Ethno religious differences in Israeli Higher Education: Vertical and Horizontal Dimensions

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Previous research

- The expansion and diversification of higher education systems increased the enrollment rates of members of disadvantaged groups.

- Privileged social groups take advantage of the differentiation within higher education.

- The two sources of stratification within higher education: type of institution and field of study.
Previous research

- Members of underprivileged groups enroll more often in less prestigious and less selective institutions (Shavit, Arum and Gamoran 2007).

- Research on class and ethnic inequalities in field of study present mixed results (Goyette and Mullen 2006; Brint and associates 2005).

- Our focus: ethno-religious vertical and horizontal inequality in the expanded Israeli higher-education system.
Factors that may explain the disadvantage of underprivileged ethno-religious groups in higher education

- Family resources
- High school tracking
- Admission policies of higher education institutions
- Choice
Some relevant characteristics of Israeli secondary education

- Separation between the Jewish and Arab sectors

- Extensive tracking:
  - Academic and vocational tracks
  - Stratification within the academic and vocational tracks
  - Within-subject differentiation (mainly in math and English)
The expansion of Israeli higher education

- Until the 1990s consisted of six research universities.

- The expansion is due to the creation of new academic public and private colleges.

*Horizontal stratification:*

- Between universities and colleges: The colleges were defined from the very beginning as the second tier of higher education.

- Fields of study are stratified mainly according to their selectivity, a function of their popularity, which depends on the expected economic returns in the labor market.
Major ethno-religious groups

Jewish group (about 80% of the total population):
- Jews of European origin (*Ashkenazim*) – the dominant ethnic group.
- Jews of Middle-Eastern or North-African origin (*Mizrachim*)
- Jews of mixed ethnicity (*Mizrachim* and *Ashkenazim*)
- New immigrants from the former Soviet Union (FSU)
- New immigrants from Ethiopia (were not included in this study due to small numbers)

Palestinian Arabs (about 20% of the total population)
- Muslims (about 80% of the Arab population)
- Druze
- Christians
Data

- The dataset was prepared by the Israeli Central Bureau of Statistics (CBS) by combining data from:
  - the 1995 population census
  - the Ministry of Education
  - the National Institute for Testing and Evaluation
  - tertiary education institutions

- It includes information on a representative sample of about 20% of all Israelis born between 1978 and 1982.

- We focus on high school graduates eligible for the matriculation diploma. To control for a possible sample selection bias, we conducted a preliminary probit regression analysis for matriculation eligibility.
Dependent variable

Ordinal, 4 categories:
- Did not enroll

Based on information from the CBS we classified the different combinations of fields of study and higher education institutions (about 400 combinations) into three categories according to expected earnings after graduation:
- low
- medium
- high
Explanatory variables

- Ethno-religious group
- *Socioeconomic background:*  
  - Number of siblings  
  - Standard of living  
  - Parental academic education
- *Specialization during high school:*  
  - Exact and natural sciences  
  - Humanities and social sciences  
  - Technological / vocational
- *Achievement on criteria for admission:*  
  - Matriculation score  
  - Psychometric score
Enrollment in higher education according to expected income, by ethno-religious groups

<table>
<thead>
<tr>
<th></th>
<th>Did not enroll</th>
<th>Lowest level</th>
<th>Middle level</th>
<th>Highest level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashkenazim</td>
<td>24.6%</td>
<td>6.6%</td>
<td>46.6%</td>
<td>22.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Ethnically mixed</td>
<td>30.7%</td>
<td>5.8%</td>
<td>42.8%</td>
<td>20.7%</td>
<td>100%</td>
</tr>
<tr>
<td>Mizrachim</td>
<td>38.8%</td>
<td>6.5%</td>
<td>37.8%</td>
<td>16.9%</td>
<td>100%</td>
</tr>
<tr>
<td>FSU</td>
<td>35.1%</td>
<td>4.5%</td>
<td>33.4%</td>
<td>27.1%</td>
<td>100%</td>
</tr>
<tr>
<td>Muslims and Druze</td>
<td>50.2%</td>
<td>20.6%</td>
<td>23.0%</td>
<td>6.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Christians</td>
<td>45.8%</td>
<td>16.0%</td>
<td>29.0%</td>
<td>9.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>33.7%</td>
<td>8.0%</td>
<td>39.4%</td>
<td>18.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

N=37,409

Note: among high school graduates eligible for the matriculation diploma
Coefficients from two generalized ordered logit models predicting enrollment in higher education

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>y&gt;1</td>
<td>y&gt;2</td>
<td>y&gt;3</td>
<td>y&gt;1</td>
<td>y&gt;2</td>
<td>y&gt;3</td>
</tr>
<tr>
<td>Ethno-religious group (reference: Ashkenazim):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnically mixed</td>
<td>-.094**</td>
<td>-.050</td>
<td>.044</td>
<td>-.032</td>
<td>.019</td>
<td>.113**</td>
</tr>
<tr>
<td>Mizrachim</td>
<td>-.212**</td>
<td>-.169**</td>
<td>.047</td>
<td>-.028</td>
<td>.009</td>
<td>.227**</td>
</tr>
<tr>
<td>FSU</td>
<td>-.365**</td>
<td>-.274**</td>
<td>.420**</td>
<td>-.324**</td>
<td>-.227**</td>
<td>.580**</td>
</tr>
<tr>
<td>Muslims and Druze</td>
<td>-.479**</td>
<td>-1.01**</td>
<td>-.941**</td>
<td>-.371**</td>
<td>-.918**</td>
<td>-.726**</td>
</tr>
<tr>
<td>Christians</td>
<td>-.671**</td>
<td>-.959**</td>
<td>-.821**</td>
<td>-.673**</td>
<td>-.940**</td>
<td>-.702**</td>
</tr>
</tbody>
</table>

Model 1: Controlling for SES
Model 2: Controlling for SES  specialization in high school, matriculation and Psychometric scores
Predicted probabilities for enrollment in higher education for an ‘average’ person

Note: Based on a generalized ordered logit model. The predictions are for persons with academic parental education, mean number of siblings and mean standard of living who specialized in science during high-school, won an average matriculation grade and a average score on the Psychometric test.
Conclusions

- Vertical and horizontal inequality operate according to different patterns.

- The vertical dimension:
  - Inequality between Ashkenazim and Mizrachim is due to high school history and achievements in the criteria for admission;
  - The disadvantage of Arabs and FSU immigrants remains after controlling for socioeconomic background, high school history and achievements.
Conclusions

- The horizontal dimension:
  - Advantage of FSU immigrants, Mizrahim and ethnically mixed over Ashkenazim in studying lucrative fields.
  - Disadvantage of Arab groups.
Conclusions

- Arabs are disadvantaged in the two dimensions.
- The disadvantage of the historically underprivileged Jewish ethnic groups persists only in the vertical dimensions and is mainly due to educational processes.
- FSU immigrants are disadvantaged in the vertical dimension but advantaged in the horizontal.