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library(ggplot2)
library(readxl)

setwd("/home/vicente/projeto-pe-2024-2025")

# Read data
wine_data_raw <- read_excel("wine_prod_EU.xlsx")

# Filter and clean data for 2003
wine_data_filtered <- wine_data_raw[!is.na(wine_data_raw$Category) &
                                     wine_data_raw$'Product Group' != "Non-
                                     Vinified" &
                                     wine_data_raw$Year == 2003, ]

# Create Country_Group variable
wine_data_filtered$Country_Group <- ifelse(wine_data_filtered$'Member State' %in%
      % c("France", "Italy", "Spain"),
      wine_data_filtered$'Member State', "
      Others")

# Aggregate data by Country_Group and Category
wine_data <- aggregate(Availability ~ Country_Group + Category,
                       data = wine_data_filtered,
                       FUN = sum, na.rm = TRUE)
names(wine_data)[3] <- "Total_Availability"

# Create bar chart
plot <- ggplot(wine_data, aes(x = Category, y = Total_Availability, fill =
      Country_Group)) +
  geom_bar(stat = "identity", position = "dodge") +
  labs(title = "Wine Availability by Category and Country Group in 2003",
       x = "Wine Category", y = "Availability (10^3 hL)", fill = "Country Group"
  ) +
  theme_minimal() +
  theme(axis.text.x = element_text(angle = 45, hjust = 1)) +
  scale_fill_brewer(type = "qual", palette = "Set2")

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