Annexes

Annex A: ***1.1.4 Sustainability condition***

For the tacit collusion to be sustainable the following needs to hold:

$$\frac{\pi^m}{2}(1+\delta+\delta^2+\dots) = V^C \geq \pi^m + (1-\delta)\times 0 = V^D \frac{\pi^m}{2}(1+\delta+\delta^2+\dots)(1-\delta) \geq \pi^m(1-\delta)$$

$$\frac{\pi^m}{2} \geq \pi^m(1-\delta)$$

$$\frac{1}{2} \geq (1-\delta)$$

$$\delta \geq \frac{1}{2}$$

Thus, the critical threshold δ^* in this case should be set at:

$$\delta \geq \delta^* = \frac{1}{2}$$

Annex B: ***1.2.3 Sustainability of multimarket collusion***

The competitor will not deviate from the collusion if:

$$\alpha\pi^m(1+\delta+\delta^2+\dots) \geq \pi^m$$

$$\alpha \geq (1-\delta)$$

Thus, the two firms competitor's share in the second market as $\alpha = 1-\delta$, which leaves the two remaining firms' sharing $\alpha = \delta$.

For the tacit collusion to be sustainable for the two firms operating in both markets the following needs to hold:

$$\left(\frac{\pi^m}{2}+\frac{\delta}{2}\pi^m\right)\left(1+\delta+\delta^2+\ldots\right)=V^C\geq\pi^m+\pi^m+(1-\delta)\times 0=V^D$$

$$\frac{\pi^m}{2}(1+\delta)\frac{1}{1-\delta}\geq\pi^m$$

$$1+\delta\geq 2(1-\delta)$$

$$\delta\geq\frac{1}{3}$$

The critical threshold δ^* in this case should be set at:

$$\delta\geq\delta^*=\frac{1}{3}$$

Annex C: ***2.1.3 Consumer-side analysis***

The condition for the price difference between the oligopolistic and the collusive scenario in the home market to be higher than the one in the foreign market is such that:

$$p_1-p_1^c>p_2-p_2^c$$

After plugging in the expressions (2.1), (2.2), (2.5) and (2.6) we obtain:

$$\left(\left(\frac{1}{1+\eta}\right)\times c\right)-\left(\frac{c}{1-\eta}\right)>\left(\left(\frac{1}{1+\eta}\right)\times(c+t)\right)-\left(\frac{c+t}{1-\eta}\right)$$

$$\frac{c}{\eta+1}-\frac{c}{-\eta+1}>\frac{c+t}{\eta+1}-\frac{c+t}{-\eta+1}$$

$$\frac{c(-\eta+1)-c(\eta+1)}{(-\eta+1)(\eta+1)}>\frac{(c+t)(-\eta-1)}{(-\eta+1)(\eta+1)}-\frac{(c+t)(\eta+1)}{(-\eta+1)(\eta+1)}$$

$$\frac{-2\eta c}{(-\eta+1)(\eta+1)}>\frac{-2\eta c-2\eta t}{(-\eta+1)(\eta+1)}$$