Problem Set 7 Solution

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March 4, 2020

Question 1.

Under limited commitment, each spouse member can not get lower value than their outside option (autarky). Therefore, even though the initial pareto weight $\theta_0 = 0.3$ is in favor of household member 2, the difference in consumption quickly disappears as income of each spouse member fluctuates and one of participation constraints binds. Unlike limited commitment, the Pareto weight under full commitment doesn't change within marriage. Therefore, the spouse member 2 gets much higher consumption throughout lifetime.

Under limited commitment, the degree of consumption smoothing is restricted because of participation constraints. On the other hand, the degree of consumption smoothing, the informal insurance, is higher under full commitment. This can be seen from the variance of log consumption graph. The full commitment lines are below the limited commitment lines.

Note that the consumption profiles are downward sloping in both limited commitment and full commitment because of parameters $\beta(1+r)<1$.

Note also that divorce didn't happen in simulated sample, because the value of informal insurance within marriage makes the couple's Pareto frontier to lie above each single's autarky values. Therefore, they can find different bargainig weights to make both spouses better off than living in autarky. This will not be true if, for example, there is additional marital preference shock, which may make divorce a better option.

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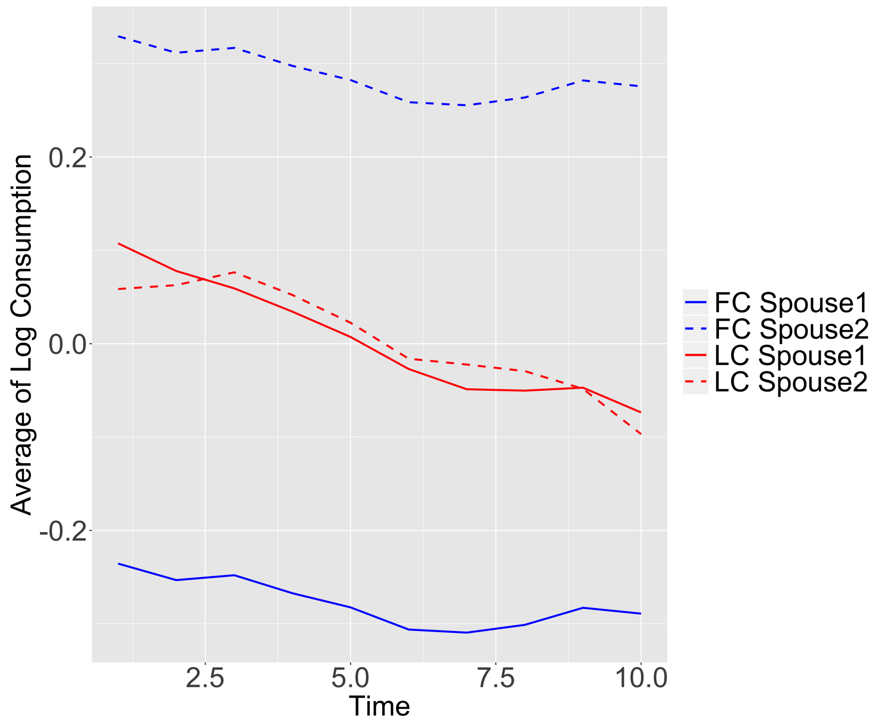
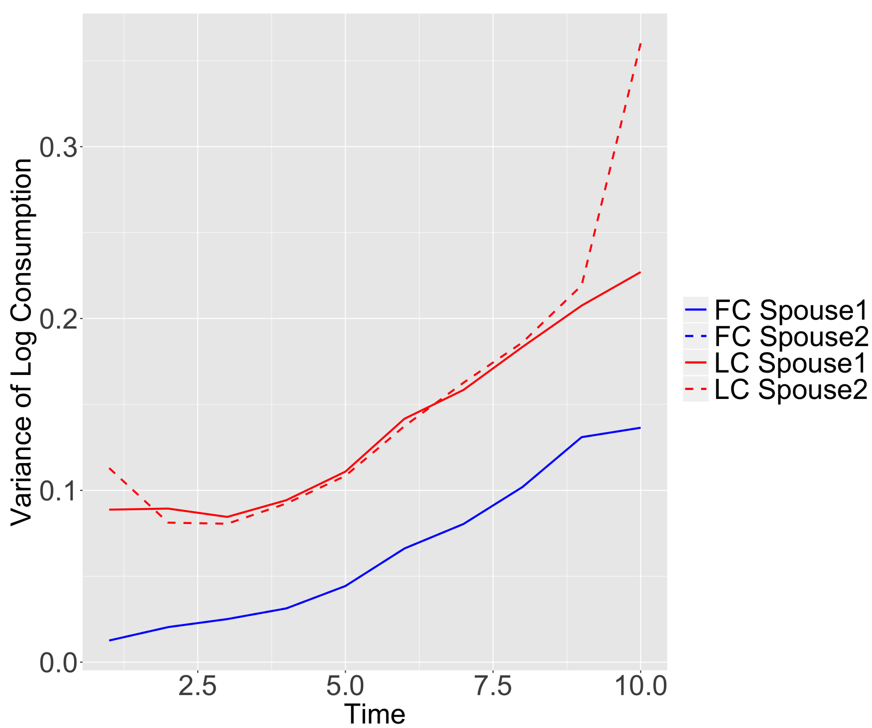

Average of Log Consumption
0.2
0.0
-0.2
2.5
5.0
7.5
10.0
Time
FC Spouse1
FC Spouse2
LC Spouse1
LC Spouse2


Variance of Log Consumption
0.3
0.2
0.1
0.0
2.5
5.0
7.5
10.0
Time
FC Spouse1
FC Spouse2
LC Spouse1
LC Spouse2