```
consumsurvey.R <- function(){
#
#  First read the correlation matrix in example 12.5
Rr <- matrix(c(1,0.02,0.96,0.42,0.01,0.02,1,0.13,0.71,0.85,0.96,0.13,1,0.5,0.11,0.42,0.71,0.5,1,0.79,0.01,0.85,0.11,0.79,1), ncol=5,nrow=5)

cat("Correlation Matrix is","\n")
print(Rr)
cat("\n")


e<-eigen(Rr)
e1<-e$values
vec <- e$vectors

cat("valores propios de R","\n")
print(e1)
cat("\n")
cat("vectores propios de R","\n")
print(vec)
MM <- vec[,1:2]
DD <- diag(sqrt(c(e1[1],e1[2])))
loadings <- MM%*%DD
cat("\n")
cat("Loadings","\n")
print(loadings)
com1 <- diag(loadings%*%t(loadings))
cat("\n")
cat("communalities","\n")
print(diag(com1))
vari.out  <-  varimax(loadings)
nloads <- vari.out$loadings
rot <- vari.out$rotmat
cat("\n")
cat("Loadings after varimax rotation","\n")
#print(nloads)
tbl  = cbind(nloads[,1],nloads[,2])
print(tbl)
comR <- diag(nloads%*%t(nloads))
cat("communalities after rotation","\n")
print(diag(comR))
}
```