Promoting Efficient Allocation in Refugee Camps: Comparing Mechanisms With Minority Reserves

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Ever since the deferred acceptance algorithm was first proposed by Gale and Shapley (1962), there has been much research about mechanisms that optimally match high school seniors to colleges, medical school students to residency training programs, and patients to suitable donors. However, the problem of designing an optimal mechanism to match refugees with country quotas has yet to be a problem of prominent interest. This paper builds on existing models used for college matching: Pathak and Sönmez (2013) incorporated truncated preferences into the existing matching framework, whereas Hafalir, Yenmez and Yildirim (2013) considered reserves for minority students. In this paper, we extend their work to the area of truncated preferences in refugee matching with quotas for the number of refugees from specific countries. Specifically, we present a novel framework for mechanism analysis with country quota reserves and compare mechanisms by their stability, Pareto optimality, and vulnerability to manipulation. Our findings reveal that the old Chicago mechanism is at least as manipulable as any other stable mechanism and is strictly more manipulable than the serial-dictatorship mechanism. Our research contributes to addressing the underdeveloped area of refugee matching with quotas in market design, providing insights for policymakers and practitioners.

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