```
#### Replication file for: Tobias Lenz and Henning Schmidtke:
"Agents, audiences and peers: why international organizations
diversify their legitimation discourse"###

#For more information on the project and the codebook, see: https://
doi.org/10.7802/2450#

####Packages####
library(groundhog)
pkgs=c('dplyr','margins','ggplot2','viridis', 'RColorBrewer',
'ggthemes','sjPlot','lme4','arm','stargazer','ggcorrplot','performan
ce')
groundhog.library(pkgs, '2022-12-06')


####Load data####
mydata <- read.csv(file="replication_data.csv", header=TRUE,
sep=",")

####Descriptive Figures (Figures 1 and 2 in the paper)####

#Figure 1: Normative diversity in discursive legitimation across 28
IOs, 1980-2019#

#prepare data#
DIV2_RO<-aggregate(mydata$normative.diversity,
by=list(IO=mydata$IO), mean,na.rm=TRUE)
DIV2_RO<-data.frame(DIV2_RO)
names(DIV2_RO)[names(DIV2_RO) == "x"] <- "DIV2"
DIV2_RO$DIV3<-round(DIV2_RO$DIV2, digits = 1)

textcol <- "grey10"

#do the plot#
Fig1<-
  ggplot(DIV2_RO, aes(x=reorder(IO, -DIV2), y=DIV2, width=.8))+
  geom_bar(stat="identity")+
  coord_flip(ylim = c(0,8),xlim = c(0,28), clip = "off")+
  ggtitle("") +
  xlab("")+
  ylab("Normative diversity (count of normative standards)")+
  scale_fill_grey()+
  geom_text(aes(label=DIV3), vjust=.5, hjust=1.5,
color="white",position = position_dodge(0.9), size=5)+
  geom_vline(xintercept=15.5,linetype="dotted",
linewidth=1.2,color="grey20")+
  annotate("text", x=15.5, y=8.5, label= "Mean = 5.1",
size=8,color="grey20",hjust=0)+
  annotate("text", x=25, y=8.5, label= "Targeted\nlegitimation",
size=8,color="grey20",hjust=0)+
  annotate("text", x=3, y=8.5, label= "Diffuse\nlegitimation",
size=8,color="grey20",hjust=0)+
  theme_classic()+
  scale_x_discrete(expand = expansion(mult = c(0.001, 0.03)))+
```

```
  scale_y_continuous(expand = expansion(mult = c(0.02, 0.05)))+
  theme(legend.position="right", legend.direction="vertical",
        legend.title=element_text(size=20, colour=textcol),
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank(),
        legend.margin=margin(grid::unit(0, "cm")),
        legend.text=element_text(colour=textcol, size=20),
        legend.key.height=grid::unit(0.8, "cm"),
        legend.key.width=grid::unit(0.2, "cm"),
        axis.text.x=element_text(size=20, colour=textcol),
        axis.text.y=element_text(size=20, vjust=0.2,
colour=textcol,hjust = 1),
        axis.title.x=element_text(size=18, vjust=0.75,
colour=textcol),
        axis.ticks=element_line(linewidth=0.4),
        panel.border=element_rect(colour = "black", fill=NA,
linewidth=1),
        plot.margin=margin(.2, 5, .2, .2, "cm"),
        plot.title=element_text(colour=textcol, hjust=0, size=20,
face="bold"),
        plot.background = element_rect(fill = "white", color = NA))

Fig1

#export plot#
ggsave("Fig1_HR.jpg", plot=Fig1, width=18, height=12, dpi=400)


#Figure 2: Normative diversity in discursive legitimation across
time and IOs, 1980-2019#

#prepare data#
plotdata <-mydata[order(mydata$region, mydata$IO),]

plotdata$ord[plotdata$IO=="AU"] <- 1
plotdata$ord[plotdata$IO=="CEMAC"] <- 2
plotdata$ord[plotdata$IO=="IGAD"] <-  6
plotdata$ord[plotdata$IO=="ASEAN"] <- 15
plotdata$ord[plotdata$IO=="OAS"] <- 12
plotdata$ord[plotdata$IO=="PIF"] <- 17
plotdata$ord[plotdata$IO=="SACU"] <- 7
plotdata$ord[plotdata$IO=="SADC"] <- 8
plotdata$ord[plotdata$IO=="COMESA"] <- 3
plotdata$ord[plotdata$IO=="EAC"] <- 4
plotdata$ord[plotdata$IO=="ECOWAS"] <- 5
plotdata$ord[plotdata$IO=="CARICOM"] <- 10
plotdata$ord[plotdata$IO=="SAARC"] <- 18
plotdata$ord[plotdata$IO=="SCO"] <- 19
plotdata$ord[plotdata$IO=="GCC"] <- 16
plotdata$ord[plotdata$IO=="CAN"] <- 9
plotdata$ord[plotdata$IO=="Mercosur"] <- 11
plotdata$ord[plotdata$IO=="OECS"] <- 13
plotdata$ord[plotdata$IO=="SICA"] <- 14
plotdata$ord[plotdata$IO=="COE"] <-  20
```

```
plotdata$ord[plotdata$IO=="EFTA"] <- 21
plotdata$ord[plotdata$IO=="EU"] <- 22
plotdata$ord[plotdata$IO=="NordC"] <- 23
plotdata$ord[plotdata$IO=="APEC"] <-  24
plotdata$ord[plotdata$IO=="CIS"] <- 25
plotdata$ord[plotdata$IO=="LoAS"] <- 26
plotdata$ord[plotdata$IO=="OAPEC"] <- 27
plotdata$ord[plotdata$IO=="OSCE"] <- 28


plotdata$region2[plotdata$region=="Asia-Pacific"] <-
"Asia\u2013Pacific"
plotdata$region2[plotdata$region=="Africa"] <- "Africa"
plotdata$region2[plotdata$region=="Americas"] <- "Americas"
plotdata$region2[plotdata$region=="Europe"] <- "Europe"
plotdata$region2[plotdata$region=="Cross-regional"] <-
"Cross\u2013regional"


plotdata <- transform(plotdata, variables = reorder(IO, -ord))
plotdata$region2 = factor(plotdata$region2,
levels=c("Africa","Americas","Asia\u2013Pacific","Europe","Cross\u20
13regional"))
plotdata2 <- plotdata %>%
  mutate(countfactor=cut(normative.diversity, breaks=c(0,1,3,6,
max(normative.diversity, na.rm=T)),
                         labels=c("No legitimation", "Targeted ",
"Intermediate ", "Diffuse"))) %>%
  mutate(countfactor=factor(as.character(countfactor),
levels=rev(levels(countfactor))))

plotdata2$countfactor<- as.character(plotdata2$countfactor)
plotdata2$countfactor[is.na(plotdata2$countfactor)] = "No data"
plotdata2$countfactor<- as.factor(plotdata2$countfactor)
plotdata2$countfactor = factor(plotdata2$countfactor,
levels=c("Diffuse", "Intermediate ", "Targeted ", "No
legitimation","No data"))


textcol <- "grey10"
legend_title <- ""

#do the plot#
Fig2 <- ggplot(plotdata2, aes(x=year, y=variables,
fill=countfactor))+
  geom_tile(colour="grey70", lwd=.7)+
  guides(fill=guide_legend(title="Legitimation\ndiscourse"))+
  labs(x="", y="", title="")+
  scale_x_continuous(breaks=seq(1980,2019,3), expand =
expansion(mult = c(0.01, 0.01)))+
  scale_fill_manual(values=c("grey5", "grey30", "grey60",
"grey85","white"))+
  theme_grey(base_size=10)+
  facet_grid(region2~., scales = "free_y",space="free_y")+
```

```
  theme_classic()+
  theme(legend.position="right", legend.direction="vertical",
        legend.title=element_text(size=20, colour=textcol),
        legend.margin=margin(grid::unit(0, "cm")),
        legend.text=element_text(colour=textcol, size=20),
        legend.key.height=grid::unit(0.8, "cm"),
        legend.key.width=grid::unit(0.2, "cm"),
        axis.text.x=element_text(size=20, colour=textcol),
        axis.text.y=element_text(size=20,colour=textcol),
        axis.ticks=element_line(linewidth=0.4),
        plot.margin=margin(.2, .5, .2, .2, "cm"),
        plot.title=element_text(colour=textcol, hjust=0, size=20,
face="bold"),
        strip.text = element_text(size = 20, color =
textcol),strip.background=element_rect(fill="grey90"),
        plot.background = element_rect(fill = "white", color = NA))

Fig2

#export plot#
ggsave("Fig2_HR.jpeg", plot=Fig2, width=18, height=12, dpi=400)


#Appendix Figure: Distribution of dependent variable#

#Set binwidth and number of non-missing obs#
bw = 1
n_obs = sum(!is.na(mydata$roll.normative.diversity))

#do the plot#
App2 <- ggplot(mydata, aes(roll.normative.diversity))  +
  geom_histogram(aes(y = after_stat(density)), binwidth = bw, colour
= "black") +
  xlab("Normative diversity")+
  ylab("Density")+
  ggtitle("") +
  theme_classic()+
  stat_function(fun = dnorm, args = list(mean =
mean(mydata$roll.normative.diversity,na.rm = TRUE), sd =
sd(mydata$normative.diversity,na.rm = TRUE)))+
  theme(legend.position="right", legend.direction="vertical",
        legend.title=element_text(size=40, colour=textcol),
        legend.margin=margin(grid::unit(0, "cm")),
        legend.text=element_text(colour=textcol, size=40),
        legend.key.height=grid::unit(0.8, "cm"),
        legend.key.width=grid::unit(0.2, "cm"),
        axis.text.x=element_text(size=40, colour=textcol),
        axis.text.y=element_text(size=40, vjust=0.2,
colour=textcol),
        axis.ticks=element_line(linewidth=0.4),
        axis.title.x = element_text(size = 30),
        axis.title.y = element_text(size = 30, margin = margin(r =
12)),
        panel.border=element_rect(colour = "black", fill=NA,
```

```
linewidth=1),
        plot.margin=margin(.2, .9, .2, .3, "cm"),
        plot.title=element_text(colour=textcol, hjust=0, size=40,
face="bold"),
        plot.background = element_rect(fill = "white", color = NA))

App2

#export plot#
ggsave("Appendix2.png", plot=App2, width=16, height=9, dpi=400)



####Fit original regression models####

#change variables to factors#
mydata$IO.purpose <- factor(mydata$IO.purpose)
mydata$type.documents <- factor(mydata$type.documents)

#Audiences#
M1<-lmer(roll.normative.diversity
~consultative.status+donor.heterogeneity+protest+type.documents+legi
timation.intensity+year+IO.purpose +(1|IO), data=mydata, REML =
FALSE)

#Agents#
M2<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+type.documents+le
gitimation.intensity+year+IO.purpose  +(1|IO), data=mydata, REML =
FALSE)

#Peers#
M3<-lmer(roll.normative.diversity ~
policy.overlap+membership.overlap+type.documents+legitimation.intens
ity+year+IO.purpose +(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+consultative.stat
us+donor.heterogeneity+protest+policy.overlap+membership.overlap+typ
e.documents+legitimation.intensity+year+IO.purpose +(1|IO),
data=mydata, REML = FALSE)

#z-standardize the results#
M1Stand<-standardize(M1, standardize.y=TRUE)
M2Stand<-standardize(M2, standardize.y=TRUE)
M3Stand<-standardize(M3, standardize.y=TRUE)
M4Stand<-standardize(M4, standardize.y=TRUE)

#Plot results tables (Table A4 in the Appendix)#
stargazer(M1Stand,M2Stand, M3Stand,M4Stand,
          type = "html",out = "Regression Models.doc",
          covariate.labels =c("Non-state consultative status","Donor
heterogeneity", "Protest","Institutional heterogeneity" ,"Cultural
```

```
heterogeneity" , "Policy overlap", "Membership overlap","Only Annual
Report" ,"Only Communiqué","Legitimation intensity","Year","General
purpose","Constant"),
          title = "Table A4. Origins of normative diversity in
discursive legitimation..",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity (rolling mean)"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents","Peers" ,"Full
Model"))

###Average marginal effects plot (Figure 3 in the paper)###

#prepare data#
effects_M4Stand <- margins(M4Stand)
AME <-summary (effects_M4Stand)
AME<-as.data.frame(AME)
AME <- AME[c(1,2,6,7)]

AME$factor2 <- NA
AME$factor2[AME$factor=="z.protest"] <- "Protest"
AME$factor2[AME$factor=="z.donor.heterogeneity"] <- "Donor
heterogeneity"
AME$factor2[AME$factor=="z.consultative.status"] <- "Non-state
consultative status"
AME$factor2[AME$factor=="z.institutional.heterogeneity"] <-
"Institutional heterogeneity"
AME$factor2[AME$factor=="z.cultural.heterogeneity"] <- "Cultural
heterogeneity"
AME$factor2[AME$factor=="z.policy.overlap"] <- "Policy overlap"
AME$factor2[AME$factor=="z.membership.overlap"] <- "Member overlap"
AME$factor2[AME$factor=="type.documents2"] <- "Only annual report"
AME$factor2[AME$factor=="type.documents3"] <- "Only communiqué"
AME$factor2[AME$factor=="z.legitimation.intensity"] <- "Legitimation
intensity"
AME$factor2[AME$factor=="c.IO.purpose"] <- "General purpose"
AME$factor2[AME$factor=="z.year"] <- "Year"

AME$factor3[AME$factor=="z.protest"] <- "Audiences"
AME$factor3[AME$factor=="z.donor.heterogeneity"] <- "Audiences"
AME$factor3[AME$factor=="z.consultative.status"] <- "Audiences"
AME$factor3[AME$factor=="z.institutional.heterogeneity"] <- "Agents"
AME$factor3[AME$factor=="z.cultural.heterogeneity"] <- "Agents"
AME$factor3[AME$factor=="z.policy.overlap"] <- "Peers"
AME$factor3[AME$factor=="z.membership.overlap"] <- "Peers"
AME$factor3[AME$factor=="type.documents2"] <- "Control"
AME$factor3[AME$factor=="type.documents3"] <- "Control"
AME$factor3[AME$factor=="z.legitimation.intensity"] <- "Control"
AME$factor3[AME$factor=="c.IO.purpose"] <- "Control"
AME$factor3[AME$factor=="z.year"] <- "Control"

AME$order <- NA
```

```
AME$order[AME$factor=="z.donor.heterogeneity"] <- 2
AME$order[AME$factor=="z.consultative.status"] <- 1
AME$order[AME$factor=="z.protest"] <- 3
AME$order[AME$factor=="z.institutional.heterogeneity"] <- 4
AME$order[AME$factor=="z.cultural.heterogeneity"] <- 5
AME$order[AME$factor=="z.policy.overlap"] <- 6
AME$order[AME$factor=="z.membership.overlap"] <- 7
AME$order[AME$factor=="type.documents2"] <- 8
AME$order[AME$factor=="type.documents3"] <- 9
AME$order[AME$factor=="z.legitimation.intensity"] <- 10
AME$order[AME$factor=="c.IO.purpose"] <- 11
AME$order[AME$factor=="z.year"] <- 12

AME$sig <- NA
AME$sig[AME$factor=="z.donor.heterogeneity"] <- 0
AME$sig[AME$factor=="z.consultative.status"] <- 1
AME$sig[AME$factor=="z.protest"] <- 0
AME$sig[AME$factor=="z.institutional.heterogeneity"] <- 2
AME$sig[AME$factor=="z.cultural.heterogeneity"] <- 0
AME$sig[AME$factor=="z.policy.overlap"] <- 2
AME$sig[AME$factor=="z.membership.overlap"] <- 1
AME$sig[AME$factor=="type.documents2"] <- 2
AME$sig[AME$factor=="type.documents3"] <- 2
AME$sig[AME$factor=="z.legitimation.intensity"] <- 2
AME$sig[AME$factor=="c.IO.purpose"] <- 0
AME$sig[AME$factor=="z.year"] <- 0

AME$factor3 = factor(AME$factor3,
levels=c('Audiences','Agents','Peers','Control'))
AME$sig = factor(AME$sig, levels=c('2','1','0'))
my_colors <- c("grey1", "grey20","grey40")
my_linetypes <- c("solid","dashed" ,"dotted")

#do the plot#
plot_AME <- ggplot(data = AME, aes(x = reorder(factor2, -order), y =
AME, ymin = lower, ymax = upper,colour = factor(sig)))+
  geom_hline(yintercept = 0, color = "gray30") +
  geom_pointrange() +
  coord_flip() +
  labs(x = "", y = "")+
  theme_classic()+
  facet_grid(factor3~., scales = "free_y",space="free_y")+
  scale_color_manual(values = my_colors, guide =
guide_legend(override.aes = list(linetype = my_linetypes)))+
  theme(legend.position="none", legend.direction="vertical",
        legend.title=element_text(size=20, colour=textcol),
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank(),
        legend.margin=margin(grid::unit(0, "cm")),
        legend.text=element_text(colour=textcol, size=20),
        legend.key.height=grid::unit(0.8, "cm"),
        legend.key.width=grid::unit(0.2, "cm"),
        axis.text.x=element_text(size=20, colour=textcol),
        axis.text.y=element_text(size=20, vjust=0.2,
```

```
colour=textcol,hjust = 1),
        axis.ticks=element_line(linewidth=0.4),
        panel.border=element_rect(colour = "black", fill=NA,
linewidth=1),
        plot.margin=margin(.2, .5, .2, .2, "cm"),
        plot.title=element_text(colour=textcol, hjust=0, size=20,
face="bold"),
        strip.text = element_text(size = 20, color =
"grey20"),strip.background=element_rect(fill="grey90"),
        plot.background = element_rect(fill = "white", color = NA))

plot_AME

#export plot#
ggsave("Fig3_HR.jpg", plot=plot_AME, width=16, height=9, dpi=400)


####A3 Diagnostics####

#Appendix: A.2.2: Descriptive statistics#
vars=c("roll.normative.diversity", "consultative.status",
"donor.heterogeneity", "protest", "institutional.heterogeneity",
"cultural.heterogeneity","policy.overlap", "membership.overlap",
"type.documents", "legitimation.intensity", "year","IO.purpose")
vars=mydata[vars]

vars$Type<- as.numeric(vars$type.documents)
vars$IO_purpose<- as.numeric(vars$IO.purpose)

stargazer(vars,
          type = "html",
          out = "Appendix descriptives.doc",
          title = "A.2.2: Descriptive statistics",
          style = "io",
          summary.stat = c("n","min", "max", "mean", "sd"),
          covariate.labels =c("Normative diversity","Non-state
consultative status","Donor heterogeneity", "Protest","Institutional
heterogeneity" ,"Cultural heterogeneity" , "Policy overlap",
"Membership overlap","Legitimation intensity","Year"))


#Appendix A3.1 Correlation matrix#

#prepare data#
vars=c("roll.normative.diversity", "consultative.status",
"donor.heterogeneity", "protest", "institutional.heterogeneity",
"cultural.heterogeneity","policy.overlap", "membership.overlap",
"legitimation.intensity", "year")
vars=mydata[vars]

names(vars)[names(vars) == "roll.normative.diversity"] <- "Normative
diversity"
names(vars)[names(vars) == "institutional.heterogeneity"] <-
"Institutional heterogeneity"
```

```
names(vars)[names(vars) == "cultural.heterogeneity"] <- "Cultural
heterogeneity"
names(vars)[names(vars) == "protest"] <- "Protest"
names(vars)[names(vars) == "donor.heterogeneity"] <- "Donor
heterogeneity"
names(vars)[names(vars) == "consultative.status"] <- "Non-state
consultative status"
names(vars)[names(vars) == "policy.overlap"] <- "Membership overlap"
names(vars)[names(vars) == "membership.overlap"] <- "Policy overlap"
names(vars)[names(vars) == "legitimation.intensity"] <-
"Legitimation intensity"
names(vars)[names(vars) == "year"] <- "Year"


#do the plot#
Corrmat<-model.matrix(~0+., data=vars) %>%
  cor(use="pairwise.complete.obs") %>%
  ggcorrplot(show.diag = T, type="lower", lab=TRUE,
lab_size=8,tl.cex = 10)+
  theme(legend.position="right", legend.direction="vertical",
        legend.title=element_text(size=20, colour=textcol),
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank(),
        legend.margin=margin(grid::unit(0, "cm")),
        legend.text=element_text(colour=textcol, size=20),
        legend.key.height=grid::unit(0.8, "cm"),
        legend.key.width=grid::unit(0.2, "cm"),
        axis.text.x=element_text(size=20, colour=textcol),
        axis.text.y=element_text(size=20, vjust=0.2,
colour=textcol),
        axis.ticks=element_line(linewidth=0.4),
        panel.border=element_rect(colour = "black", fill=NA,
linewidth=1),
        plot.margin=margin(.2, .5, .2, .2, "cm"),
        plot.title=element_text(colour=textcol, hjust=0, size=20,
face="bold"),
        plot.background = element_rect(fill = "white", color = NA))

Corrmat

#export plot#
ggsave("Appendix3.png", plot=Corrmat, width=15, height=15, dpi=400)


#Appendix A3.2 Multicollinearity#

multi1<-check_collinearity(M4)
multi1


####Robustness Checks####

#Robustness1: raw count of normative standards without superimposing
the rolling mean (Table A4.1 in the Appendix)#
```

```
#Audiences#
M1R1<-lmer(normative.diversity
~consultative.status+donor.heterogeneity+protest+type.documents+legi
timation.intensity+year+IO.purpose +(1|IO), data=mydata, REML =
FALSE)

#Agents#
M2R1<-lmer(normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+type.documents+le
gitimation.intensity+year+IO.purpose  +(1|IO), data=mydata, REML =
FALSE)

#Peers#
M3R1<-lmer(normative.diversity ~
policy.overlap+membership.overlap+type.documents+legitimation.intens
ity+year+IO.purpose +(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4R1<-lmer(normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+consultative.stat
us+donor.heterogeneity+protest+policy.overlap+membership.overlap+typ
e.documents+legitimation.intensity+year+IO.purpose +(1|IO),
data=mydata, REML = FALSE)

#z-standardize the results#
M1R1Stand<-standardize(M1R1, standardize.y=TRUE)
M2R1Stand<-standardize(M2R1, standardize.y=TRUE)
M3R1Stand<-standardize(M3R1, standardize.y=TRUE)
M4R1Stand<-standardize(M4R1, standardize.y=TRUE)

#Plot results tables (Table A4.1 in the Appendix)#
stargazer(M1R1Stand,M2R1Stand, M3R1Stand,M4R1Stand,
          type = "html",out = "Robustness1.doc",
          covariate.labels =c("Non-state consultative status","Donor
heterogeneity", "Protest","Institutional heterogeneity" ,"Cultural
heterogeneity" , "Policy overlap", "Membership overlap","Only Annual
Report" ,"Only Communiqué","Legitimation intensity","Year","General
purpose","Constant"),
          title = "Table A4.1. Origins of normative diversity in
discursive legitimation.",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents",  "Peers" ,"Full
Model"))

#Robustness2: coarser measure of normative diversity, distinguishing
four broad normative themes (liberal, functional, communitarian, and
other, Table A4.2 in the Appendix)#

#Audiences#
```

```
M1R2<-lmer(roll.normative.diversity2
~consultative.status+donor.heterogeneity+protest+type.documents+legi
timation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#Agents#
M2R2<-lmer(roll.normative.diversity2 ~
institutional.heterogeneity+cultural.heterogeneity+type.documents+le
gitimation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#Peers#
M3R2<-lmer(roll.normative.diversity2 ~
policy.overlap+membership.overlap+type.documents+legitimation.intens
ity+year+IO.purpose+(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4R2<-lmer(roll.normative.diversity2 ~
institutional.heterogeneity+cultural.heterogeneity+consultative.stat
us+donor.heterogeneity+protest+policy.overlap+membership.overlap+typ
e.documents+legitimation.intensity+year+IO.purpose+(1|IO),
data=mydata, REML = FALSE)

#z-standardize the results#
M1R2Stand<-standardize(M1R2, standardize.y=TRUE)
M2R2Stand<-standardize(M2R2, standardize.y=TRUE)
M3R2Stand<-standardize(M3R2, standardize.y=TRUE)
M4R2Stand<-standardize(M4R2, standardize.y=TRUE)

#Plot results tables (Table A4.2 in the Appendix)#
stargazer(M1R2Stand,M2R2Stand, M3R2Stand,M4R2Stand,
          type = "html",out = "Robustness2.doc",
          covariate.labels =c("Non-state consultative status","Donor
heterogeneity", "Protest","Institutional heterogeneity" ,"Cultural
heterogeneity" , "Policy overlap", "Membership overlap","Only Annual
Report" ,"Only Communiqué","Legitimation intensity","Year","General
purpose","Constant"),
          title = "Table A4.2. Origins of normative diversity in
discursive legitimation.",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity 2 (rolling mean)"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents",  "Peers" ,"Full
Model"))


#Robustness3: alternative measure of civil society demand (count of
CSOs)#

#Audiences#
M1R3<-lmer(roll.normative.diversity
~number.CSOs+donor.heterogeneity+protest+type.documents+legitimation
```

```
.intensity+year+IO.purpose+(1|IO), data=mydata, REML = FALSE)

#Agents#
M2R3<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+type.documents+le
gitimation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#Peers#
M3R3<-lmer(roll.normative.diversity ~
policy.overlap+membership.overlap+type.documents+legitimation.intens
ity+year+IO.purpose+(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4R3<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+number.CSOs+donor
.heterogeneity+protest+policy.overlap+membership.overlap+type.docume
nts+legitimation.intensity+year+IO.purpose+(1|IO), data=mydata, REML
= FALSE)

#z-standardize the results#
M1R3Stand<-standardize(M1R3, standardize.y=TRUE)
M2R3Stand<-standardize(M2R3, standardize.y=TRUE)
M3R3Stand<-standardize(M3R3, standardize.y=TRUE)
M4R3Stand<-standardize(M4R3, standardize.y=TRUE)

#Plot results tables (Table A4.3 in the Appendix)#
stargazer(M1R3Stand,M2R3Stand, M3R3Stand,M4R3Stand,
          type = "html",out = "Robustness3.doc",
          covariate.labels =c("Count of CSOs (log)","Donor
heterogeneity", "Protest","Institutional heterogeneity" ,"Cultural
heterogeneity" , "Policy overlap", "Membership overlap","Only Annual
Report" ,"Only Communiqué","Legitimation intensity","Year","General
purpose","Constant"),
          title = "Table A4.3. Origins of normative diversity in
discursive legitimation.",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents","Peers","Full
Model"))


#Robustness4: alternative measure of donor heterogeneity (count of
donors)#

#Audiences#
M1R4<-lmer(roll.normative.diversity
~consultative.status+number.donors+protest+type.documents+legitimati
on.intensity+year+IO.purpose+(1|IO), data=mydata, REML = FALSE)

#Agents#
```

```
M2R4<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+type.documents+le
gitimation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#Peers#
M3R4<-lmer(roll.normative.diversity ~
policy.overlap+membership.overlap+type.documents+legitimation.intens
ity+year+IO.purpose+(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4R4<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+consultative.stat
us+number.donors+protest+policy.overlap+membership.overlap+type.docu
ments+legitimation.intensity+year+IO.purpose+(1|IO), data=mydata,
REML = FALSE)

#z-standardize the results#
M1R4Stand<-standardize(M1R4, standardize.y=TRUE)
M2R4Stand<-standardize(M2R4, standardize.y=TRUE)
M3R4Stand<-standardize(M3R4, standardize.y=TRUE)
M4R4Stand<-standardize(M4R4, standardize.y=TRUE)

#Plot results tables (Table A4.4 in the Appendix)#
stargazer(M1R4Stand,M2R4Stand, M3R4Stand,M4R4Stand,
          type = "html",out = "Robustness4.doc",
          covariate.labels =c("Non-state consultative status","Count
of donors (log)", "Protest","Institutional heterogeneity" ,"Cultural
heterogeneity" , "Policy overlap", "Membership overlap","Only Annual
Report" ,"Only Communiqué","Legitimation intensity","Year","General
purpose","Constant"),
          title = "Table A4.4. Origins of normative diversity in
discursive legitimation.",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents","Peers","Full
Model"))


#Robustness5: alternative measure for states' normative
heterogeneity (count of members)#

#Audiences#
M1R5<-lmer(roll.normative.diversity
~consultative.status+donor.heterogeneity+protest+type.documents+legi
timation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#Agents#
M2R5<-lmer(roll.normative.diversity ~
number.members+cultural.heterogeneity+type.documents+legitimation.in
```

```
tensity+year+IO.purpose+(1|IO), data=mydata, REML = FALSE)


###Peers###
M3R5<-lmer(roll.normative.diversity ~
policy.overlap+membership.overlap+type.documents+legitimation.intens
ity+year+IO.purpose+(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4R5<-lmer(roll.normative.diversity ~
number.members+cultural.heterogeneity+consultative.status+donor.hete
rogeneity+protest+policy.overlap+membership.overlap+type.documents+l
egitimation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#z-standardize the results#
M1R5Stand<-standardize(M1R5, standardize.y=TRUE)
M2R5Stand<-standardize(M2R5, standardize.y=TRUE)
M3R5Stand<-standardize(M3R5, standardize.y=TRUE)
M4R5Stand<-standardize(M4R5, standardize.y=TRUE)

#Plot results tables (Table A4.5 in the Appendix)#
stargazer(M1R5Stand,M2R5Stand, M3R5Stand,M4R5Stand,
          type = "html",out = "Robustness5.doc",
          covariate.labels =c("Non-state consultative status","Donor
heterogeneity", "Protest","Count of member states" ,"Cultural
heterogeneity", "Policy overlap", "Membership overlap","Only Annual
Report" ,"Only Communiqué","Legitimation intensity","Year","General
purpose","Constant"),
          title = "Table A4.5. Origins of normative diversity in
discursive legitimation.",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents","Peers","Full
Model"))

#Robustness6: alternative measure of policy and member overlap
(count of member overlap and count of policy overlap)#

#Audiences#
M1R6<-lmer(roll.normative.diversity
~consultative.status+donor.heterogeneity+protest+type.documents+legi
timation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)

#Agents#
M2R6<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+type.documents+le
gitimation.intensity+year+IO.purpose+(1|IO), data=mydata, REML =
FALSE)
```

```
#Peers#
M3R6<-lmer(roll.normative.diversity ~ count.policy.overlap
+count.membership.overlap+type.documents+legitimation.intensity+year
+IO.purpose+(1|IO),  data=mydata, REML = FALSE)

#Full Model#
M4R6<-lmer(roll.normative.diversity ~
institutional.heterogeneity+cultural.heterogeneity+consultative.stat
us+donor.heterogeneity+protest+count.policy.overlap
+count.membership.overlap+type.documents+legitimation.intensity+year
+IO.purpose+(1|IO), data=mydata, REML = FALSE)

#z-standardize the results#
M1R6Stand<-standardize(M1R6, standardize.y=TRUE)
M2R6Stand<-standardize(M2R6, standardize.y=TRUE)
M3R6Stand<-standardize(M3R6, standardize.y=TRUE)
M4R6Stand<-standardize(M4R6, standardize.y=TRUE)

#Plot results tables (Table A4.6 in the Appendix)#
stargazer(M1R6Stand,M2R6Stand, M3R6Stand,M4R6Stand,
          type = "html",out = "Robustness6.doc",
          covariate.labels =c("Non-state consultative status","Donor
heterogeneity", "Protest","Institutional heterogeneity" ,"Cultural
heterogeneity" , "Count of policy overlap","Count of member
overlap","Only Annual Report" ,"Only Communiqué","Legitimation
intensity","Year","General purpose","Constant"),
          title = "Table A4.6. Origins of normative diversity in
discursive legitimation.",
          omit.stat=c("LL","ser","f"),
          dep.var.labels=c("Normative diversity"),
          style = "io",
          notes = "Multi-level model using the lme4 R package,
Standardized coefficients with standard errors in parentheses.",
          column.labels= c("Audiences","Agents",  "Peers" ,"Full
Model"))
```