MPSGE.jl

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Closed 2×2 Economy

This is adapted from Jim Markusen's example 'M22'. This model introduces intermediate goods and a simple CES nesting that permits specification of different elasticities of substitution between different groups of inputs.

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	X	Y	W	CONS
PX	120	−20	−100	0
PY	−20	120	−100	0
PW	0	0	200	−200
PK	−60	−40	0	100
PL	−40	−60	0	100

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	X
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PY	-20
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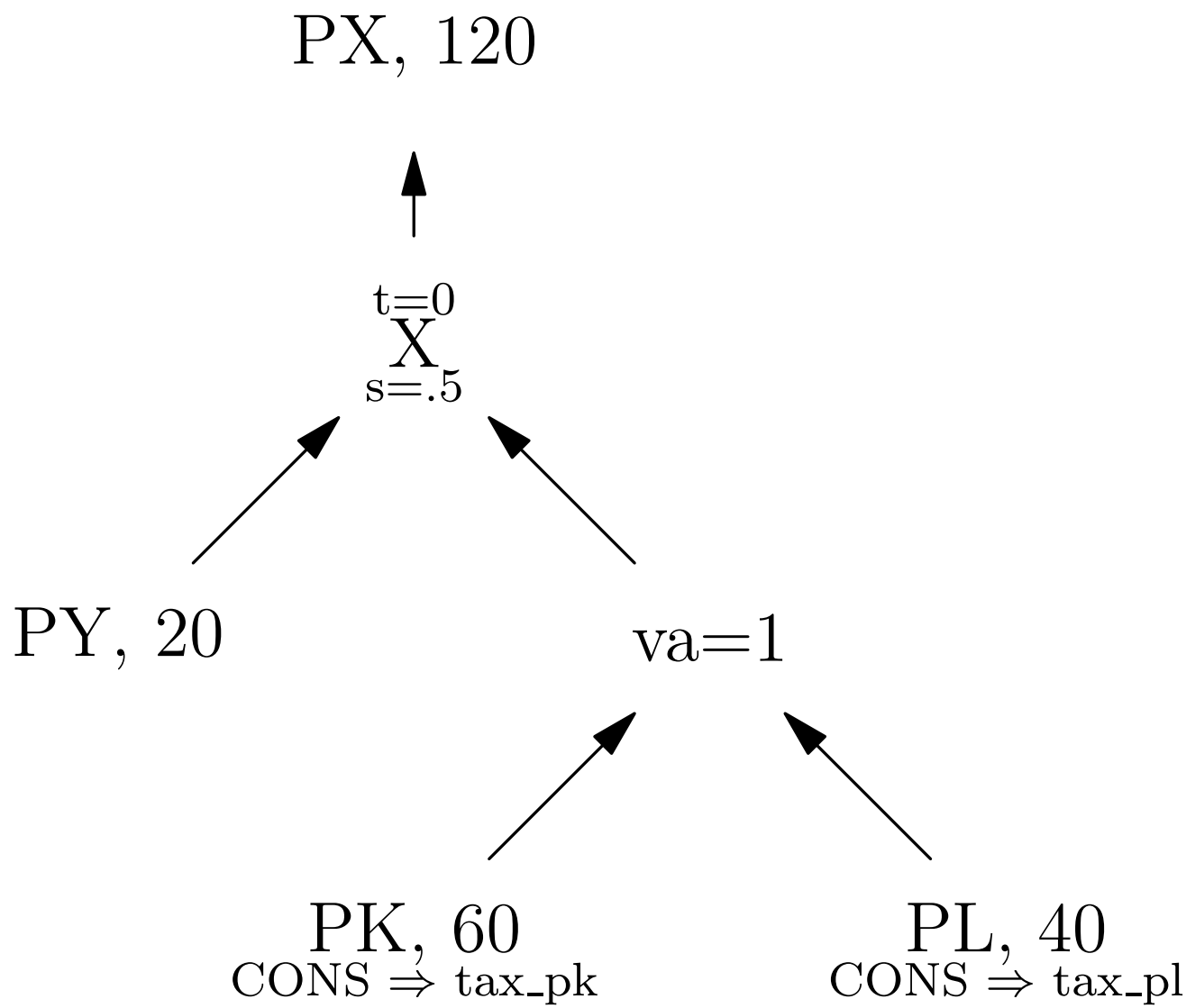

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Let's set up an environment and install the packages we need. Start Julia from the directory where you want to work.

```
julia> ]
pkg> activate .
pkg> add MPSGE, JuMP, PATHSolver, PlotlyJS, DataFrames
pkg> dev https://github.com/julia-mpsge/markusen_2_2.jl
```

We've added the `markusen_2_2` as *dev*, typically you want to do this with packages in your personal GitHub as *dev* stands for *development*. Best practice would be to fork the repo and dev the fork, but we will survive without that for now.

Alternatively, you can just *add* the `markusen_2_2` package, it's just a little easier to view the source code if you have it in your local environment.

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Before going further, ensure that VSCode is using the environment we just defined. On the bottom of VSCode is a blue bar, on the left should be the text `Julia env:` with the active environment. If it isn't your working directory click on it and select the environment you just created.

The README in the GitHub repo has an example using the code, just copy/paste that into a file and save it as `markusen.jl`.

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Let's look at the models. You can either do this directly on GitHub, which is the easiest method, or you can open the directory.

If you used dev, then the source code is located in:

```
~/.julia/dev/markusen_2_2
```

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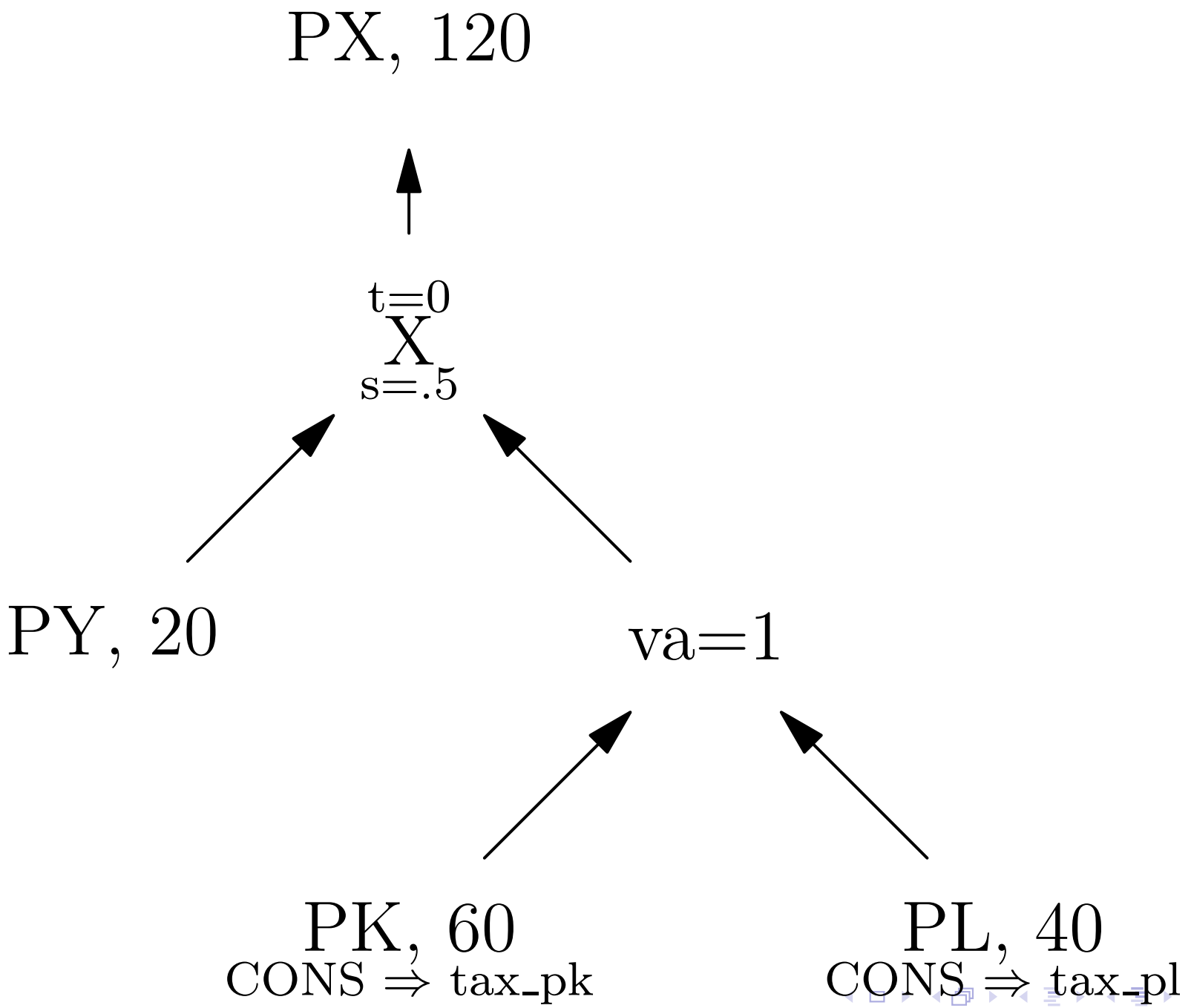

WiNDC Household Model

First, add the package to your environment. Here is a link to the GitHub repo.

```
pkg> add https://github.com/julia-mpsge/windc_household_mod
```

The household model disaggregates the WiNDC state model into 5 consumers per state, corresponding to the 5 quintiles of income.