Stock dependency

Methods

The socio-economic indicators, Gross Value Added (GVA) and Operating Cash Flow (OCF), provided by quota stock and port, were estimated based on DCF data of 2012. As DCF economic data are provided by fleet segment at the supra-region level, coefficients of GVA and OCF were calculated for each vessel length group assuming that the cost structure of vessels in the same fleet segment is similar, i.e., the proportion of GVA (or OCF) to landings value is similar for vessels of the same length group. The GVA and OCF coefficients were multiplied by the value of landings for each vessel covered by logbook or journal data in 2013 to estimate vessel level figures and scaled to the port level. Port dependency on quota stocks was calculated as the share of GVA generated by the value of landings of quota species to the total GVA generated in the port.

The spatial relation between catches and stocks was built on the basis of boundaries for stocks defined in the Regulation (EU) No 43/2014 of 20 January 2014 and centroids of ICES rectangles reported in the logbook data.

Definitions

Stock – species under quota regime delimited by fishing areas

Total vessels (home port) – number of vessels with logbook or journal data registered in the port

Landing port – port where vessels land their catch of quota species

Home port – port where vessels are registered

Total employment $_{(hp)}$ - employment, in FTE, generated by vessels registered in the port with logbook or journal data

Calculated, using the employment coefficient based on DCF data and assuming that the average FTE per vessel is similar by vessel length group, as:

Total employment $_{(hp)}$ =∑ (employment coefficient $_{(vi)}$ * number of vessels $_{(vi)}$) registered in the port and covered by logbook or journal data

where,

employment coefficient $_{(vi)}$ = FTE $_{(vi)}$ / number of vessels$_{(vi)}$

and,

vi = vessel length group *i*

Total GVA (hp) – Gross value added, generated from landings by vessels registered in the port covered by logbook or journal data

Calculated, using the GVA coefficient based on DCF data and assuming that the cost structure for vessels in the same vessel length group is similar, as:

GVA $_{(hp)}$ =∑ (GVA coefficient $_{(vi)}$ * landings value by vessels $_{(vi)}$) registered in the port and covered by logbook or journal data

where,

GVA = Income from landings + other income – (energy costs + repair costs + other variable + non variable costs)

and,

GVA coefficient $_{(vi)}$ = GVA $_{(vi)}$ / landings value $_{(vi)}$

and,

vi = vessel length group *i*

Total GVA (lp), Gross value added, generated from landings by **Swedish** vessels covered by logbook or journal data in the landing port.

Calculated as:

GVA $_{(lp)}$ =∑ (GVA coefficient $_{(vi)}$ * landings value by vessels $_{(vi)}$) covered by logbook or journal data in the landing port

where,

GVA = Income from landings + other income – (energy costs + repair costs + other variable + non variable costs)

and,

GVA coefficient $_{(vi)}$ = GVA $_{(vi)}$ / landings value of vessels $_{(vi)}$

and,

vi = vessel length group *i*

Total OCF – Operating cash flow, generated from landings by vessels registered in the port and covered by logbook or journal data. Calculated, using DCF data and assuming that the cost structure for vessels in the same vessel length group is similar, as:

Calculated as:

OCF $_{(hp)}$ =∑ (OCF coefficient $_{(vi)}$ * landings value by vessel s $_{(vi)}$) registered in the port and covered by logbook or journal data

where,

OCF = Income from landings + other income – (crew wage + energy costs + repair costs + other variable + non variable costs)

and,

OCF coefficient $_{(vi)}$ = OCF $_{(vi)}$ / landings value of vessels $_{(vi)}$

and,

vi = vessel length group *i*

Dependency home port (%) – the home ports' dependency in terms of the GVA generated by quota species landings

Calculated as:

Dependency (hp) = $GVA_{(Qi)}$ / $GVA_{(hp)}$

Where,

Q_i = quota stock *i*

Dependency landing port (%) – the landing ports' dependency in terms of the GVA generated by quota species landings covered by Swedish vessels with logbook or journal data

Calculated as:

Dependency (lp) = $GVA_{(Qi)}$ / $GVA_{(lp)}$

Where,

Q_i = quota stock *i*