

Children's Occupational Preferences

Evidence from a Theme Park Behavior Logs



Elizaveta Sivak

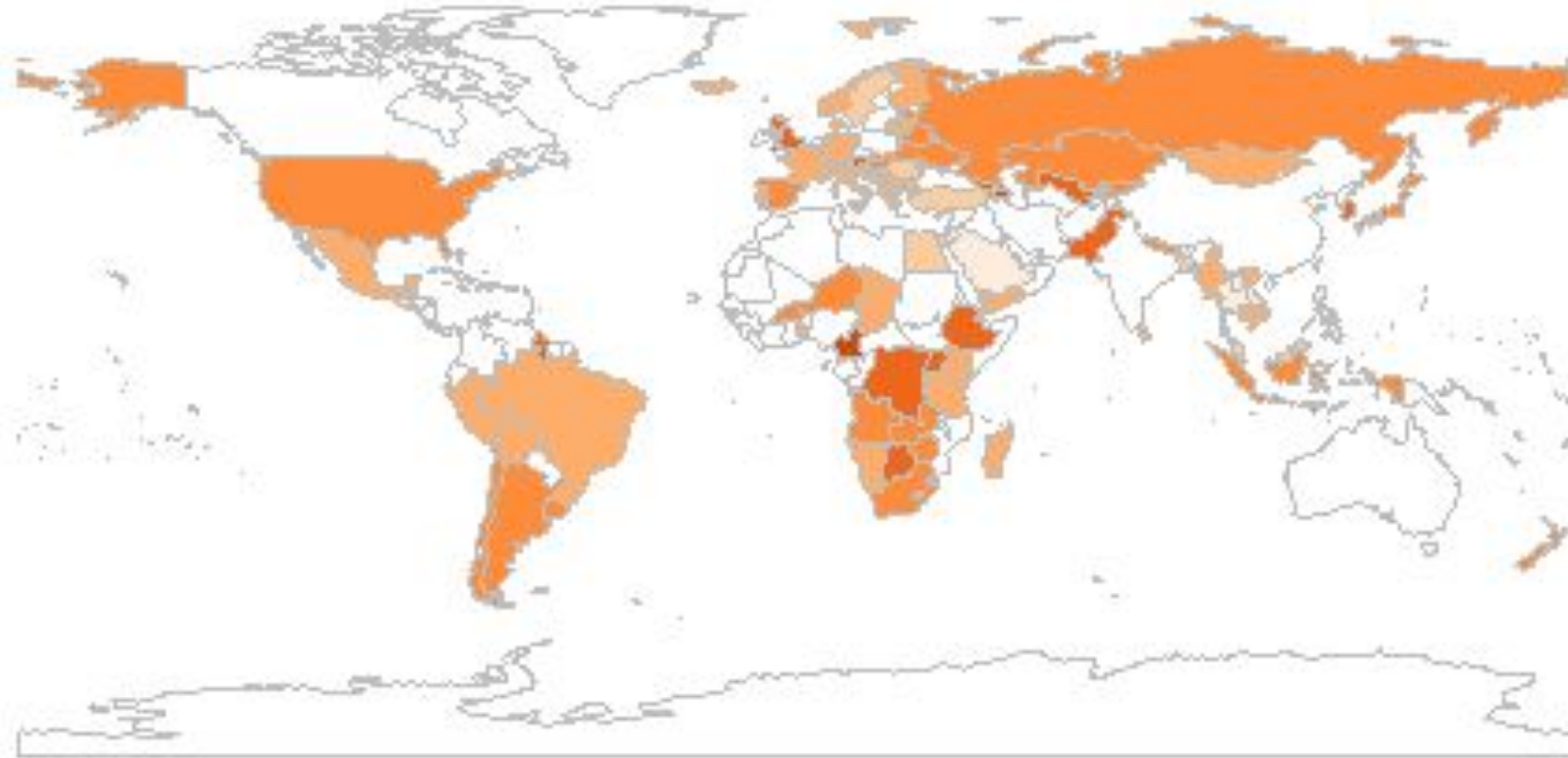
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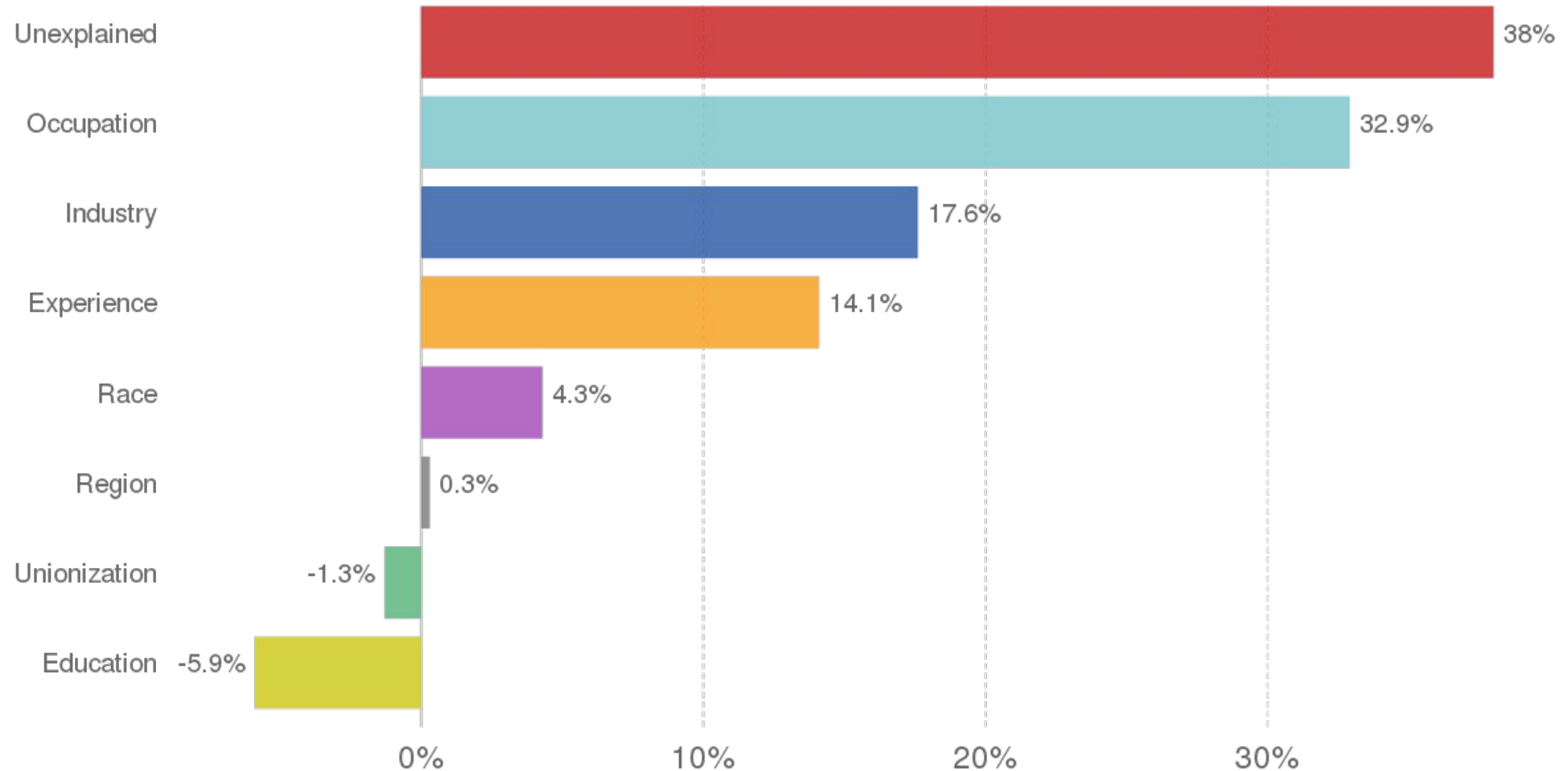
Gender wage gap: women earn on average 20% less than man



Data source: International Labor Organization, Mean nominal monthly earnings of employees by sex and economic activity
Estimates correspond to the difference between average earnings of men and women, expressed as a percentage of average earnings of men.

Decomposition of the gender wage gap, 2010

Shown are the fractions of the total gender wage gap accounted for by different labor-market variables. "Occupation" for example, refers to gender differences in occupation (i.e. lawyer vs. teacher). The "unexplained" percentage refers to the residual that remains after all other factors are accounted for – it is often seen as discrimination.



Source: Blau and Kahn (2017)

Note: These are estimates: it is important to keep in mind that it's impossible to precisely delineate between the contribution of different factors. For instance, discrimination may contribute to occupational segregation, and conversely, "unexplained" factors might include aspects such as unobserved gender differences in productivity.

Why does occupational gender segregation persist?

Discrimination in hiring and promotion

Hostile work environments for women

Long-hours culture

...

Occupational stereotypes

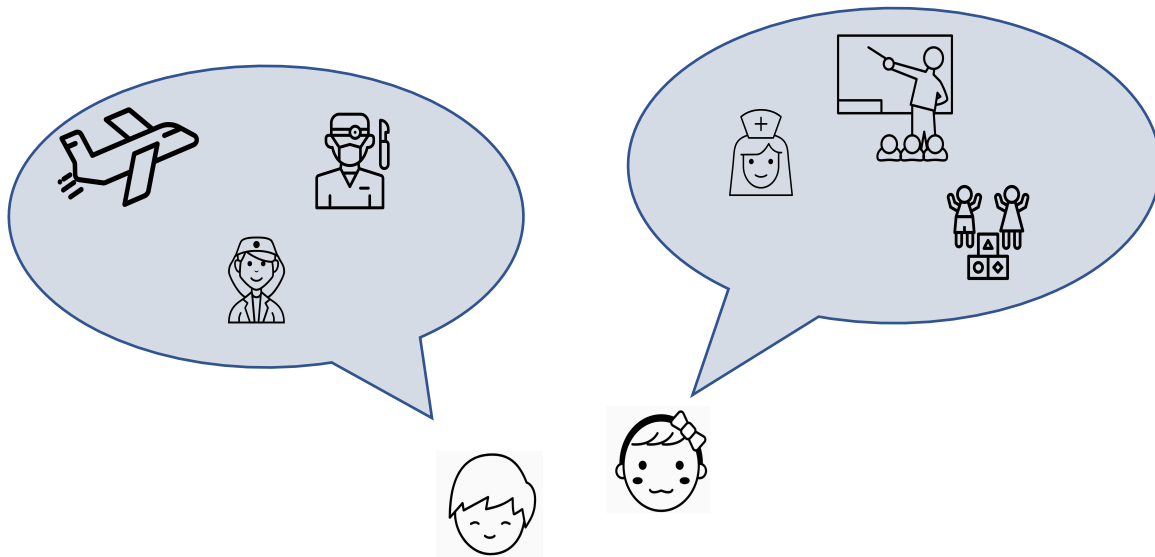
He, J. C., Kang, S. K., Tse, K., & Toh, S. M. (2019). Stereotypes at work: Occupational stereotypes predict race and gender segregation in the workforce. *Journal of Vocational Behavior*, 115, 103318.

Gender stereotypes:

acquired at an early age



influence children's interests, perception of their abilities, and job aspirations



Bian, L., Leslie, S. J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science*, 355(6323), 389-391.

Guimond, S., & Roussel, L. (2001). Bragging about one's school grades: Gender stereotyping and students' perception of their abilities in science, mathematics, and language. *Social psychology of education*, 4(3), 275-293.

Makarova, E., Aeschlimann, B., & Herzog, W. (2019). The gender gap in STEM fields: The impact of the gender stereotype of math and science on secondary students' career aspirations. *Frontiers in Education*, 4, 60.

What can influence stereotyping?

What can influence stereotyping?

Role-play in a counter-stereotypical or neutral environment (?)

Kaufman, G., Flanagan, M., & Freedman, G. (2019). Not Just for Girls: Encouraging Cross-Gender Role Play and Reducing Gender Stereotypes with a Strategy Game. In Proceedings of the Annual Symposium on Computer-Human Interaction in Play, 481-493.

What can influence stereotyping?

Role-play in a counter-stereotypical or neutral environment (?)

We use data from KidZania theme park in Moscow (Russia) to study preferences in this environment

KidZania



KidZania

Child-sized replica of a real city

Locations:

~ traditionally male-dominated occupations (e.g. a fire station)

~ traditionally female-dominated occupations (e.g. a beauty parlor)

~ neutral locations (e.g. a pizzeria)

Children are free to choose whatever location and job they want

Data and Methods

Anonymized behavioral logs from electronic bracelets about the visit

- visit date
- entry\exit time
- locations
 - name
 - order
 - job performed
 - timestamps (enter\left)
 - did a child earn or pay some ‘money‘

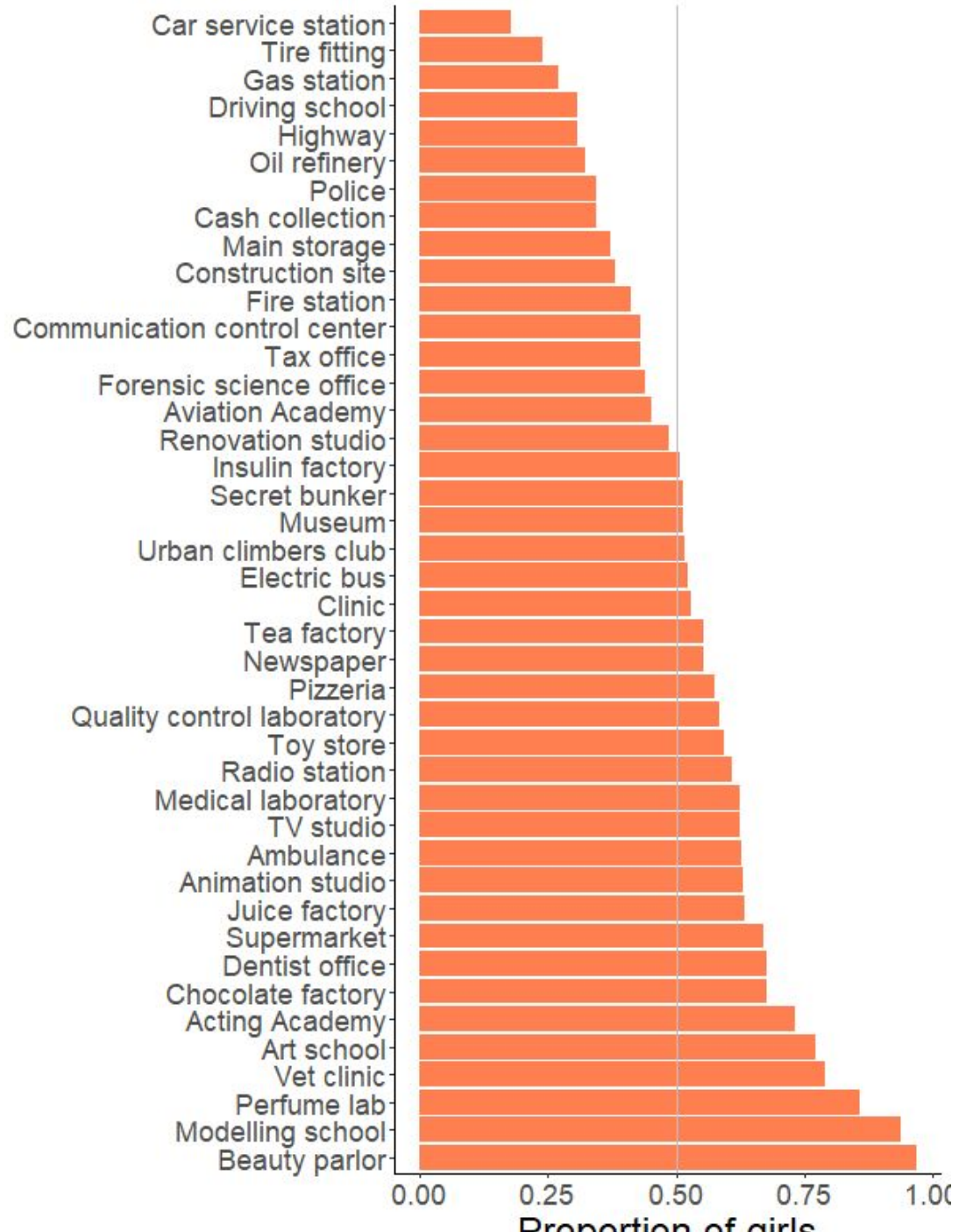
+ child's age and gender

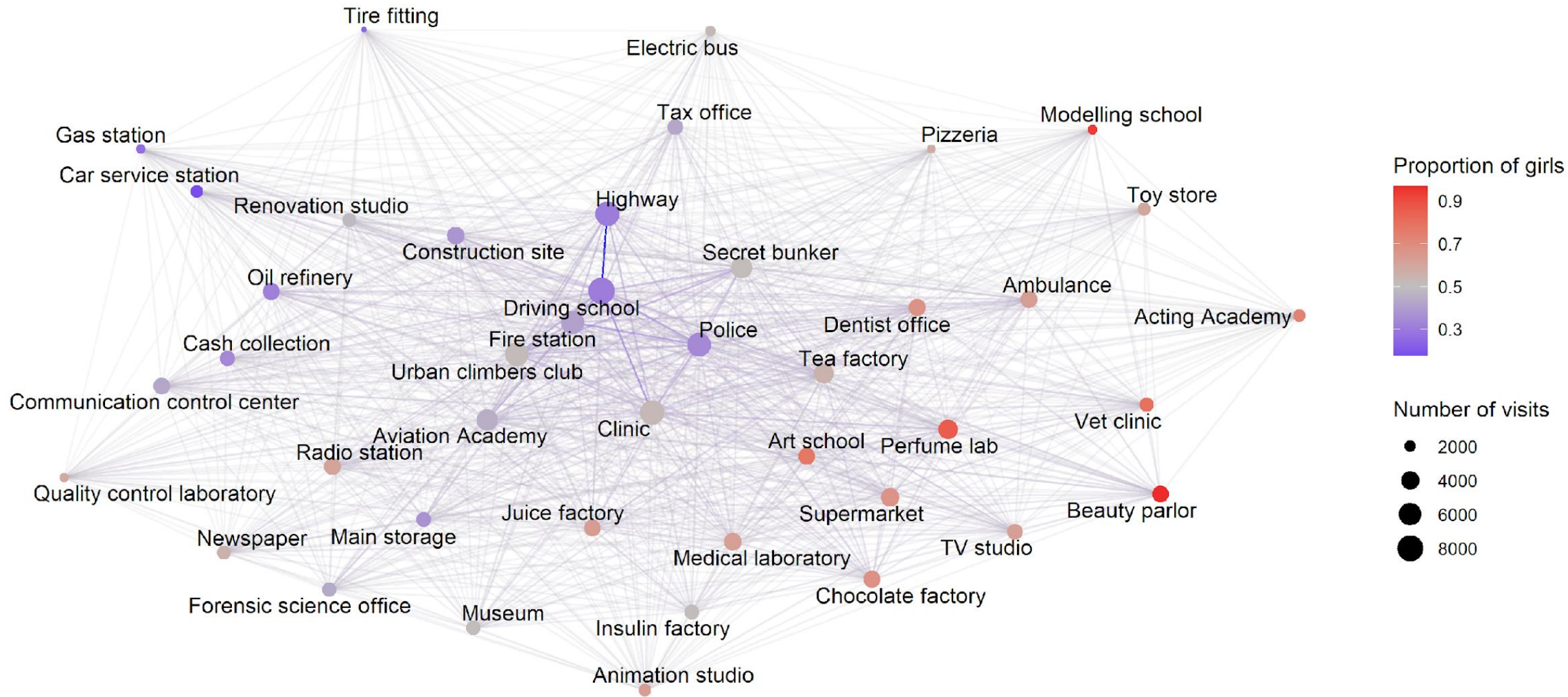
Data and Methods

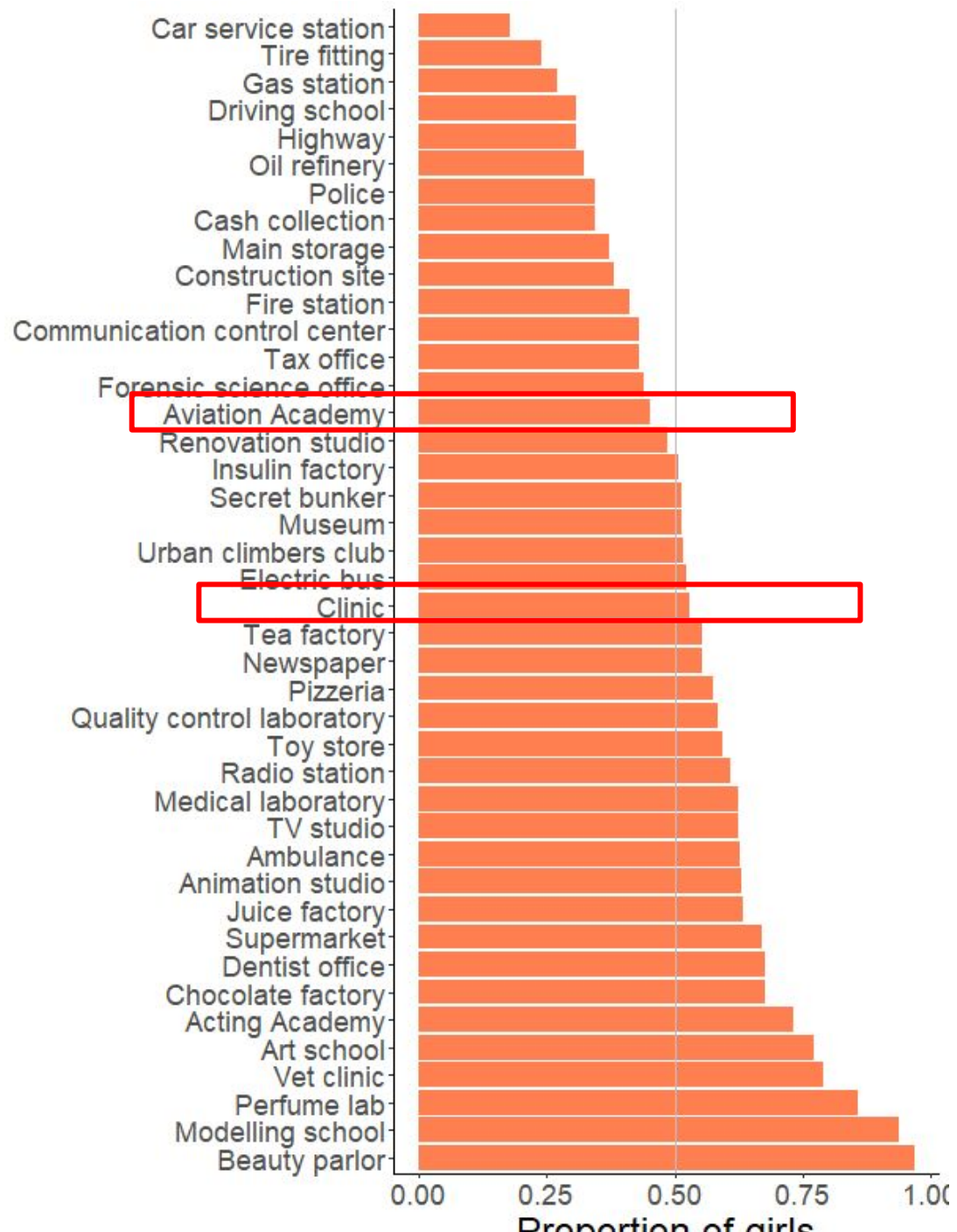
29 thousand children aged 7-12 years (53% girls), who visited KidZania in 2018

On average a child attends 6 locations per visit

- we choose 42 most popular locations (>1500 visits per location, 94% of all locations' visits)
- analyzed the proportion of girls among the visitors of each location
- constructed a bipartite network (child -> location) and then projected it to a location co-visited network







**Clinic:
Radiologist vs General
practitioner vs Surgeon**

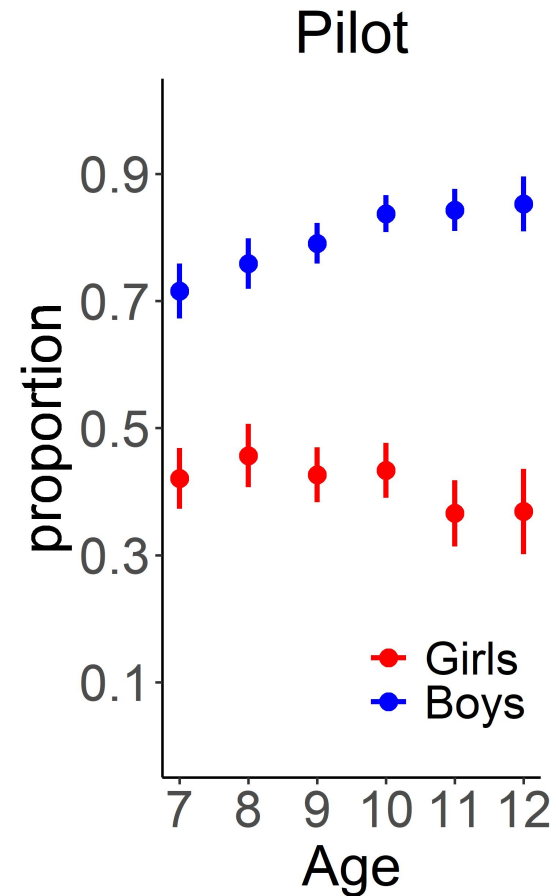
**Aviation academy:
Pilot vs Flight attendant**

**Clinic:
Radiologist vs General
practitioner vs Surgeon**

More girls than boys
choose the surgeon role
(41% vs 30%, chi-squared
test, $p < 10^{-4}$)

This proportion is stable
for children of different
ages

**Aviation academy:
Pilot vs Flight attendant**



Main conclusion:

There are gender differences in children's occupational preferences, which correspond to the "real world" gender occupational segregation

Why do children behave this way? Observations, interviews

What can decrease gender segregation? Interventions (female supervisor in the Aviation Academy?)

Are there other gender differences in children's economic behavior? (earnings/spendings at KidZania)

Thank you!

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