OUTPUT PCA & Factor Analysis

summary(fit) # Which one to take

Importance of components:

Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7

Standard deviation 1.9007997 1.3360053 0.9131710 0.6350305 0.45950381 0.37797658 0.104381227

Proportion of Variance 0.5161485 0.2549872 0.1191259 0.0576091 0.03016339 0.02040947 0.001556492

Cumulative Proportion 0.5161485 0.7711357 0.8902615 0.9478706 0.97803404 0.99844351 1.000000000

loadings(fit) # pc loadings

Loadings:

Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7

e -0.417 0.168 -0.128 0.863 0.185

m -0.458 0.115 0.380 -0.309 0.729

w -0.388 0.670 -0.209 0.375 -0.462

at1 -0.237 -0.662 -0.109 0.703

at2 -0.255 -0.650 -0.711

ec -0.445 0.216 -0.285 -0.190 -0.653 -0.461

ep -0.383 0.222 -0.539 -0.413 0.551 0.197

Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7

SS loadings 1.000 1.000 1.000 1.000 1.000 1.000 1.000

Proportion Var 0.143 0.143 0.143 0.143 0.143 0.143 0.143

Cumulative Var 0.143 0.286 0.429 0.571 0.714 0.857 1.000

fit\_fact1 <- factanal(wk1, 3, rotation="varimax")

> print(fit\_fact1, digits=2, cutoff=.3, sort=TRUE)

Call:

factanal(x = wk1, factors = 3, rotation = "varimax")

Uniquenesses:

m w at1 at2 ec ep

0.06 0.30 0.02 0.00 0.13 0.29

Loadings:

Factor1 Factor2 Factor3

ec 0.86 0.00

ep 0.83

at1 0.98

at2 0.99

m 0.86

w 0.80

Factor1 Factor2 Factor3

SS loadings 2.07 1.98 1.71

Proportion Var 0.30 0.28 0.24

Cumulative Var 0.30 0.58 0.82

Test of the hypothesis that 3 factors are sufficient.

The chi square statistic is 2205.71 on 3 degrees of freedom.

The p-value is 0