The impact of divorce laws on the equilibrium in the marriage market: Replication Instructions

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1 Overview

1.1 Software Requirements

- Matlab 2020b.
- Stata 18.0 SE.
- OS: Microsoft Windows 11 Enterprise.
- Parallel computing with 12 workers.

1.2 Replication Folder Structure

The replication folder **Replication_JPE** has the following sub-folders:

1. **Evidence**: Files to produce the empirical evidence on the impact of Unilateral Divorce (henceforth UD) on assortative matching.
2. **Internal_estimation**: Files for estimation under Mutual Consent Divorce (henceforth MCD) regime.
3. **Impact_UD**: Files to produce the counterfactual impact of UD.
4. **Outputs**: Contains four sub-folders in which intermediate results used as inputs in tables and figures are stored. Each sub-folder corresponds to one of the four model specifications:
   - MCD: stores estimation results under MCD.
   - UD: stores results from simulating the model under UD.
   - Divorce_settlement: stores results from simulating the model under UD with divorce settlement.
   - Commitment: stores results from simulating the model under UD without renegotiation.
5. **Figures_and_Tables**: Files to compile and produce the main figures and tables.
6. **Validation**: Files to execute two exercises that provide evidence in support of my model. Each exercise is in one of the following sub-folders

- **Impact_PAM**: Files to produce the untargeted impact of UD on the correlation in spousal education in the model.
- **Impact_already_married**: Files to produce the untargeted impact of UD for already married couples.

7. **Data**: Files to clean the data.

1.3 Overview of Table and Figure Replication

The following tables indicate the code that needs to be run to replicate each table and figures in the paper. Note that the next section provides detailed instructions on how to obtain the values.

Table 1: Codes that produce each Table in the paper

Table	Title	Folder	Code
1	Internally estimated parameters and main sensitivity moments: Preference parameters	Figures_and_Tables	Estimation_MCD.m
2	Initial Pareto weights under MCD, averaged across marriage markets	Figures_and_Tables	Estimation_MCD.m
3	Excess marriages relative to random matching by marriage market	Figures_and_Tables	Impact_of_UD.m
4	Ratio of model's share of same-education couples to that share if random matching	Figures_and_Tables	Impact_of_UD.m
A1	Unilateral divorce and assortativeness in education for newlyweds (PSID data)—main and reversed specifications	Evidence	evidence.do
A4	Internally estimated parameters and main sensitivity moments: Income process parameters	Figures_and_Tables	Estimation_MCD.m
A5	Impact of UD on the correlation in spousal education types	Validation\Impact_PAM	impact_on_sorting.m
A6	Impact of UD for already married couples	Validation\Impact_already_married	impact_already_married.do

Table 2: Codes that produce each Figure in the paper

Figure	Title	Folder	Code
1	Unilateral divorce and assortativeness in education for newlyweds	Evidence	event_graph.m
3	Share of women and men of education $s = \{hs, sc, c+\}$, by marriage market	Figures_and_Tables	Estimation_MCD.m
4	Frequency of couple type (s_f, s_m) in the model and the data by marriage market	Figures_and_Tables	Estimation_MCD.m
5	Share of men married to stay-at-home wives averaged across marriage markets	Figures_and_Tables	Impact_of_UD.m
6	Divorce probability, averaged across marriage markets, by type of couple	Figures_and_Tables	Impact_of_UD.m
7	Gains from marriage and consumption equivalence for women averaged across markets	Figures_and_Tables	Impact_of_UD.m
A1	Untargeted moments: equilibrium dynamic behavior under MCD	Figures_and_Tables	Estimation_MCD.m

2 Instructions for replicating results

2.1 First steps

Download the data for this project. This project uses publicly available data from the Panel Study of Income Dynamics (PSID, 2016). Per the PSID Conditions of Use, the data for this project is saved in repository Reynoso (2024). To download the data, follow the next steps in order:

1. Access the repository at `https://www.openicpsr.org/openicpsr/project/200441/version/V2/view`.
2. Download the data "households_psid.dta" to sub-folder Data\Inputs.

After downloading the data, all the analysis can be replicated. However, if the replicator wishes to work from the raw data, in subsection 3 I provide detailed instructions to download and clean the data.

Indicate your replication path. At the beginning of each file to be executed, there is a section called "Replication Path" in which the replicator must fill in the location in which they saved the replication package folder "Replication_JPE", as indicated in each code.

2.2 Empirical evidence

To produce all figures and tables in the *Empirical evidence* section of the paper—that is, Figure 1 and Table A1—follow these steps in order:

1. In folder Evidence:
   (a) Run evidence.do to produce the event studies estimates and regression tables.
   (b) Run event_graph.m to compile estimation results and produce the figure.

All figures and tables are stored under sub-folder Output.

2.3 Estimation

To produce all figures and tables in the *Estimation* section of the paper—that is, Figure 3, Table 1, Table A4, Table 2, Figure 4, and Figure A1—follow these steps in order:

1. In folder Internal_estimation:
   (a) Run estimation_mcd.m to estimate the model under MCD. This step takes about 18 hours.
   (b) Run se_and_sensitivity.m to produce standard errors and sensitivity moments. This step takes about 30 minutes.
   (c) Run Outputs_MCD.m to compile and store estimation results.
2. In folder Figures_and_Tables:
   (a) Run Estimation_MCD.m to create all figures and tables.

All figures and tables are stored under sub-folder Figures_and_Tables\Output.

2.4 Impact of Unilateral Divorce

To produce all figures and tables in the *The equilibrium effects of UD and their mechanisms* section of the paper—that is, Table 3, Table 4, Figure 5, Figure 6, Figure 7—follow these steps in order:

1. In folder Impact_UD:
   (a) Run impact_UD.m to solve the model under UD full model, UD with divorce settlement, and UD without renegotiation.
   (b) Run Outputs_UD.m to compile and store results under UD. This step takes about 25 minutes.
2. In folder Figures_and_Tables:
   (a) Run Impact_of_UD.m to create all figures and tables.

All figures and tables are stored under sub-folder Figures_and_Tables\Output.

2.5 Validation

To produce Table A5 in the *External validation and robustness of the model* section of the paper, follow these steps in order:

1. In folder Validation\Impact_PAM:
   (a) Run impact_on_sorting.do to produce the data values.
   (b) Run impact_on_sorting.m to build the table.

The table is stored in file Table_A5 under sub-folder Validation\Impact_PAM\Output.

To produce Table A6 in the *External validation and robustness of the model* section of the paper, follow these steps in order:

1. In folder Validation\Impact_already_married:

(a) Run impact_already_married.m to simulate the impact of UD for already married couples.

(b) Run impact_already_married.do to produce the results.

Results are stored in file Table_A6_Model.log under folder Validation\Impact_already_married\Output.

3 Instructions for cleaning the data

To download and clean the data used for this project, follow the next steps in order:

1. Download the PSID data: The raw PSID data is publicly available from the Institute for Social Research at the University of Michigan website, which link is: https://simba.isr.umich.edu/Zips/ZipMain.aspx. I use the Individual files and the Family files for the survey studies 1968 to 1993.
2. In folder Data:
   (a) Run do-file PSID_data_clean.do which inputs the raw data, homogenizes names of variables across years, and merges the family and individual files. Note: since I provide the cleaned data in repository Reynoso (2024), this step can be skipped.
   (b) Run do-file Data_for_moments.do that constructs a dataset at the household level.
   (c) Run do-file Data_for_untargeted_moments.do that constructs a dataset at the household level with additional variables.
   (d) Run do-file Moments_and_CI.do which creates data moments and their confidence intervals.
   (e) Run inputs_mcd.m which creates a Matlab dataset of inputs for estimation.

References

PSID. Public use dataset. *Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI*, 2016.

A. Reynoso. Data for "The impact of divorce laws on the equilibrium in the marriage market". *MI: Inter-university Consortium for Political and Social Research [distributor]*, 2024. URL https://doi.org/10.3886/E200441V2.