

# Appendix C

## Do-files for STATA<sub>12</sub> software of the simulation experiment

```
gen x.=
replace x=1 if x1==1 & x2==1 & x3==1
replace x=2 if x1==1 & x2==1 & x3==2
replace x=3 if x1==1 & x2==2 & x3==1
replace x=4 if x1==1 & x2==2 & x3==2
replace x=5 if x1==1 & x2==3 & x3==1
replace x=6 if x1==1 & x2==3 & x3==2
replace x=7 if x1==2 & x2==1 & x3==1
replace x=8 if x1==2 & x2==1 & x3==2
replace x=9 if x1==2 & x2==2 & x3==1
replace x=10 if x1==2 & x2==2 & x3==2
replace x=11 if x1==2 & x2==3 & x3==1
replace x=12 if x1==2 & x2==3 & x3==2

gen t= rbinomial(1,0.5(
replace t=2 if t==0
gen v=t

    local i=2
    while `i' <=500}
    sum t if x1==1 & t==1 & f1<=`i'-1
    scalar gx11t11=r(N)+1
    sum t if x2==1 & t==1 & f1<=`i'-1
    scalar gx21t11=r(N)+1
        sum t if x3==1 & t==1 & f1<=`i'-1
    scalar gx31t11=r(N)+1
        sum t if x1==1 & t==2 & f1<=`i'-1
    scalar gx11t21=r(N(
    sum t if x2==1 & t==2 & f1<=`i'-1
    scalar gx21t21=r(N(
    sum t if x3==1 & t==2 & f1<=`i'-1
    scalar gx31t21=r(N(

        scalar gx11t1=abs(gx11t11 - gx11t21(
        scalar gx21t1=abs(gx21t11 - gx21t21(
        scalar gx31t1=abs(gx31t11 - gx31t21(

        sum t if x1==1 & t==1 & f1<=`i'-1
    scalar gx11t12=r(N(
    sum t if x2==1 & t==1 & f1<=`i'-1
    scalar gx21t12=r(N(
        sum t if x3==1 & t==1 & f1<=`i'-1
    scalar gx31t12=r(N(
        sum t if x1==1 & t==2 & f1<=`i'-1
    scalar gx11t22=r(N)+1
    sum t if x2==1 & t==2 & f1<=`i'-1
    scalar gx21t22=r(N)+1
    sum t if x3==1 & t==2 & f1<=`i'-1
    scalar gx31t22=r(N)+1

        scalar gx11t2=abs(gx11t12 - gx11t22(
        scalar gx21t2=abs(gx21t12 - gx21t22(
        scalar gx31t2=abs(gx31t12 - gx31t22(

    scalar gx01t1=gx11t1+gx21t1+gx31t1
```

```

scalar gx01t2=gx11t2+gx21t2+gx31t2

sum t if x3==2 & t==1 & f1<='i'-1
scalar gx32t11=r(N)+1
sum t if x3==2 & t==2 & f1<='i'-1
scalar gx32t21=r(N(

scalar gx32t1=abs(gx32t11 - gx32t21(

sum t if x3==2 & t==1 & f1<='i'-1
scalar gx32t12=r(N(
sum t if x3==2 & t==2 & f1<='i'-1
scalar gx32t22=r(N)+1

scalar gx32t2=abs(gx32t12 - gx32t22(

scalar gx02t1=gx11t1+gx21t1+gx32t1
scalar gx02t2=gx11t2+gx21t2+gx32t2

sum t if x2==2 & t==1 & f1<='i'-1
scalar gx22t11=r(N)+1
sum t if x2==2 & t==2 & f1<='i'-1
scalar gx22t21=r(N(

scalar gx22t1=abs(gx22t11 - gx22t21(

sum t if x2==2 & t==1 & f1<='i'-1
scalar gx22t12=r(N(
sum t if x2==2 & t==2 & f1<='i'-1
scalar gx22t22=r(N)+1

scalar gx22t2=abs(gx22t12 - gx22t22(

scalar gx03t1=gx11t1+gx22t1+gx31t1
scalar gx03t2=gx11t2+gx22t2+gx31t2

scalar gx04t1=gx11t1+gx22t1+gx32t1
scalar gx04t2=gx11t2+gx22t2+gx32t2

sum t if x2==3 & t==1 & f1<='i'-1
scalar gx23t11=r(N)+1
sum t if x2==3 & t==2 & f1<='i'-1
scalar gx23t21=r(N(

scalar gx23t1=abs(gx23t11 - gx23t21(

sum t if x2==3 & t==1 & f1<='i'-1
scalar gx23t12=r(N(
sum t if x2==3 & t==2 & f1<='i'-1
scalar gx23t22=r(N)+1

scalar gx23t2=abs(gx23t12 - gx23t22(

scalar gx05t1=gx11t1+gx23t1+gx31t1
scalar gx05t2=gx11t2+gx23t2+gx31t2

scalar gx06t1=gx11t1+gx23t1+gx32t1
scalar gx06t2=gx11t2+gx23t2+gx32t2

sum t if x1==2 & t==1 & f1<='i'-1
scalar gx12t11=r(N)+1
sum t if x1==2 & t==2 & f1<='i'-1

```

```

scalar gx12t21=r(N(
    scalar gx12t1=abs(gx12t11 - gx12t21(
        sum t if x1==2 & t==1 & f1<='i'-1
scalar gx12t12=r(N(
sum t if x1==2 & t==2 & f1<='i'-1
scalar gx12t22=r(N)+1

    scalar gx12t2=abs(gx12t12 - gx12t22(

    scalar gx07t1=gx12t1+gx21t1+gx31t1
    scalar gx07t2=gx12t2+gx21t2+gx31t2

    scalar gx08t1=gx12t1+gx21t1+gx32t1
    scalar gx08t2=gx12t2+gx21t2+gx32t2

    scalar gx09t1=gx12t1+gx22t1+gx31t1
    scalar gx09t2=gx12t2+gx22t2+gx31t2

    scalar gx10t1=gx12t1+gx22t1+gx32t1
    scalar gx10t2=gx12t2+gx22t2+gx32t2

    scalar gx11t1=gx12t1+gx23t1+gx31t1
    scalar gx11t2=gx12t2+gx23t2+gx31t2

    scalar gx12t1=gx21t1+gx23t1+gx32t1
    scalar gx12t2=gx21t2+gx23t2+gx32t2

    sum x if f1=='i'
    if `r(mean)'==1 & gx01t1 < gx01t2}
    replace t=1 if x==1 & f1=='i '
    {
    else}
    if `r(mean)'==1 & gx01t2 < gx01t1}
    replace t=2 if x==1 & f1=='i '
    {
        {
if `r(mean)'==2 & gx02t1 < gx02t2}
    replace t=1 if x==2 & f1=='i '
    {
    else}
    if `r(mean)'==2 & gx02t2 < gx02t1}
    replace t=2 if x==2 & f1=='i '
    {
        {
if `r(mean)'==3 & gx03t1 < gx03t2}
    replace t=1 if x==3 & f1=='i '
    {
    else}
    if `r(mean)'==3 & gx03t2 < gx03t1}
    replace t=2 if x==3 & f1=='i '
    {
        {
if `r(mean)'==4 & gx04t1 < gx04t2}
    replace t=1 if x==4 & f1=='i '
    {
    else}
    if `r(mean)'==4 & gx04t2 < gx04t1}
    replace t=2 if x==4 & f1=='i '
    {

```

```

    {
    if `r(mean)'==5 & gx05t1 < gx05t2}
    replace t=1 if x==5 & f1=='i '
    {
    else}
    if `r(mean)'==5 & gx05t2 < gx05t1}
    replace t=2 if x==5 & f1=='i '
    {
    {
    if `r(mean)'==6 & gx06t1 < gx06t2}
    replace t=1 if x==6 & f1=='i '
    {
    else}
    if `r(mean)'==6 & gx06t2 < gx06t1}
    replace t=2 if x==6 & f1=='i '
    {
    {
    if `r(mean)'==7 & gx07t1 < gx07t2}
    replace t=1 if x==7 & f1=='i '
    {
    else}
    if `r(mean)'==7 & gx07t2 < gx07t1}
    replace t=2 if x==7 & f1=='i '
    {
    {
    if `r(mean)'==8 & gx08t1 < gx08t2}
    replace t=1 if x==8 & f1=='i '
    {
    else}
    if `r(mean)'==8 & gx08t2 < gx08t1}
    replace t=2 if x==8 & f1=='i '
    {
    {
    if `r(mean)'==9 & gx09t1 < gx09t2}
    replace t=1 if x==9 & f1=='i '
    {
    else}
    if `r(mean)'==9 & gx09t2 < gx09t1}
    replace t=2 if x==9 & f1=='i '
    {
    {
    if `r(mean)'==10 & gx10t1 < gx10t2}
    replace t=1 if x==10 & f1=='i '
    {
    else}
    if `r(mean)'==10 & gx10t2 < gx10t1}
    replace t=2 if x==10 & f1=='i '
    {
    {
    if `r(mean)'==11 & gx11t1 < gx11t2}
    replace t=1 if x==11 & f1=='i '
    {
    else}
    if `r(mean)'==11 & gx11t2 < gx11t1}
    replace t=2 if x==11 & f1=='i '
    {
    {
    if `r(mean)'==12 & gx12t1 < gx12t2}
    replace t=1 if x==12 & f1=='i '
    {
    else}
    if `r(mean)'==12 & gx12t2 < gx12t1}

```

```
replace t=2 if x==12 & f1==`i`  
{  
    {  
  
    local i=`i'+1`  
    {  
  
        exit
```