2 2 2 4 3 4 1 4 2 5 ...  
## $ Q38G : Factor w/ 7 levels "1","2","3","4",..: 2 2 2 7 2 5 4 7 3 5 ...  
## [list output truncated]

## 4. Feature selection using Caret

The feature selection, which is a crucial part of machine learning, is made easy by Caret. The “recursive feature elimination” or “rfe” function in Caret is used to find the best subset of features to be included in the models.

# Feature selection using rfe in caret  
ctrl <- rfeControl(functions = rfFuncs,  
 method = "repeatedcv",  
 repeats = 3,  
 verbose = FALSE)  
  
y <- trainSet2$approval  
x <- select(trainSet2, - approval)  
  
approvalProfile <- rfe(x, y,  
 rfeControl = ctrl)  
  
approvalProfile

##   
## Recursive feature selection  
##   
## Outer resampling method: Cross-Validated (10 fold, repeated 3 times)   
##   
## Resampling performance over subset size:  
##   
## Variables Accuracy Kappa AccuracySD KappaSD Selected  
## 4 0.6895 0.4293 0.03349 0.06402   
## 8 0.7292 0.4974 0.04432 0.08684   
## 16 0.7444 0.5231 0.04077 0.07524 \*  
## 286 0.7227 0.4551 0.04005 0.08388   
##   
## The top 5 variables (out of 16):  
## Q58B, Q43A, Q58C, REGION, Q99

Recursive feature selection

Outer resampling method: Cross-Validated (10 fold, repeated 3 times)

Resampling performance over subset size:

The top 5 variables (out of 16): Q58B, Q43A, Q58C, REGION, Q58E

## 5. Training models using Caret

Caret provides a large number of algorithms with similar syntax. Following Kaushik’s practical guide, we will apply the following: GBM, Random forest, Neural net and Logistic regression.

fitControl <- trainControl(method = "repeatedcv",  
 number = 5,  
 repeats = 3)  
model\_gbm2 <- train(approval ~ ., data = trainSet2,   
 method = "gbm",   
 trControl = fitControl,  
 verbose = FALSE)

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1030: Q55PT330 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1030: Q55PT330 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

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## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

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## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1030: Q55PT330 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 253: Q12C9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 259: Q12D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 854: Q49K9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1026: Q55PT325 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 253: Q12C9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 259: Q12D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 854: Q49K9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1026: Q55PT325 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 253: Q12C9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 259: Q12D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 854: Q49K9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1026: Q55PT325 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1549: Q87C4 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1549: Q87C4 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1549: Q87C4 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 990: Q55PT222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 990: Q55PT222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 990: Q55PT222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 264: Q12E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 264: Q12E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 264: Q12E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 812: Q49C9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 812: Q49C9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 812: Q49C9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
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## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 106: Q2B1225 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 106: Q2B1225 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 106: Q2B1225 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 83: Q2A1253 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 106: Q2B1225 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 130: Q2B1253 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 854: Q49K9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1033: Q55PT31220 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 83: Q2A1253 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 106: Q2B1225 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 130: Q2B1253 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 854: Q49K9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1033: Q55PT31220 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 83: Q2A1253 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 98: Q2A9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 106: Q2B1225 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 130: Q2B1253 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 140: Q2B9998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 141: Q2B9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 161: Q58 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 167: Q68 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 173: Q78 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 179: Q8A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 185: Q8B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 190: Q8C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 196: Q8D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 202: Q8E8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 214: Q98 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 226: Q10B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 231: Q11A8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 235: Q11B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 246: Q12B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 247: Q12B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 252: Q12C8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 258: Q12D8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 854: Q49K9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 877: Q49P9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 952: Q55PT115 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1033: Q55PT31220 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1463: Q841236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1469: Q841242 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1475: Q841249 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1444: Q82C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1444: Q82C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 118: Q2B1238 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 156: Q4B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 352: Q20B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 391: Q25A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 955: Q55PT118 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 975: Q55PT26 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1015: Q55PT312 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1311: Q7013 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1433: Q82A\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1444: Q82C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1460: Q841232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1596: Q909 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1714: Q9823 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 180: Q8A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 180: Q8A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 109: Q2B1228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 126: Q2B1248 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 180: Q8A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 236: Q11B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 806: Q49B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 842: Q49I9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 869: Q49N9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 981: Q55PT212 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1424: Q81C\_CAM9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1593: Q89F9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1611: Q92A9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1699: Q985 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1715: Q9825 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1715: Q9825 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 62: Q2A1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 86: Q2A1256 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 132: Q2B1255 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 134: Q2B1258 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 815: Q49D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 836: Q49H9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 848: Q49J9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 956: Q55PT119 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1485: Q841259 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1487: Q842222 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1498: Q849990 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1627: Q949 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1705: Q9811 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1712: Q9820 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1715: Q9825 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 65: Q2A1235 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 113: Q2B1232 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 396: Q25B9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 406: Q25D9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 944: Q55PT16 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 996: Q55PT228 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1021: Q55PT318 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1464: Q841237 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1704: Q9810 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 99: Q2A9999 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 116: Q2B1236 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 857: Q49L9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 863: Q49M9 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 964: Q55PT130 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1004: Q55PT29998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1013: Q55PT310 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1036: Q55PT39998 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1512: Q85B8 has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =  
## "bernoulli", : variable 1622: Q939 has no variation.

model\_rf2 <- train(approval ~ ., data = trainSet2,   
 method = "rf",   
 trControl = fitControl,  
 verbose = FALSE)

## 6. Variable importance estimation using Caret

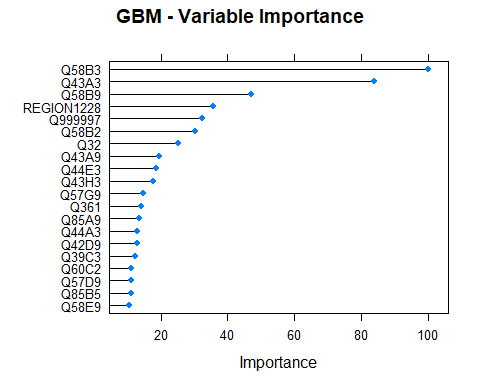
We can also check the variable importance estimates in Caret by using the “varImp” function" for any model.

### 6.1 Variable importance for GBM

# Checking variable importance for GBM  
# Variable Importance  
varImp(object=model\_gbm2)

## gbm variable importance  
##   
## only 20 most important variables shown (out of 1741)  
##   
## Overall  
## Q58B3 100.00  
## Q43A3 83.82  
## Q58B9 47.03  
## REGION1228 35.83  
## Q999997 32.45  
## Q58B2 30.43  
## Q32 25.14  
## Q43A9 19.42  
## Q44E3 18.47  
## Q43H3 17.79  
## Q57G9 14.69  
## Q361 13.97  
## Q85A9 13.40  
## Q44A3 12.82  
## Q42D9 12.80  
## Q39C3 12.35  
## Q60C2 11.25  
## Q57D9 11.22  
## Q85B5 11.12  
## Q58E9 10.65

#Plotting Varianle importance for GBM  
plot(varImp(object=model\_gbm2),main="GBM - Variable Importance", top = 20)

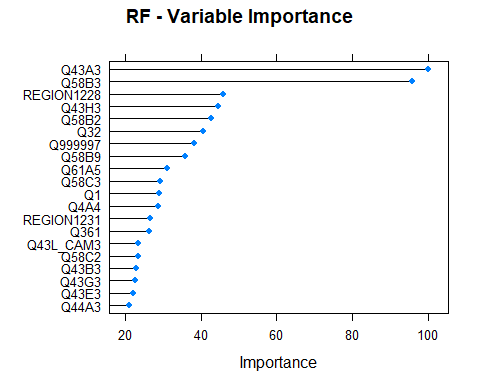


### 6.2 Variable importance for RF

#Checking variable importance for RF  
varImp(object=model\_rf2)

## rf variable importance  
##   
## only 20 most important variables shown (out of 1741)  
##   
## Overall  
## Q43A3 100.00  
## Q58B3 95.78  
## REGION1228 45.94  
## Q43H3 44.58  
## Q58B2 42.59  
## Q32 40.59  
## Q999997 38.16  
## Q58B9 35.90  
## Q61A5 31.04  
## Q58C3 29.06  
## Q1 28.97  
## Q4A4 28.68  
## REGION1231 26.49  
## Q361 26.16  
## Q43L\_CAM3 23.35  
## Q58C2 23.35  
## Q43B3 22.89  
## Q43G3 22.66  
## Q43E3 22.01  
## Q44A3 21.11

#rf variable importance  
  
  
#Plotting Varianle importance for Random Forest  
plot(varImp(object=model\_rf2),main="RF - Variable Importance", top = 20)



## 7. Making predictions using Caret

#Predictions with gbm  
predictions\_gbm2 <-predict.train(object=model\_gbm2,testSet2,type="raw")  
table(predictions\_gbm2)

## predictions\_gbm2  
## Approve Disapprove Don't know   
## 191 87 21

confusionMatrix(predictions\_gbm2,testSet2$approval)

## Confusion Matrix and Statistics  
##   
## Reference  
## Prediction Approve Disapprove Don't know  
## Approve 146 36 9  
## Disapprove 18 59 10  
## Don't know 4 5 12  
##   
## Overall Statistics  
##   
## Accuracy : 0.7258   
## 95% CI : (0.6714, 0.7755)  
## No Information Rate : 0.5619   
## P-Value [Acc > NIR] : 3.607e-09   
##   
## Kappa : 0.4888   
##   
## Mcnemar's Test P-Value : 0.0224   
##   
## Statistics by Class:  
##   
## Class: Approve Class: Disapprove Class: Don't know  
## Sensitivity 0.8690 0.5900 0.38710  
## Specificity 0.6565 0.8593 0.96642  
## Pos Pred Value 0.7644 0.6782 0.57143  
## Neg Pred Value 0.7963 0.8066 0.93165  
## Prevalence 0.5619 0.3344 0.10368  
## Detection Rate 0.4883 0.1973 0.04013  
## Detection Prevalence 0.6388 0.2910 0.07023  
## Balanced Accuracy 0.7628 0.7246 0.67676

Result of the prediction withm GBM:

predictions\_gbm2 Approve Disapprove Don’t know 184 96 19 Confusion Matrix and Statistics

Reference

Prediction Approve Disapprove Don’t know Approve 137 37 10 Disapprove 28 62 6 Don’t know 3 1 15

Overall Statistics

Accuracy : 0.7157   
 95% CI : (0.6609, 0.7662)  
No Information Rate : 0.5619   
P-Value [Acc > NIR] : 3.046e-08   
   
 Kappa : 0.4738

Mcnemar’s Test P-Value : 0.03532

Statistics by Class:

Class: Approve Class: Disapprove Class: Don't know

Sensitivity 0.8155 0.6200 0.48387 Specificity 0.6412 0.8291 0.98507 Pos Pred Value 0.7446 0.6458 0.78947 Neg Pred Value 0.7304 0.8128 0.94286 Prevalence 0.5619 0.3344 0.10368 Detection Rate 0.4582 0.2074 0.05017 Detection Prevalence 0.6154 0.3211 0.06355 Balanced Accuracy 0.7283 0.7246 0.73447

#Predictions with rf  
predictions\_rf2 <-predict.train(object=model\_rf2,testSet2,type="raw")  
table(predictions\_rf2)

## predictions\_rf2  
## Approve Disapprove Don't know   
## 225 66 8

confusionMatrix(predictions\_rf2,testSet2$approval)

## Confusion Matrix and Statistics  
##   
## Reference  
## Prediction Approve Disapprove Don't know  
## Approve 160 50 15  
## Disapprove 8 48 10  
## Don't know 0 2 6  
##   
## Overall Statistics  
##   
## Accuracy : 0.7157   
## 95% CI : (0.6609, 0.7662)  
## No Information Rate : 0.5619   
## P-Value [Acc > NIR] : 3.046e-08   
##   
## Kappa : 0.4321   
##   
## Mcnemar's Test P-Value : 5.538e-11   
##   
## Statistics by Class:  
##   
## Class: Approve Class: Disapprove Class: Don't know  
## Sensitivity 0.9524 0.4800 0.19355  
## Specificity 0.5038 0.9095 0.99254  
## Pos Pred Value 0.7111 0.7273 0.75000  
## Neg Pred Value 0.8919 0.7768 0.91409  
## Prevalence 0.5619 0.3344 0.10368  
## Detection Rate 0.5351 0.1605 0.02007  
## Detection Prevalence 0.7525 0.2207 0.02676  
## Balanced Accuracy 0.7281 0.6948 0.59304

Result of the predition with Random Forest algorithm:

predictions\_rf2 Approve Disapprove Don’t know 185 91 23 Confusion Matrix and Statistics

Reference

Prediction Approve Disapprove Don’t know Approve 142 32 11 Disapprove 23 63 5 Don’t know 3 5 15

Overall Statistics

Accuracy : 0.7358   
 95% CI : (0.682, 0.7849)  
No Information Rate : 0.5619   
P-Value [Acc > NIR] : 3.686e-10   
   
 Kappa : 0.513

Mcnemar’s Test P-Value : 0.1095

Statistics by Class:

Class: Approve Class: Disapprove Class: Don't know

Sensitivity 0.8452 0.6300 0.48387 Specificity 0.6718 0.8593 0.97015 Pos Pred Value 0.7676 0.6923 0.65217 Neg Pred Value 0.7719 0.8221 0.94203 Prevalence 0.5619 0.3344 0.10368 Detection Rate 0.4749 0.2107 0.05017 Detection Prevalence 0.6187 0.3043 0.07692 Balanced Accuracy 0.7585 0.7446 0.72701

## Conclusion