

Exercise 2: Implement a reform to the UK model and use the Statistics Presenter to analyse its impact on the income distribution

Objectives:

- Copy and paste a policy system
- Introduce a simple policy reform to the copied policy system
- Assess the redistributive effects of the reform

Directions:

- Open UKMOD and access the UK policy descriptions
- Copy the UK_2021 system, and call the copy UK_2021reform
- Open the Child Benefit policy (*bch_uk*)
- Find the parameter name defining the benefit value for the first child
- Check the default value for this parameter
- In system UK_2021reform, replace the parameter with the value 25.00#w (per week)
- Save your changes
- Run both UK_2021 and UK_2021reform
- Use the Statistics Presenter, Baseline/Reform option, to analyse distributional effects

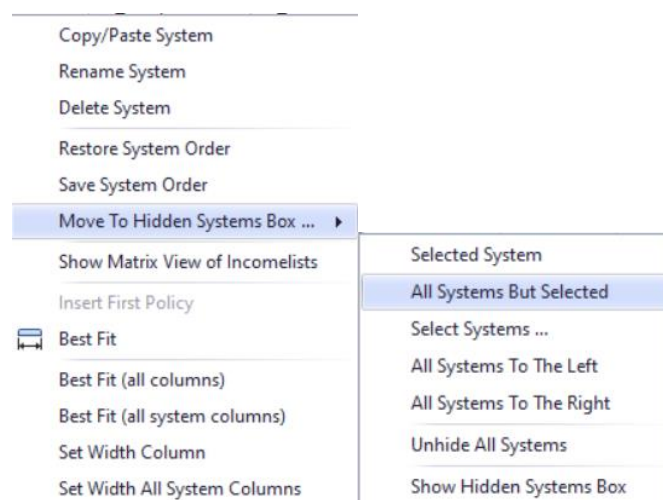
Exercise 2: Implementing a reform to the UK model and using the Statistics Presenter to analyse its impact on the income distribution

Step-by-step solutions and further information:

Step 1: Adding a new system

Open the UK model, by clicking on the UK country flag. To work more easily with the UK_2021 system, hide the rest of the systems, by right-clicking on the system name (UK_2021), selecting “move to hidden system box” and then selecting “all systems but selected”.

Figure 1: Hiding a system



Add a new system. There are two ways of doing it: 1) right-click on the system heading UK_2021 and select the option ‘copy/paste system’ and 2) click on the button *Add System* in the Country Tools tab. Using 1), specify a name for the reform system (type e.g. *UK_2020reform*).

Figure 2: Adding a reform system using the copy/paste option

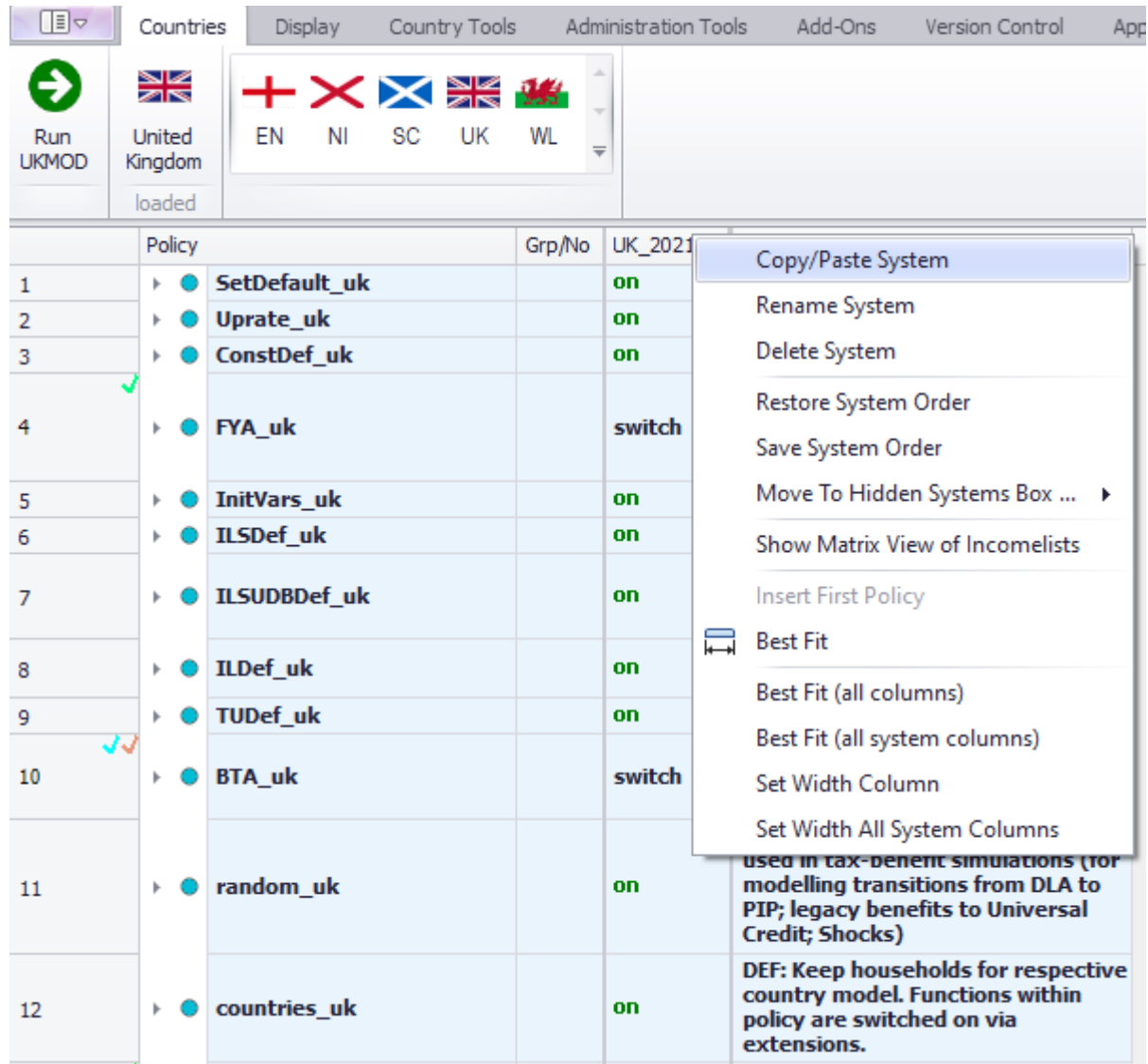


Figure 3: Giving a name to the reform system

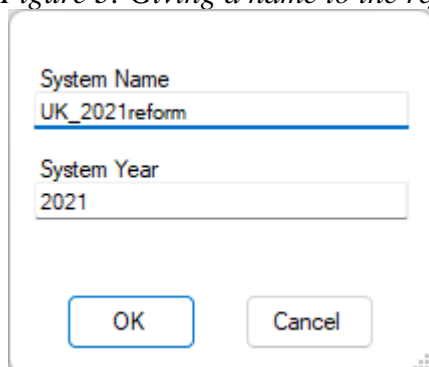


Figure 4: Find policy “bch uk”

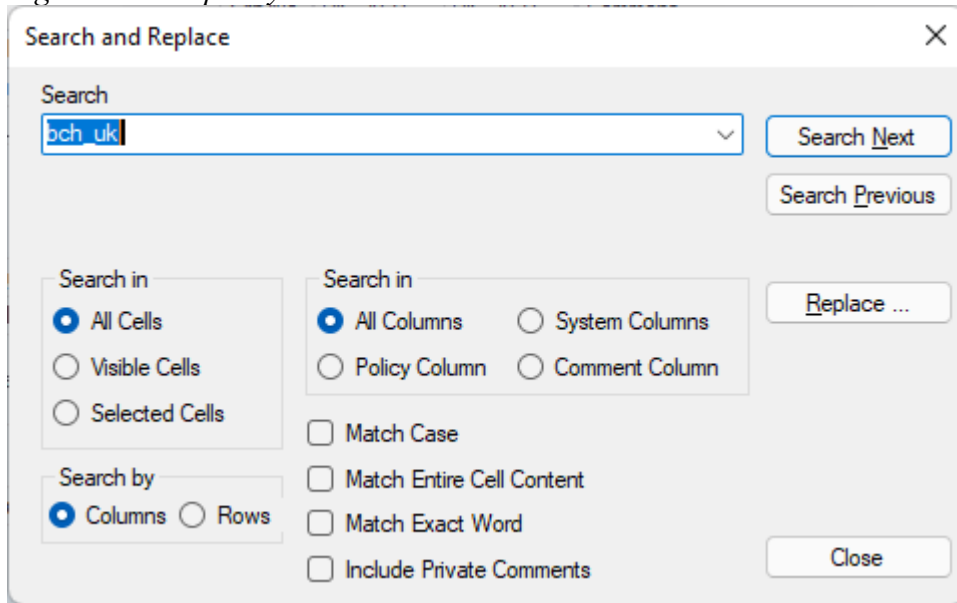


Figure 5: Check value of benefit for first child

	Policy	Grp/No	UK_2021	UK_2021...	Comment
28	▶ ● bunct_uk		on	on	BEN: contributory unemployment benefit (Jobseeker's Allowance)
29	▶ ● boaht_uk		on	on	BEN: pensioner's annual heating allowance (Winter Fuel Allowance)
30	▼ ● bch_uk		on	on	BEN: child benefit
30.1	▼ fx BenCalc		on	on	Child Benefit: amount
30.1.1	comp_cond	1	(IsNtoMchild#1)	(IsNtoMchild#1)	First child entitled to receive...
30.1.2	#_N	1	1	1	
30.1.3	#_M	1	1	1	
30.1.4	comp_perElig	1	\$CBFirst	\$CBFirst	this amount par69
30.1.5	comp_cond	2	(IsNtoMchild#2)	(IsNtoMchild#2)	"From second child on, each child is
30.1.6	#_N	2	2	2	\$CBFirst = 21.15#wive..."
30.1.7	#_M	2	99	99	
30.1.8	comp_perElig	2	\$CBOther	\$CBOther	this amount par70
30.1.9	output_var		bch_s	bch_s	
30.1.10	TAX_UNIT		tu_bu_uk	tu_bu_uk	

Step 2: Implementing the reform

You need to increase the Child Benefit amount for the first child from £21.15 per week to £25 per week. In the reform system UK_2021reform, change the parameter value of *comp_perElig* (1) from *\$CBFirst* to *25#w* (£25 per week).

Figure 6: New benefit amount for the first child

	Policy	Grp/No	UK_2021	UK_2021...	Comment
29	▶ ● boeht_uk		on	on	BEN: pensioner's annual heating allowance (Winter Fuel Allowance)
30	▼ ● bch_uk		on	on	BEN: child benefit
30.1	▼ fx BenCalc		on	on	Child Benefit: amount
30.1.1	comp_cond	1	(IsNtoMchild#1)	(IsNtoMchild#1)	First child entitled to receive...
30.1.2	#_N	1	1	1	
30.1.3	#_M	1	1	1	
30.1.4	comp_perElig	1	\$CBFirst	25#w	this amount par69
30.1.5	comp_cond	2	(IsNtoMchild#2)	(IsNtoMchild#2)	"From second child on, each child is entitled to receive..."
30.1.6	#_N	2	2	2	
30.1.7	#_M	2	99	99	
30.1.8	comp_perElig	2	\$CBOther	\$CBOther	this amount par70
30.1.9	output_var		bch_s	bch_s	
30.1.10	TAX_UNIT		tu_bu_uk	tu_bu...	

Figure 7: Save your changes

The screenshot shows a software interface with a 'Save Country' menu open. The menu options are: Save Country (Ctrl+S), Save Country As, New Project, Open Project, Project Configuration, Close Country, Close All Countries/Add-Ons, and Exit. In the background, a table is visible with the following data:

Grp/No	UK_2021	UK_2021...	Comment
	on	on	BEN: pensioner's annual heating allowance (Winter Fuel Allowance)
	on	on	BEN: child benefit
	on	on	Child Benefit: amount
1	(IsNtoMchild#1)	(IsNtoMchild#1)	First child entitled to receive...
1	1	1	
1	1	1	
1	\$CBFirst	25#w	this amount par69
2	(IsNtoMchild#2)	(IsNtoMchild#2)	"From second child on, each child is entitled to receive..."
2	2	2	
2	99	99	
2	\$CBOther	\$CBOther	this amount par70
	bch_s	bch_s	
	tu_bu_uk	tu_bu...	
	on	on	TAX: personal tax allowance
	on	on	TAX: personal income tax

Step 3: Produce and analyse micro-data output

Run the model to produce micro-data output for the baseline and reform system. Use the Statistics Presenter – option Baseline/Reform – to analyse differences in government revenues and income poverty due to the changes in the Child Benefit.

Figure 8: Producing micro-data output for the baseline and reform systems

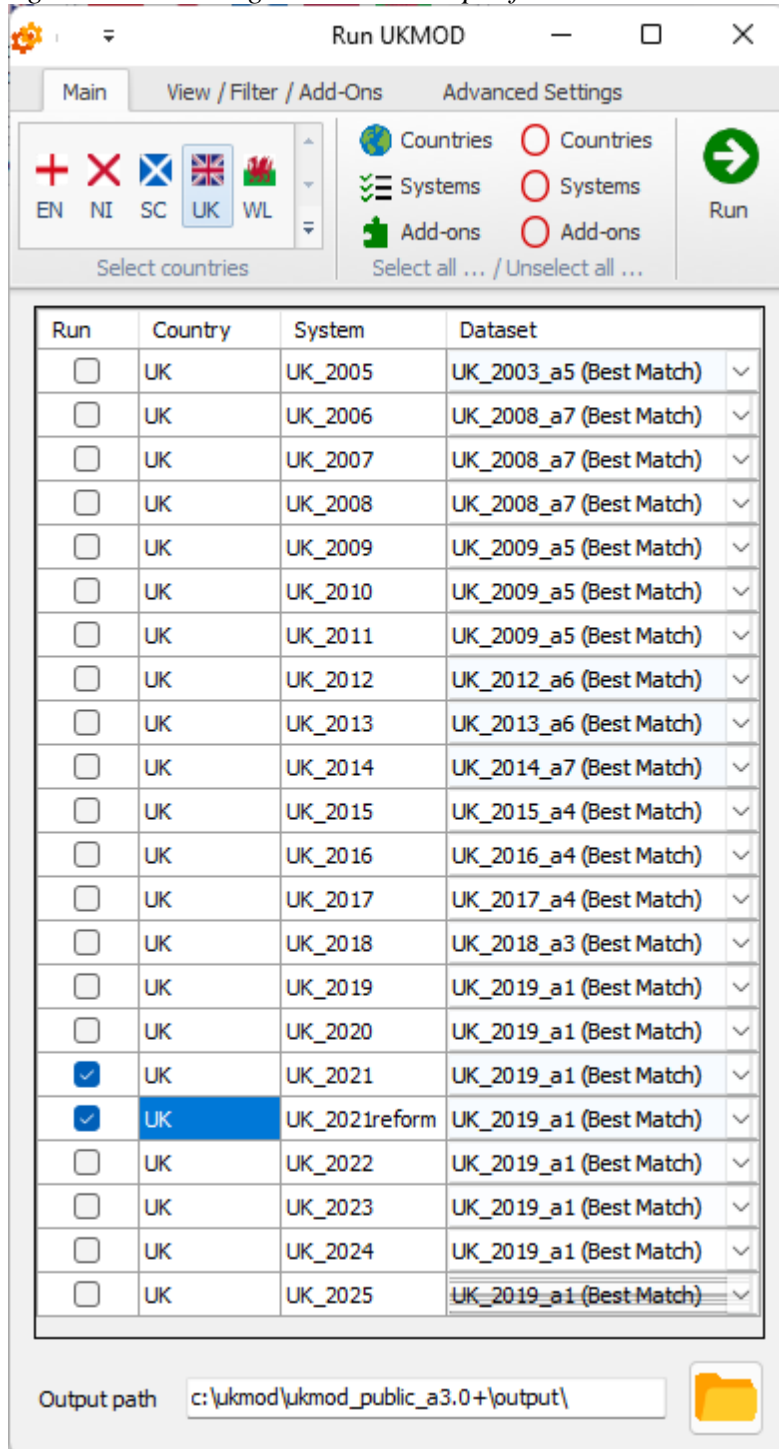


Figure 7: Opening Statistics Presenter – Baseline/Reform option

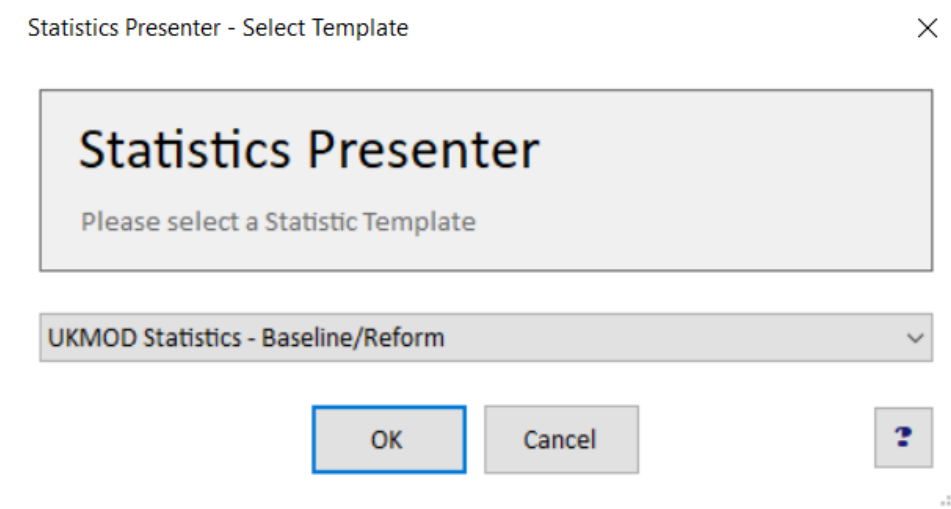
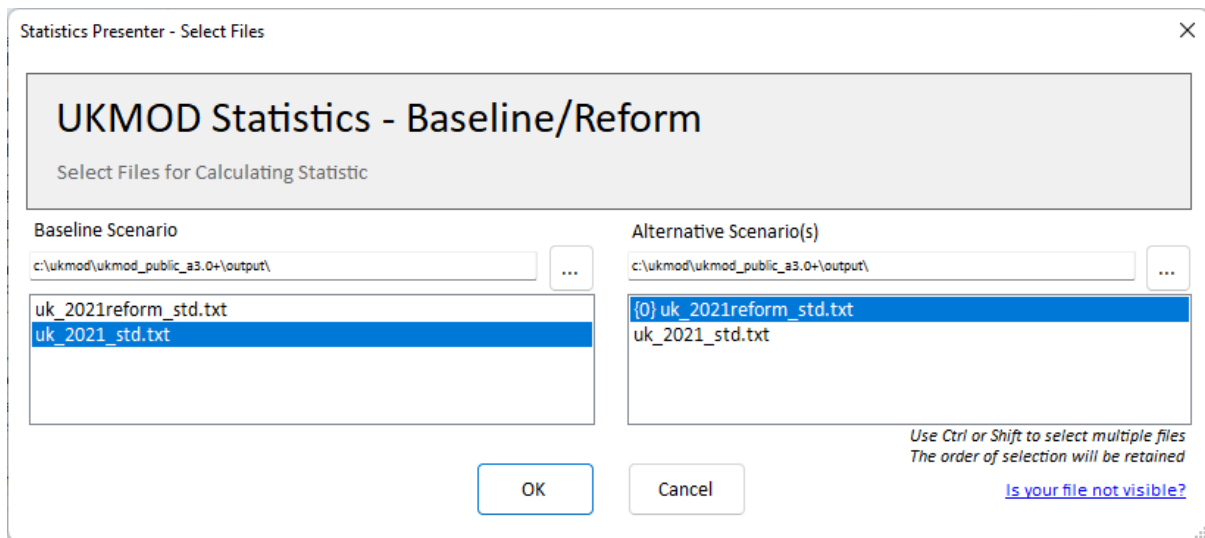


Figure 8: Selecting the relevant output files with the Statistics Presenter



Solution

See Excel file “Exercise 2.xls”