

# Analysis of RICA database

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# Is Mont-Saint-Michel Norman or Breton?



Analysis of cattle units, number of dairy workers, turnover and farm surface area between Normandy and Brittany.



# Summary

## I. Qualitative analysis

- NREG
- UGBBO
- SAFER

## II. Quantitative analysis

- UTATO
- CHAFF



# Lets get technical before the fun

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## How did we get the data ?

```
#Port the excel file

# Install readxl
install.packages("readxl")

# readxl package
library(readxl)

# Replace "file_path.xlsx" with the path to your Excel file
data <- read_excel("C:/Users/cleme/Downloads/RICA_isafe_students_vf.xlsx")

# Read the first sheet of the Excel file
data <- read_excel("C:/Users/cleme/Downloads/RICA_isafe_students_vf.xlsx", sheet = 1)
```

## How did we clean the data ?

```
#Get the farms from normandie
normandie <- data[data$NREG == 28, ]

#Get the farms from brittany
bretagne <- data[data$NREG == 53, ]
```



# I. NREG : rather a bowl of cider or calva ?

**Counting the number of farms in Brittany and Normandy.**

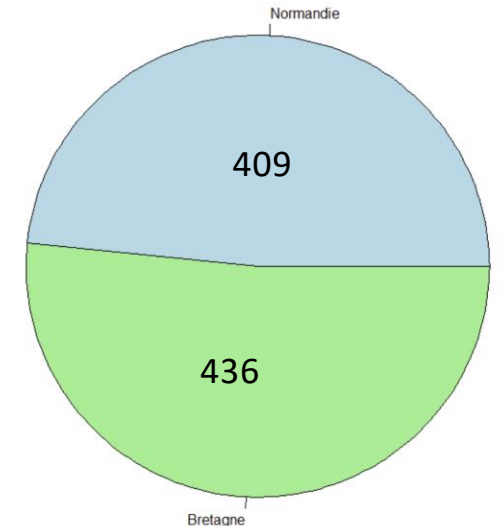
=>436 in Brittany and 409 in Normandy

Pie chart to visualize proportion

**Relevance test (chi-square):**  $p \text{ value} = 0.005473204$

=> there are significantly more farms in Brittany than in Normandy.

Number of Farms in Normandie vs Bretagne





# First point: Brittany



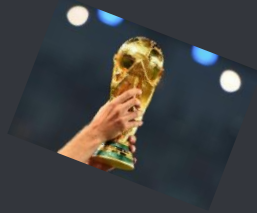


First point: Brittany Normandy

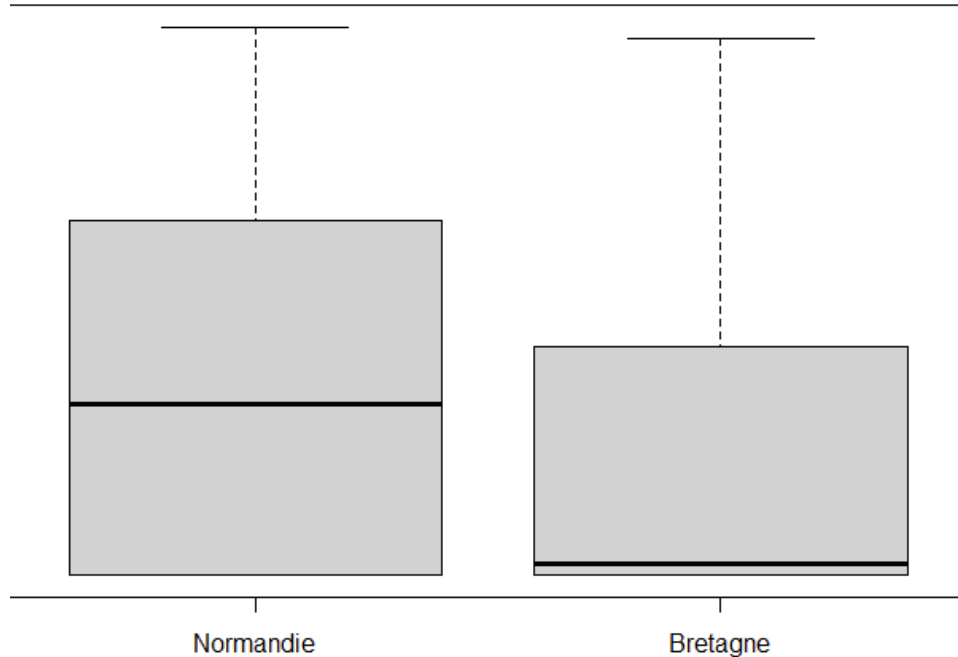




# UGBBO Who has the biggest..... cow sheptel



Boxplot of UGBBO in Normandie and Bretagne



- Number of large cattle per farm in Normandy and Brittany

- => IQR, median and average

- higher in Normandy Box plot to visualize

- T-test:  $p \text{ value} = 6.955298e-09$
- => null hypothesis rejected , significant difference in mean UGBBO.







Second point: Normandy

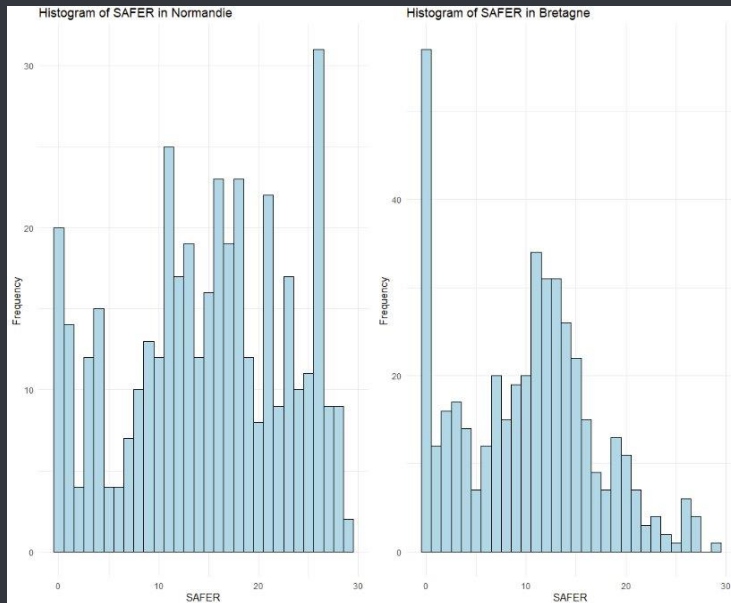




# SAFER : is it better to marry a Norman or a Breton farmer ?

## Comparing surface of exploitation

=> highest surface exploitations in normandie than in bretagne Histogram to compare







Third point: Normandy





# UTATO : where are the most beautiful, the most motivated, the most charismatic farmers?

Comparison of number of workers  
=> fairly close, more in Brittany

## Mean of the number of workers per farms in regions

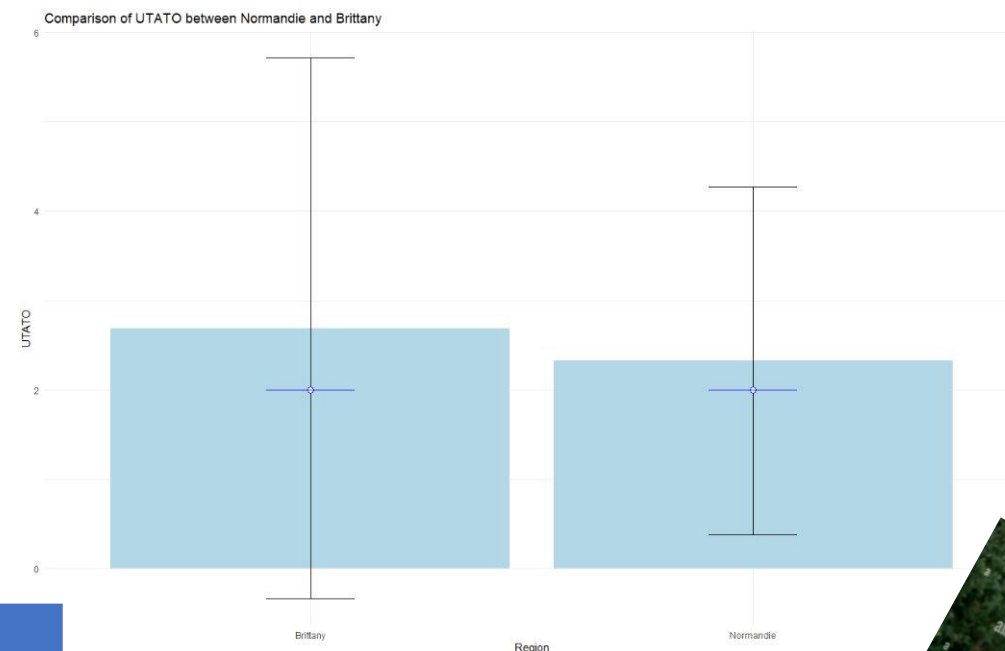
Brittany	Normady
2,69055	2.324474

Shapiro wilk:

Values are not normally distributed

## Results of shapiro wilk test

	Brittany	Normandy
W	0.51716	0.66876
p	< 2.2e-16	< 2.2e-16







Fourth point: Brittany



# CHAFF : Who is worth the more ?

Comparison of average sales per farm

=> Brittany earns more per farm.

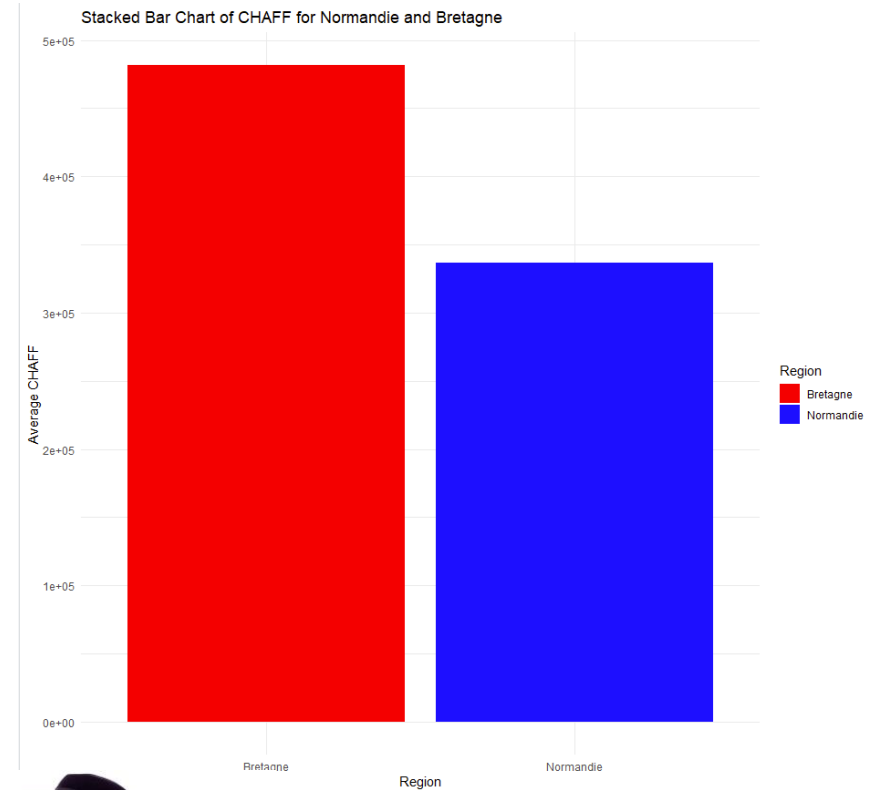
Visualization with stacked bar chart

Shapiro test:

- two p-values less than 0.05
- the distribution is not normal.

Fisher test :

- ratio = 0.7519717 and p-value less than 0.05
- the variances are therefore significantly different.







Fifth point: Brittany





A scenic view of Mont Saint-Michel, a medieval island monastery in Normandy, France. The image shows the iconic abbey with its tall spire, surrounded by a dense cluster of stone buildings. The island is connected to the mainland by a long causeway. The sea is calm, and the sky is a mix of blue and light orange, suggesting dawn or dusk. In the foreground, there are several white and blue plastic bags of trash, and a white podium with the number 1 on it.

# Brittany Normandy

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1

3



A detailed historical map of Normandy and Brittany, France, from 1808. The map shows the coastline, major cities, and rivers. A compass rose is in the top left, and a circular seal is in the top center. The text 'NORMANDIE ET DE LA BRETAGNE' is prominently displayed in the center, with '1808' below it. A decorative frame surrounds the title. The map is titled 'NORMANDIE ET DE LA BRETAGNE' and includes a scale bar at the bottom right. The text 'OCEAN' is visible on the left side. The map is a historical document, likely a military or administrative map, given the date and the detailed nature of the geographical features.

Thanks for your attention