FES Project Output

Scottish Budget 2026

```
1  md"""
2  # FES Project Output
3
4  ## $(settings.run_name)
5  """
```

Table of Contents

```
1  begin
2      settings = Settings()
3      settings.run_name = "Scottish Budget 2026"
4      settings.do_marginal_rates = true
5      wage = 30
6      examples = get_example_hhs(settings)
7
8      const DEFAULT_SYS_2026 = get_default_system_for_fin_year(2026; scotland=true,
       autoweekly=false )
9
10 end;
```

turn_on_property! (generic function with 1 method)

```julia
1
2
3  function turn_on_property!( ; sys::TaxBenefitSystem{T},
4                                rates::Vector{T},
5                                thresholds::Vector{T},
6                                basic_rate=2 ) where T <: AbstractFloat
7      sys.it.property_rates = copy(rates)
8      sys.it.property_thresholds = copy(thresholds)
9      sys.it.property_basic_rate = basic_rate
10     # no equivalent of the savings allowance.
11     sys.it.personal_property_allowance = 0.0
12     # just property income in the property definition
13     push!(sys.it.property_income,PROPERTY)
14     # ... and remove property from standard Scottish Income Tax
15     setdiff!(sys.it.non_savings_income, [PROPERTY] )
16 end
17
18
```

```
[0.0, 3.83299, 5.74949]
```

```julia
1  begin
2      sys1 = deepcopy( DEFAULT_SYS_2026 )
3
4      sys2 = deepcopy( DEFAULT_SYS_2026)
5      #=
6      Rooker-wised 2025/6 thresholds
7      gaps between bands increased by 3.8% rounded up to next £100
8      =#
9      sys1.it.non_savings_thresholds = [
10          3000.0,
11         15600.0,
12         32400.0,
13         65000.0,
14        130100.0]
15      #=
16      or just do:
17      sys1.it.non_savings_thresholds = [
18          2934.426,
19         15487.998000000001,
20         32273.496000000003,
21         64802.340000000004,
22        129895.32]
23      =#
24      # The next 2 add £40 for children under 1
25      sys2.scottish_child_payment.maximum_ages = [0,15,99]
26      sys2.scottish_child_payment.amounts = [40.0,28.2,0]
27
28      # This adds extra CT for house values above 1m. All other CT is unchanged.
29      sys2.loctax.ct.house_values[Band_H] = 1_000_000
30      sys2.loctax.ct.house_values[Band_I] = 2_000_000
31      sys2.loctax.ct.house_values[Band_J] = 99999999999
32
33      sys2.loctax.ct.keep_band = Band_H
34      # these relativities are made up.
35      sys2.loctax.ct.relativities[Band_I] = 840/360
36      sys2.loctax.ct.relativities[Band_J] = 960/360
37      sys2.loctax.ct.revalue = true # turn false/true for CT 1m
38      weeklyise!(sys1)
39      weeklyise!(sys2)
40  end
```

```
1  Enter cell code...
```

The next line runs the model every time one of the blocks above changes.

```julia
1  summary, data, short_summary, zipname  = fes_run( settings, [sys1, sys2] );
```
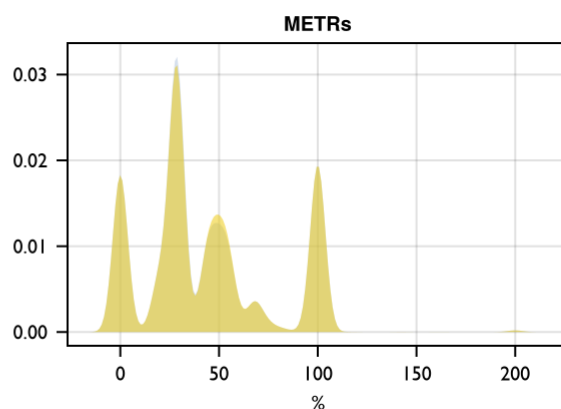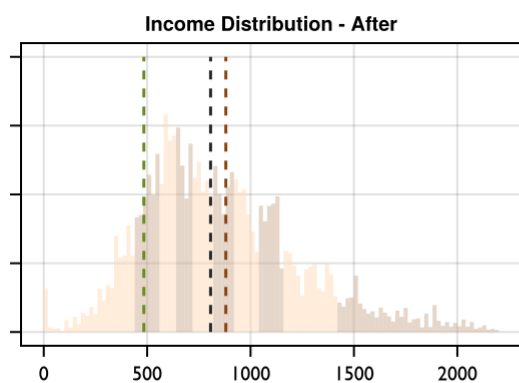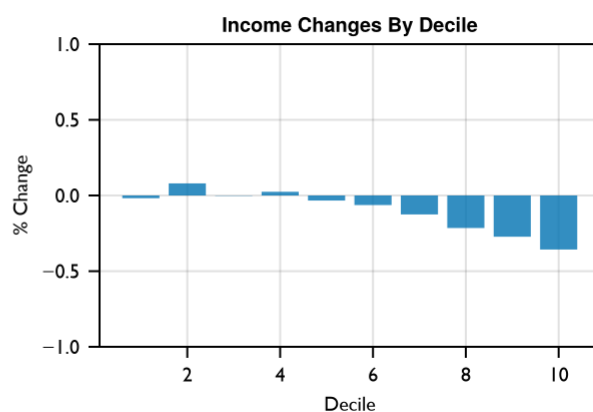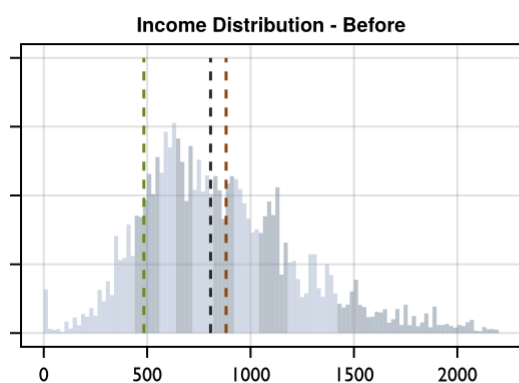
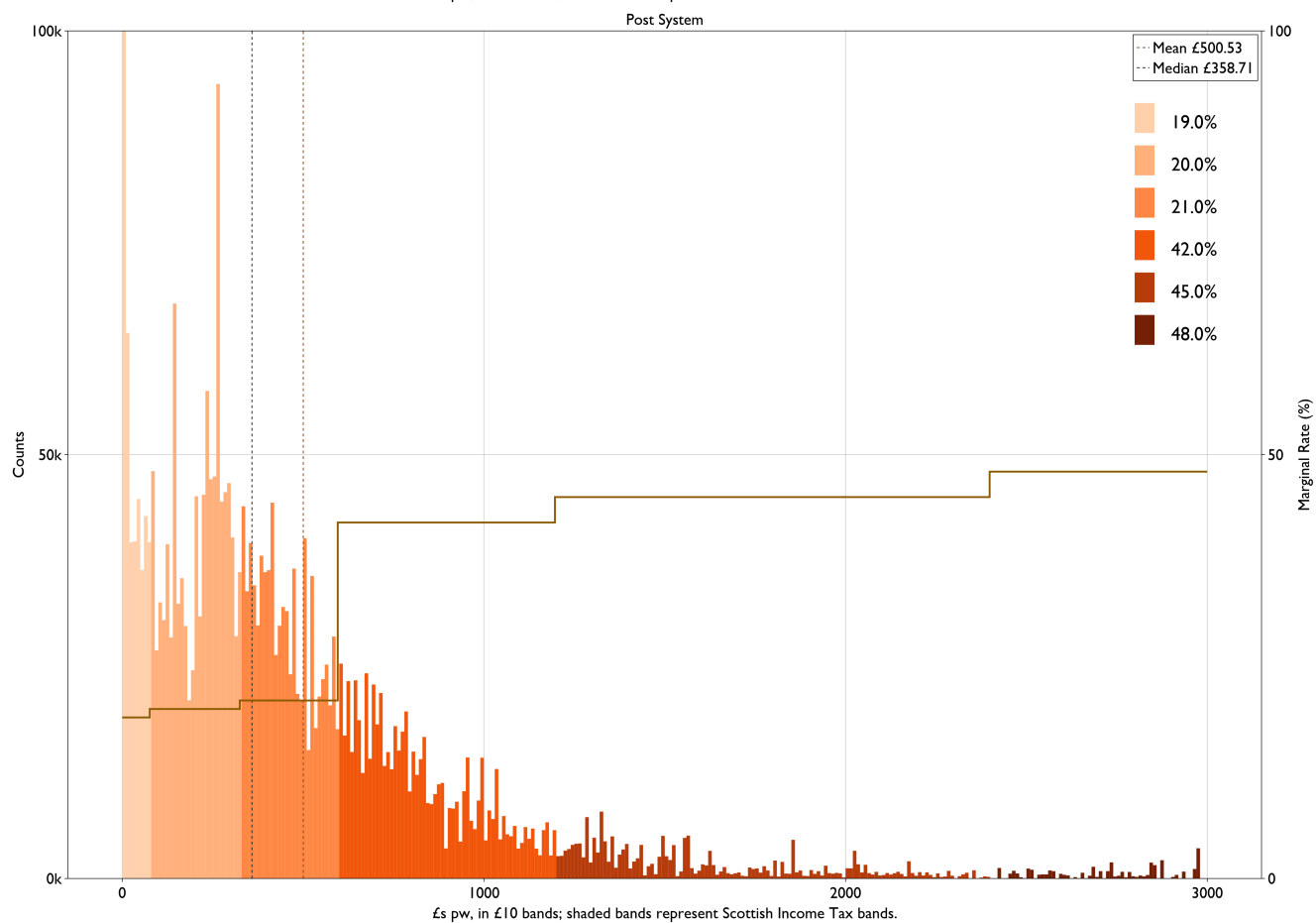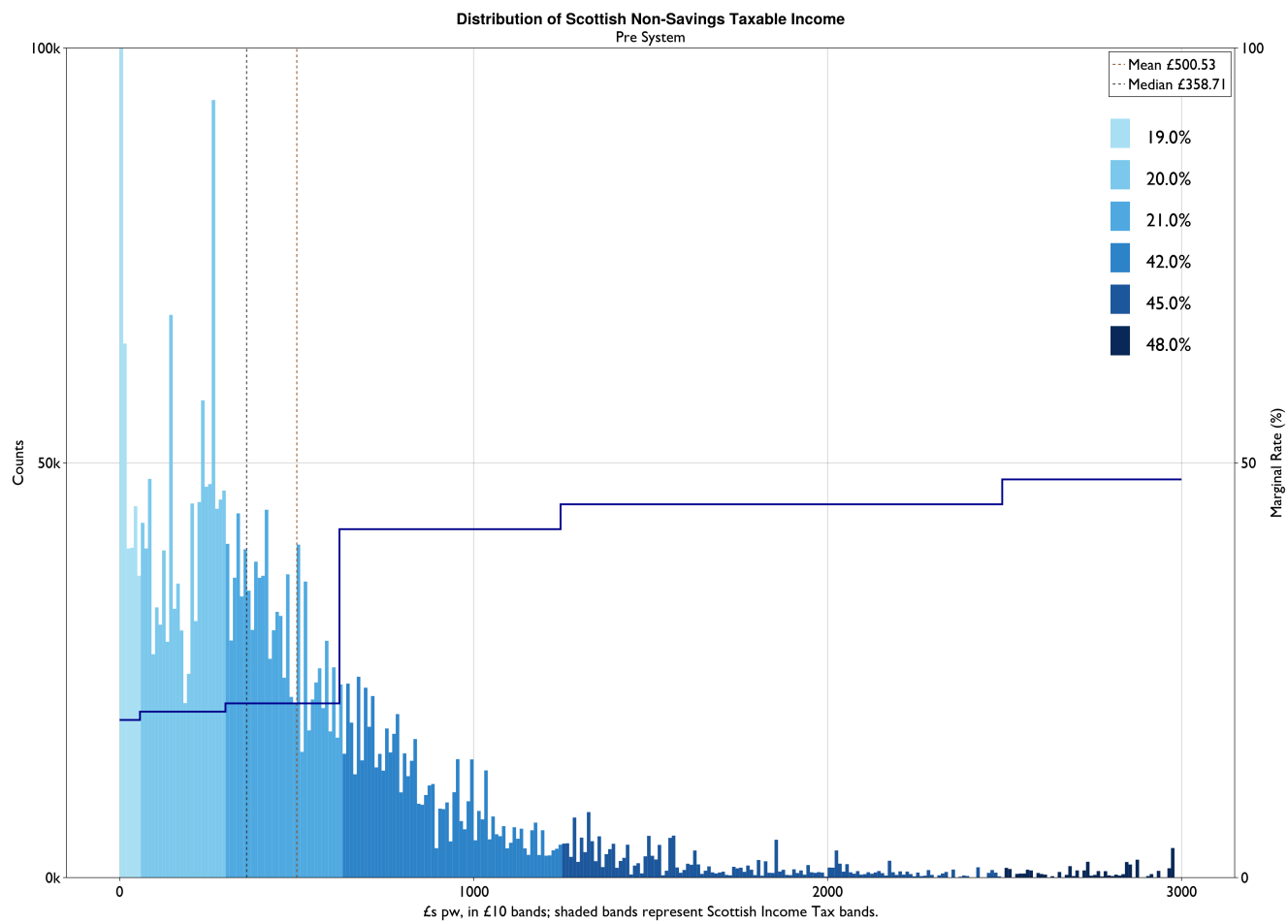Everything below this is automatically generated output. It changes every time the parameters change.

Run Settings Summary

- ScotBen version: **0.1.7**

- Incomes uprated to: **2026** q**1**;
- Income Type Used for Poverty/Inequality/Decile Graphs: **Equivalised Before Housing Costs**;
- Income Type used for Gain-Lose tables: **Equivalised Before Housing Costs**
- Populations weighed to: **2026**;
- Poverty Line :**Computed as 60% AHC/BHC from 1st parameter system** ;
- Means-Tested Benefits Phase in assumption: **Universal Credit Fully Implemented**;
- Disability Benefits Phase in assumption: **Scottish System 100% phased in**;
- Dodgy Means-Tested Benefits takeup corrections applied: **false**;
- Output written to directory **output/scottish_budget_2026**.

Summary Results : Scottish Budget 2026

Distribution of Scottish Non-Savings Taxable Income

£s pw, in £10 bands; shaded bands represent Scottish Income Tax bands.

£s pw, in £10 bands; shaded bands represent Scottish Income Tax bands.

```
1  begin
2      save_taxable_graph( settings, data, summary, [sys1,sys2] )
3  end
4
```

Net Cost of your changes: **£191mn**

Direct Tax revenue

before: **£40,793mn** after: **£40,963mn** change: **£169mn** £mn pa

Net Revenue Raised inc. Local Taxes

£191mn £mn pa

Net Revenue raised - Benefits & Direct Taxes only

£155mn £mn pa

£191mn £mn pa

Benefit Spending

before: **£27,990mn** after: **£28,003mn** change: **£14mn** £m pa

Inequality

- **Gini:** before: **27.2%** after: **27.1%** change: **-0.1%**
- **Palma:** before: **94.7%** after: **94.1%** change: **-0.5%**

Using Equivalised Before Housing Costs income.

Gainers & Losers

People gaining: **2,318,879** losing: **1,707,473** unchanged: **1,383,024**

Poverty Measures

- **Count:** before: **13.7%** after: **13.6%** change: **-0.1%**
- **Gap:** before: **4.0%** after: **4.0%** change: **-0.0%**
- **Severity:** before: **3.0%** after: **3.0%** change: **-0.0%**
- **Child Poverty:** before: **11.8%** after: **11.6%** change: **-0.2%**

Using Equivalised Before Housing Costs income.

Incomes Summary

Tax Liabilities and Benefit Entitlements, £m pa, 2025/26

	Before	After	Change
Total Income Tax	23,570	23,739	+169
Employee's National Insurance	4,180	4,180	–
Employer's National Insurance	13,043	13,043	–
Scottish Income Tax	23,413	23,583	+169
Domestic Local Taxes	3,629	3,665	+36
Total Benefit Spending	27,990	28,003	+14
All Means Tested Benefits	8,595	8,609	+14
Legacy Means-Tested Benefits	1,517	1,517	−0
Universal Credit	5,764	5,763	−1
Non Means Tested Benefits	19,394	19,394	–
Disability, Sickness-Related Benefits	6,069	6,069	–
Scottish Benefits	6,638	6,649	+11

SFC Behavioral Corrections

Taxable Income £pa	Tie Rate	AETR Rate	Num People	Static Baseline	Static Reform	Static Change	Intensive Change	Extensive Change	Beha
						£m pa			
£0 – £37,700	0.01	0.00	4,727,221	7,789	7,781	−8	−2	0	
£37,700 – £67,430	0.10	0.06	467,579	5,695	5,798	103	−7	−5	
£67,430 – £150,000	0.20	0.06	175,870	5,360	5,417	56	−5	−3	
£150,000 – £300,000	0.35	0.25	25,370	1,947	1,959	12	−1	−3	
£300,000 – £500,000	0.55	0.25	11,832	2,111	2,117	6	0	−1	
£500,000+	0.75	0.25	1,503	510	511	1	0	−0	
Total			5,409,375	23,413	23,583	169	−14	−12	

Marginal Effective Tax Rates (METRs)

Working age individuals with Marginal Effective Tax Rates (METRs) in the given range. METR is the percentage of the next £1 you earn that is taken away in taxes or reduced means-tested benefits.

	Before	After	Change
Negative or Zero	0	0	–
Under 10%	571,307	571,058	–249
10-20%	78,637	86,707	+8,070
20-30%	1,119,538	1,080,830	–38,708
30-50%	316,344	322,656	+6,312
50-80%	543,864	568,313	+24,449
80-100%	13,375	13,501	+126
Above 100%	618,795	618,795	–
Average METR	43	43	+0

Poverty

Standard Poverty Measures, using Before Housing Costs Equivalised Net Income.

	Before	After	Change
Headcount (All)	13.68	13.60	–0.08
Child Poverty	11.75	11.55	–0.20
Gap	3.96	3.95	–0.00
FGT(α=2)	3.02	3.02	–0.00
Watts	5.59	5.58	–0.00
Sen	5.87	5.86	–0.01
Shorrocks	1.04	1.04	–0.01

Inequality

Standard Inequality Measures, using Before Housing Costs Equivalised Net Income.

	Before	After	Change
Gini	27.18	27.09	–0.08
Palma	94.65	94.11	–0.54
Atkinson(ε=0.5)	5.72	5.69	–0.03
Atkinson(ε=1)	12.17	12.12	–0.06
Atkinson(ε=2)	99.66	99.66	–0.00
Hoover	19.00	18.94	–0.06

Poverty Transitions

		After				
		V.Deep (<=30%)	Deep (<=40%)	In Poverty (<=60%)	Near Poverty (<=80%)	Not in Poverty	Total
Before	**V.Deep (<=30%)**	114,258	–	–	–	–	114,258
	Deep (<=40%)	–	107,160	–	–	–	107,160
	In Poverty (<=60%)	–	–	513,768	4,782	–	518,551
	Near Poverty (<=80%)	–	–	417	1,014,482	2,813	1,017,712
	Not in Poverty	–	–	–	1,410	3,650,285	3,651,695
	Total	114,258	107,160	514,185	1,020,674	3,653,098	5,409,375

Higher Rates Effects Table

	label	Scottish Income Tax	diff_prev	diff_cum
1	"Base"	23413.3	0.0	0.0
2	"Full Reformed Sys"	23582.5	169.238	169.238
3	"Reform Rates[6->6] Deleted"	23413.8	-168.699	0.538707
4	"Reform Rates[6->5] Deleted"	23060.3	-353.49	-352.952
5	"Reform Rates[6->4] Deleted"	17994.6	-5065.67	-5418.62
6	"Reform Rates[6->3] Deleted"	17564.3	-430.331	-5848.95
7	"Reform Rates[6->2] Deleted"	16894.6	-669.703	-6518.66

More Detailed Income Breakdown

There's also a spreadsheet of this ... maybe not needed here.

	label	Grant Total £p.a	Counts	Grant Total £p.a_1	Counts_1
1	"Wages"	96105.1	2390.89	96105.1	2390.89
2	"Self Employment Income"	12672.8	346.001	12672.8	346.001
3	"Odd Jobs"	63.1052	34.3545	63.1052	34.3545
4	"Private Pensions"	10889.0	823.831	10889.0	823.831
5	"National Savings"	46.0688	276.292	46.0688	276.292
6	"Bank Interest"	78.3147	1229.99	78.3147	1229.99
7	"Stocks Shares"	566.228	235.797	566.228	235.797
8	"Individual Savings Account"	206.053	580.492	206.053	580.492
9	"Property"	857.007	119.907	857.007	119.907
10	"Royalties"	32.3653	14.5172	32.3653	14.5172
	more				
127	"Ni Class 4 Band"	0.0	0.0	0.0	0.0

```
1 summary.short_income_summary
```

Gain/Lose Tables

Using Equivalised Before Housing Costs

By Decile

	Lose £10.01+	Lose £1.01-£10	No Change	Gain £1.01-£10	Gain £10.01+	Av. Change	Pct. Change
1	1,938	205	523,192	9,521	5,636	0.10	-0.01
2	1,798	3,054	502,793	27,915	2,041	0.35	0.05
3	8,175	33,734	476,165	23,667	2,151	-0.04	0.01
4	507	50,975	478,237	6,133	5,828	0.11	0.03
5	3,292	64,505	468,036	4,564	0	-0.29	-0.01
6	3,216	90,915	443,872	3,095	0	-0.51	-0.03
7	3,706	196,059	334,470	7,161	0	-1.13	-0.09
8	3,515	282,556	254,262	0	0	-2.19	-0.23
9	5,015	410,229	125,943	0	0	-3.43	-0.32
10	76,203	444,879	20,216	0	0	-7.64	-0.40

```
1 Show( MIME"text/html"(), format_gainlose("By Decile",summary.gain_lose[2].dec_gl ))
```

By Tenure

	Lose £10.01+	Lose £1.01-£10	No Change	Gain £1.01-£10	Gain £10.01+	Av. Change	Pct. Change
Council Rented	1,348	30,617	597,386	17,528	3,332	0.14	0.01
Housing Association	339	12,633	486,764	15,015	6,930	0.26	0.02
Private Rented Unfurnished	1,370	61,596	328,622	18,264	1,833	-0.19	-0.04
Private Rented Furnished	1,078	43,975	137,899	2,361	0	-0.97	-0.13
Mortgaged Or Shared	67,564	956,275	853,579	16,040	3,562	-2.75	-0.26
Owned Outright	35,666	460,491	1,175,563	11,951	0	-1.58	-0.17
Rent Free	0	11,524	47,210	896	0	-0.54	-0.07
Squats	0	0	162	0	0	0.00	0.00

```
1  Show( MIME"text/html"(), format_gainlose("By Tenure",summary.gain_lose[2].ten_gl ))
```

```
[(hh = Household(0, 7979, 120190797900, 2019, 2020, 2, 1, Mortgaged_Or_Shared::Tenure_Type
```

```
1  get_examples( settings,
2                summary.gain_lose[2].ten_examples,
3                systems=[sys1,sys2];
4                colval="Lose £10.01+",
5                rowval="Mortgaged_Or_Shared" )
```

By Numbers of Children

	Lose £10.01+	Lose £1.01-£10	No Change	Gain £1.01-£10	Gain £10.01+	Av. Change	Pct. Change
0	60,743	715,863	2,402,060	11,443	0	-1.31	-0.15
1	21,562	485,251	680,365	25,687	9,469	-1.82	-0.19
2	20,169	307,539	363,486	25,387	4,904	-1.88	-0.20
3	4,891	57,492	134,197	10,412	0	-1.04	-0.13
4	0	10,967	29,574	6,945	0	0.06	0.01
5	0	0	8,254	2,183	1,284	2.50	0.48
6	0	0	9,249	0	0	0.01	0.00

```
1  Show( MIME"text/html"(), format_gainlose("By Numbers of
   Children",summary.gain_lose[2].children_gl ))
```

By Household Size

	Lose £10.01+	Lose £1.01-£10	No Change	Gain £1.01-£10	Gain £10.01+	Av. Change	Pct. Change
1	15,698	102,278	851,066	0	0	-1.06	-0.15
2	40,600	413,112	1,368,135	7,045	5,862	-1.38	-0.15
3	13,656	414,194	623,227	27,684	4,949	-1.63	-0.17
4	20,598	439,314	511,015	25,249	3,562	-1.88	-0.20
5	4,891	133,273	175,075	14,251	0	-1.21	-0.14
6	11,922	63,000	38,070	2,807	0	-3.11	-0.26
7	0	11,940	34,317	5,020	1,284	0.40	0.07
8	0	0	10,778	0	0	0.02	0.01
9	0	0	15,503	0	0	0.33	0.03

```
1  Show( MIME"text/html"(), format_gainlose("By Household
   Size",summary.gain_lose[2].hhtype_gl ))
```

exasize =

```
[(hh = Household(0, 14331, 120191433100, 2019, 2019, 10, 4, Mortgaged_Or_Shared::Tenure_Ty
```

```
1  exasize = get_examples( settings,
2              summary.gain_lose[2].hhtype_examples,
3              systems=[sys1,sys2];
4              colval="Gain £10.01+",
5              rowval="4" )
```

```
1  exadec[1].results[1].bus[1].pers[120191130901].it
```

```
1  exadec[1].results[2].bus[1].pers[120191130901].it
```

Examples of Gaining Households

This is for checking purposes and you may want to ignore.

```
1  md"""## Examples of Gaining Households
2
3  This is for checking purposes and you may want to ignore.
4
5  """
```

```
[(hh = Household(0, 13, 120190001300, 2019, 2020, 1, 1, Mortgaged_Or_Shared::Tenure_Type =
```
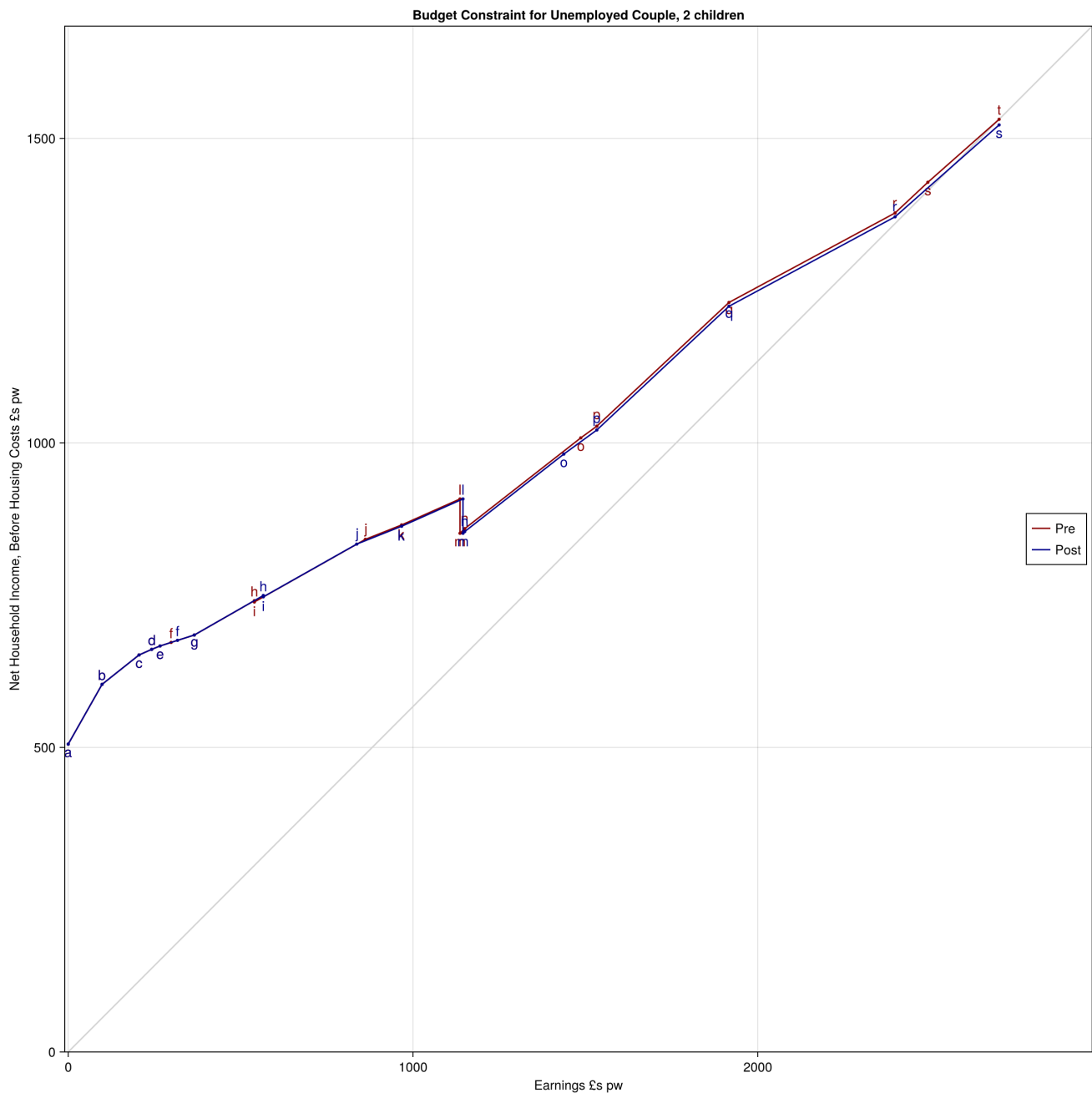
```
1  get_change_target_hhs( settings, sys1, sys2, summary.gain_lose[2].ex_gainers )
```

Examples of Losing Households

```
1  md"## Examples of Losing Households"
```

[(hh = Household(0, 6, 120190000600, 2019, 2019, 4, 2, Owned_outright::Tenure_Type = 6, Sc

```
1  get_change_target_hhs( settings, sys1, sys2, summary.gain_lose[2].ex_losers )
```


Budget Constraint for Unemployed Couple, 2 children

```
1  draw_bc( settings, "Budget Constraint for $(hh.label)", bc1, bc2 )
```

Pre Budget Constraint Unemployed Couple, 2 children

ID	Earnings £pw	Net Income BHC £pw	METR
a	0.00	505.44	0.000
b	98.16	603.60	55.000
c	205.37	651.84	75.000
d	242.00	661.00	77.000
e	266.32	666.60	81.750
f	298.40	672.45	82.000
g	365.75	684.57	67.600
h	539.88	740.99	Discontinuity
i	539.88	738.82	68.050
j	861.85	841.69	77.500
k	967.00	865.35	74.800
l	1,136.41	908.04	Discontinuity
m	1,136.41	851.64	44.000
n	1,149.90	859.19	55.727
o	1,486.63	1,008.27	58.727
p	1,533.20	1,027.49	47.000
q	1,916.50	1,230.64	69.500
r	2,398.30	1,377.59	47.000
s	2,493.36	1,427.97	50.000
t	2,700.00	1,531.29	50.000

```
1  Show(MIME"text/html"(), format_bc_df( "Pre Budget Constraint $(hh.label)", bc1 ))
2
```

Post Budget Constraint Unemployed Couple, 2 children

ID	Earnings £pw	Net Income BHC £pw	METR
a	0.00	505.44	0.000
b	98.16	603.60	55.000
c	205.37	651.84	75.000
d	242.00	661.00	77.000
e	266.32	666.60	81.750
f	316.93	675.83	82.000
g	365.50	684.57	67.600
h	565.86	749.49	Discontinuity
i	565.86	747.32	68.050
j	836.78	833.88	77.500
k	967.00	863.18	74.800
l	1,145.01	908.04	Discontinuity
m	1,145.01	851.64	44.000
n	1,149.90	854.37	55.727
o	1,437.37	981.64	58.727
p	1,533.20	1,021.19	47.000
q	1,916.50	1,224.34	69.500
r	2,398.30	1,371.29	50.000
s	2,700.00	1,522.14	50.000

```
1 Show(MIME"text/html"(), format_bc_df( "Post Budget Constraint  $(hh.label)", bc2 ))
```