



PROMOTING CHANGE IN ESTONIA:

From stable kindergarten place allocations to increase
in female bargaining power



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EEMD = Efficiency and Equity in matching children and kindergartens: Mechanism Design approach



AIM OF THE WORKSHOP

TO ANSWER FOLLOWING QUESTIONS:

- What are the explanations of Estonian gender wage gap?
- How post-communist past and liberal labour market (contribution based) policies contribute to wage gap?
- How to disentangle this puzzle – kindergarten place allocation mechanism
- Discussion

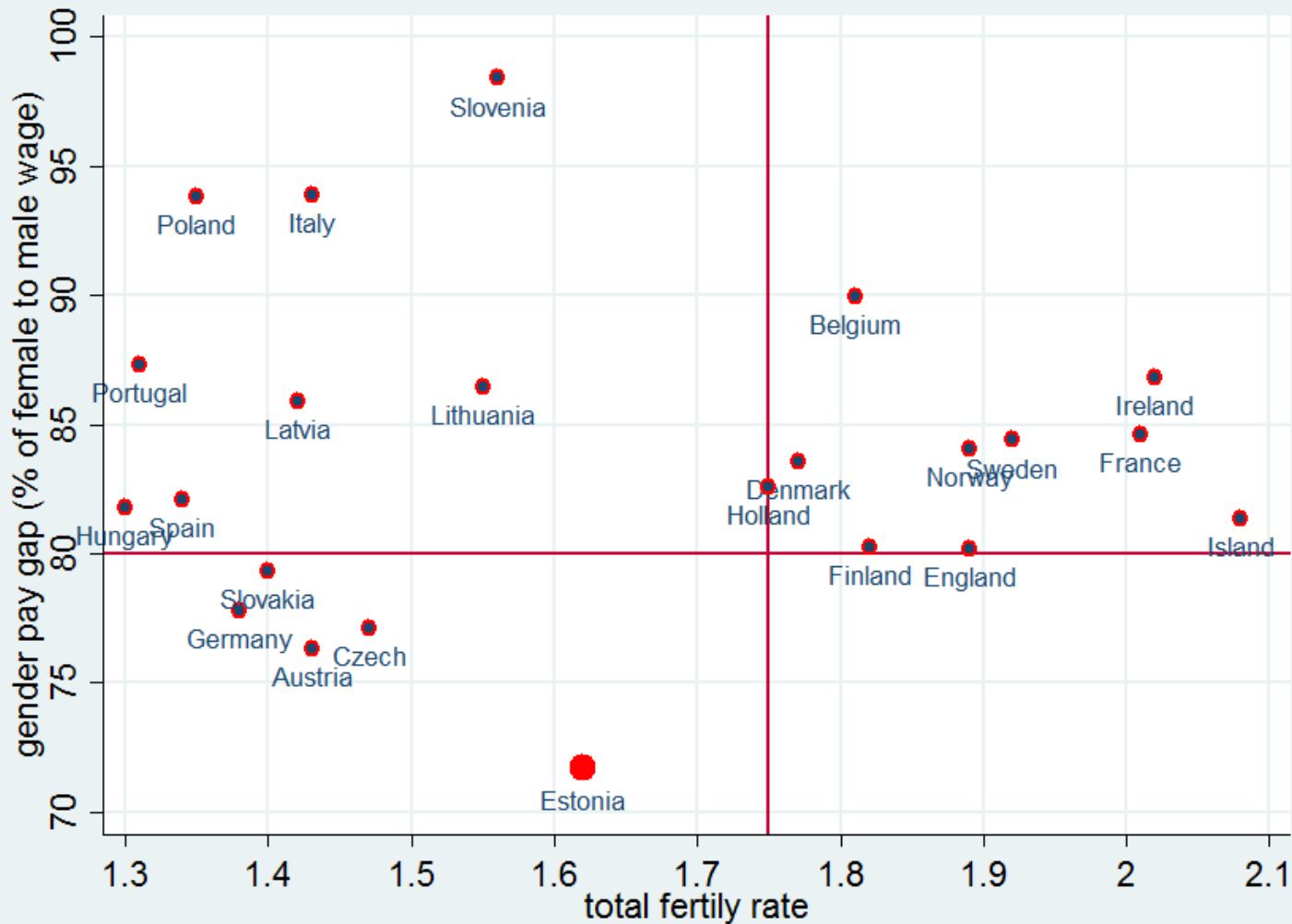


MOTIVATION

A long time **rational choice framework** has been explaining family and childbearing choices:

- **Labour force participation is a constraint on fertility;**
- Most "classical" policy instruments are targeted to solve worker-mother conflict
- However, more recent consensus (Esping-Andersen, 2009) has been shifting toward admitting **positive correlation between female labour force participation and fertility**
 - How to explain such a shift
 - How to conceptualise family policies and care-work is such a framework?

GENDER WAGE GAP (average 2009-2013)





PLAUSIBLE EXPLANATIONS

- **COST OF HAVING CHILDREN – OPPORTUNITY COST APPROACH**
 - Gives justification of various “leave” policies
 - Justifies also de-familisation – care work should be “outsourced” to cheaper (more efficient) institutions (market or cheap childcare facilities including unpaid grandparents)
- **GENDER EQUALITY THEORY – FEMINIST APPROACH**
 - child-bearing is a result of perceived gender equity;
 - gender equity is defined by the perceptions of fairness and opportunity not by strict equality of outcome (McDonald 2000);
 - low fertility is a result of social perception by females that prevailing cultural-institutional gender context is not fair.



FOCUS ON CHILDCARE

Why childcare facilities matter?

Variables that have been found to be statistically significant in gender wage gap

- Author female
- New entrants
- Narrow occupation
- Low-prestige occupation
- Medium-prestige occupation
- High-prestige occupation
- Singles
- Minority
- No hourly wages
- Gross wages

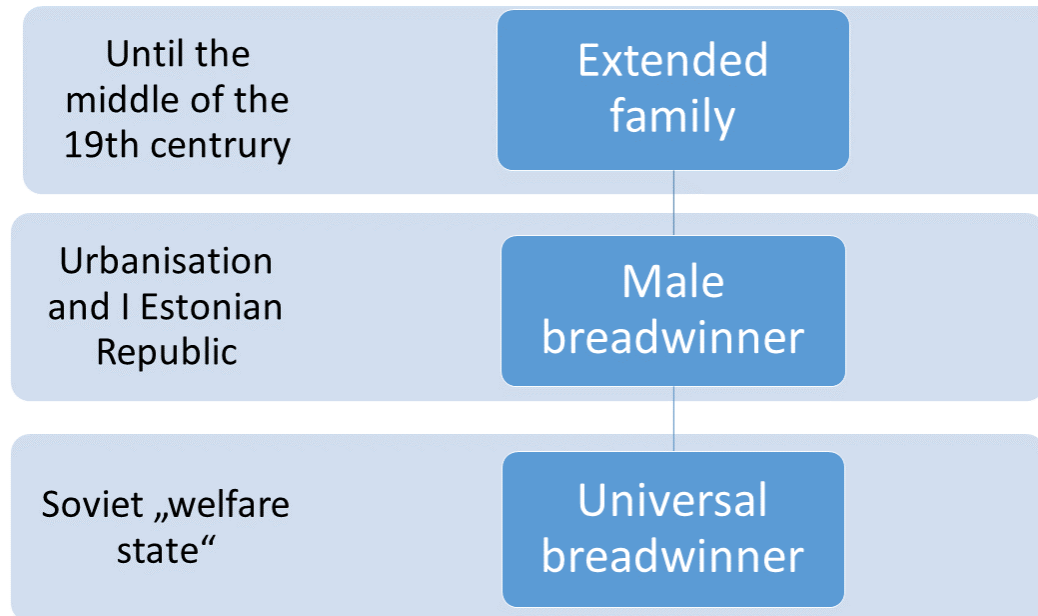
Variables missing in wage regression but statistically significant

- Experience
- Race or immigrant
- Kids
- Marital/kids interaction
- Training
- Tenure
- Government work
- Urban
- Region

Access to childcare / allocation of kindergarten places – not in the papers reviewed by Weichselbaumer & Winter-Ebmer

Doris Weichselbaumer & Rudolf Winter-Ebmer (2005) “A meta-analysis of the international gender wage gap” *Journal of Economic Surveys*, Vol. 19, No. 3, pp. 479-511.

TRADITIONAL GENDER ROLES + HIGH FEMALE LABOUR MARKET PARTICIPATION



TRADITIONAL GENDER ROLES & BUILDING OF CLASS-SOCIETY

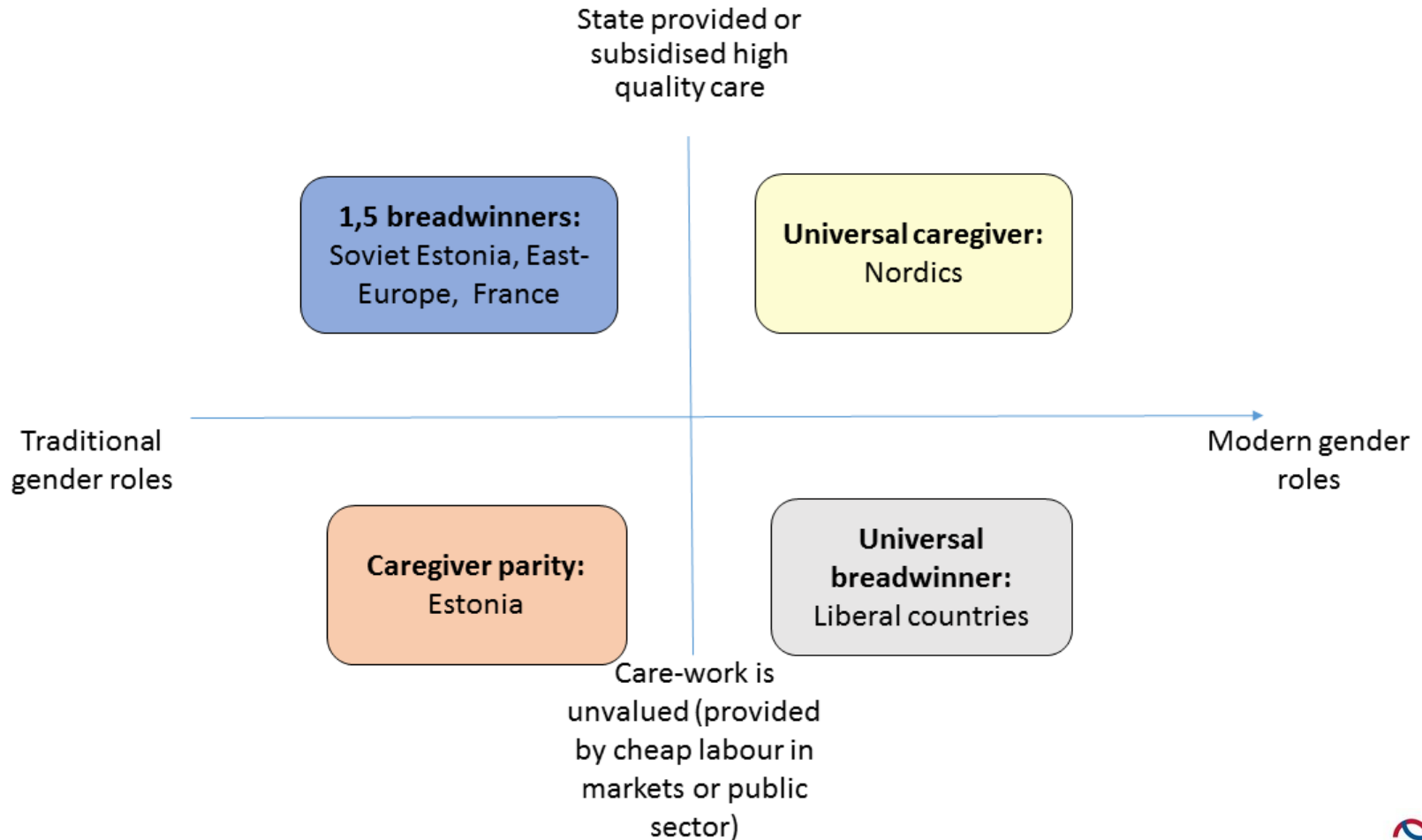


Institutional support

		Weak	Strong
Cultural commitment	Weak	Ethnicity	Gender
	Strong	Class allocation	Class distribution

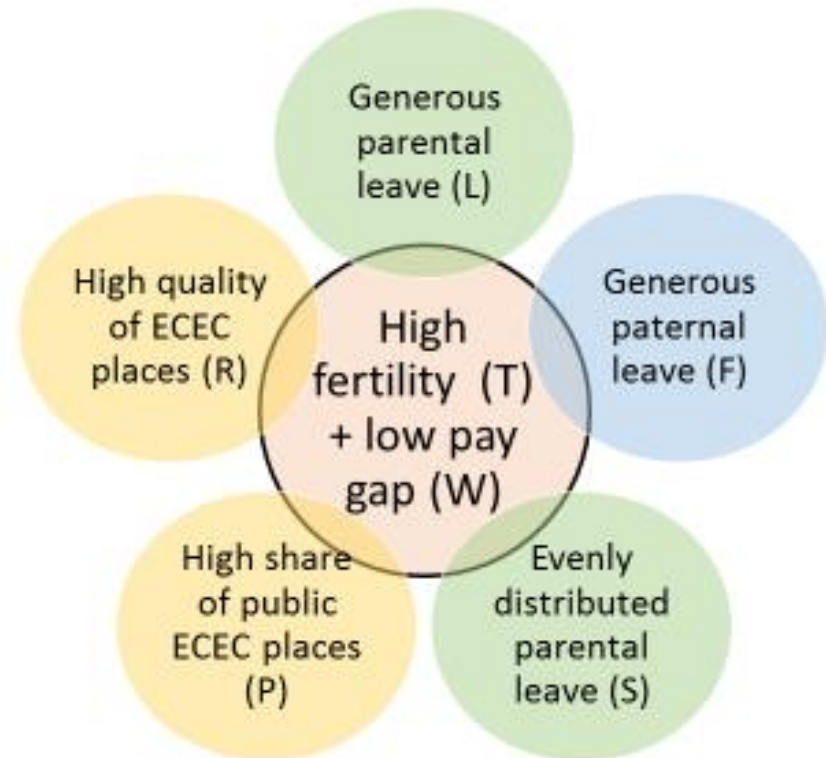
Source: Sonja Szelenyi *Equality by Design*, Stanford: Stanford Univ. Press, pp. 129-130.

POLICY EFFECT WORKS THROUGH GENDER ROLES

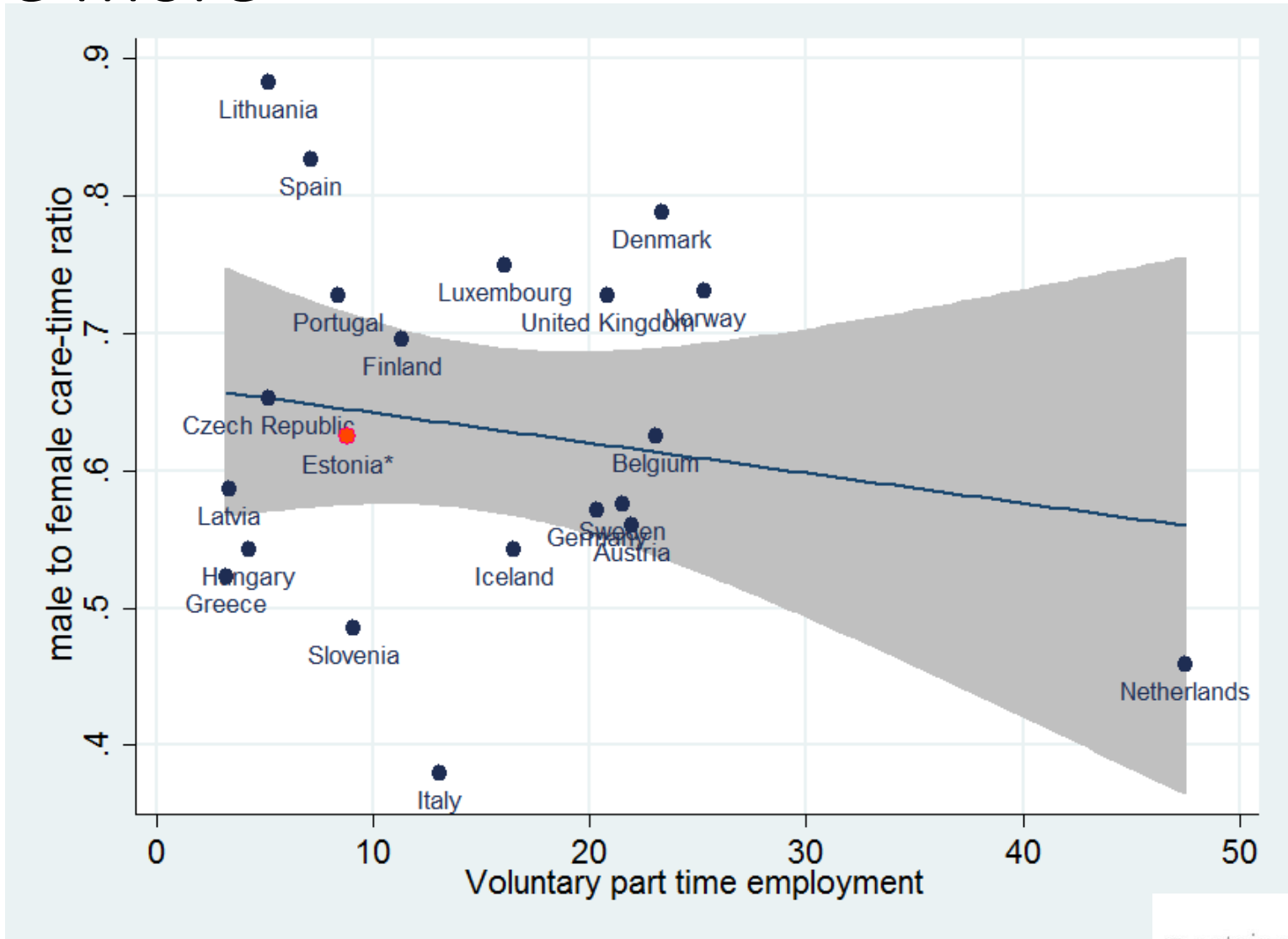


Our „model“

- We assume the good policy mix ($M = T + W$) to be achievable
- We assume that there are several paths to good policy mix (M)
- These path have configurational quality – the success of paths is dependent on
 - 1) Context – gender roles
 - 2) The pattern of key instruments of family policy



In liberal and Nordic countries males care more



Truth table – which paths (configurations of dimensions) work?

Notes: 1 means positive value; in Bold countries which show good outcome

L	F	S	P	R	G	Countries
Parental leave (L)	Paternal leave (F)	Evenness of parental leave (S)	Share of public places (P)	Quality of care (R)	Gender roles (G)	
1	1	1	1	1	1	SE, FI
1	0	1	1	1	1	SI
1	0	1	1	0	0	HU
1	0	0	1	1	0	CZ, EE
1	0	0	1	0	1	LT, LV, SK
1	0	0	1	0	0	PL
1	1	1	0	0	0	NO
1	1	0	0	0	0	DE
1	0	0	0	0	0	AT
0	1	1	1	1	1	IS
0	1	1	0	1	1	BE
0	0	1	1	1	0	UK
0	0	0	1	1	0	NL
0	0	0	1	0	1	FR
0	0	1	0	1	0	IE
0	0	1	1	1	1	DK
0	1	0	0	0	1	IT, PT
0	0	0	0	0	0	ES

← Generous in all key dimensions

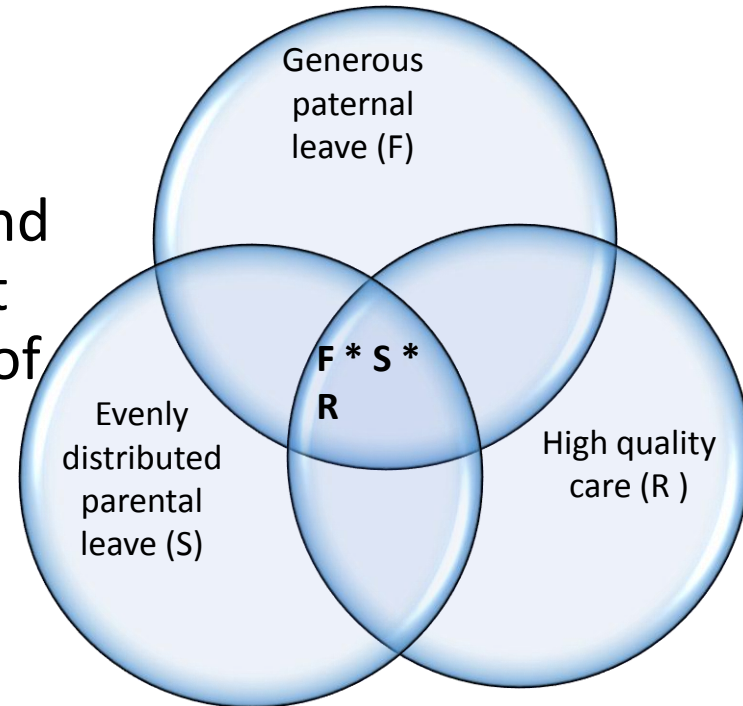
← Generous leaves

← Fathers + care

← Care

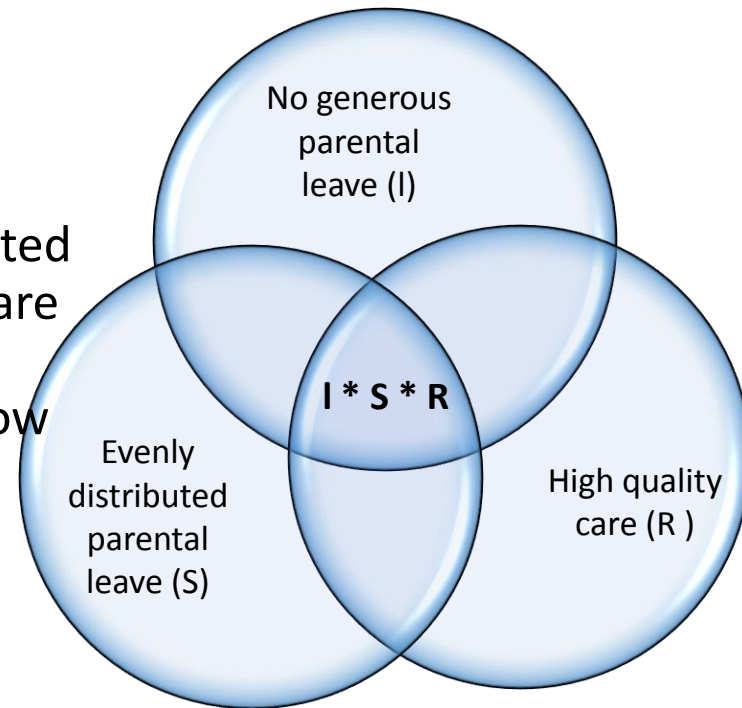
Path 1: Family policy path for countries with modern gender roles

- **F * S * R**
- Generous paternal leave in combination with evenly distributed parental leave and high quality care is sufficient to good policy mix in terms of high fertility rates and low gender pay gap
- Countries which follow this path are: Finland, Sweden, Iceland



Path 2: Family policy path for countries with traditional gender roles

- **I * S * R**
- No generous parental leave in combination with evenly distributed parental leave and high quality care is sufficient to good policy mix in terms of high fertility rates and low gender pay gap
- Countries which follow this path are: Belgium, Denmark, Ireland, United Kingdom





Policy implications

- Estonia follows the path L * f * s * P * R
- The main discrepancy to sufficient path in case of traditional gender roles (I * S * R) is generous and uneven parental leave
- This may accelerate two parallel inequality mechanisms:
 - Gender way gap (indirectly)
 - Kindergarten's places accessible to stronger SES
- Mechanism design approach to mitigate these problems



MECHANISM DESIGN

- Allows both:
 - **Family view** (what families want – individual preferences)
 - **Societal view** (social goals (affirmative action policies) – priorities)
- Answers the question – **how kindergarten places should be distributed**
 - Literature of school choice:
 - Gale and Shapley 1962
 - Shapley and Scarf 1974

Key concepts:

Stability: (a) allocation does not violate any priorities, (b) every family weakly prefers his assigned seat to remaining unassigned. Thus stable mechanism eliminates justified envy.

Strategy proofness: outcome is not vulnerable to manipulation, indicating that for each family dominant strategy is to state true preferences.

Efficiency: allocation should promote families welfare

Current practices

EXAMPLE I: HARKU CASE



- Approx. 250 annual applications – 7 kindergartens
- 200 are getting place in municipal kindergarten
- **Procedure:**
 - 3 preferences, central information system
 - Boston – decentrally distributed places according to the first preferences
 - Decentralised but coordinated matching -- heads of the kindergartens decid according to first preference
 - Priority – No priorities. Sometimes (randomly) additional information (insights of the head of kindergarten) such as brothers and sisters or home address is taken into account.

Current practices: EXAMPLE II: RAE CASE



- Approx. 1000 annual applications –
 - 9 municipal kindergartens
- 400 are getting place in municipal kindergarten
- **Procedure:**
 - No preferences
 - Serial proposing side dictatorship – dictator is the family who has made the application earlier in time
 - Decentralised matching -- officials decide where the family is allocated
 - Priority – discrete choice by heads of kindergartens based on home address



HOW TO IMPROVE?

- Define **priorities** (affirmative action policies)
- Allow to submit **preferences** (no upper limit)
- Central „data warehouse“ – **clearinghouse**
- Decide upon **stable mechanism** – no justified envy
- Integrate **private providers** to the clearinghouse

CONTRIBUTION OF THE EEMD PROJECT



- **Social innovation**
 - Policy advice to local municipalities (how to distribute places and what kind of equity criteria to consider)
 - Substitute semi-central manual assignment to algorithm based assignment
- **Improve work-life balance by**
 - Transparent and „equity enhancing“ way of allocating kindergarten places
 - Show the shortcomings of current decentralised allocation practices
 - Increase awareness of alternative paths (configurational, most probably) of family policies
 - Conceptualise family policy alternatives in the case of alternative aims: fertility (total number of children), female labour market participation (and wage gap), increased value of the care (familisation instead of defamilisation)



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- Project web-page: <http://www.ttu.ee/eemd>