**Appendix A**

**The sensitivity test for the share of primary products on world exports**

In the following, we consider two separate aggregates, all polities with data on composition of trade (subscript k) and all other polities (subscript u). Total exports are T for both groups, while for the former we distinguish exports of primary products (PP), manufactures (M) and other (unknown) exports (R). Thus, the world trade is:

T= Tk+Tu A.1)

And the share of the first aggregate, the ‘known’ polities, y, is

y=Tk/T A.2)

We define the share of primary products on the total available exports of the ‘known’ polities as

a= PP/(PP+M) A.3)

and the share of ‘known’ exports on total exports for the first aggregate polity as

b=(PP+M)/Tk A.4)

We thus obtain the four alternative series for the test

i) Min ignores missing countries and hypothesizes that the residual R consisted entirely of manufactures – i.e. that all trade in primary products was equal to PP. In this case the share would be

Min=PP/Tk A.5 a)

Which, multiplying and dividing by (PP+M), yields

Min=PP/(PP+M)\*(PP+M)/Tk=a\*b A.5 a)

ii) Max ignores missing countries and hypothesizes that the residual R consisted entirely of primary products

Max=(PP+R)/Tk A.6 a)

By definition PP+R=Tk-M

Dividing by Tk

(PP+R)/Tk=1-M/Tk

multiplying and dividing by (PP+M) yields

M/Tk=M/(PP+M)\*(PP+M)/Tk= (1-a)\*b

And finally, substituting in the definition

Max=(PP+R)/Tk =1-(1-a)\*b= 1-b+a\*b A.6b)

iii) Minn is equivalent to Min, with the additional assumption that also exports of the second group of polities, the ‘unknown’ ones, consisted of manufactures

Minn=PP/T A.7a)

Substituting From definition T=y/Tk

Substituting A.2) into A.5b)

Minn=PP/Tk\*y=a\*b\*y

iv) Last but not least, we define Maxx as Max with the additional assumption that also exports of the second group of polities, the ‘unknown’ ones, consisted of manufactures

Maxx=(PP+R+Tu)/T A.8a)

Defining Tu=T-Tk and splitting the right-hand side

Maxx=[PP+R+(T-Tk)]/T=[PP+R]/T+[(T-Tk)]/T

Substituting T=Tk/y from A.2) in the denominator of the first term

Maxx=[(PP+R)/Tk]\*y+[(T-Tk)]/T

The first term is equivalent to Max (cf. A.6b) and the second to (1-y) from A.2). Substituting yields the final formula for Maxx

Maxx=(1-b+a\*b)\*y+(1-y) A.8b)