**Notes on SATIMGE model for WB ZAF SDG’s Beyond the Gap report 2022**

20/11/2022

**Taxes in SATIMGE**

ATAX(AC) activity taxes

DTAX(AC) direct taxes

ETAX(AC) export taxes

FTAX(AC) factor taxes

MTAX(AC) import taxes

STAX(AC) sales taxes

VTAX(AC) value added taxes

ATAX(AC) activity taxes

DTAX(AC) direct taxes

ETAX(AC) export taxes

FTAX(AC) factor taxes

MTAX(AC) import taxes

STAX(AC) sales taxes

VTAX(AC) value added taxes

YG\_DTAX0 direct tax take plus transfers from abroad

YG\_ITAX0 indirect tax take

YG\_DTAX Data are different

YG\_DTAXDEF Data are different

YG\_DTAXX Data are different

YG\_NTAX Data are different

YG\_NTAXDEF Data are different

YG\_NTAXX Data are different

TAXPAR('INSTAX',INSD) = SUM(DTAX, SAM(DTAX,INSD));

TAXPAR('FACTAX',F) = SUM(FTAX, SAM(FTAX,F));

TAXPAR('IMPTAX',C) = SUM(MTAX, SAM(MTAX,C));

TAXPAR('EXPTAX',C) = SUM(ETAX, SAM(ETAX,C));

TAXPAR('VATAX',ARD) = SUM(VTAX, SAM(VTAX,ARD));

TAXPAR('ACTTAX',ARD) = SUM(ATAX, SAM(ATAX,ARD));

TAXPAR('COMTAX',C) = SUM(STAX, SAM(STAX,C));

GOVTAB('DIRTAX',XC,TC,TT) = SUM(INSDNG, TINSX(INSDNG,XC,TC,TT)\*YIX(INSDNG,XC,TC,TT));

GOVTAB('FACTAX',XC,TC,TT) = SUM(F, tfx(F,XC,TC,TT)\*YFX(F,XC,TC,TT)) ;

GOVTAB('FACINC',XC,TC,TT) = SUM(F, YIFX('GOV',F,XC,TC,TT));

GOVTAB('TRNSFR',XC,TC,TT) = trnsfrx('GOV','ROW',XC,TC,TT)\*EXRX(XC,TC,TT);

GOVTAB('ACTTAX',XC,TC,TT) = SUM((RD,A), TAX(A,RD,XC,TC,TT)\*PARX(A,RD,XC,TC,TT)\*QARX(A,RD,XC,TC,TT)) ;

GOVTAB('VATAX',XC,TC,TT) = SUM((A,RD), TVAX(A,RD,XC,TC,TT)\*PVAX(A,RD,XC,TC,TT)\*QVAX(A,RD,XC,TC,TT)) ;

GOVTAB('IMPTAX',XC,TC,TT) = SUM((RW,CM), TMX(CM,RW,XC,TC,TT)\*QMX(CM,RW,XC,TC,TT)\*PWMX(CM,RW,XC,TC,TT))\*EXRX(XC,TC,TT);

GOVTAB('EXPTAX',XC,TC,TT) = SUM((RW,CE), te(CE,RW)\*QEX(CE,RW,XC,TC,TT)\*PWEX(CE,RW,XC,TC,TT))\*EXRX(XC,TC,TT);

GOVTAB('COMTAX',XC,TC,TT) = SUM(C, TQX(C,XC,TC,TT)\*PQX(C,XC,TC,TT)\*QQX(C,XC,TC,TT)) ;

GOVTAB('CO2D',XC,TC,TT) = SUM(C, tco2dx(XC,TC,TT)\*co2cx(C,XC,TC,TT)\*QQX(C,XC,TC,TT)) ;

GOVTAB('CO2M',XC,TC,TT) = SUM((C,RW), tco2mx(XC,TC,TT)\*co2mx(C,RW,XC,TC,TT)\*QMX(C,RW,XC,TC,TT)) ;

GOVTAB('CO2E',XC,TC,TT) =-SUM((C,RW), tco2ex(XC,TC,TT)\*co2ex(C,RW,XC,TC,TT)\*QEX(C,RW,XC,TC,TT)) ;

GOVTAB('UTAX',XC,TC,TT) = SUM((C,A,RD), tui(C,A,RD)\*PQX(C,XC,TC,TT)\*QINTAX(A,RD,XC,TC,TT)\*icax(C,A,RD,XC,TC,TT))

+ SUM((C,H), tuh(C,H)\*PQX(C,XC,TC,TT)\*QHX(C,H,XC,TC,TT)) ;

**Government expenditure in SATIMGE**

**Transfers in SATIMGE**