ECON ### Assignment

Seth Kushniryk

PDF Links

Here are 3 link examples:

i) Internal links are easy to include in documents. Here is a link to this section: PDF Links.
ii) Here's a link to a random target at the end of the document: End.
iii) Here's an external link to the github repo for this template: gh:sethkush/AssignmentTemplate.

Matrices

Matrices can be used in a variety of ways:

In piecewise definitions:

$$\frac{\partial u_t}{\partial y_s} = \begin{cases} 1 & \text{if } t = s \\ -\gamma_j & \text{if } t = s - j \quad \forall j \in \{1, \dots, P\} \\ 0 & \text{if } t \neq s \text{ and } t \neq s - j \quad \exists j \in \{1, \dots, P\} \end{cases}$$

Or more traditionally:

$$\Rightarrow J = \begin{bmatrix} 1 & & & & & \\ -\gamma_1 & 1 & & & \mathbf{0} & \\ -\gamma_2 & -\gamma_1 & 1 & & & \\ \vdots & \vdots & & \ddots & & \\ -\gamma_P & \vdots & & & \ddots & \\ 0 & -\gamma_P & \cdots & -\gamma_2 & -\gamma_1 & 1 \end{bmatrix}$$

The dots could use a bit of tweaking, but they're currently good enough for the amount I use them.

Math

I defined a quick macro to get a script "$\mathcal{L}$" for lagrangians:

$$\mathcal{L} = \left(\int_{\Omega} c(\omega)^{\rho} d\omega \right)^{\frac{1}{\rho}} + \lambda \left(wl - \int_{\Omega} p(\omega) c(\omega) d\omega \right)$$

I think equations look pretty good in Palatino:

$$\int_{a^*}^{\infty} \left(\left(\frac{a}{a^*} \right)^{\frac{-\rho}{\rho-1}} - 1 \right) g(a) da + \frac{f_x}{f} \int_{a_x^*}^{\infty} \left(\left(\frac{a}{a_x^*} \right)^{\frac{-\rho}{\rho-1}} - 1 \right) g(a) da \leq \frac{f_e}{wf}$$

$$a^* = \left(\frac{f}{f_e} \frac{1 + \tau^{-\xi} \left(\frac{f_x}{f} \right)^{\frac{-(\xi(1-\rho)-\rho)}{\rho}}}{\frac{\xi(1-\rho)-\rho}{\rho}} \right)^{\frac{1}{\xi}}$$

Tables

Traditional tbl tables can be used:

	Tauchen	Rouwenhorst	True
mean	4.000000	4.000000	4
variance	78.182303	51.020408	51.0204
skewness	-0.000000	0.000000	0
kurtosis	-0.981094	2.800000	3

An alternative that might be easier to use is hdtbl:

	Tauchen	**Rouwenhorst**	**True**
mean	4.000000	4.000000	4
variance	78.182303	51.020408	51.0204
skewness	-0.000000	0.000000	0
kurtosis	-0.981094	2.800000	3

I've used traditional tbl tables for game theory assignments:

			I: A (q)	I: F ($1-q$)
E	A	p	$\frac{3x}{3+x}, \frac{3x+9}{12+4x}$	-2,-1
	F	$1-p$	1,-2	-3,-1

Images

Encapsulated Postscript (.eps) files can be included with ease.

Figure F.1

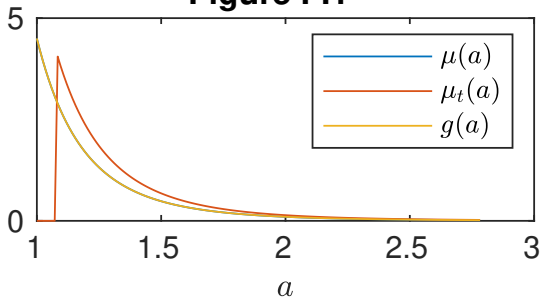

Figure F.2

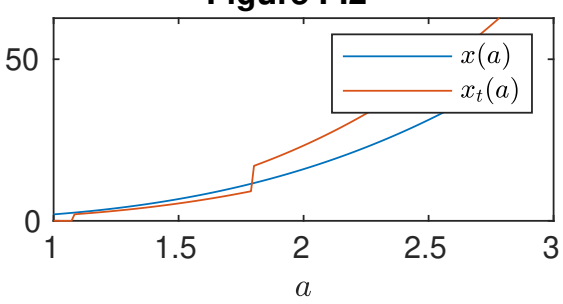

Figure F.3

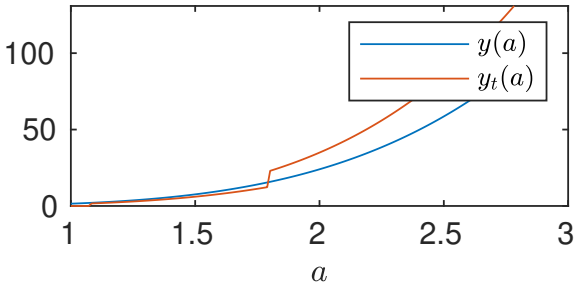

Figure F.4

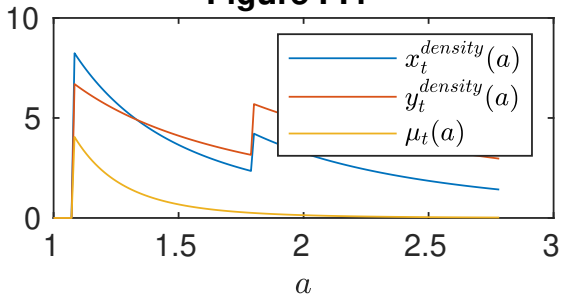

Figure F.5

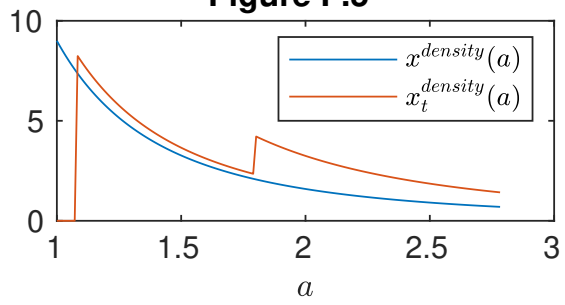

Figure F.6