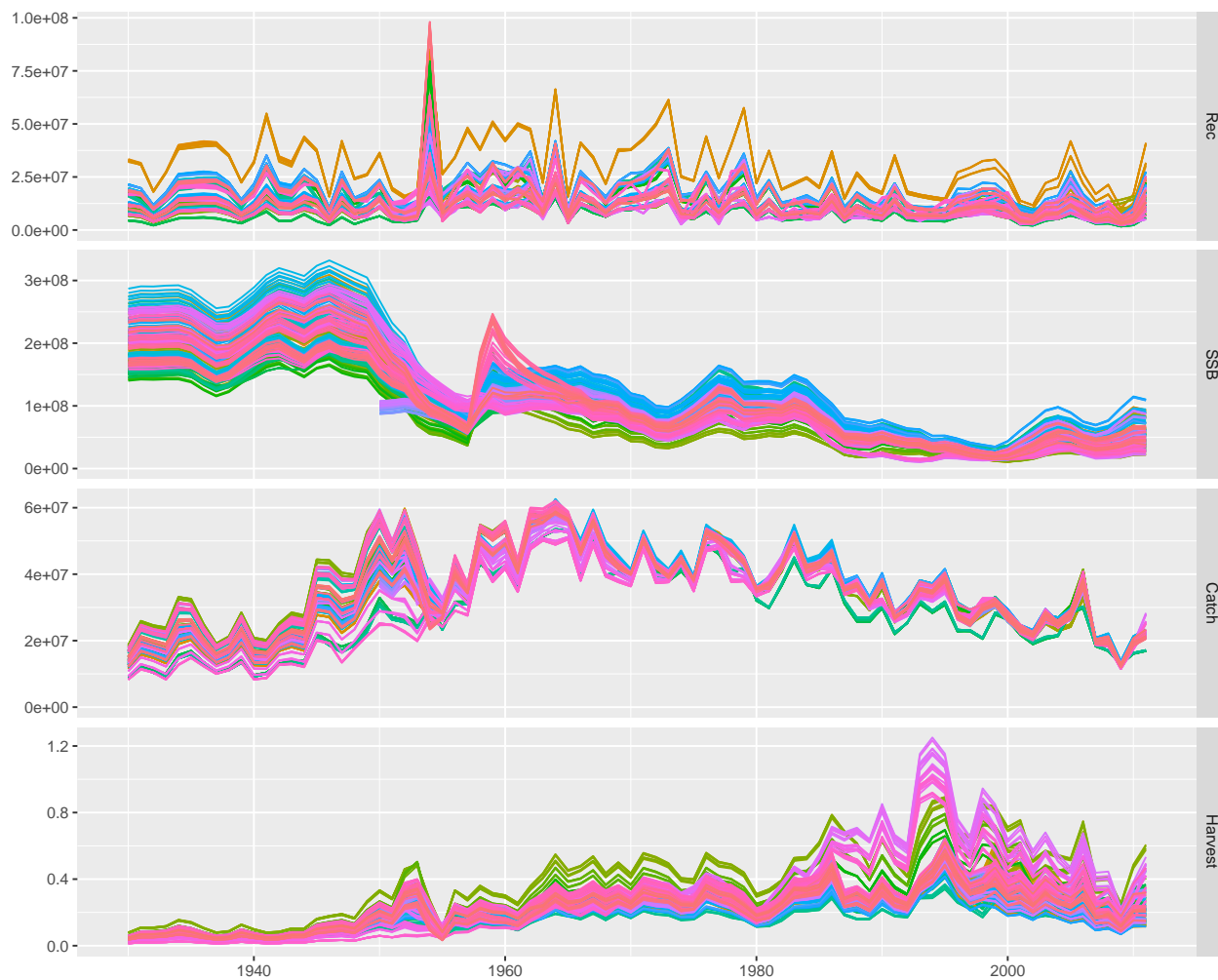


# North Atlantic Albacore MSE

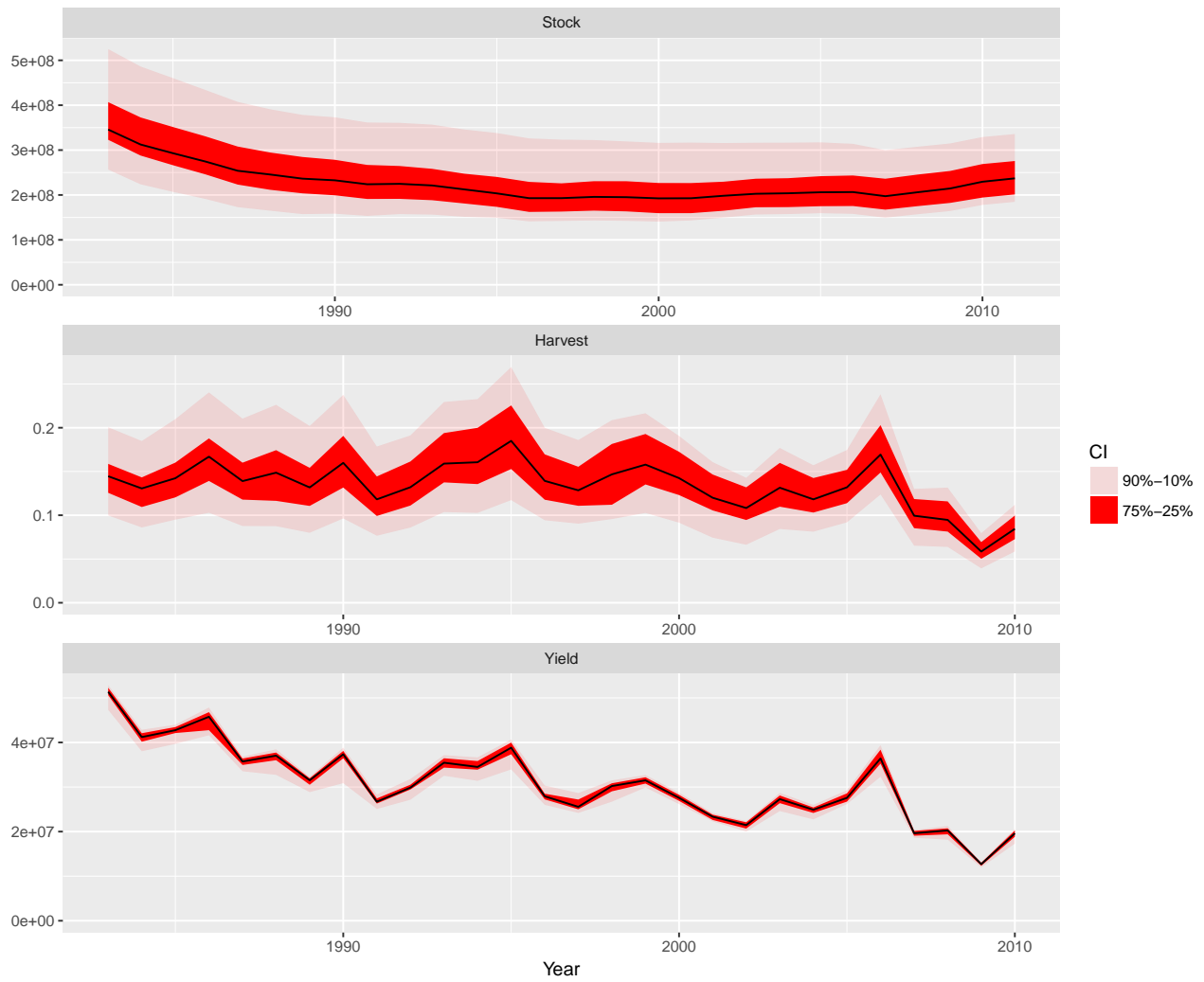
Cross-test of MP

*L Kell*

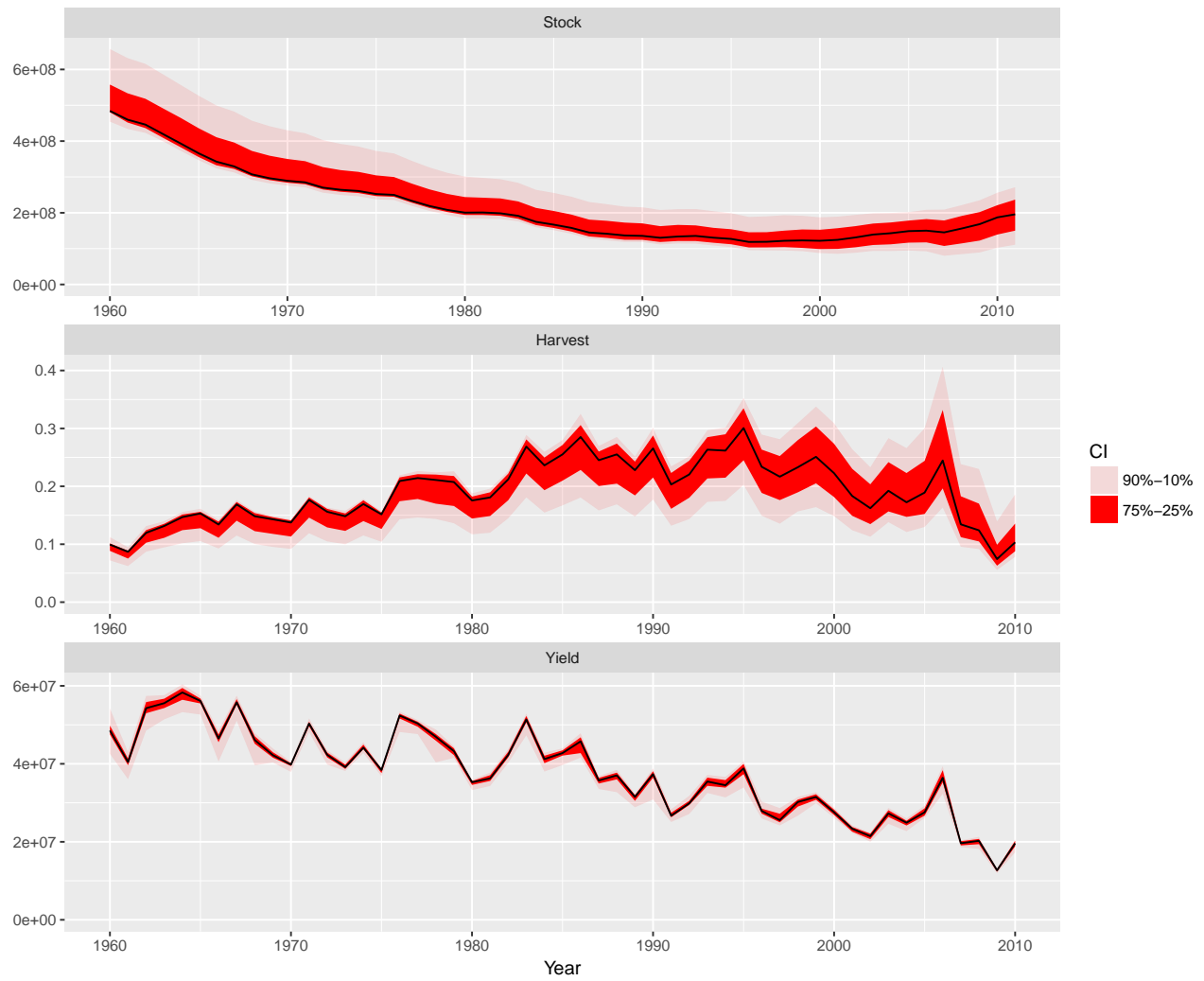
*22 March, 2018*



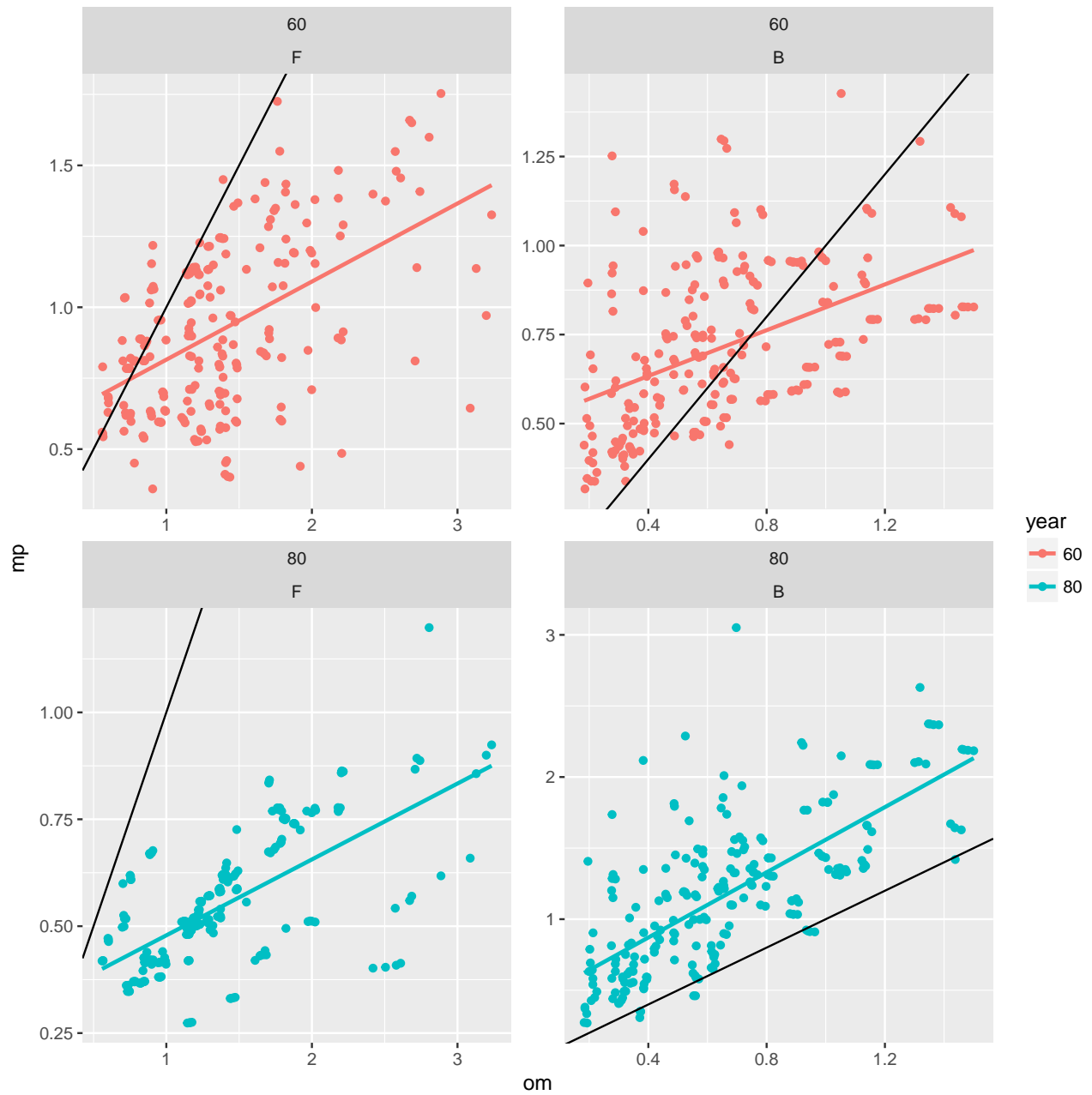
**Figure 1.** Operating Models



**Figure 2.** MP stock assessment fits using data from 1980 and perfect biomass index



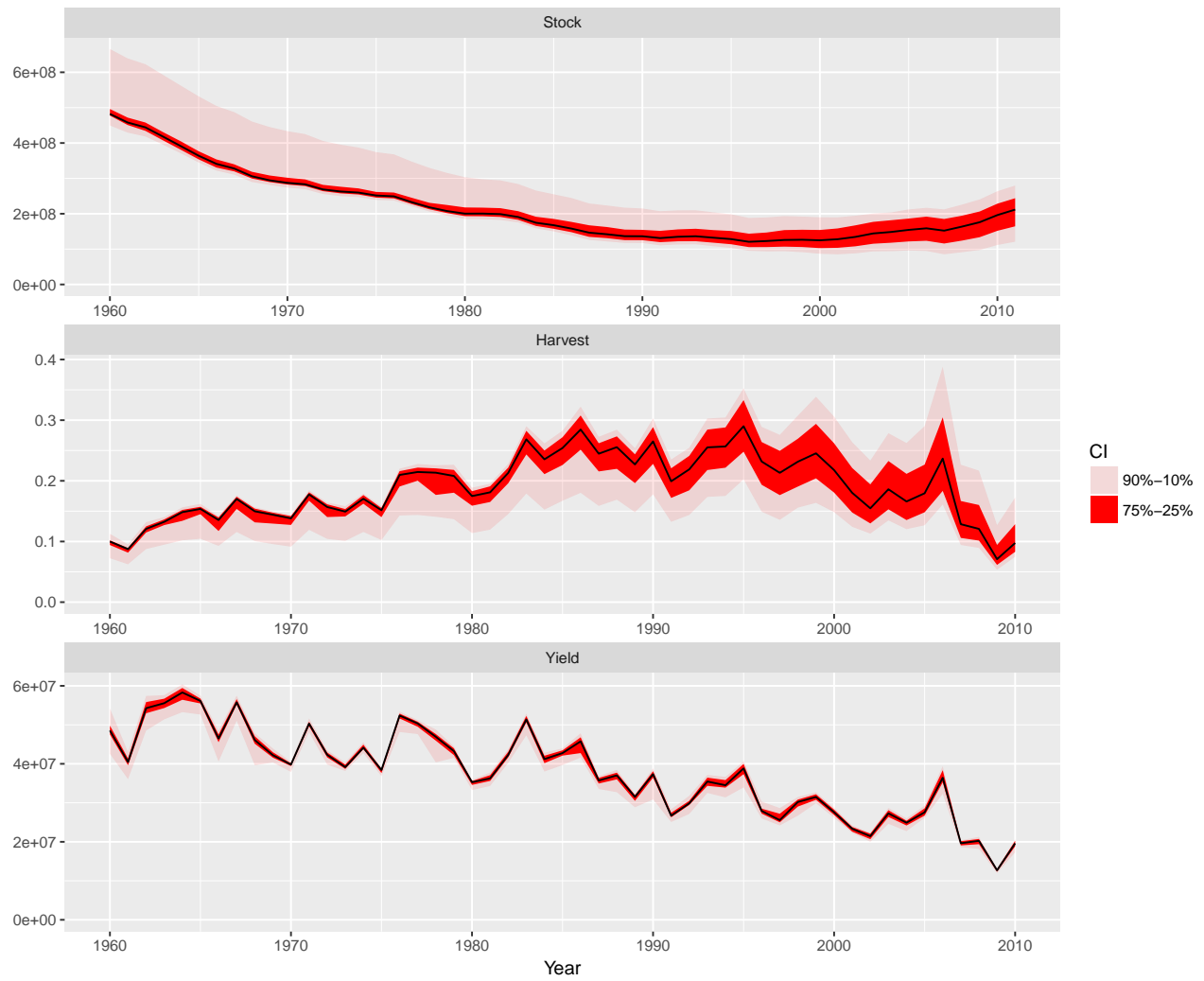
**Figure 3.** MP stock assessment fits using data from 1960 and perfect biomass index



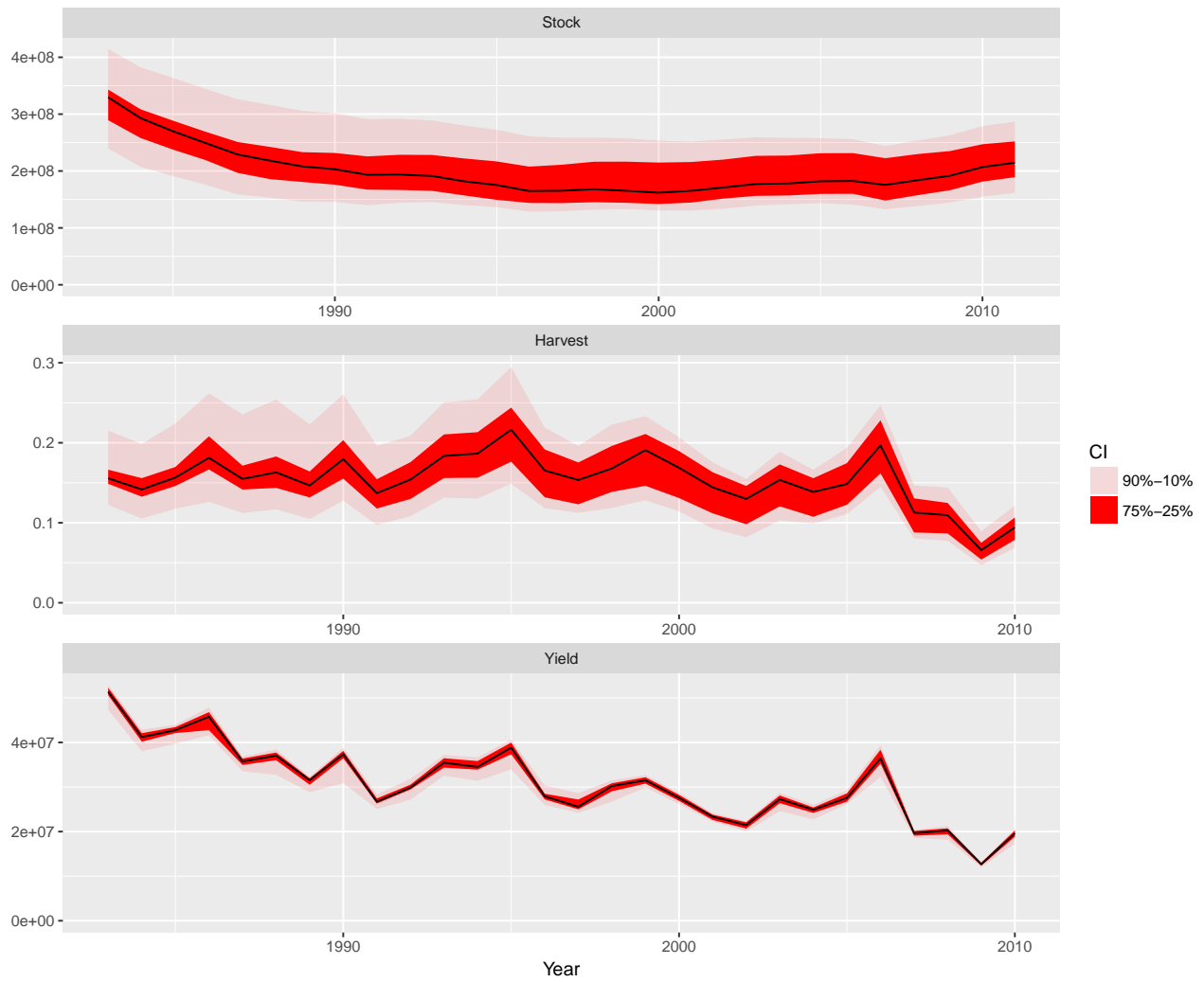
[1] "RSS"

	year	
quantity	60	80
F	0.4721018	0.4676944
B	0.2948743	0.3712701

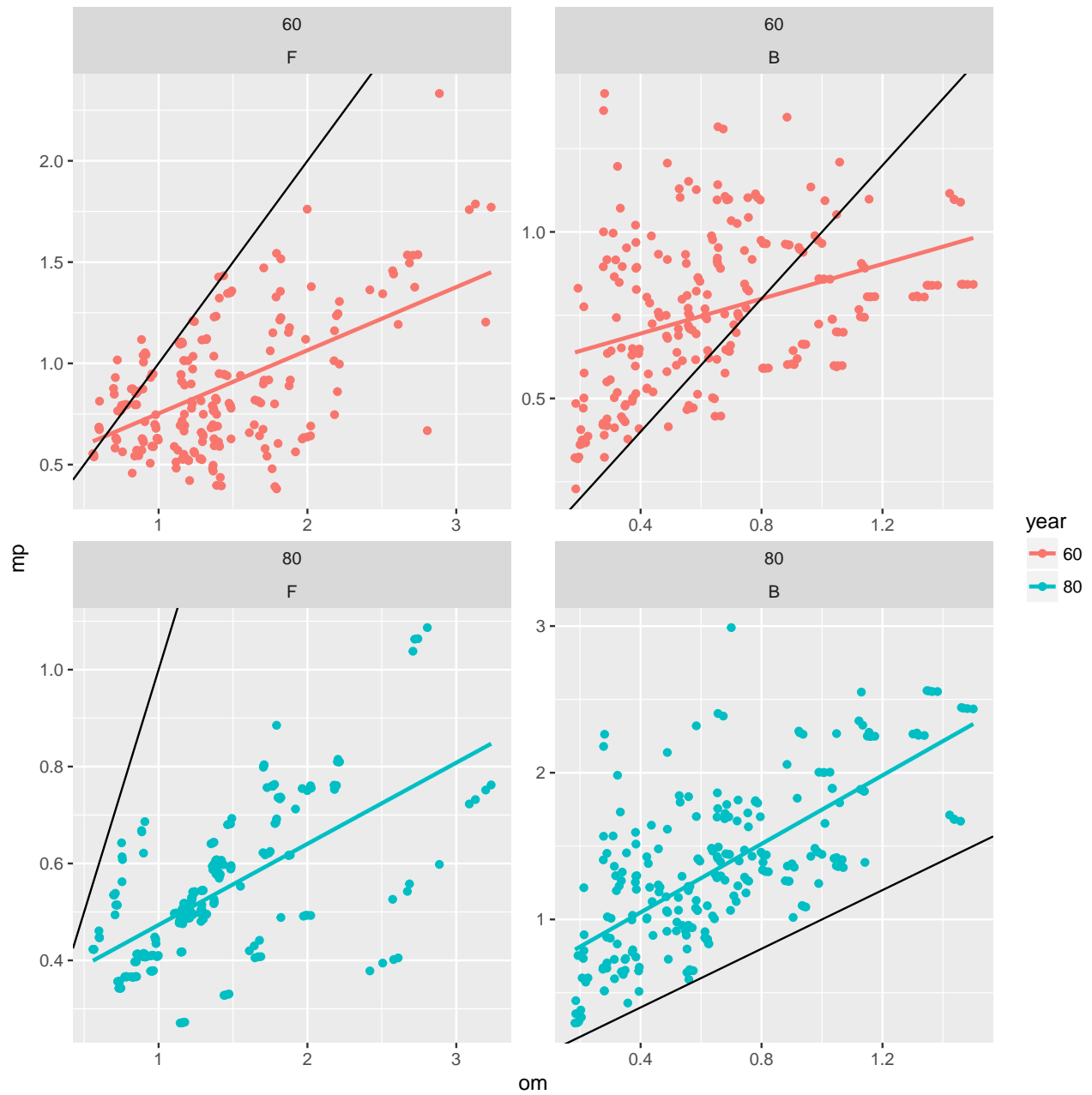
**Figure 4.** Comparison of current status ( $B/B_{MSY}$  and  $F/F_{MSY}$ ) for OM and MP.



**Figure 5.** MP stock assessment fits using data from 1960 with prior for  $r$  and perfect biomass index



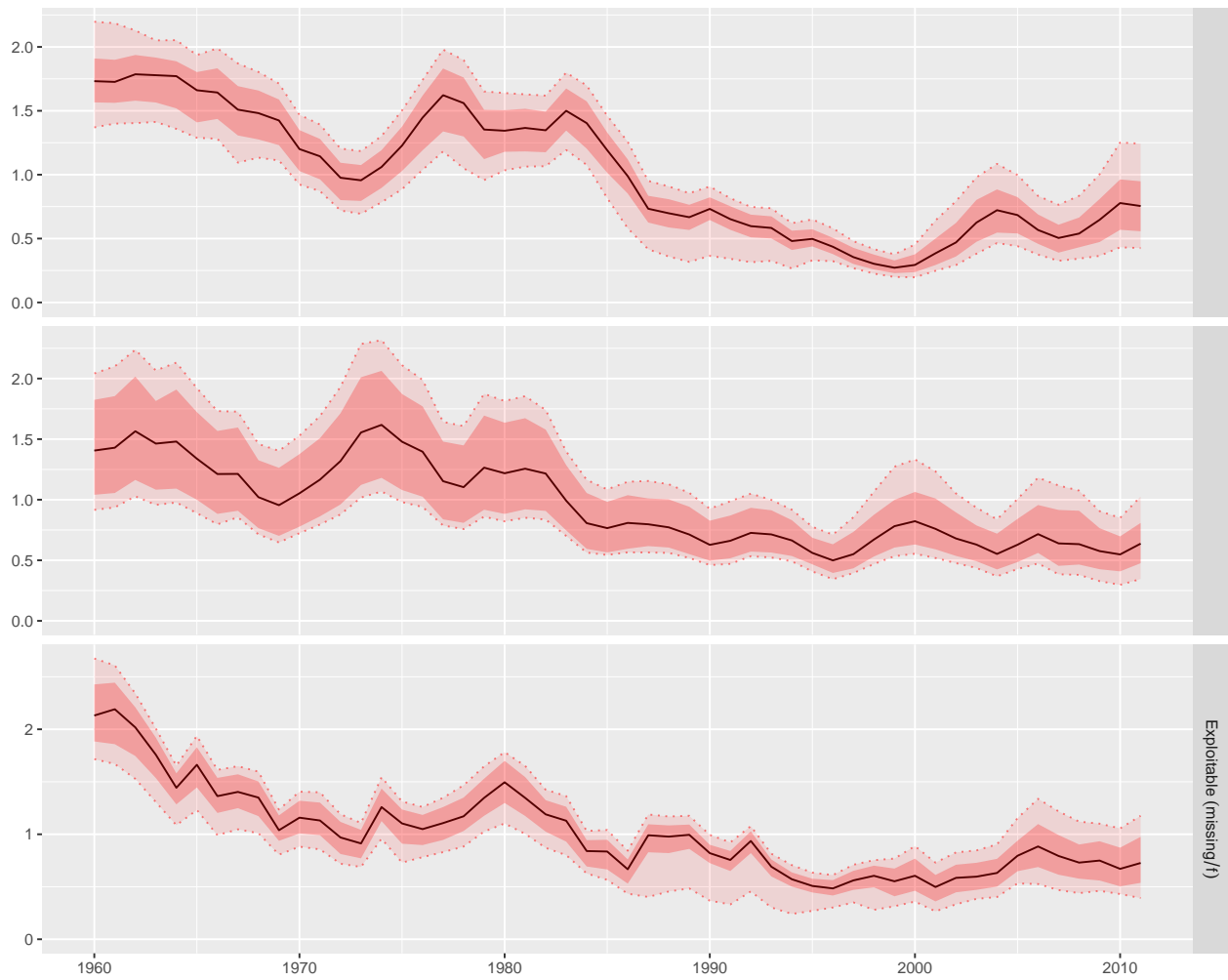
**Figure 6.** MP stock assessment fits using data from 1980 with prior for  $r$  and perfect biomass index



[1] "RSS"

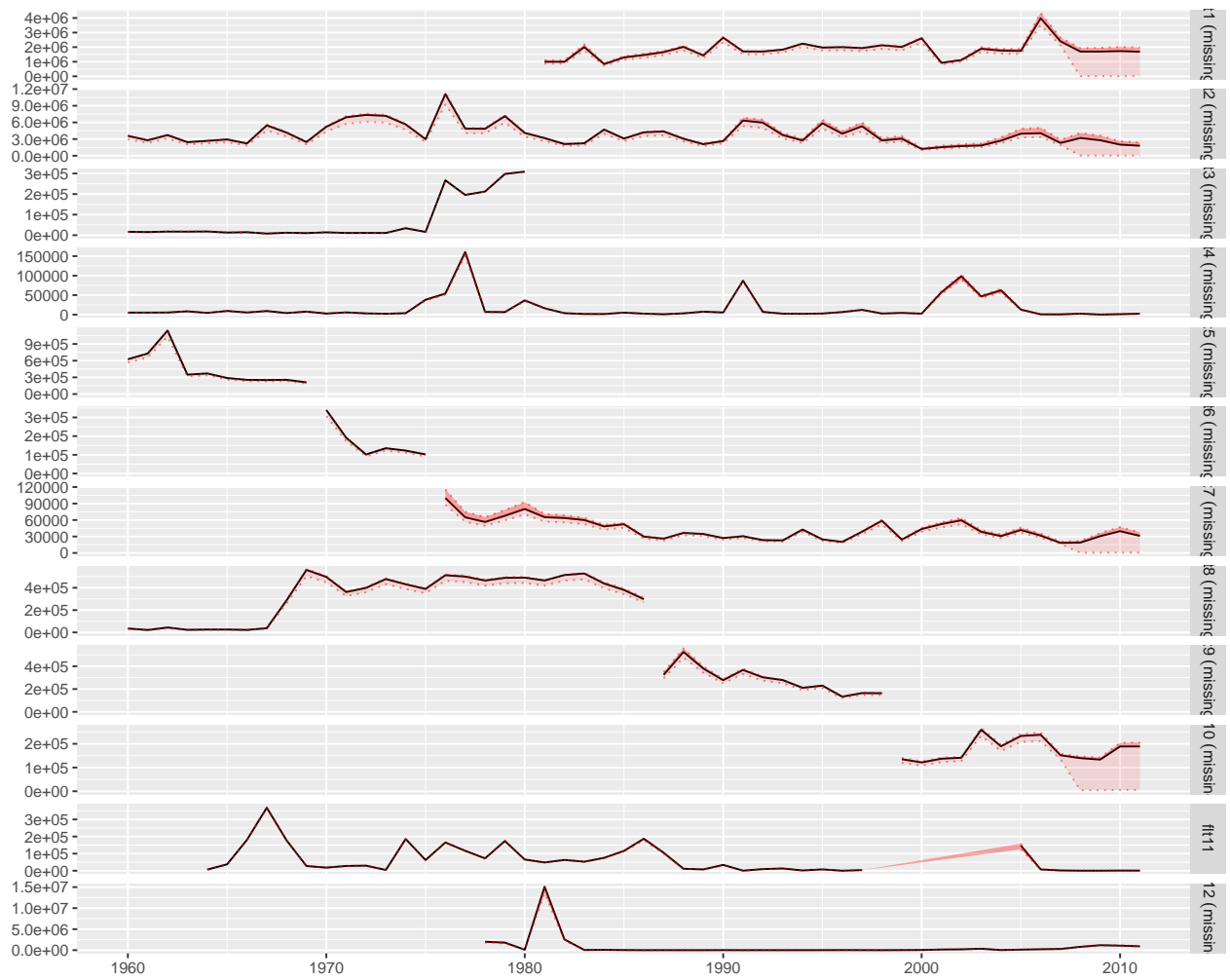
	year	
quantity	60	80
F	0.4602099	0.4733766
B	0.3240773	0.4024516

**Figure 7.** Comparison of current status ( $B/B_{MSY}$  and  $F/F_{MSY}$ ) for OM and MP.

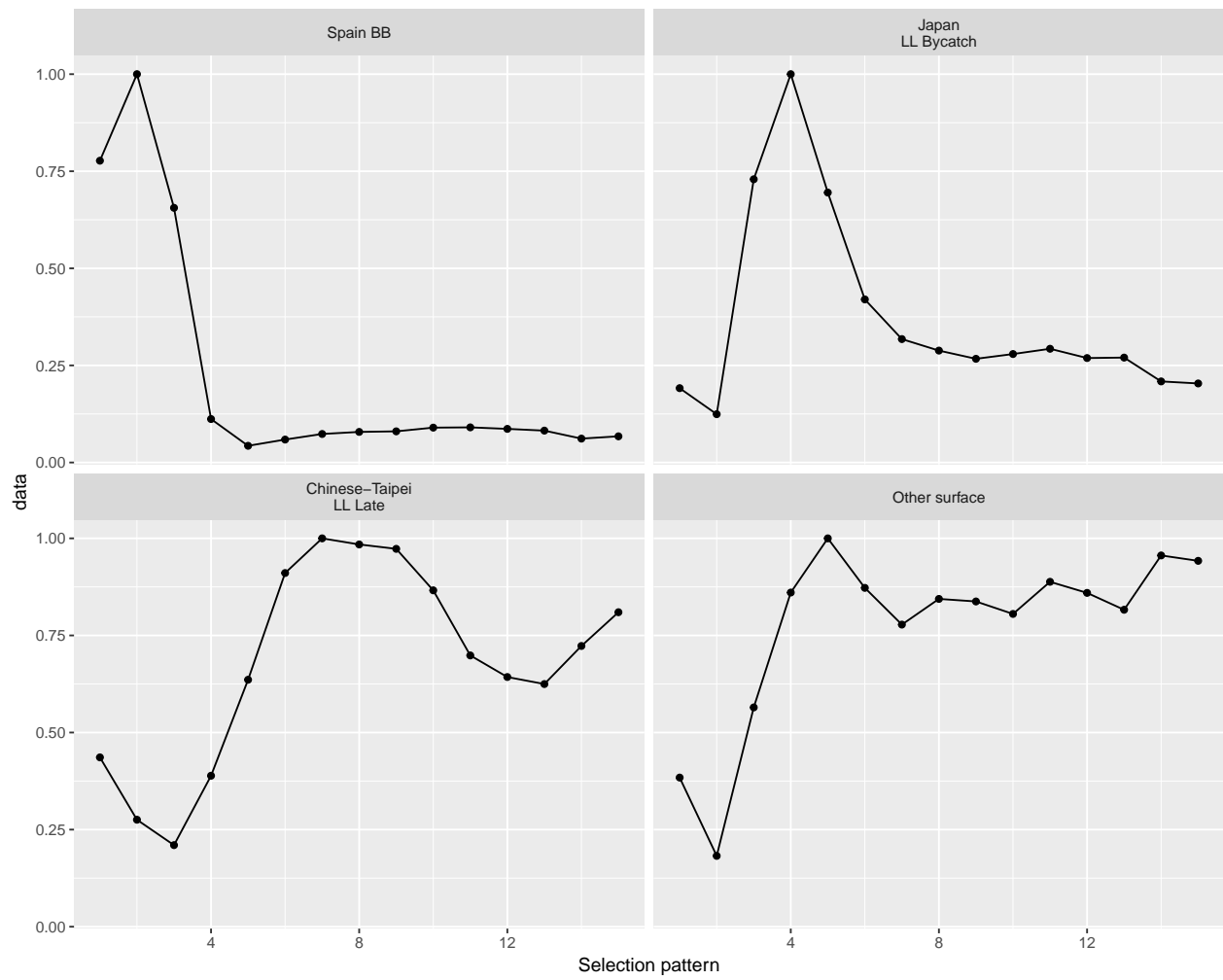


**Figure 8.** Indices, simulated.

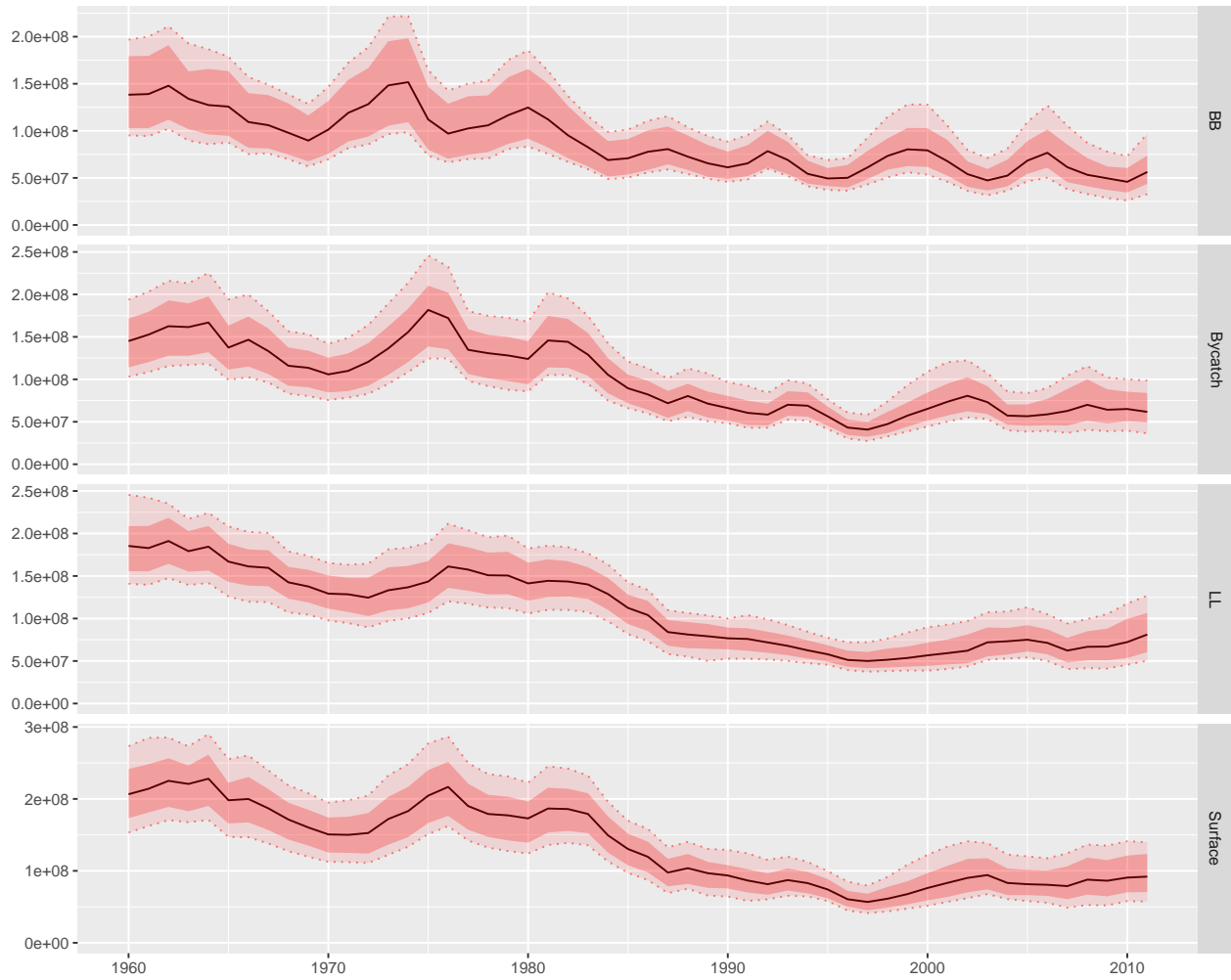




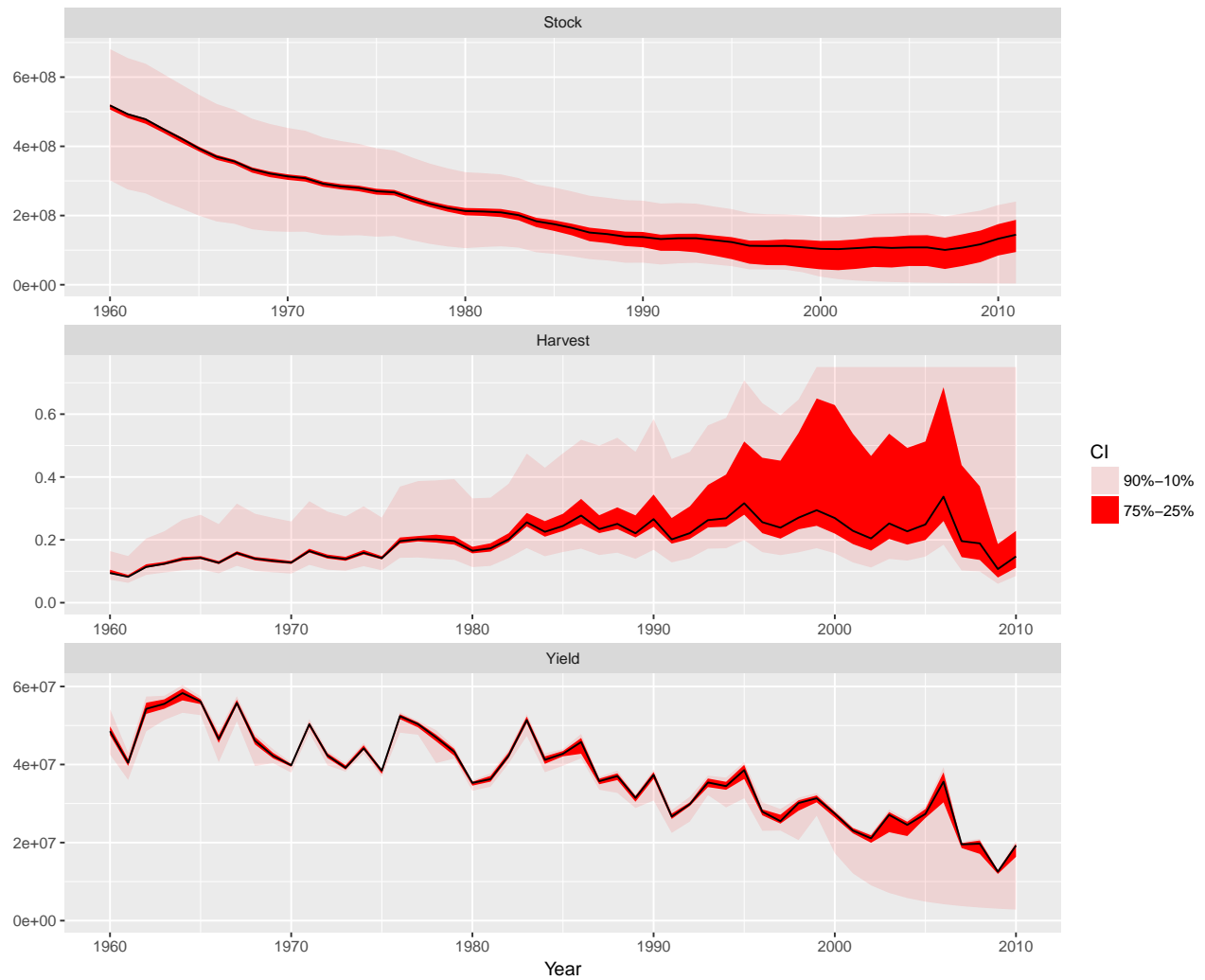
**Figure 9.** Indices, actual



**Figure 10.** Selection pattern.



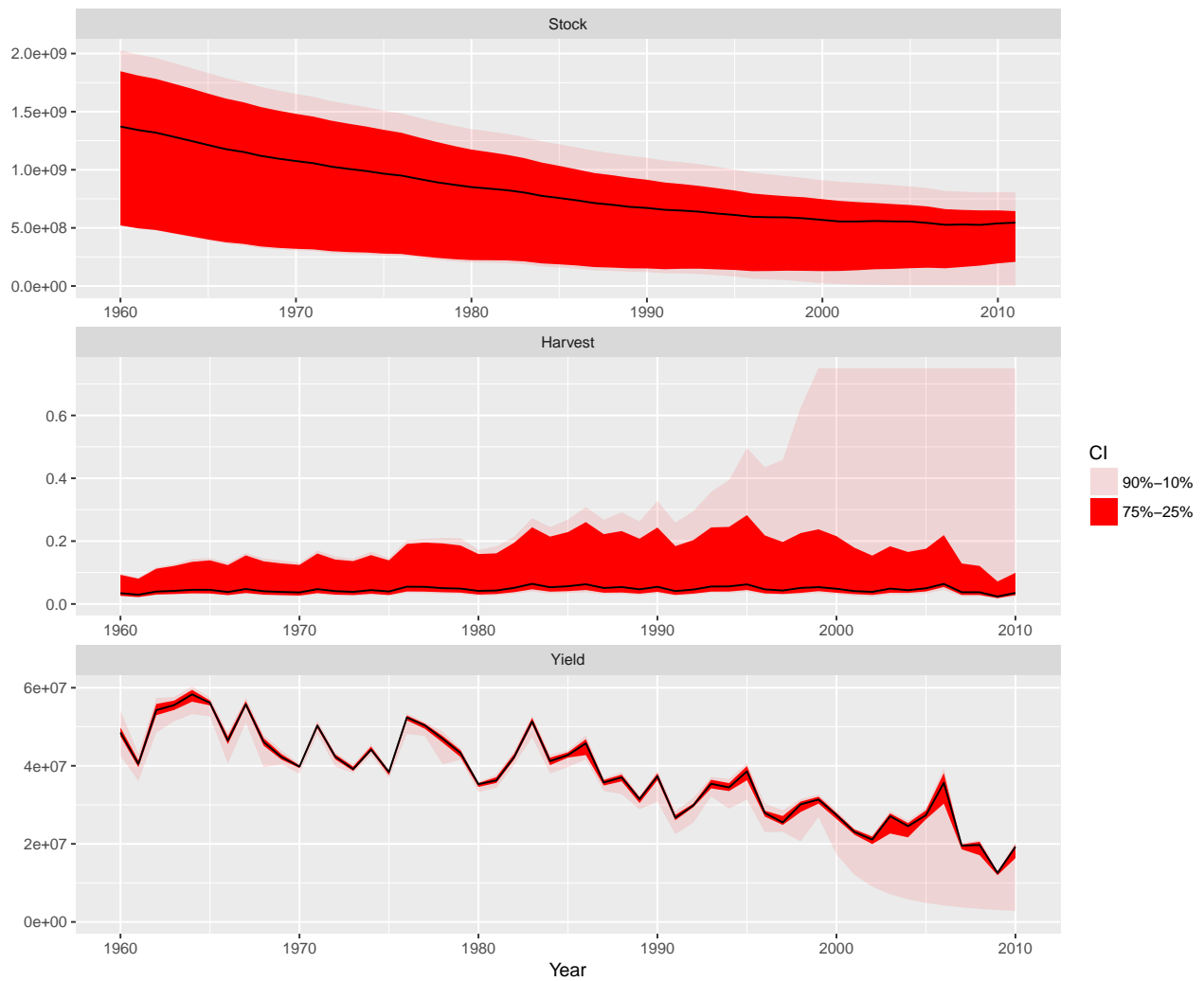
**Figure 11.** Indices, CPUE



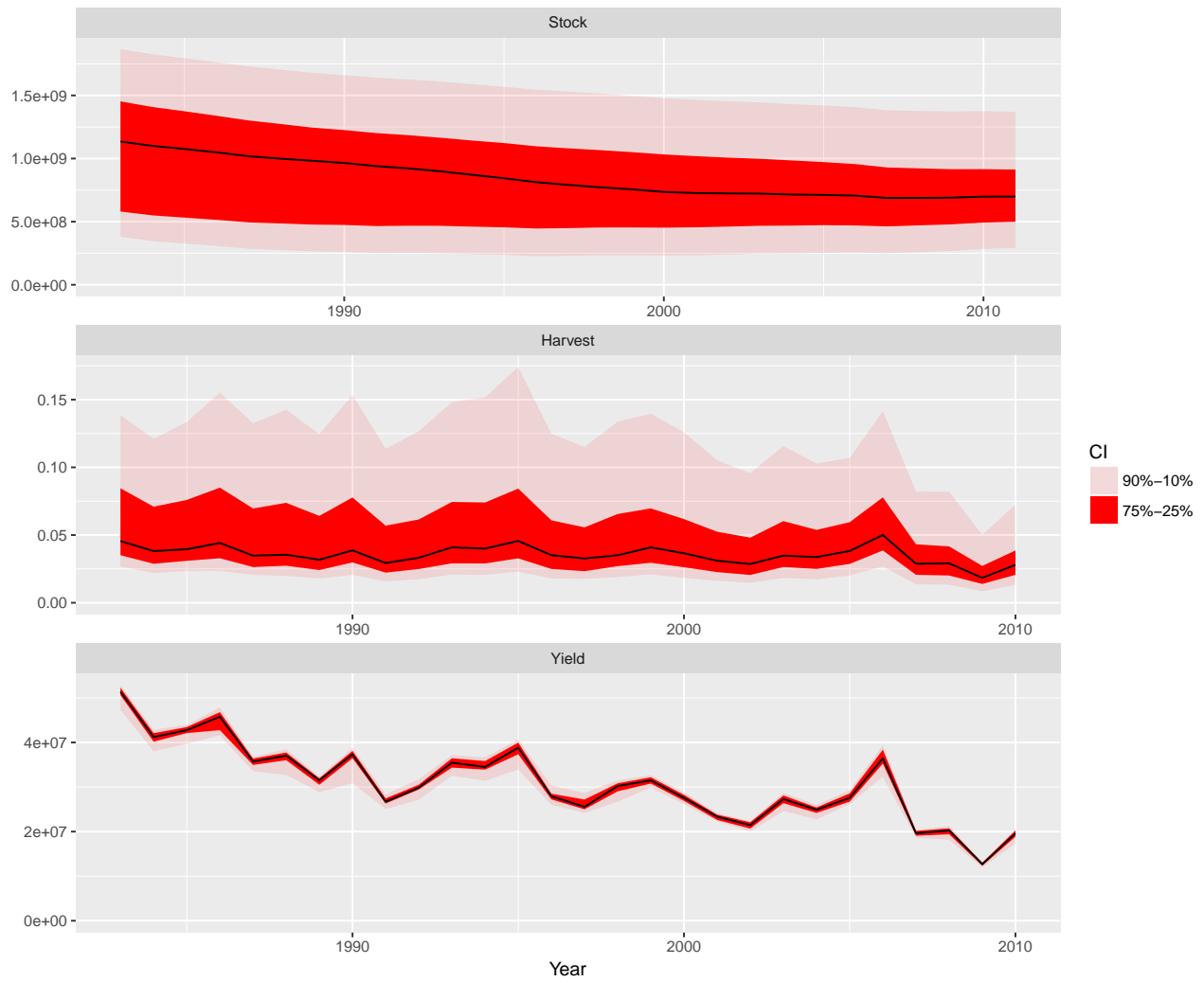
**Figure 12.** Assessment for adult index using data from 1960



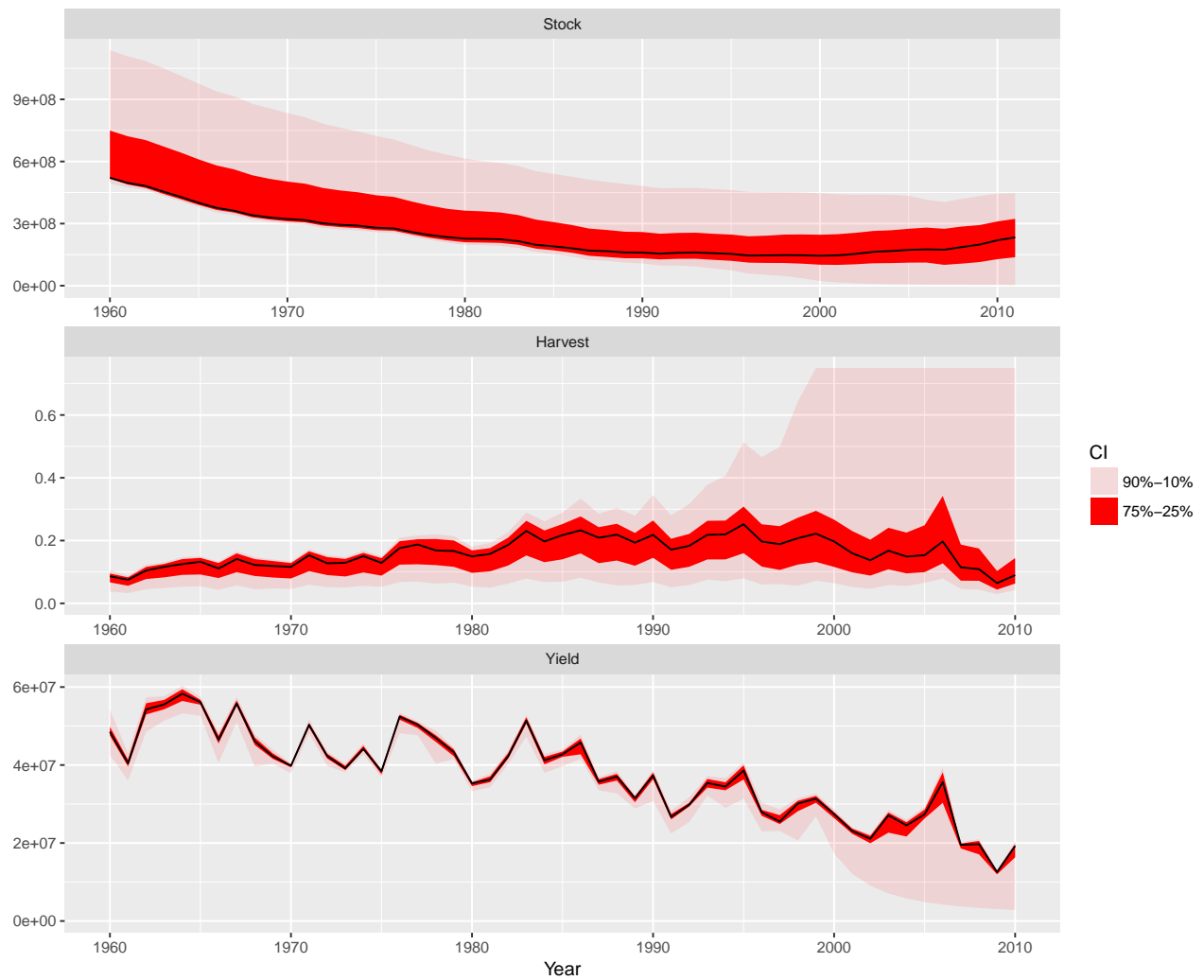
**Figure 13.** Assessment for adult index using data from 1980



**Figure 14.** Assessment for juvenile index using data from 1960

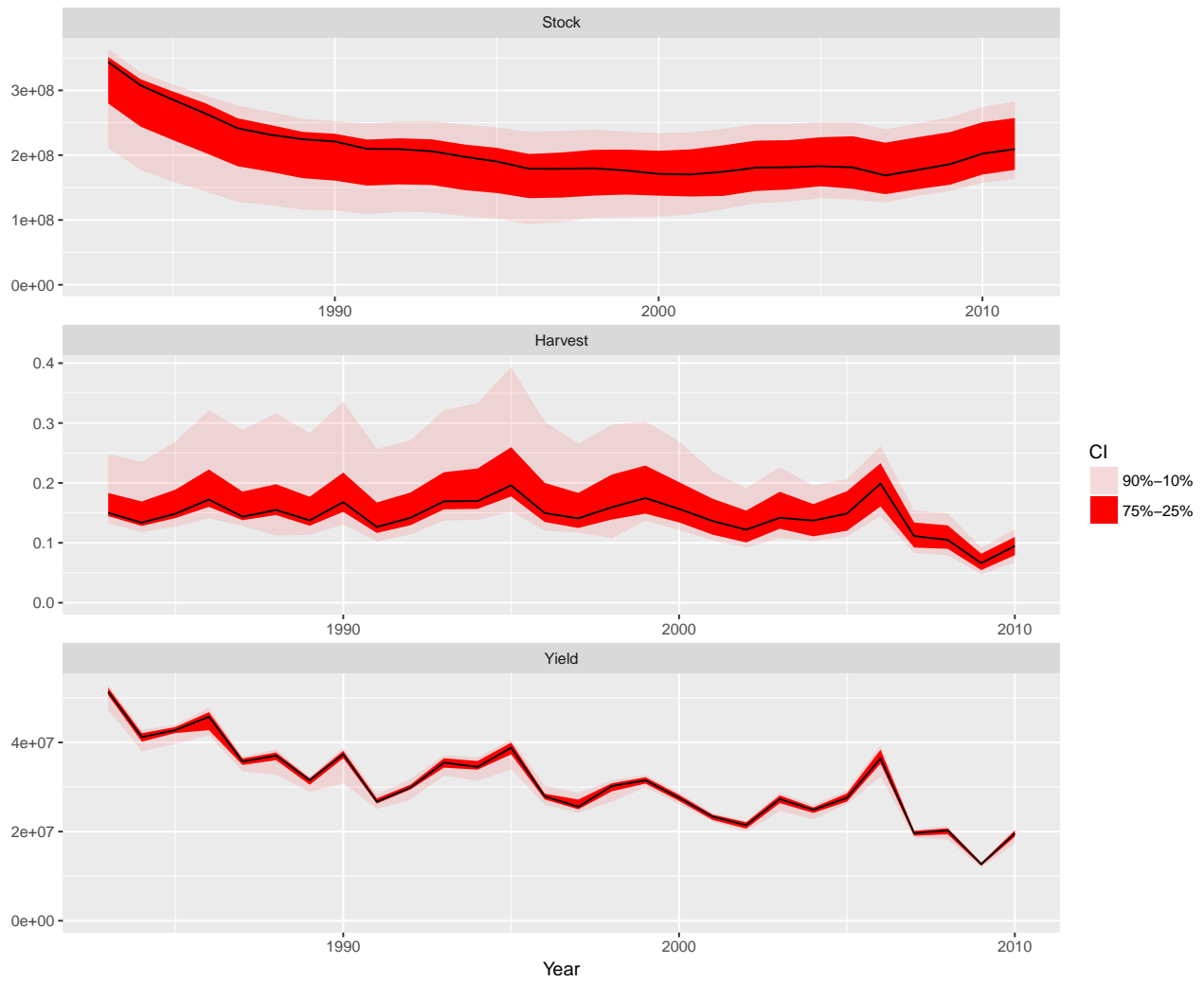


**Figure 15.** Assessment for juvenile index using data from 1980



**Figure 16.** Assessment for fisheries dependent index using data from 1960

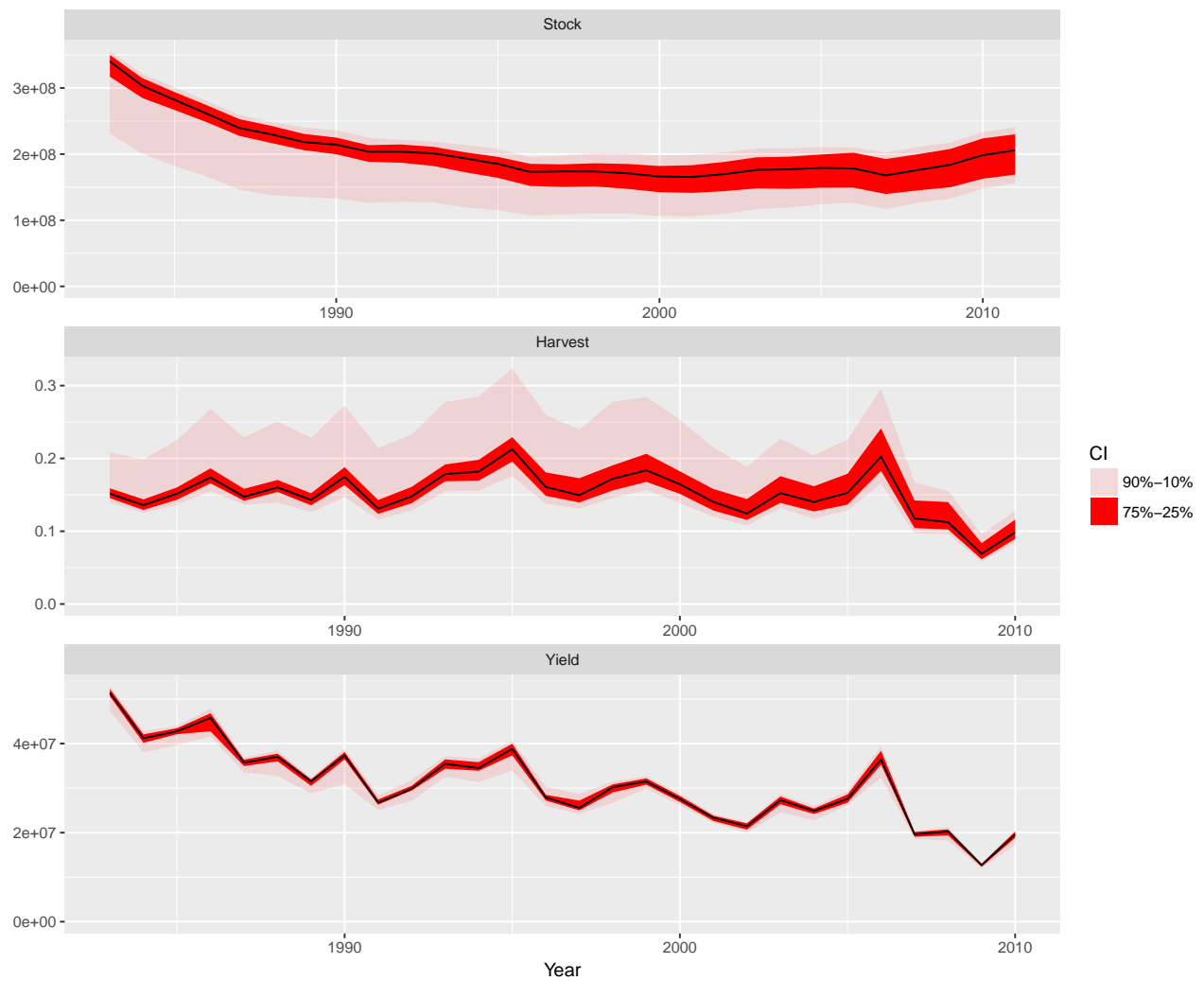




**Figure 17.** Assessment for fisheries dependent index using data from 1980



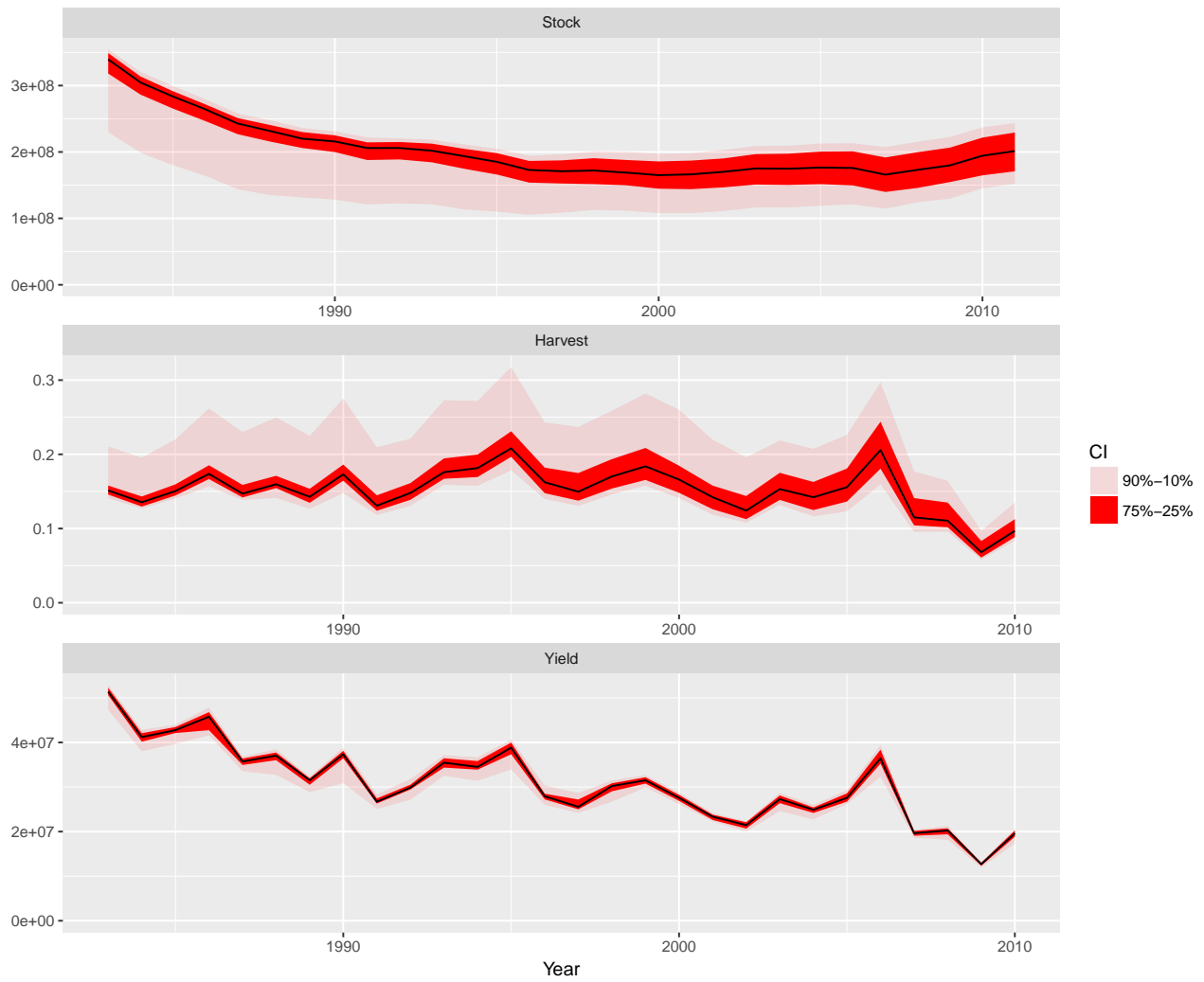
**Figure 18.** Assessment for fisheries dependent index using data from 1960



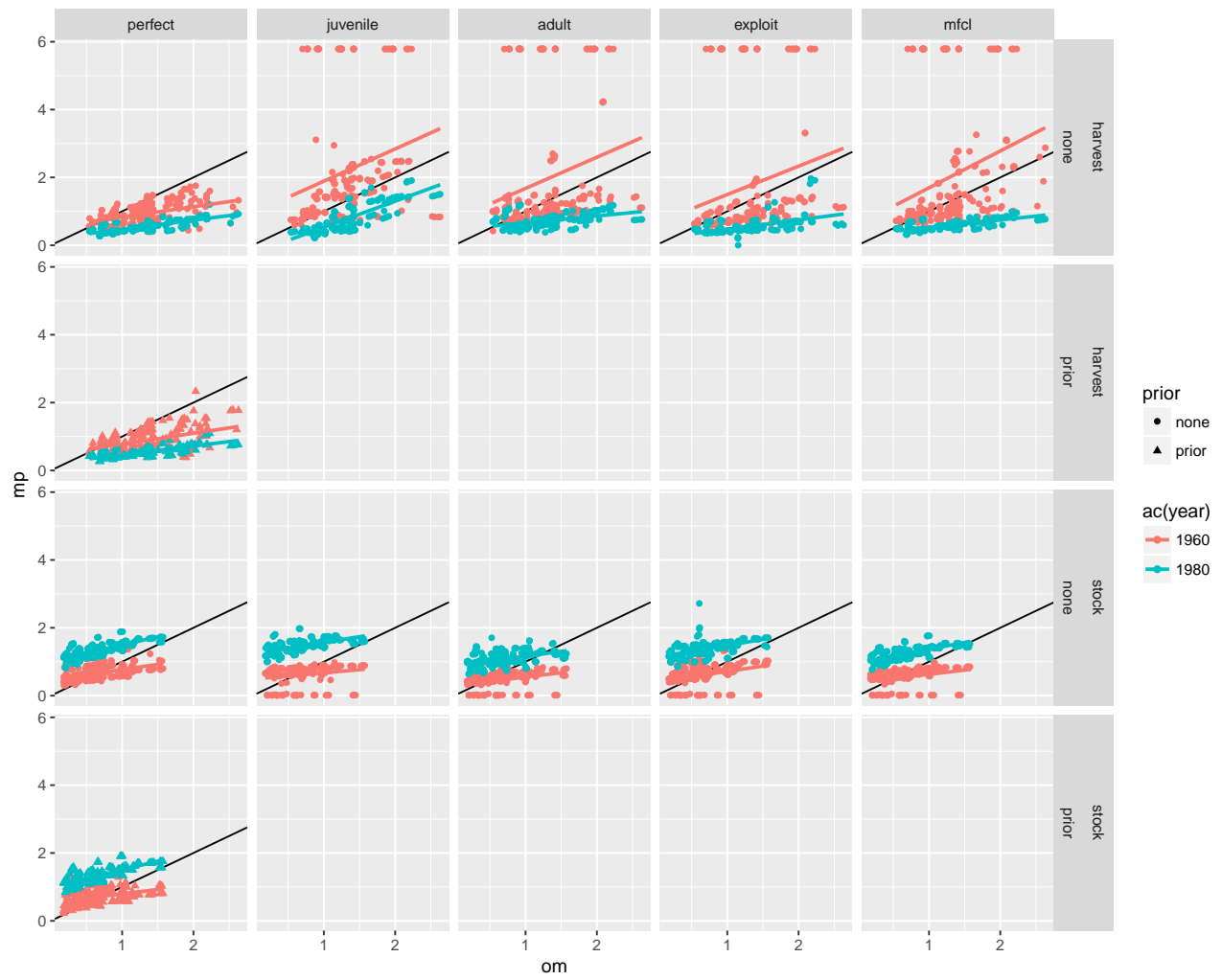
**Figure 19.** Assessment for fisheries dependent index using data from 1980



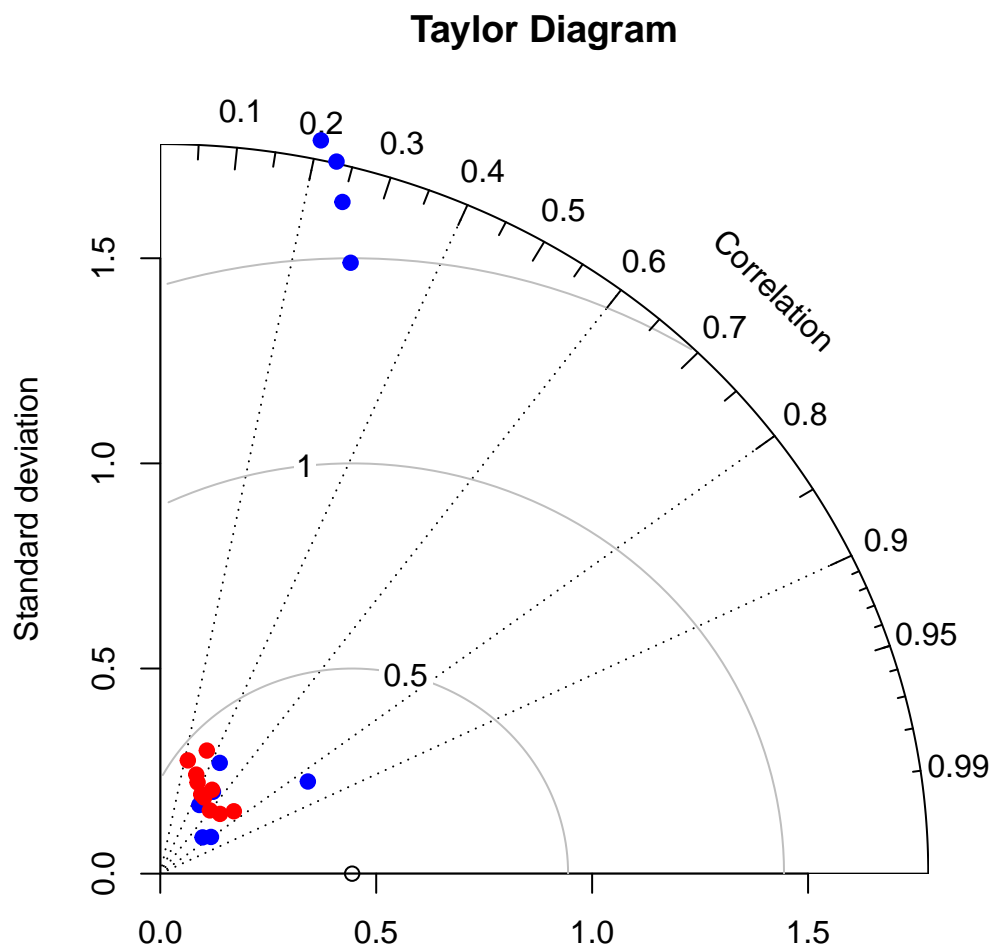
**Figure 20.** Assessment for fisheries dependent index using data from 1960 and prior for  $r$



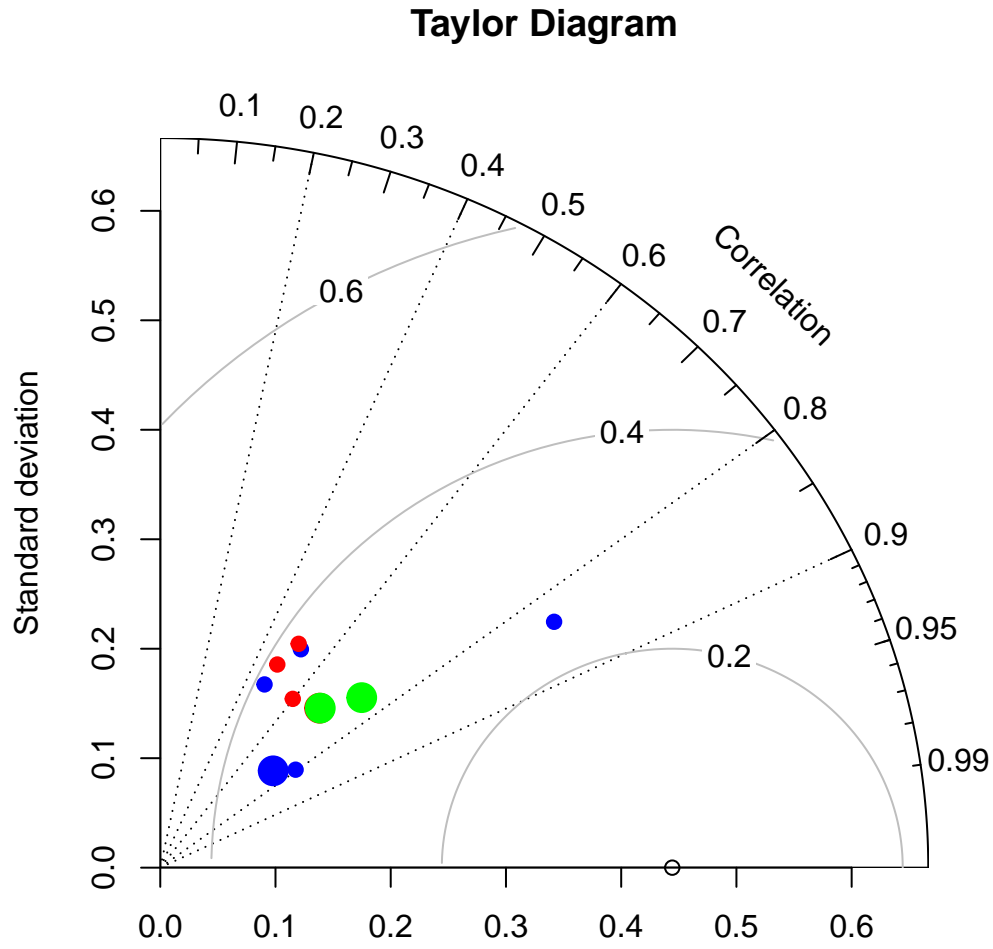
**Figure 21.** Assessment for fisheries dependent index using data from 1960 and prior for r



**Figure 22.** Relationship between stock status



**Figure 23.** Relationship between stock status harvest rate (blue) and stock (red)



**Figure 24.** Relationship between stock status harvest rate (blue) and stock (red), green harvest with 1980 data set.

**Table 1.** ratio between MP and MP values of  $B/B_{MSY}$  and  $F/F_{MSY}$

quantity	V1
1 harvest	1.6267375
2 stock	0.9779579