Advanced Macro

Assignment 5

Hans Martinez

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Integration

Julia code: click here.

```
# Julia code
# See A5.jl
```

Discretization of an AR(1) process

a) Simulate a Markov chain
b) Use Tauchen and Rouwenhorst's to discretize
c) Compute the first four moments
d) Plot

	Data	Tauchen	Tauchen	Rouwenhorst	Rouwenhorst
		$N = 5$	$N = 15$	$N = 5$	$N = 15$
mean	−0.075	−0.002	0.049	0.071	0.08
var	22.214	13.94	12.168	20.772	21.403
skew	0.056	−0.01	−0.005	0.021	−0.042
kurt	−0.13	−0.981	−0.998	−0.491	−0.191
acorr	0.905	0.84	0.845	0.898	0.902

Application

a) Discretize using Rouwenhorst's
b) Solve planner's problem and plot

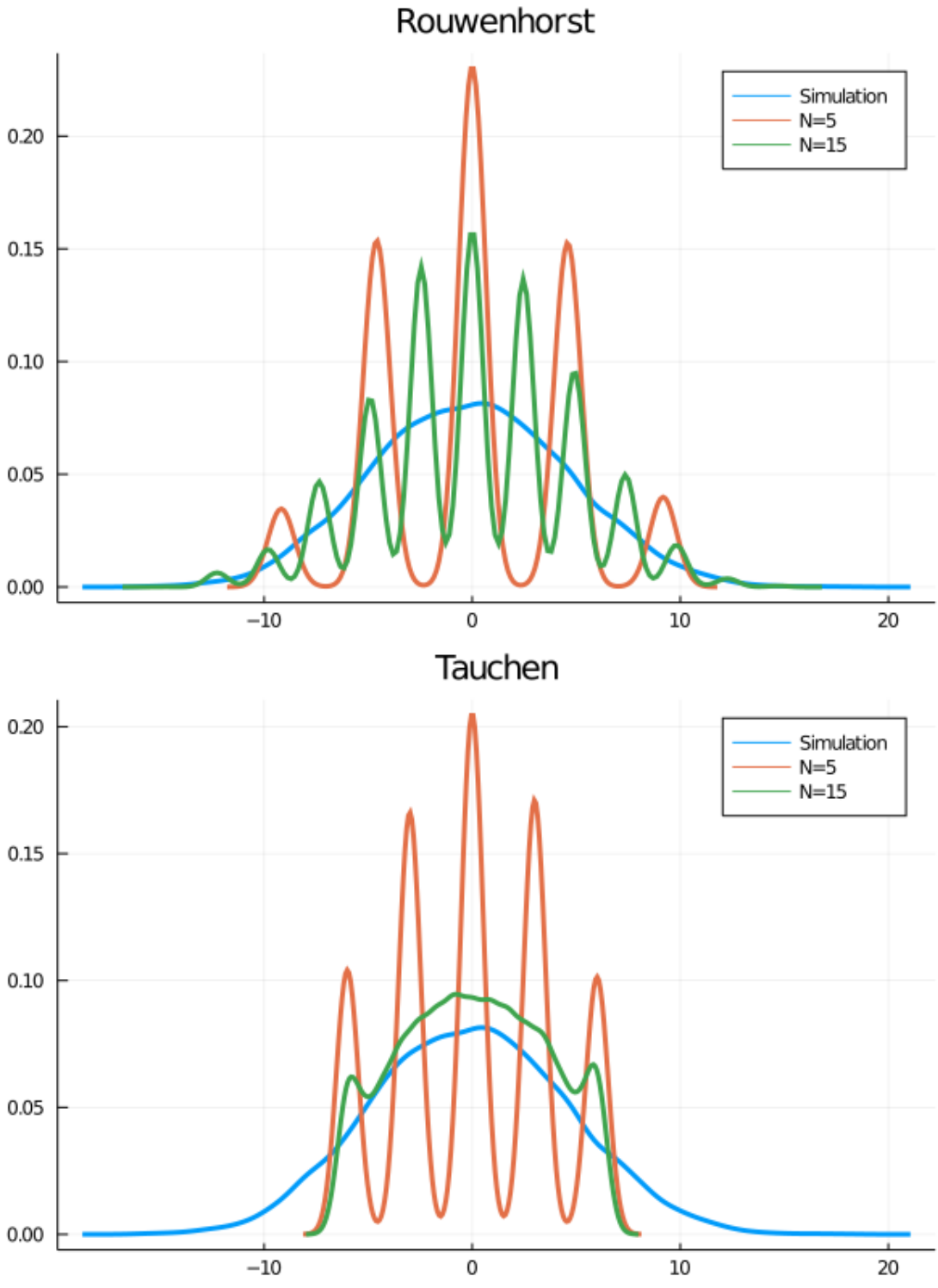

Figure 1: Density of Markov chains

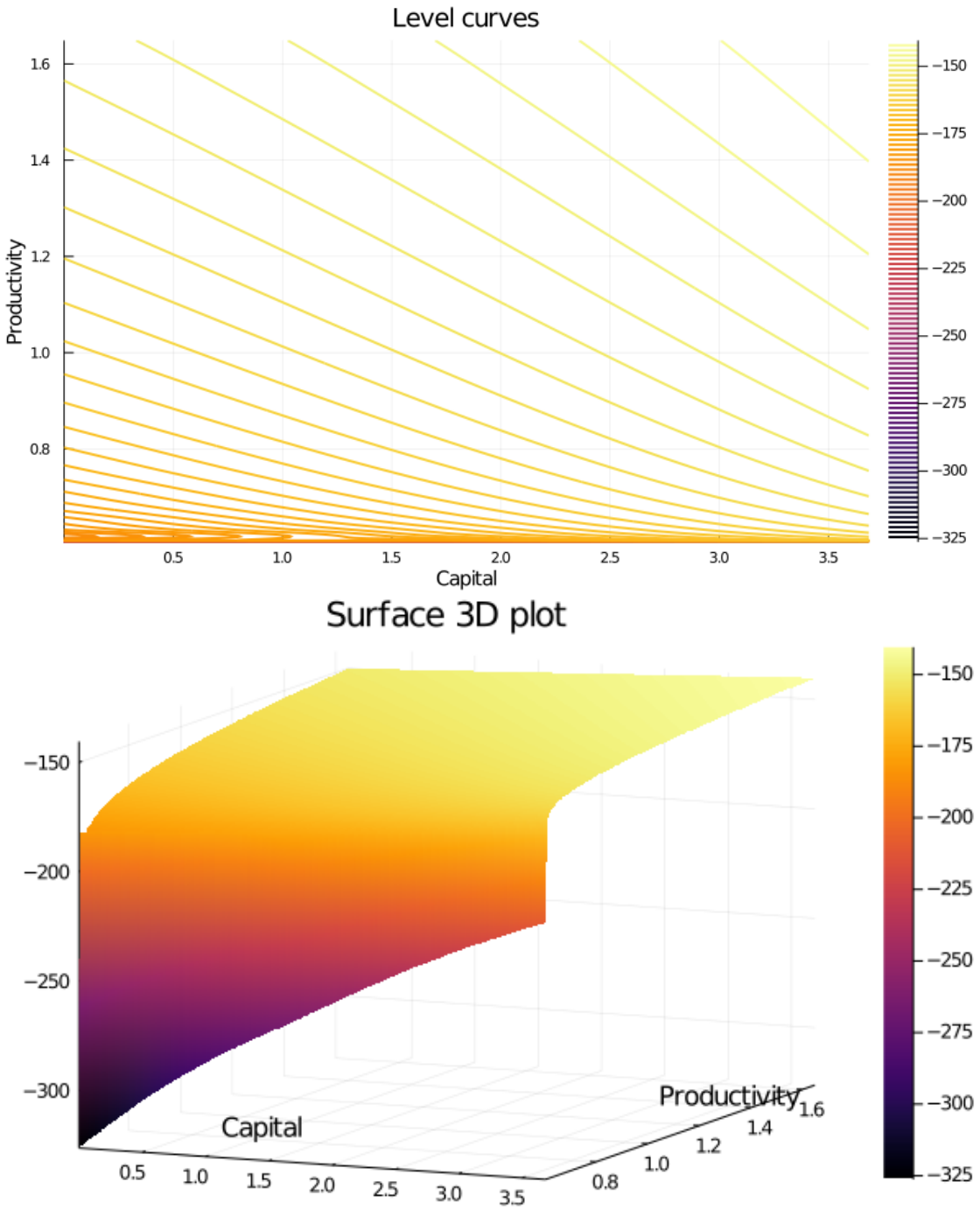

Figure 2: Solution plot