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## Models

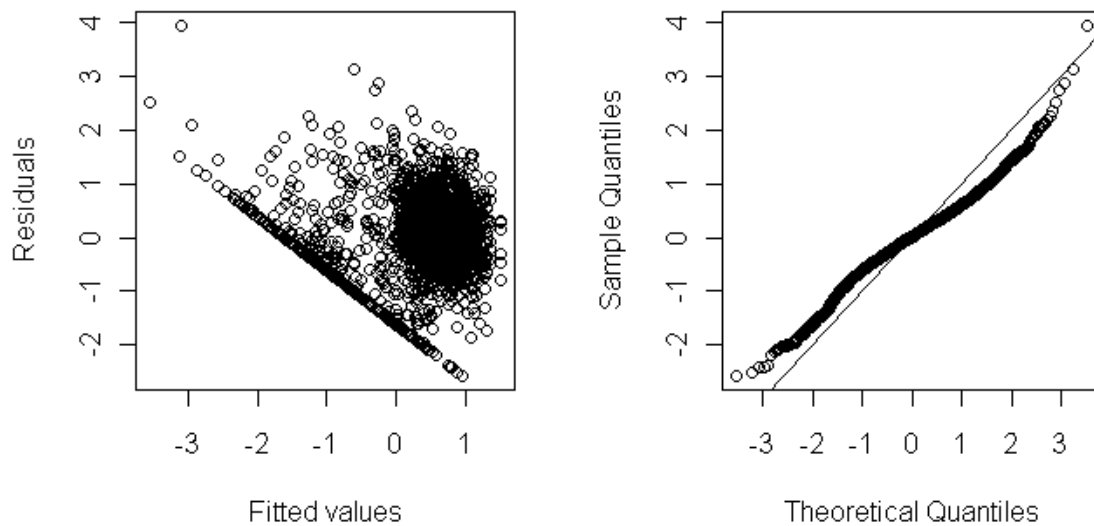
Four models were fitted and their residuals diagnostics, AIC and BIC compared; as well as the effect they produced in the standardised series compared to the raw series.

- Model 3: year + month + area + Lat5 + BET\_CPUE + YFT\_CPUE + month\*area
- Model 7: year + month + area + Lat5 + BET\_CPUE + YFT\_CPUE + month\*area+year\*Lat5
- Model 8: year + month + area + Lat5 + BET\_CPUE + YFT\_CPUE + month\*area+year\*area
- Model 9: year+month+area+BET\_CPUE+YFT\_CPUE+month\*area

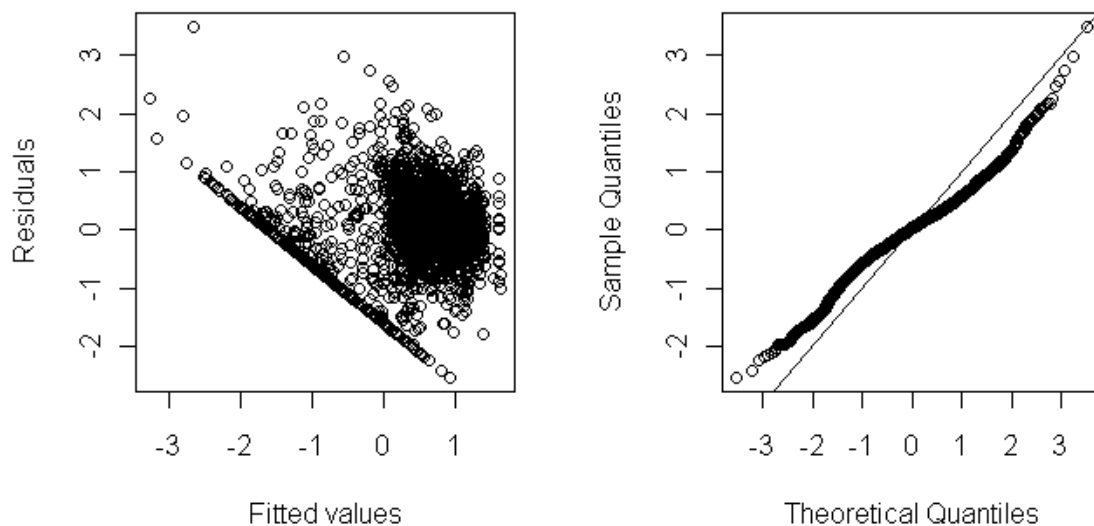
Model 9 presents slightly better residual qq-plot than the other models which are fairly similar between each other.

Model 3 still produces the smoothest series.

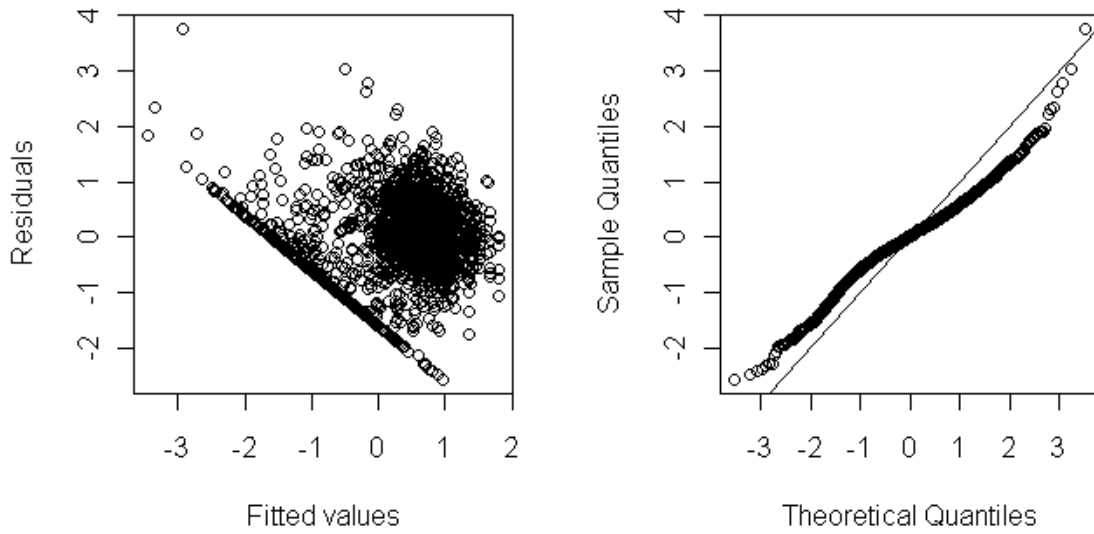
**Figure 1: Residuals diagnostics - model 3**



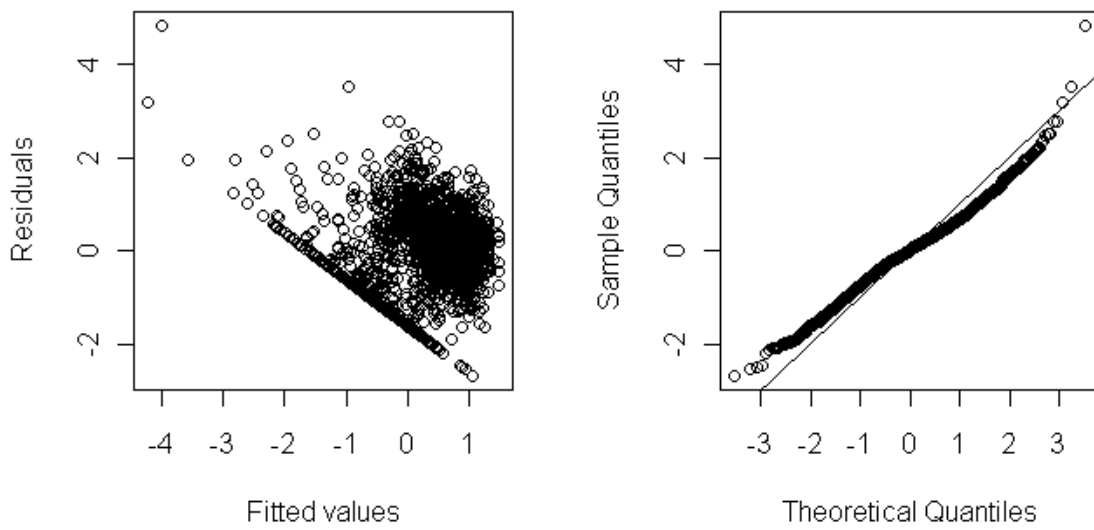
**Figure 2: Residuals diagnostics – model 7**



**Figure 3: Residuals diagnostics – model 8**



**Figure 4: Residuals diagnostics – model 9**



**Table 1: Models AIC and BIC**

	<b>AIC</b>	<b>BIC</b>
<b>Model 3</b>	5064	5397
<b>Model 7</b>	5013	5726
<b>Model 8</b>	5028	5868
<b>Model 9</b>	<b>5449</b>	<b>5651</b>

**Figure 5: CPUE series 1986-2008 – models 3, 7 to 9 and raw series.**

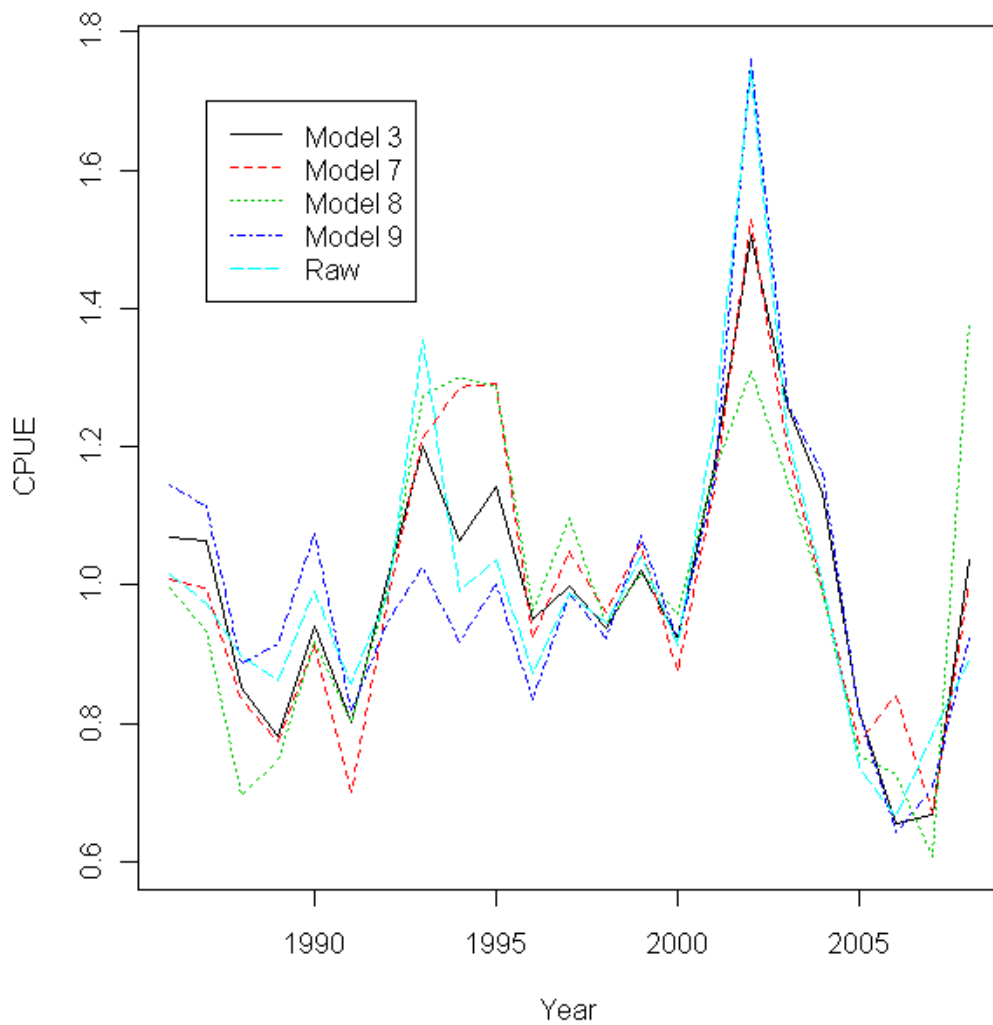


Figure 6: CPUE series 1986-2008 – model 9 unweighted, 0.5, 0.8 and raw series.

