

# Econ899 PS1b

November 7, 2021

1. The log likelihood is -6942.805. The score is

```
1×17 Matrix{Float64}:  
 -2605.91  -556.32  -1156.86  -222.818  ...    -466.689  
 -582.469  -546.411
```

The hessian is

```
17×17 Matrix{Float64}:  
 -3224.63  -880.428  -1428.39  ...    -681.85  
 -674.379  -582.954  
 -880.428  -880.428      -0.0      -189.337  -211.554  
 -170.069  
 -1428.39      -0.0      -1428.39      -308.877  
 -299.44      -266.606  
 -387.591      -10.0764  -165.227      -104.651  
 -92.3703      -77.2665  
 -1305.7      -404.234      -560.344      -290.986  
 -299.44      -192.876  
 -1546.77      -421.328      -675.977  ...    -326.323  
 -325.511      -282.993  
 -2619.43      -686.268      -1192.14      -551.432  
 -540.134      -477.388  
 -1210.69      -331.979      -544.713      -257.316  
 -253.334      -220.353  
 -6304.56      -1720.75      -2796.02      -1333.23  -1318.87  
 -1134.65  
 -5761.32      -1655.08      -2551.24      -1223.71  -1213.88  
 -1033.59  
 -23783.2      -6607.99      -10512.7  ...    -5017.54  
 -4970.07      -4271.64  
 -23599.2      -6563.05      -10428.5      -4978.92  
 -4944.78      -4247.05  
 -1404.99      -390.078      -586.887      -306.911  
 -305.732      -268.375
```

	-664.352	-163.778	-283.711	-0.0	
-0.0	-0.0				
	-681.85	-189.337	-308.877	-681.85	
-0.0	-0.0				
	-674.379	-211.554	-299.44 ...	-0.0	-674.379
-0.0					
	-582.954	-170.069	-266.606	-0.0	
-0.0	-582.954				

2. The numerical first derivative is

1×17 Matrix{Float64}:  

-2605.91	-556.32	-1156.86	-222.818 ...	-466.689
-582.469	-546.411			