

VOLUNTARY PARTICIPATION IN CENTRALIZED MATCHING SCHEMES

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CHILDCARE ASSIGNMENT: A PRESSING ISSUE

Current situation

- Since 2013, children aged below three years have a legal claim to a kindergarten place
- There are far more applicants than kindergarten places



Parents

Face long waiting times and uncertainty over when they can return to work

- Adverse labor market effects

Kindergartens

Long admission processes keep kindergarten staff busy

- Large administrative overhead

Cities

Currently used assignment mechanisms violate binding admissions criteria

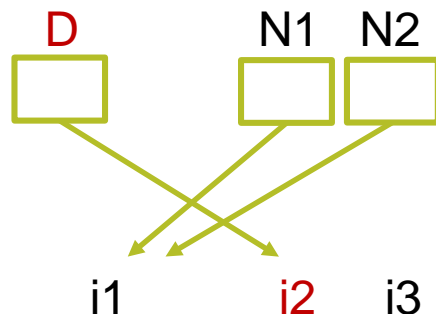
- Legal issues/ lawsuits

CURRENT MATCHING PRACTICE

- **Matching practice**
 - Binding registration deadline (1 February)
 - Parents list up to 12 facilities, no ranking
 - Universal admissions criteria exist, but facilities decide independently
 - Facilities send exploding offers, valid for 2 weeks
 - Upon acceptance, applications are removed from system
- **Perceived issues:** Congestion; Strategic considerations; Non-stable allocation
- **Common (mis)perception:** „With the current shortage of places, parents are happy if they get a place at all.“ – Youth welfare office

HIGH ADMINISTRATIVE COURT CASE 2017

- **Case:** Parents of **child i2** are offered a **daycare (D)** place but would have preferred a place in **nursery school (N)**.
- **Court ruling:** City failed to demonstrate that places in nursery schools were filled by children with higher priority, based on the universal admission criteria.
- **Reaction:** City changed the universal admissions criteria and obliged all public facilities (16%) to apply them. Some faith schools followed suit.
- **Problem:** Unstable allocations may persist.



Preferences:

D, N1, N2: i1 i2 i3

i1: N1 N2

i2: N1 N2 D

i3: N1 N2

PROPOSAL: DEFERRED ACCEPTANCE (DA)

- **Youth welfare office.** We understand that DA guarantees legal compliance for public facilities. But how can we get the IT-provider and private facilities to participate?
- **IT-provider.** The following misperceptions are common:
 - „All offers are sent on the same date. Thus, there is no strategic pressure on parents to accept an early offer or wait for later offers to arrive.“
 - „Allowing parents to submit rankings is against the law. According to §3a of the child education act (KiBiz), parents are guaranteed freedom of choice.“
- **Private facilities.** Can you change the mechanism such that ...
 - we don't need to rank children?
 - we maintain control over group composition?

REVISED PROPOSAL: DECENTRALIZED DA

■ Revised matching practice

- Parents submit rankings which categorise facilities in tiers, where they are indifferent between facilities in the same tier.
- **Coordination step 1:** Iterative, unlocked process:
 - **Parents.** Platform automates decisions. Holds the first offer for the highest tier (to date) and rejects all others. Immediately accepts the first tier 1 offer.
 - **Private facilities.** Platform displays feasible* applicants only. Facilities register non-exploding offers on the platform.
 - **Public facilities.** Platform automates decisions. Registers DA allocation based on public facilities' ROL and offers held from private facilities.
- **Coordination step 2:** DA with rankings over remaining feasible applicants

* Applicants are infeasible for a facility if they already hold a better offer.

INCENTIVES FOR VOLUNTARY PARTICIPATION

- **Participation in step 1**
 - Immediate acceptance of reciprocated first offers
 - Immediate rejections make exploding offers obsolete
- **Participation in step 2**
 - Better control over group composition, conditional on accepted offers in step 1
- **Early submission of offers**
 - Earlier offers have priority over later offers within the same tier