

Accepted Manuscript

Two-Sided Matching with Indifferences

Aytek Erdil, Haluk Ergin

PII: S0022-0531(17)30078-9
DOI: <http://dx.doi.org/10.1016/j.jet.2017.07.002>
Reference: YJETH 4682

To appear in: *Journal of Economic Theory*

Received date: 19 April 2016
Revised date: 30 June 2017
Accepted date: 7 July 2017

Please cite this article in press as: Erdil, A., Ergin, H. Two-Sided Matching with Indifferences. *J. Econ. Theory* (2017), <http://dx.doi.org/10.1016/j.jet.2017.07.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Two-Sided Matching with Indifferences*

Aytek Erdil[†] Haluk Ergin[‡]

July 19, 2017

Abstract

Most of the two-sided matching literature maintains the assumption that agents are never indifferent between any two members of the opposite side. In practice, however, ties in preferences arise naturally and are widespread. Market design needs to handle ties carefully, because in the presence of indifferences, stability no longer implies Pareto efficiency, and the deferred acceptance algorithm cannot be applied to produce a Pareto efficient or a worker-optimal stable matching.

We allow ties in preference rankings and show that the Pareto dominance relation on stable matchings can be captured by two simple operations which involve rematching of workers and firms via *cycles* or *chains*. Likewise, the Pareto relation defined via workers' welfare can also be broken down to two similar procedures which preserve stability. Using these structural results we design *fast* algorithms to compute a Pareto efficient and stable matching, and a worker-optimal stable matching.

Keywords: Two-sided matching; matching with ties; matching with indifferences; efficient and stable matching.

*We thank Vince Crawford, Bob Evans, Alex Malanyuk, Al Roth, Tayfun Sönmez, and numerous seminar audiences for their valuable comments.

[†](Corresponding author) University of Cambridge, Faculty of Economics. Email: nae25@cam.ac.uk

[‡]UC Berkeley, Department of Economics. Email: hie@berkeley.edu

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات