UTAUT

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```
#Install the required packages
install.packages("tidyr")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)
```

```
install.packages("dplyr")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)
```

```
install.packages("xfun")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)
```

```
#Load the require libraries

library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyr)
library(knitr)
```

```
# Read the CSV file
data <- read.csv("/cloud/project/Survey/survey.csv")
```

```
#Factoring the elements of every column in Performance Expectancy and change it in numeric value
#Getting the mean and standard deviation
PE1 <- data$Do.you.find.using.Digital.payment.useful.
PE1_fr <- factor(data$Do.you.find.using.Digital.payment.useful., levels = c("Yes", "No", "Maybe"))
PE1_recode <- recode(PE1_fr, "Yes" = 1, "No" = 2, "Maybe" = 3)
PE1_mean <- mean(PE1_recode)
PE1_sd <- sd(PE1_recode)


PE2 <- data$Do.you.think.using.Digital.payment.method.will.help.you.manage.your.money.better.
```

```r
PE2_fr <- factor(data$Do.you.think.using.Digital.payment.method.will.help.you.manage.your.money.better.
PE2_recode <- recode(PE2_fr, "Yes" = 1, "No" = 2, "Maybe" = 3)
PE2_mean <- mean(PE2_recode)
PE2_sd <- sd(PE2_recode)


PE3 <- data$Do.you.believe.that.Digital.payment.method.will.make.your.financial.transaction.easier.
PE3_fr <- factor(PE3, levels = c("Yes", "No", "Maybe"))
PE3_recode <- recode(PE3_fr, "Yes" = 1, "No" = 2, "Maybe" = 3)
PE3_mean <- mean(PE3_recode, na.rm = TRUE)
PE3_sd <- sd(PE3_recode, na.rm = TRUE)


PE4 <- data$Do.you.think.Digital.payment.method.will.make.it.easier.for.you.to.keep.track.of.your.spendi
PE4_fr <- factor(PE4, levels = c("Yes", "No", "Maybe"))
PE4_recode <- recode(PE4_fr, "Yes" = 1, "No" = 2, "Maybe" = 3)
PE4_mean <- mean(PE4_recode, na.rm = TRUE)
PE4_sd <- sd(PE4_recode, na.rm = TRUE)

#Calculate the mean and standard deviation of Performance Expectancy rounded to 2 decimal places
PE1_mean <- round(PE1_mean, 2)
PE1_sd <- round(PE1_sd, 2)

PE2_mean <- round(PE2_mean, 2)
PE2_sd <- round(PE2_sd, 2)

PE3_mean <- round(PE3_mean, 2)
PE3_sd <- round(PE3_sd, 2)

PE4_mean <- round(PE4_mean, 2)
PE4_sd <- round(PE4_sd, 2)

#Creating a data frame for Performance Expectancy data
PE_data <- data.frame(
  Questions = c("Do you find using Digital payment useful?", "Do you think using Digital payment method
  Description = c("Performance Expectance", "Performance Expectance", "Performance Expectance", "Perfora
  Mean = c(PE1_mean, PE2_mean, PE3_mean, PE4_mean),
  SD = c(PE1_sd, PE2_sd, PE3_sd, PE4_sd)
)

# Save the data frame of Performance Expectancy as a CSV file
write.csv(PE_data, "PE.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(PE_data, caption = "Performance Expectancy")
```

Table 1: Performance Expectancy

Questions	Description	Mean	SD
Do you find using Digital payment useful?	Performance Expectance	1.00	0.00
Do you think using Digital payment method will help you manage your money better?	Performance Expectance	1.75	0.92

Questions	Description	Mean	SD
Do you believe that Digital payment method will make your financial transaction easier?	Performance Expectance	1.19	0.57
Do you think Digital payment method will make it easier for you to keep track of your spending?	Perforamce Expectancy	1.33	0.67

```
#Factoring the elements of every column in Effort Expectancy and change it in numeric value
#Getting the mean and standard deviation
EE1 <-data$Do.you.find.Digital.payment.method.easy.to.use.and.understand.
EE1_fr <-factor(data$Do.you.find.Digital.payment.method.easy.to.use.and.understand., levels = c("Strongl
EE1_recode <- recode(EE1_fr, "Strongly agree" = 1, "Agree" = 2, "Neutral" = 3, "Disagree" = 4, "Strongly
EE1_mean <- mean(EE1_recode)
EE1_sd <- sd(EE1_recode)

EE2 <-data$Do.you.find.digital.payment.platforms.user.friendly.and.efficient.for.making.transactions.
EE2_fr <-factor(data$Do.you.find.digital.payment.platforms.user.friendly.and.efficient.for.making.transa
EE2_recode <- recode(EE2_fr, "Strongly agree" = 1, "Agree" = 2, "Neutral" = 3, "Disagree" = 4, "Strongly
EE2_mean <- mean(EE2_recode)
EE2_sd <- sd(EE2_recode)


EE3 <-data$Do.you.find.the.process.of.digital.payment.platforms.with.other.financial.tools.and.services
EE3_fr <-factor(data$Do.you.find.the.process.of.digital.payment.platforms.with.other.financial.tools.and
EE3_recode <- recode(EE3_fr, "Strongly agree" = 1, "Agree" = 2, "Neutral" = 3, "Disagree" = 4, "Strongly
EE3_mean <- mean(EE3_recode)
EE3_sd <- sd(EE3_recode)

EE4 <-data$Do.you.find.digital.payment.method.convenient.to.use.
EE4_fr <-factor(data$Do.you.find.digital.payment.method.convenient.to.use., levels = c("Strongly agree"
EE4_recode <- recode(EE4_fr, "Strongly agree" = 1, "Agree" = 2, "Neutral" = 3, "Disagree" = 4, "Strongly
EE4_mean <- mean(EE4_recode)
EE4_sd <- sd(EE4_recode)

#Rounding the value of mean and standard deviation into 2 decimal places
EE1_mean <- round(EE1_mean, 2)
EE1_sd <- round(EE1_sd, 2)

EE2_mean <- round(EE2_mean, 2)
EE2_sd <- round(EE2_sd, 2)

EE3_mean <- round(EE3_mean, 2)
EE3_sd <- round(EE3_sd, 2)

EE4_mean <- round(EE4_mean, 2)
EE4_sd <- round(EE4_sd, 2)

#Creating a data frame for Performance Expectancy data
EE_data <- data.frame(
  Questions = c("Do you find Digital payment method easy to use and understand?", "Do you find digital p
  Description = c("Effort Expectancy", "Effort Expectancy", "Effort Expectancy", "Effort Expectancy"),
  Mean = c(EE1_mean, EE2_mean, EE3_mean, EE4_mean),
  SD = c(EE1_sd, EE2_sd, EE3_sd, EE4_sd)
)
```

```r
# Save the data frame of Effort Expectancy as a CSV file
write.csv(EE_data, "EE.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(EE_data, caption = "Effort Expectancy")
```

Table 2: Effort Expectancy

Questions	Description	Mean	SD
Do you find Digital payment method easy to use and understand?	Effort Expectancy	1.79	0.73
Do you find digital payment platforms user-friendly and efficient for making transactions?	Effort Expectancy	1.82	0.75
Do you find the process of digital payment platforms with other financial tools and services beneficial?	Effort Expectancy	1.82	0.73
Do you find digital payment method convenient to use?	Effort Expectancy	1.74	0.76

```r
#Factoring the elements of every column in Social Influence and change it in numeric value
#Getting the mean and standard deviation
SI1 <- data$Do.you.generally.embrace.new.technologies..including.digital.payment.methods.
SI1_fr <- factor(data$Do.you.generally.embrace.new.technologies..including.digital.payment.methods., le
SI1_recode <- recode(SI1_fr, "Yes" = 1, "No" = 2,"Maybe" = 3)
SI1_mean <- mean(SI1_recode)
SI1_sd <- sd(SI1_recode)

SI2 <-data$Are.you.influenced.by.the.behavior.of.others.when.it.comes.to.adopting.digital.payment.techn
SI2_fr <- factor(data$Are.you.influenced.by.the.behavior.of.others.when.it.comes.to.adopting.digital.pa
SI2_recode <- recode(SI2_fr, "Yes" = 1, "No" = 2,"Maybe" = 3)
SI2_mean <- mean(SI2_recode)
SI2_sd <- sd(SI2_recode)

SI3 <-data$Do.you.feel.pressure.from.social.circles.to.use.digital.payment.platforms.
SI3_fr <- factor(data$Do.you.feel.pressure.from.social.circles.to.use.digital.payment.platforms., levels
SI3_recode <- recode(SI3_fr, "Yes" = 1, "No" = 2,"Maybe" = 3)
SI3_mean <- mean(SI3_recode)
SI3_sd <- sd(SI3_recode)


#Rounding the value of mean and standard deviation into 2 decimal places
SI1_mean <- round(SI1_mean, 2)
SI1_sd <- round(SI1_sd, 2)

SI2_mean <- round(SI2_mean, 2)
SI2_sd <- round(SI2_sd, 2)

SI3_mean <- round(SI3_mean, 2)
SI3_sd <- round(SI3_sd, 2)

#Creating a data frame for Social Influence data
SI_data <- data.frame(
  Questions = c("Do your friends or family members encourage you to use digital payment methods?", "Are
```

```
  Description = c("Social Influence", "Social Influence", "Social Influence"),
  Mean = c(SI1_mean, SI2_mean, SI3_mean),
  SD = c(SI1_sd, SI2_sd, SI3_sd)
)

# Save the data frame of Social Influence as a CSV file
write.csv(SI_data, "SI.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(SI_data, caption = "Social Influence")
```

Table 3: Social Influence

Questions	Description	Mean	SD
Do your friends or family members encourage you to use digital payment methods?	Social Influence	1.21	0.60
Are you influenced by the behavior of others when it comes to adopting digital payment technologies?	Social Influence	1.44	0.71
Do you feel pressure from social circles to use digital payment platforms?	Social Influence	1.79	0.55

```
#Factoring the elements of every column in Facilitating Condition and change it in numeric value
#Getting the mean and standard deviation
FC1 <- data$How.easy.is.it.for.you.to.access.digital.payment.platforms.like.GCash..PayMaya..PayPal..etc
FC1_fr <- factor(data$How.easy.is.it.for.you.to.access.digital.payment.platforms.like.GCash..PayMaya..Pa
FC1_recode <- recode(FC1_fr, "Very easy" = 1, "Easy" = 2, "Medium" = 3, "Hard" = 4, "Very hard" = 5)
FC1_mean <- mean(FC1_recode)
FC1_sd <- sd(FC1_recode)

FC2 <- data$Have.you.faced.any.problems.using.digital.payment.platforms.
FC2_fr <- factor(data$Have.you.faced.any.problems.using.digital.payment.platforms., levels = c("Yes", "
FC2_recode <- recode(FC2_fr, "Yes" = 4, "No" = 1, "Sometimes" = 2, "Maybe" = 3)
FC2_mean <- mean(FC2_recode)
FC2_sd <- sd(FC2_recode)

FC3 <- data$What.features.would.you.like.digital.payment.platforms.to.have.to.make.them.easier.to.use.
FC3_fr <- factor(data$What.features.would.you.like.digital.payment.platforms.to.have.to.make.them.easie
FC3_recode <- recode(FC3_fr, "Faster transactions" = 1, "Simpler interface" = 2, "Better customer suppo
FC3_mean <- mean(FC3_recode)
FC3_sd <- sd(FC3_recode)

#Rounding the value of mean and standard deviation into 2 decimal places
FC1_mean <- round(FC1_mean, 2)
FC1_sd <- round(FC1_sd, 2)

FC2_mean <- round(FC2_mean, 2)
FC2_sd <- round(FC2_sd, 2)

FC3_mean <- round(FC3_mean, 2)
FC3_sd <- round(FC3_sd, 2)

#Creating a data frame for Facilitating Condition data
```

```r
FC_data <- data.frame(
  Questions = c("How easy is it for you to access digital payment platforms like GCash, PayMaya, PayPal
  Description = c("Facilitating Condition", "Facilitating Condition", "Facilitating Condition"),
  Mean = c(FC1_mean, FC2_mean, FC3_mean),
  SD = c(FC1_sd, FC2_sd, FC3_sd)
)

# Save the data frame of Facilitating Condition as a CSV file
write.csv(FC_data, "FC.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(FC_data, caption = "Facilitating Condition")
```

Table 4: Facilitating Condition

Questions	Description	Mean	SD
How easy is it for you to access digital payment platforms like GCash, PayMaya, PayPal, etc.?	Facilitating Condition	2.23	0.94
Have you faced any problems using digital payment platforms?	Facilitating Condition	2.67	1.24
What features would you like digital payment platforms to have to make them easier to use?	Facilitating Condition	1.89	1.06

```r
#Reading each CSV Files
PE <- read.csv("/cloud/project/Survey/UTAUT/CSV Files/PE.csv")
EE <- read.csv("/cloud/project/Survey/UTAUT/CSV Files/EE.csv")
SI <- read.csv("/cloud/project/Survey/UTAUT/CSV Files/SI.csv")
FC <- read.csv("/cloud/project/Survey/UTAUT/CSV Files/FC.csv")


# Combine all data frames into one
merged_data <- bind_rows(PE,SI,FC,EE)

# Save the combined data frame as a CSV file
write.csv(merged_data, "MergedData.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(merged_data, caption = "")
```

Questions	Description	Mean	SD
Do you find using Digital payment useful?	Performance Expectance	1.00	0.00
Do you think using Digital payment method will help you manage your money better?	Performance Expectance	1.75	0.92
Do you believe that Digital payment method will make your financial transaction easier?	Performance Expectance	1.19	0.57
Do you think Digital payment method will make it easier for you to keep track of your spending?	Performamce Expectancy	1.33	0.67
Do your friends or family members encourage you to use digital payment methods?	Social Influence	1.21	0.60
Are you influenced by the behavior of others when it comes to adopting digital payment technologies?	Social Influence	1.44	0.71

Questions	Description	Mean	SD
Do you feel pressure from social circles to use digital payment platforms?	Social Influence	1.79	0.55
How easy is it for you to access digital payment platforms like GCash, PayMaya, PayPal, etc.?	Facilitating Condition	2.23	0.94
Have you faced any problems using digital payment platforms?	Facilitating Condition	2.67	1.24
What features would you like digital payment platforms to have to make them easier to use?	Facilitating Condition	1.89	1.06
Do you find Digital payment method easy to use and understand?	Effort Expectancy	1.79	0.73
Do you find digital payment platforms user-friendly and efficient for making transactions?	Effort Expectancy	1.82	0.75
Do you find the process of digital payment platforms with other financial tools and services beneficial?	Effort Expectancy	1.82	0.73
Do you find digital payment method convenient to use?	Effort Expectancy	1.74	0.76

```r
#Data frame for Performance Expectancy summary
PE_merged_mean <- mean(c(PE1_mean,PE2_mean, PE3_mean, PE4_mean), na.rm = TRUE)

PE_merged_sd <- sqrt(mean(c(PE1_sd^2,PE2_sd^2, PE3_sd^2, PE4_sd^2), na.rm = TRUE))

PE_summary<- data.frame(
  `Title` = "Performance Expectancy",
  Mean = PE_merged_mean,
  SD = PE_merged_sd
)

# Save PE merged summary data frame as a CSV file
write.csv(PE_summary, "PE_Summary.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(PE_summary, caption = "Performance Expectancy Average")
```

Table 6: Performance Expectancy Average

Title	Mean	SD
Performance Expectancy	1.3175	0.6364354

```r
#Data frame for Facilitating Condition summary
FC_merged_mean <- mean(c(FC1_mean, FC2_mean, FC3_mean), na.rm = TRUE)
FC_merged_sd <- sqrt(mean(c(FC1_sd^2, FC2_sd^2, FC3_sd^2), na.rm = TRUE))

FC_summary<-data.frame(
  `Title` = "Facilitating Conditions",
  Mean = FC_merged_mean,
  SD = FC_merged_sd
)

# Save FC merged summary data frame as a CSV file
write.csv(FC_summary, "FC_Summary.csv", row.names = FALSE)
```

```r
#Displaying data frame using kable function
kable(FC_summary, caption = "Facilitating Condition Average")
```

Table 7: Facilitating Condition Average

Title	Mean	SD
Facilitating Conditions	2.263333	1.087014

```r
#Data frame for Effort Expectancy summary
EE_merged_mean <- mean(c(EE1_mean, EE2_mean, EE3_mean, EE4_mean), na.rm = TRUE)
EE_merged_sd <- sqrt(mean(c(EE1_sd^2, EE2_sd^2, EE3_sd^2, EE3_sd^2), na.rm = TRUE))

EE_summary<-data.frame(
  `Title` = "Effort Expectancy",
  Mean = EE_merged_mean,
  SD = EE_merged_sd
)

# Save EE merged summary data frame as a CSV file
write.csv(EE_summary, "EE_Summary.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(EE_summary, caption = "Effort Expectancy Average")
```

Table 8: Effort Expectancy Average

Title	Mean	SD
Effort Expectancy	1.7925	0.735051

```r
#Data frame for Social Influence summary
SI_merged_mean <- mean(c(SI1_mean, SI2_mean, SI3_mean), na.rm = TRUE)
SI_merged_sd <- sqrt(mean(c(SI1_sd^2, SI2_sd^2, SI3_sd^2), na.rm = TRUE))
SI_summary<-data.frame(
  `Title` = "Social Influence",
  Mean = SI_merged_mean,
  SD = SI_merged_sd
)

# Save SI merged summary data frame as a CSV file
write.csv(SI_summary, "SI_Summary.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(SI_summary, caption = "Social Influence Average")
```

Table 9: Social Influence Average

Title	Mean	SD
Social Influence	1.48	0.6235917

```r
#Adding average mean and sd column
read_merged_data <- read.csv("/cloud/project/Survey/UTAUT/CSV Files/MergedData.csv")
read_merged_data <- read_merged_data %>%
  mutate(Average_Mean = c(PE_merged_mean, PE_merged_mean, PE_merged_mean, PE_merged_mean, EE_merged_mean
         Average_Sd = c(PE_merged_sd, PE_merged_sd, PE_merged_sd, PE_merged_sd, EE_merged_sd, EE_merged_s

#Creating a data frame
write.csv(read_merged_data, "Final_Merged.csv", row.names = FALSE)

#Displaying Data frame using kable function
kable(read_merged_data, caption = "Understanding the Role of Digital Wallets")
```

Table 10: Understanding the Role of Digital Wallets

Questions	Description	Mean	SD	Average_Mean	Average_Sd
Do you find using Digital payment useful?	Performance Expectance	1.00	0.00	1.317500	0.6364354
Do you think using Digital payment method will help you manage your money better?	Performance Expectance	1.75	0.92	1.317500	0.6364354
Do you believe that Digital payment method will make your financial transaction easier?	Performance Expectance	1.19	0.57	1.317500	0.6364354
Do you think Digital payment method will make it easier for you to keep track of your spending?	Perforamce Expectancy	1.33	0.67	1.317500	0.6364354
Do your friends or family members encourage you to use digital payment methods?	Social Influence	1.21	0.60	1.792500	0.7350510
Are you influenced by the behavior of others when it comes to adopting digital payment technologies?	Social Influence	1.44	0.71	1.792500	0.7350510
Do you feel pressure from social circles to use digital payment platforms?	Social Influence	1.79	0.55	1.792500	0.7350510
How easy is it for you to access digital payment platforms like GCash, PayMaya, PayPal, etc.?	Facilitating Condition	2.23	0.94	1.792500	0.7350510
Have you faced any problems using digital payment platforms?	Facilitating Condition	2.67	1.24	1.480000	0.6235917
What features would you like digital payment platforms to have to make them easier to use?	Facilitating Condition	1.89	1.06	1.480000	0.6235917
Do you find Digital payment method easy to use and understand?	Effort Expectancy	1.79	0.73	1.480000	0.6235917
Do you find digital payment platforms user-friendly and efficient for making transactions?	Effort Expectancy	1.82	0.75	2.263333	1.0870143
Do you find the process of digital payment platforms with other financial tools and services beneficial?	Effort Expectancy	1.82	0.73	2.263333	1.0870143
Do you find digital payment method convenient to use?	Effort Expectancy	1.74	0.76	2.263333	1.0870143

```r
#BEHAVIORAL INTENTION
#Merged summaries
PE2<-read.csv("/cloud/project/Survey/UTAUT/CSV Files/PE_Summary.csv")
EE2<-read.csv("/cloud/project/Survey/UTAUT/CSV Files/EE_Summary.csv")
SI2<-read.csv("/cloud/project/Survey/UTAUT/CSV Files/SI_Summary.csv")

# Combine all summaries into a single data frame
merged_summary<- rbind(PE2, EE2, SI2)
```

```r
# Save the merged summary data frame as a CSV file
write.csv(merged_summary, "Behavioral Intention.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(merged_summary, caption = "")
```

Title	Mean	SD
Performance Expectancy	1.3175	0.6364354
Effort Expectancy	1.7925	0.7350510
Social Influence	1.4800	0.6235917

```r
#USER BEHAVIOR
FC2<-read.csv("/cloud/project/Survey/UTAUT/CSV Files/FC_Summary.csv")
BI<-read.csv("/cloud/project/Survey/UTAUT/CSV Files/Behavioral Intention.csv")

# Combine all summaries into a single data frame
merged_summary2<- rbind(FC2, BI)

# Save the merged summary data frame as a CSV file
write.csv(merged_summary2, "User Behavior.csv", row.names = FALSE)

#Displaying data frame using kable function
kable(merged_summary2, caption = "")
```

Title	Mean	SD
Facilitating Conditions	2.263333	1.0870143
Performance Expectancy	1.317500	0.6364354
Effort Expectancy	1.792500	0.7350510
Social Influence	1.480000	0.6235917