

# **FEM41-01: Inequality, Intergenerational Mobility of Women Educational Attainment and Inclusive Policies in Arab Countries**

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# Research Questions

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It is well known that the inclusion of women through education leads to enterprise creation and to further employment opportunities with the enhancement of economic and social participation. But, further issues need the development of updated knowledge as the globalization process generates new needs and new challenges.

In this context, intergenerational mobility in educational attainment refers to changes in education levels across generations. It concerns, here, younger and new generations of women in the Arab world.

Among the new directions of economic research, the following questions are emphasized in the context of Arab economies:

- ❖ **How education attainment inequalities affect the process of economic and social participation of women?**
- ❖ **How intergenerational mobility in education attainment provides incentives or impediments to the inclusion of women?**
- ❖ **How outcomes from both inequality and intergenerational mobility could be used for the enrichment of inclusive economic and social policies?**
- ❖ **How the situation of Arab countries could be compared with Central and Eastern European economics as these are countries with relatively newer development of markets?**

The above questions are motivated by the continuous need for updating and feeding policy making with new inputs. Inequality in educational attainment and its related intergenerational mobility with their links have not yet been fully addressed in the context of Arab countries, mainly in relation to the provision of new policy insights. It is also well-known that these questions have been concerning all countries and world economies during the recent years.

# Literature Review

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- ▶ While reference to inequality is common in social science research, intergenerational mobility has been used mainly in specialized literature such as in sociology and economics.
- ▶ According to OECD (2007) intergenerational mobility is defined as the extent to which some key characteristics and outcomes of individuals differ from those of their parents. Intergenerational mobility refers to changes in social status between different generations within the same family.
- ▶ Intergenerational educational mobility refers to the extent to which education attainments are able to change across generations. If there were no intergenerational mobility in education, at all, all poor children would become poor adults and all rich children would become rich adults assuming that higher levels of education lead to higher incomes. In the case of complete intergenerational mobility, there would be no relationship between family background and the adult education outcomes. A child would have exactly the same likelihood of having a good education independently from the social background. The intergenerational education mobility indicator is connected to education inequality. While education inequality can be thought of as an indicator of **equality of outcome**, the intergenerational education mobility indicator can be thought of as an indicator of **equality of opportunity**.

# Theoretical Framework <sub>1</sub>

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- ▶ There have been several attempts to setting an overall theoretical framework for the intergenerational mobility and its links with inequality:
  - ▶ Becker, Kominers, Murphy and Spenkuch (2015) develop a model of the intergenerational transmission of resources that emphasizes the link between inequality and intergenerational mobility. Across countries, inequality and intergenerational mobility are strongly negatively correlated, a phenomenon sometimes referred to as “The Great Gatsby Curve”.
  - ▶ Ichino, Karabarbounis and Moretti (2010), present a parsimonious political economy model and show how the interaction between private and collective decisions determines the equilibrium level of mobility. Contrary to what it is generally assumed, a low correlation between father income and son income is not always desirable, as it may imply more inefficiency due to the distortionary effects of mobility-enhancing public policies.
  - ▶ Corak (2013), presents the evidence that countries with more inequality at one point in time also experience less earnings mobility across the generations, a relationship that has been called “The Great Gatsby Curve.” This author outlines how to interpret the common statistic measuring intergenerational earnings mobility and its relationship to equality of opportunity. Countries with greater inequality of incomes also tend to be countries in which a greater fraction of economic advantage and disadvantage is passed on between parents and their children. This same framework is applied to education attainment where both intergenerational mobility and inequality are considered.
  - ▶ Driouchi and Gamar (2015), assess intergenerational mobility and inequalities in educational attainment in Arab countries with the aim of finding out about the existence of a Gatsby curve for education. The existence of links between intergenerational mobility and inequalities provide useful insights to new inclusive economic policies.

# Theoretical Framework <sub>2</sub>

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## 1. Measures of inequality

Allison (1978) considers that measures of inequality are increasingly used to compare nations, cities, and other social units and that the properties of alternative measures have received little attention. The author addresses both theoretical and methodological implications of several common measures of inequality. The Gini index is found to satisfy the basic criteria of scale invariance and the principle of transfers. Currently, different measures of inequality have been developed so far.

### ▶ Gini index

The range of the Gini index is between 0 and 1 where 0 indicates perfect equality and 1 indicates maximum inequality. The Gini index is the most frequently used inequality index. The reason for its popularity is that it is easy to understand how to compute the Gini index as a ratio of two areas in Lorenz curve diagrams. As a disadvantage, the Gini index only maps a number to the properties of a diagram, but the diagram itself is not based on any model of a distribution process. The "meaning" of the Gini index only can be understood empirically. Additionally the Gini does not capture where in the distribution the inequality occurs. As a result, two very different distributions of income can have the same Gini index.

# Theoretical Framework <sub>3</sub>

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## 2. Intergenerational Mobility

The extent of intergenerational mobility in economic or social status at a point in time is often evaluated using a simple log-linear regression of children's outcomes on parent's outcomes for family  $i$  as:

$\ln Y_i \text{ child} = \alpha + \beta \ln Y \text{ parents} + \varepsilon$ , where  $Y$  is the measure of economic or social status of interest and  $\varepsilon$  is an error term.

The coefficient  $\beta$  measures the extent of intergenerational mobility, reflecting how strongly children's status is associated with parental economic status. The literature usually proceeds to say that a value of zero for  $\beta$  (where child and parental  $Y$  are uncorrelated) corresponds to complete intergenerational mobility and a value of unity for  $\beta$  (child  $Y$  is fully determined by parental  $Y$ ) corresponds to complete immobility.

**The intergenerational elasticity of income** is generally considered one of the best summary measures of the degree to which a society gives equal opportunity of success to all its members, irrespective of their family background (Ichino, Karabarbounis and Moretti, 2010).

# Data

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- ▶ The research uses the updated **data retrieved from the Barro and Lee (2014) dataset**. This includes data ranging from 1950 to 2010 for the Arab countries namely: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Libya, Morocco, Mauritania, Qatar, Syria, Saudi Arabia, Sudan, Tunisia, United Arab Emirates and Yemen.
- ▶ **The variables** used include average years of total schooling and the four categories of education that captures the status of people in education: the first one concerns those with no education (no schooling), the second those that completed primary education (TP), the third those that completed Secondary education (TS) and the fourth those that completed tertiary education (TT).
- ▶ This data will be used to study the relationship between inequalities in educational attainment and the intergenerational mobility.
- ▶ The average years of total schooling measured in years will be used to determine the elasticities of the intergenerational mobility in education while the four educational levels that represent percentages will be used to determine the yearly GINI coefficients for each of the Arab countries.

# Preliminary Results <sub>1</sub>

The time trends for the average years of schooling are highly statistically significant and positive:

**Table 1: The Coefficients and t-statistics for the trend line regressions for the different levels of schooling for the total population in Arab Countries**

Countries	Average Years of Schooling								N
	Total		Primary		Secondary		Tertiary		
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	
Algeria	0.543	14.463	0.333	14.699	0.185	12.850	0.025	6.289	13
Bahrain	0.639	12.950	0.348	11.501	0.258	15.338	0.034	6.414	13
Egypt	0.611	15.005	0.337	16.683	0.250	11.697	0.024	6.215	13
Iraq	0.625	20.472	0.385	21.791	0.203	15.768	0.037	10.282	13
Jordan	0.723	29.241	0.381	51.546	0.311	17.255	0.031	16.920	13
Kuwait	0.452	13.249	<b>0.173</b>	<b>17.349</b>	0.259	7.610	0.020	3.991	13
Libya	0.705	18.326	0.402	19.696	0.254	12.540	0.048	4.869	13
Mauritania	<b>0.270</b>	<b>12.128</b>	0.192	11.546	0.073	12.572	<b>0.006</b>	<b>9.833</b>	13
Morocco	0.406	17.219	0.229	17.685	0.151	17.202	0.026	11.541	13
Qatar	0.529	34.840	0.297	16.785	0.195	40.370	0.037	20.910	13
Saudi Arabia	0.534	17.361	0.288	20.327	0.220	13.237	0.027	13.952	13
Sudan	0.274	15.675	0.214	14.633	<b>0.054</b>	<b>13.377</b>	<b>0.006</b>	<b>4.202</b>	13
Syria	0.486	19.007	0.342	23.177	0.131	9.540	0.013	8.437	13
Tunisia	0.597	19.881	0.359	27.208	0.210	13.595	0.028	6.221	13
<b>UAE</b>	<b>0.777</b>	<b>18.130</b>	<b>0.428</b>	<b>18.036</b>	<b>0.306</b>	<b>19.094</b>	<b>0.042</b>	<b>9.769</b>	<b>13</b>
Yemen	0.295	6.749	0.195	7.142	0.094	6.100	0.007	5.806	13

**Table 4: The Coefficients and t-statistics for the trend line regressions for the different levels of schooling for the total population in Eastern and Central European Countries**

Countries	Average Years of Schooling								N
	Total		Primary		Secondary		Tertiary		
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	
Albania	<b>0.718</b>	<b>17.717</b>	<b>0.465</b>	<b>13.266</b>	0.244	15.982	<b>0.009</b>	<b>2.774</b>	13
Bulgaria	0.606	17.526	0.318	23.316	0.238	10.180	0.050	21.236	13
Croatia	0.446	22.200	0.120	5.173	0.292	8.789	0.035	6.368	13
Czech	0.440	19.306	0.111	9.257	0.296	14.848	0.034	10.556	13
Estonia	0.530	18.408	0.075	13.976	<b>0.385</b>	<b>15.372</b>	<b>0.070</b>	<b>9.252</b>	13
Hungary	0.415	11.705	0.089	5.956	0.283	10.205	0.044	11.695	13
Latvia	0.605	29.165	0.240	14.506	0.329	16.266	0.036	12.093	13
Lithuania	0.617	47.025	0.269	19.223	0.294	27.583	0.054	8.812	13
Poland	0.506	42.501	0.239	13.856	<b>0.229</b>	<b>12.663</b>	0.039	6.288	13
Romania	0.571	20.507	0.250	7.787	0.297	26.338	0.024	11.187	13
Serbia	0.531	24.627	0.195	7.366	0.297	7.221	0.039	15.533	13
Slovakia	<b>0.377</b>	<b>21.053</b>	<b>0.065</b>	<b>3.581</b>	0.274	10.015	0.037	9.188	13
Slovenia	0.557	22.415	0.134	2.906	0.374	13.172	0.050	10.693	13



# Preliminary Results <sup>2</sup>

**Table 2: The Coefficients and t-statistics for the trend line regressions for the different levels of schooling for the female population in Arab Countries**

Countries	Average Years of Schooling								N
	Total		Primary		Secondary		Tertiary		
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	
Algeria	0.499	10.195	0.299	9.811	0.176	11.203	0.024	4.863	13
Bahrain	0.703	14.984	0.380	13.661	0.284	16.281	0.039	7.097	13
Egypt	0.552	11.930	0.309	14.301	0.224	9.656	0.020	5.688	13
Iraq	0.529	13.145	0.341	13.917	0.159	10.536	0.029	9.740	13
Jordan	0.768	18.294	0.428	24.985	0.316	12.686	0.024	14.624	13
Kuwait	0.585	14.950	0.233	28.811	0.320	9.614	0.031	8.278	13
Libya	0.808	10.963	0.432	13.400	0.315	8.718	0.060	4.779	13
Mauritania	0.195	8.351	0.148	8.268	<b>0.045</b>	<b>7.944</b>	<b>0.002</b>	<b>8.253</b>	13
Morocco	0.328	11.965	0.182	12.739	0.128	11.215	0.018	9.016	13
Qatar	0.699	28.306	0.353	21.659	0.279	31.555	<b>0.067</b>	<b>22.588</b>	13
Saudi Arabia	0.612	10.672	0.335	12.472	0.242	8.673	0.034	9.823	13
Sudan	0.246	11.463	0.189	11.899	0.050	9.754	0.007	4.386	13
Syria	0.495	15.423	0.355	15.634	0.130	10.573	0.010	7.798	13
Tunisia	0.556	12.704	0.337	18.116	0.194	8.993	0.025	4.838	13
UAE	<b>0.928</b>	<b>17.074</b>	<b>0.486</b>	<b>17.855</b>	<b>0.383</b>	<b>17.350</b>	0.059	10.880	13
Yemen	<b>0.177</b>	<b>4.785</b>	<b>0.109</b>	<b>5.147</b>	0.063	4.244	0.006	4.585	13

**Table 3: The Coefficients and t-statistics for the trend line regressions for the different levels of schooling for the male population in Arab Countries**

Countries	Average Years of Schooling								N
	Total		Primary		Secondary		Tertiary		
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	
Algeria	0.602	14.970	0.380	15.943	0.195	10.944	0.027	9.595	13
Bahrain	0.580	11.305	0.314	10.015	0.235	13.362	0.030	5.564	13
Egypt	0.662	17.057	0.361	15.154	<b>0.274</b>	<b>13.558</b>	0.027	7.022	13
Iraq	<b>0.720</b>	<b>24.633</b>	<b>0.428</b>	<b>22.027</b>	0.246	19.716	<b>0.046</b>	<b>11.089</b>	13
Jordan	0.685	44.929	0.333	31.220	0.313	19.828	0.039	13.177	13
Kuwait	0.371	11.768	<b>0.138</b>	<b>11.117</b>	0.219	6.541	0.015	2.285	13
Libya	0.610	23.637	0.371	14.733	0.202	16.888	0.036	4.611	13
Mauritania	0.349	14.772	0.239	13.771	<b>0.100</b>	<b>15.051</b>	0.010	9.050	13
Morocco	0.487	22.974	0.280	22.967	0.171	26.381	0.035	12.514	13
Qatar	0.438	21.343	0.264	12.285	0.151	25.794	0.022	9.241	13
Saudi Arabia	0.432	32.158	0.224	31.621	0.189	20.544	0.019	9.226	13
Sudan	<b>0.311</b>	<b>18.446</b>	0.253	16.230	0.055	12.748	<b>0.004</b>	<b>4.607</b>	13
Syria	0.492	14.322	0.341	19.201	0.135	7.634	0.018	9.165	13
Tunisia	0.630	31.453	0.382	27.418	0.217	22.065	0.032	7.500	13
UAE	0.686	15.736	0.388	15.191	0.265	17.103	0.034	7.708	13
Yemen	0.405	7.714	0.281	8.154	0.118	6.860	0.008	7.434	13

# Preliminary Results <sub>3</sub>

In all CEE countries it could be observed the same increasing trend in average years of schooling, statistically significant:

**Table 5: The Coefficients and t-statistics for the trend line regressions for the different levels of schooling for the female population in Eastern and Central European Countries**

Countries	Average Years of Schooling								N
	Total		Primary		Secondary		Tertiary		
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	
Albania	<b>0.744</b>	<b>17.496</b>	<b>0.485</b>	<b>13.844</b>	0.249	18.364	<b>0.011</b>	<b>4.721</b>	13
Bulgaria	0.652	21.321	0.332	26.091	0.259	12.484	0.060	21.472	13
Croatia	0.478	18.875	0.164	8.318	0.274	7.752	0.039	6.359	13
Czech	0.475	17.305	0.128	11.916	0.317	13.369	0.030	9.361	13
Estonia	0.550	16.465	0.066	22.013	<b>0.398</b>	<b>15.917</b>	<b>0.086</b>	<b>8.014</b>	13
Hungary	0.424	10.186	0.095	5.474	0.279	9.331	0.051	9.921	13
Latvia	0.623	27.546	0.236	15.925	0.343	16.756	0.044	15.191	13
Lithuania	0.650	53.184	0.277	22.662	0.310	39.743	0.063	8.396	13
Poland	0.533	46.158	0.253	13.782	<b>0.234</b>	<b>13.428</b>	0.046	6.334	13
Romania	0.589	28.899	0.279	10.565	0.285	20.444	0.025	9.604	13
Serbia	0.593	27.804	0.276	10.253	0.280	6.780	0.037	11.148	13
Slovakia	<b>0.402</b>	<b>16.934</b>	<b>0.077</b>	<b>5.355</b>	0.284	9.187	0.041	7.190	13
Slovenia	0.636	23.488	0.211	4.364	0.368	11.664	0.057	8.332	13

**Table 6: The Coefficients and t-statistics for the trend line regressions for the different levels of schooling for the male population in Eastern and Central European Countries**

Countries	Average Years of Schooling								N
	Total		Primary		Secondary		Tertiary		
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	
Albania	<b>0.686</b>	<b>17.773</b>	<b>0.447</b>	<b>12.466</b>	0.230	16.864	<b>0.010</b>	<b>1.988</b>	13
Bulgaria	0.537	16.002	0.315	22.189	<b>0.182</b>	<b>7.286</b>	0.040	13.674	13
Croatia	0.412	22.842	0.065	2.440	0.316	9.773	0.032	6.463	13
Czech	0.396	14.620	0.093	6.071	0.266	13.471	0.037	5.777	13
Estonia	0.506	23.573	0.088	9.201	0.367	15.743	<b>0.052</b>	<b>12.068</b>	13
Hungary	0.411	13.546	0.082	6.670	0.293	11.765	0.036	15.667	13
Latvia	0.585	26.302	0.245	12.478	0.314	14.104	0.027	12.040	13
Lithuania	0.580	30.612	0.268	13.555	0.268	16.841	0.045	9.792	13
Poland	0.486	31.695	0.225	14.541	0.230	11.798	0.030	7.081	13
Romania	0.553	13.505	0.218	5.683	0.313	30.917	0.023	14.841	13
Serbia	0.437	16.193	0.088	3.431	0.312	7.198	0.037	25.692	13
Slovakia	<b>0.343</b>	<b>22.050</b>	<b>0.054</b>	<b>2.474</b>	0.256	12.597	0.033	16.603	13
Slovenia	0.471	21.101	<b>0.054</b>	<b>1.270</b>	<b>0.374</b>	<b>15.250</b>	0.043	17.450	13

# Preliminary Results <sup>4</sup>

**Measurement of Inequality:** While for Arab countries there is observed a decreasing trend in inequality, for CEE countries it is observed a decreasing trend only for Albania, Croatia and Serbia. Positive trends are found for Latvia (females and males), Estonia (females), Slovakia (males) and Czech Republic (males) meaning that in these countries the inequality increased during the analyzed period.

**Table 11: GINI trend lines coefficients with the t-statistics for females and males, Arab countries**

Countries	Females		Males		N
	Coefficient	t-statistic	Coefficient	t-statistic	
Algeria	-0.0449**	-9.8276	-0.0502**	-11.3631	13
Bahrain	-0.0681**	-12.6138	-0.0589**	-9.9246	13
Egypt	-0.0534**	-12.3576	-0.0624**	-15.9627	13
Iraq	-0.0518**	-14.3986	-0.0669**	-18.4979	13
Jordan	-0.0602**	-12.8108	-0.0338**	-4.7698	13
Kuwait	-0.0594**	-19.5871	-0.0379**	-19.2750	13
Libya	-0.0693**	-11.4430	-0.0528**	-24.0912	13
Mauritania	-0.0152**	-7.3956	-0.0299**	-12.5525	13
Morocco	-0.0320**	-13.0370	-0.0483**	-28.0439	13
Qatar	-0.0534**	-9.6708	-0.0405**	-34.2342	13
Saudi Arabia	-0.0055**	-11.6092	-0.0325**	-10.2559	13
Sudan	-0.0234**	-15.6180	-0.0249**	-21.3930	13
Syria	0.0507**	-18.5029	-0.0415**	-10.0447	13
Tunisia	-0.0518**	-14.0027	-0.0584**	-29.1456	13
UAE	-0.0597**	-8.2746	-0.0540**	-12.5864	13
Yemen	-0.0169**	-4.8710	-0.0407**	-7.6489	13

**Table 12: GINI trend lines coefficients with the t-statistics for females and males, ECE countries**

Countries	Females		Males		N
	Coefficient	t-statistics	Coefficient	t-statistics	
Albania	-0.0328**	-4.4895	-0.0173*	-2.6141	13
Bulgaria	-0.0052	-0.6797	0.0052	0.8810	13
Croatia	-0.0235**	-3.9104	-0.0014	-0.1867	13
Czech	0.0095	1.3072	0.0214**	4.3652	13
Estonia	0.0170*	2.0272	0.0144*	2.0091	13
Hungary	0.0021	0.3084	0.0097	1.2878	13
Latvia	0.0131*	1.9726	0.0177**	3.1081	13
Lithuania	-0.0029	-0.3339	0.0103	1.6064	13
Poland	-0.0026	-0.4246	0.0074	1.4093	13
Romania	-0.0087	-1.3401	0.0082*	1.7783	13
Serbia	-0.0314**	-5.8889	-0.0100	-1.4332	13
Slovakia	0.0039	0.5192	0.0185**	4.4464	13
Slovenia	0.0051	0.6800	0.0152*	2.3001	13

# Preliminary Results <sub>5</sub>

Intergenerational Mobility for total education: all Arab countries enjoy higher mobility in education except Mauritania. Males and females do show highly statistically significant educational estimates of mobility over total education. This is also confirmed for each level of education at the exception.

**Table 13: The Elasticities for Intergeneration Total Education Mobility for Arab Countries**

Countries	Total	
	Elasticities	tstatistics
Algeria	0.6429	4.5721
Bahrain	0.3778	5.8349
Egypt	0.7496	7.2206
Iraq	0.5099	14.4771
Jordan	0.6916	17.7490
Kuwait	0.4856	5.8311
Libya	0.5952	8.1222
Mauritania	<b>1.2687</b>	<b>17.8472</b>
Morocco	0.6699	11.9104
Qatar	0.5902	9.7938
Saudi Arabia	0.7800	7.6956
Syria	0.5663	8.2241
Sudan	0.7779	12.3392
Tunisia	0.6551	13.4366
UAE	0.6992	4.5720
Yemen	0.7469	13.8059

**Table 14: Elasticities for intergenerational mobility for the total education 1950-2010**

Countries	Females		Males		N
	Elasticities	t-statistic	Elasticities	t-statistic	
Algeria	0.7780**	2.9652	0.4926**	5.7261	9
Bahrain	0.3810**	6.7742	0.3750**	5.5311	9
Egypt	0.7210**	10.3437	0.7040**	6.1122	9
Iraq	0.5850**	14.7520	0.4530**	12.4642	9
Jordan	0.7300**	23.5956	0.6105**	12.3082	9
Kuwait	0.3990**	8.2180	0.5080**	4.8096	9
Libya	0.5350**	6.5837	0.4585**	9.9012	9
Mauritania	<b>1.6100**</b>	<b>25.3657</b>	<b>1.0714**</b>	<b>9.3417</b>	9
Morocco	0.8120**	11.5910	0.5882**	23.0544	9
Qatar	0.6030**	12.8908	0.6757**	7.3023	9
Saudi Arabia	<b>1.0950**</b>	<b>7.3929</b>	0.9303**	17.5510	9
Sudan	0.7330**	9.2872	0.6836**	6.5675	9
Syria	0.6360**	7.9456	0.4155**	5.1599	9
Tunisia	0.6850**	11.7355	0.5826**	11.4846	9
UAE	0.5720**	15.6078	0.8545**	8.6951	9
Yemen	<b>1.0660**</b>	<b>2.3200</b>	0.8562**	4.2351	9

# Preliminary Results <sub>6</sub>

Table 15: Elasticities for Intergenerational Mobility for Education by schooling levels

Countries	Females			Males			N
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	
Algeria	0.762* (2.428)	0.749* (2.722)	0.667 (1.679)	0.528** (5.950)	0.698** (3.462)	0.991** (3.029)	9
Bahrain	0.331** (6.754)	0.424** (7.035)	0.430* (2.778)	0.317** (4.981)	0.423** (7.330)	0.331 (1.592)	9
Egypt	0.669** (9.935)	0.764** (7.595)	0.972** (6.428)	0.605** (5.095)	0.805** (6.064)	<b>1.022**</b> (4.749)	9
Iraq	0.532** (17.037)	0.606** (11.281)	0.671** (5.191)	0.393** (13.717)	0.522** (8.878)	0.676** (13.101)	9
Jordan	0.641** (26.595)	0.775** (9.808)	0.415** (3.756)	0.527** (8.248)	0.688** (10.335)	0.318** (5.353)	9
Kuwait	0.489** (16.273)	0.328** (5.137)	0.482** (3.435)	0.489** (16.273)	0.334* (2.550)	-0.047 (-0.165)	9
Libya	0.466** (6.218)	0.130 (0.487)	4.229** (5.842)	0.376** (8.376)	0.432** (8.224)	0.987* (2.092)	9
Mauritania	<b>1.627**</b> (23.619)	<b>1.106**</b> (9.261)	0.491 (1.519)	<b>1.225**</b> (11.694)	0.631** (6.730)	0.631** (3.941)	9
Morocco	0.768** (11.999)	0.877** (11.089)	0.829** (2.903)	0.581** (19.297)	0.580** (35.069)	0.677** (3.091)	9
Qatar	0.590** (9.750)	0.609** (14.957)	0.544** (26.411)	0.707** (6.008)	0.664** (8.908)	0.293* (2.210)	9
Saudi Arabia	<b>1.063**</b> (7.402)	<b>1.027**</b> (6.500)	0.929** (5.606)	0.924** (12.685)	0.928** (28.477)	0.493** (3.755)	9
Sudan	0.696** (12.370)	0.768** (4.437)	0.600* (1.979)	0.739** (5.843)	0.428** (5.454)	-0.042 (-0.082)	9
Syria	0.703** (8.383)	0.463** (7.045)	0.313* (2.469)	0.481** (6.702)	0.240* (2.597)	0.382** (2.922)	9
Tunisia	0.588** (9.910)	0.827** (13.729)	<b>1.395**</b> (2.973)	0.512** (8.686)	0.661** (18.369)	<b>1.148**</b> (6.950)	9
UAE	0.575* (16.094)	0.556** (15.715)	0.632** (9.433)	0.897** (9.643)	0.776** (9.049)	0.850* (2.516)	9
Yemen	<b>1.016*</b> (2.313)	-0.715 (-1.157)	<b>1.108</b> (1.379)	0.822** (5.193)	-0.218 (-0.341)	0.781* (2.164)	9

# Preliminary Results <sub>7</sub>

When looking at the elasticity related to ECE countries and over total education, on the total sample (males and females) the estimated coefficients show a Statistically significant mobility except for the Czech Republic, Estonia and Hungary. The highest educational mobility is observed in Albania, Bulgaria and Romania.

**Table 16: Total Educational Elasticity for ECE countries**

Countries	Total	
	Elasticities	tstatistics
Albania	0.577	5.183
Bulgaria	0.553	5.518
Croatia	0.994	12.567
Czech	<b>1.028</b>	10.483
Estonia	<b>1.219</b>	28.112
Hungary	<b>1.450</b>	7.287
Latvia	0.906	16.667
Lithuania	0.686	16.526
Poland	0.811	15.630
Romania	0.524	9.775
Serbia	0.919	15.028
Slovakia	0.918	8.336
Slovenia	0.649	8.342

**Table 17: Elasticities for intergenerational mobility for total Education ECE countries**

Countries	Females		Males		N
	Elasticities	t-statistics	Elasticities	t-statistics	
Albania	0.5804**	5.0464	0.5653**	5.3539	9
Bulgaria	0.5738**	6.9412	0.5914**	5.0997	9
Croatia	<b>1.0505**</b>	13.6637	0.9222**	9.2529	9
Czech	<b>1.2114**</b>	11.8986	0.7404**	4.6267	9
Estonia	<b>1.3051**</b>	27.4778	<b>1.0647**</b>	22.7345	9
Hungary	<b>1.5737**</b>	5.5043	<b>1.3389**</b>	10.8025	9
Latvia	0.9165**	18.8031	0.9298**	13.9257	9
Lithuania	0.7029**	18.7713	0.6180**	12.5424	9
Poland	0.7870**	20.6261	0.8036**	13.2125	9
Romania	0.6324**	9.7442	0.3919**	8.4456	9
Serbia	0.8422**	18.9272	<b>1.0616**</b>	9.3184	9
Slovakia	<b>1.1232**</b>	10.4462	0.6967**	8.5591	9
Slovenia	0.6614**	9.3172	0.6247**	8.6474	9

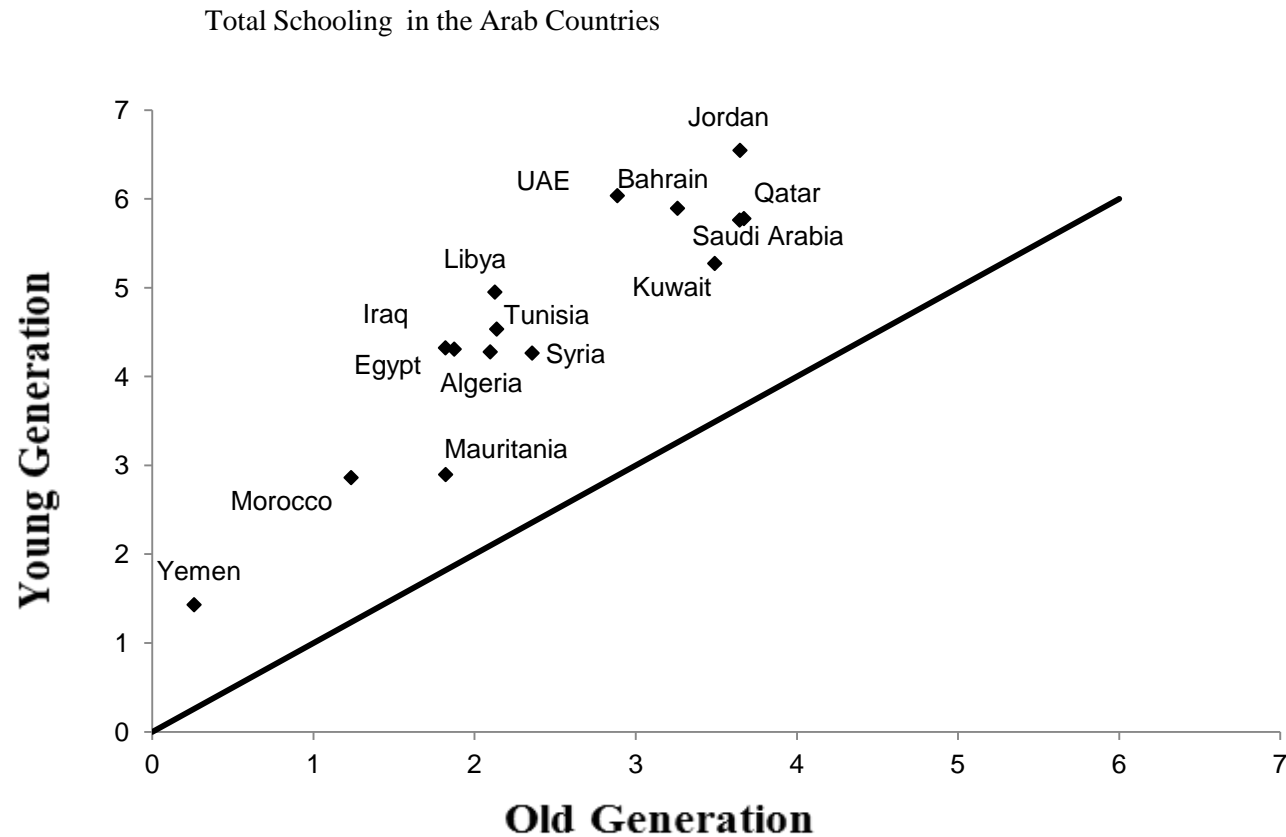
# Preliminary Results 8

**Table 18: Elasticities for intergenerational mobility in Education by schooling level**

Countries	Females			Males			N
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	
Albania	0.644** (3.822)	0.277 (1.139)	-0.167 (-0.425)	0.587** (3.173)	0.222 (0.7668)	-0.259 (-0.543)	9
Bulgaria	0.639** (8.634)	0.445** (4.319)	0.511** (10.198)	0.661** (7.175)	0.411* (2.083)	0.355** (4.238)	9
Croatia	0.331** (3.861)	1.133** (43.388)	<b>1.145**</b> (9.894)	-0.149 (-0.912)	<b>1.115**</b> (14.348)	<b>1.438**</b> (5.139)	9
Czech	0.747** (5.431)	0.743** (17.635)	0.725** (7.773)	0.306 (1.412)	0.572** (3.837)	0.445* (2.125)	9
Estonia	0.777** (15.755)	0.898** (22.330)	<b>1.173**</b> (9.025)	0.392** (4.237)	0.962** (20.787)	<b>1.004**</b> (7.085)	9
Hungary	0.392 (1.037)	0.914** (15.733)	0.683** (10.690)	0.616* (2.256)	0.883** (8.879)	0.755** (7.434)	9
Latvia	0.741** (4.662)	0.880** (15.967)	0.722** (10.345)	0.700** (3.477)	0.962** (9.121)	0.605** (4.194)	9
Lithuania	0.782** (6.790)	0.531** (15.925)	0.717** (7.398)	0.683** (3.947)	0.412** (6.460)	0.736** (5.499)	9
Poland	0.461** (11.033)	0.905** (9.191)	<b>1.103**</b> (5.198)	0.487** (12.078)	0.887** (5.180)	<b>1.375**</b> (4.465)	9
Romania	0.419** (4.984)	0.609** (15.236)	<b>1.028**</b> (15.238)	0.142* (1.852)	0.455** (22.067)	0.807** (7.567)	9
Serbia	0.397** (4.995)	<b>1.082**</b> (33.759)	0.784** (11.356)	-0.029 (-0.158)	<b>1.316**</b> (20.212)	0.535** (12.208)	9
Slovakia	0.232 (1.777)	0.752** (9.328)	0.871** (15.721)	-0.096 (-0.494)	0.747** (6.297)	0.885** (13.650)	9
Slovenia	0.088 (0.676)	0.976** (9.401)	0.828** (6.394)	-0.354 (-1.524)	0.883** (14.365)	0.603** (7.147)	9

# Preliminary Results 9

- ▶ When comparing the number of years of schooling of the younger generation with the oldest one it appears that the youngest generations in all countries show higher educational attainment.





# Preliminary Results 10

Positive coefficients means that low mobility is related to high inequality.

Table 19: Coefficients and t-statistics of the regressions that characterizes the relationship between education inequality and the intergenerational mobility for Arab countries for total education

Years	Females		Males		N
	Coefficient	tstatistics	Coefficient	tstatistics	
1950	-1.697*	-1.927	-0.259	-0.247	13
1955	-1.509	-1.574	-0.064	-0.056	13
1960	-1.260	-1.325	-0.111	-0.095	13
1965	-1.166	-1.208	0.242	0.229	13
1970	-0.790	-0.749	1.376	1.122	13
1975	-0.568	-0.493	-1.204	-0.631	13
1980	-0.087	-0.065	-4.969**	-2.613	13
1985	0.207	0.103	-3.974**	-3.256	13
1990	-2.346	-1.148	-2.739**	-3.018	13
1995	0.996	0.825	-0.368	-0.308	13
2000	1.176	1.195	0.516	0.465	13
2005	2.023	1.647	1.313	0.792	13
2010	2.416*	1.977	2.579	1.432	13

Table 20: Coefficients and t-statistics of the regressions that characterizes the relationship between education inequality and the intergenerational mobility in education for Arab Countries by schooling level 1950-2010

Years	Females			Males			N
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	
1950	-0.311 (-0.426)	-0.392 (-0.481)	-1.450 (-1.388)	-0.120 (-0.081)	-0.391 (-0.303)	-2.176 (-1.324)	13
1955	-0.431 (-0.570)	-0.303 (-0.355)	-1.557 (-1.437)	-0.002 (-0.001)	-0.415 (-0.291)	-2.444 (-1.350)	13
1960	-0.577 (-0.801)	-0.292 (-0.354)	-1.774* (-1.763)	-0.275 (-0.169)	-0.645 (-0.453)	-3.341* (-1.980)	13
1965	-0.382 (-0.520)	-0.387 (-0.470)	-1.819* (-1.815)	1.164 (0.806)	-0.659 (-0.510)	-2.503 (-1.546)	13
1970	-0.450 (-0.584)	-0.013 (-0.015)	-1.610 (-1.463)	0.777 (0.431)	0.249 (0.156)	-2.669 (-1.314)	13
1975	-0.743 (-0.916)	0.422 (0.452)	-1.405 (-1.148)	-2.670 (-1.025)	-1.373 (-0.581)	-4.480 (-1.500)	13
1980	-0.900 (-0.968)	1.265 (1.248)	-0.956 (-0.654)	-3.388 (-1.045)	-3.521 (-1.261)	-3.165 (-0.797)	13
1985	-1.126 (-0.798)	3.397* (2.690)	2.162 (1.012)	-0.481 (-0.201)	-3.520* (-1.929)	-1.794 (-0.633)	13
1990	-1.540 (-1.031)	2.307 (1.436)	2.037 (0.876)	-0.779 (-0.457)	-2.576* (-1.981)	-1.445 (-0.714)	13
1995	0.546 (0.617)	0.408 (0.408)	1.239 (0.929)	-0.420 (-0.250)	-0.518 (-0.352)	0.953 (0.475)	13
2000	0.884 (1.248)	-0.151 (-0.178)	0.283 (0.244)	0.556 (0.355)	-0.505 (-0.367)	-0.368 (-0.195)	13
2005	0.924 (0.970)	0.295 (0.267)	1.176 (0.793)	0.448 (0.188)	0.226 (0.107)	1.667 (0.589)	13
2010	0.543 (0.535)	0.947 (0.848)	2.205 (1.534)	-0.993 (-0.363)	2.912 (1.290)	4.437 (1.465)	13

# Preliminary Results 11

**Table 21: Coefficients and t-statistics of the regressions that characterizes the relationship between Education Inequalities and the Intergenerational mobility for ECE countries for total education**

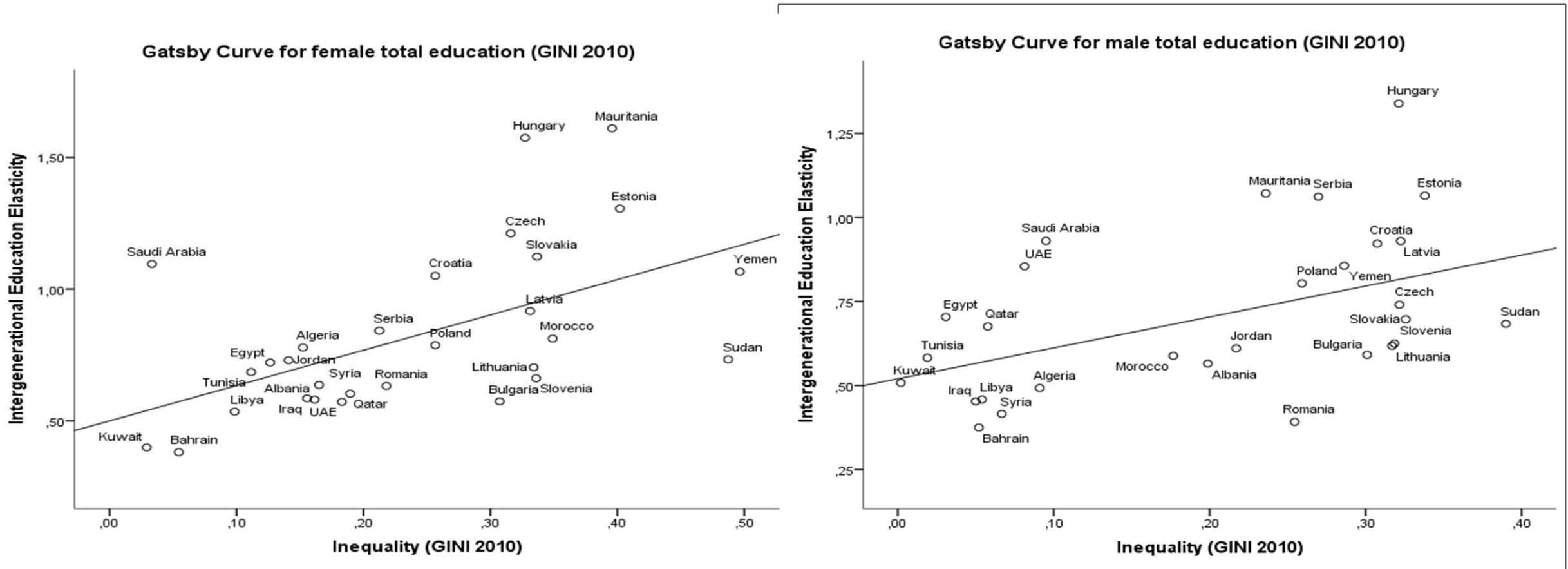
Years	Females		Males		N
	Coefficient	tstatistics	Coefficient	tstatistics	
1950	-2.849*	-1.750	-0.250	-0.440	16
1955	-1.614	-1.086	-0.211	-0.412	16
1960	-0.529	-0.401	-0.120	-0.259	16
1965	0.318	0.293	0.017	0.039	16
1970	0.897	1.078	0.409	1.047	16
1975	1.054	1.561	0.535	1.503	16
1980	<b>1.138*</b>	2.336	<b>0.643*</b>	1.926	16
1985	<b>1.067**</b>	2.732	<b>0.639*</b>	2.006	16
1990	<b>1.009**</b>	2.861	<b>0.640*</b>	2.005	16
1995	<b>0.944**</b>	2.878	0.568	1.613	16
2000	<b>0.942**</b>	2.898	0.519	1.339	16
2005	<b>0.938**</b>	2.636	0.547	1.338	16
2010	<b>1.076*</b>	2.387	<b>0.818*</b>	1.881	16

**Table 22: Coefficients and t-statistics of the regressions that characterizes the relationship between education inequality and the intergenerational mobility in education for ECE countries by schooling level**

Years	Females			Males			N
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	
1950	-3.345* (-2.109)	7.680 (1.498)	-4.490* (-2.000)	-0.390 (-0.578)	-1.034 (-1.433)	1.807* (1.950)	16
1955	-2.080 (-1.420)	7.028 (1.609)	-3.455* (-1.739)	-0.307 (-0.503)	-0.995 (-1.544)	1.703* (2.063)	16
1960	-0.967 (-0.733)	6.382* (1.702)	-2.454 (-1.391)	-0.172 (-0.312)	-0.926 (-1.609)	1.570* (2.135)	16
1965	-0.019 (-0.018)	5.157 (1.691)	-1.693 (-1.148)	0.001 (0.002)	-0.891* (-1.723)	1.323* (1.935)	16
1970	0.655 (0.763)	4.013 (1.648)	-0.998 (-0.834)	0.453 (0.965)	-0.808 (-1.602)	1.198* (1.790)	16
1975	0.904 (1.291)	2.919 (1.385)	-0.839 (-0.830)	0.5993 (1.393)	-0.869* (-1.873)	0.792 (1.184)	16
1980	<b>1.019*</b> (1.984)	1.244 (0.718)	-0.382 (-0.474)	<b>0.751*</b> (1.870)	<b>-0.882*</b> (-1.959)	0.535 (0.797)	16
1985	<b>0.971*</b> (2.340)	0.693 (0.470)	-0.290 (-0.426)	<b>0.780*</b> (2.059)	<b>-0.895*</b> (-2.096)	0.332 (0.506)	16
1990	<b>0.944*</b> (2.535)	0.427 (0.314)	-0.307 (-0.493)	<b>0.811*</b> (2.162)	<b>-0.877*</b> (-2.037)	0.186 (0.282)	16
1995	<b>0.906**</b> (2.647)	0.150 (0.118)	-0.319 (-0.550)	<b>0.745*</b> (1.805)	<b>-1.041*</b> (-2.378)	-0.059 (-0.085)	16
2000	<b>0.924**</b> (2.756)	-0.412 (-0.328)	-0.308 (-0.535)	<b>0.773*</b> (1.728)	<b>-1.141*</b> (-2.447)	-0.442 (-0.594)	16
2005	<b>0.922**</b> (2.526)	-0.970 (-0.739)	-0.329 (-0.540)	<b>0.806*</b> (1.707)	-0.885 (-1.647)	-0.514 (-0.658)	16
2010	<b>1.056*</b> (2.287)	-0.842 (-0.518)	-0.579 (-0.781)	<b>1.051*</b> (2.061)	-0.765 (-1.222)	-0.986 (-1.160)	16

# Preliminary Results <sup>12</sup>

The Gatsby curves follows a significant linear trend, with all coefficients significant for both males and females:



# Preliminary Results <sup>13</sup>

If in educational attainment there are not generally significant differences between Arab countries, in intergenerational mobility there are significant differences between them both, for males and females:

females

**Table 31: Comparisons of the Education Attainment Inequalities (GINI) within the Arab Countries for Total Education**

males

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A	0.000	1.924	-0.147	-0.281	1.572	2.365	0.454	-0.944	-1.531	2.397	1.308	-2.488	0.515	0.057	1.376	-3.666
B		0.000	-1.945	-2.078	-0.430	0.193	-1.231	-2.914	-3.238	0.148	-0.729	-3.974	-1.459	-1.803	-0.558	-4.811
C			0.000	-0.121	1.607	2.349	0.549	-0.638	-1.209	2.373	1.357	-2.018	0.619	0.193	1.424	-3.035
D				0.000	1.747	2.505	0.661	-0.493	-1.094	2.537	1.501	-1.923	0.757	0.320	1.558	-2.973
E					0.000	0.673	-0.879	-2.648	-3.004	0.640	-0.305	-3.830	-1.077	-1.452	-0.144	-4.773
F						0.000	-1.511	-3.662	-3.928	-0.055	-1.012	-4.839	-1.832	-2.203	-0.808	-5.829
G							0.000	-1.171	-1.609	1.501	0.630	-2.254	-0.036	-0.392	0.732	-3.048
H								0.000	-1.109	3.811	2.429	-2.907	1.542	0.923	2.369	-5.370
I									0.000	4.056	2.812	-1.069	2.035	1.476	2.744	-2.596
J										0.000	-0.989	-5.041	-1.841	-2.224	-0.779	-6.099
K											0.000	-3.700	-0.795	-1.191	0.149	-4.719
L												0.000	2.961	2.332	3.527	-1.824
M													0.000	-0.431	0.898	-4.067
N														0.000	1.268	-3.389
O															0.000	-4.434
P																0.000

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A	0.000	1.093	0.073	0.045	1.723	1.896	0.434	-1.428	-1.525	1.006	2.704	-2.539	1.293	0.208	0.408	-3.445
B		0.000	-0.930	-0.921	0.348	0.471	-0.688	-2.530	-2.507	-0.297	1.131	-3.524	-0.007	-0.847	-0.688	-4.259
C			0.000	-0.022	1.432	1.573	0.318	-1.309	-1.433	0.802	2.252	-2.237	1.063	0.120	0.298	-3.119
D				0.000	1.393	1.525	0.330	-1.213	-1.349	0.792	2.167	-2.085	1.042	0.139	0.310	-2.957
E					0.000	0.151	-1.221	-3.916	-3.512	-0.829	1.015	-5.435	-0.441	-1.370	-1.202	-5.801
F						0.000	-1.379	-4.250	-3.742	-1.008	0.888	-5.878	-0.600	-1.520	-1.354	-6.116
G							0.000	-1.934	-1.959	0.511	2.155	-3.049	0.809	-0.202	-0.015	-3.873
H								0.000	-0.384	3.003	5.552	-1.520	3.266	1.554	1.847	-2.764
I									0.000	2.770	4.678	-0.703	3.014	1.643	1.892	-1.937
J										0.000	1.924	-4.473	0.360	-0.704	-0.513	-5.031
K											0.000	-7.457	-1.454	-2.244	-2.101	-7.237
L												0.000	4.667	2.561	2.913	-1.743
M													0.000	-0.980	-0.802	-5.207
N														0.000	0.183	-3.431
O															0.000	-3.748
P																0.000

# Preliminary Results <sub>13</sub>

**Table 33: Comparisons for Intergenerational Mobility in education within the Arab countries for total schooling**

females

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A	0.000	4.440	0.630	2.174	0.545	4.262	2.655	-9.249	-0.376	1.970	-3.157	0.493	1.553	1.038	2.333	-1.632
B		0.000	-11.397	-8.416	-16.070	-0.727	-4.677	-43.496	-14.403	-9.109	-13.521	-10.898	-7.821	-11.258	-8.542	-4.437
C			0.000	4.881	-0.350	11.370	5.213	-28.295	-2.764	4.218	-6.854	-0.342	2.403	1.188	5.677	-2.226
D				0.000	-7.663	8.321	1.605	-39.171	-8.119	-0.821	-9.861	-4.854	-1.655	-4.031	0.661	-3.123
E					0.000	16.898	6.670	-36.897	-3.178	6.653	-7.215	-0.105	3.256	2.013	9.607	-2.187
F						0.000	-4.309	-45.435	-14.534	-9.069	-13.393	-10.806	-7.590	-11.294	-8.523	-4.328
G							0.000	-31.276	-7.747	-2.176	-9.944	-5.243	-2.656	-4.498	-1.245	-3.412
H								0.000	25.329	38.305	9.587	25.970	28.596	32.178	42.476	3.517
I									0.000	7.445	-5.182	2.246	4.964	4.179	9.109	-1.639
J										0.000	-9.502	-4.249	-1.067	-3.288	1.564	-3.006
K											0.000	6.470	8.178	7.726	10.282	0.180
L												0.000	2.588	1.467	5.548	-2.142
M													0.000	-1.484	2.180	-2.764
N														0.000	4.918	-2.466
O															0.000	-3.213
P																0.000

males

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A	0.000	3.221	-4.412	1.272	-3.562	-0.339	1.047	-12.111	-3.196	-4.347	-12.994	-4.243	1.963	-2.703	-8.312	-4.965
B		0.000	-7.386	-3.042	-8.411	-3.179	-3.051	-15.682	-8.831	-7.865	-19.360	-7.453	-1.154	-7.356	-12.049	-6.770
C			0.000	6.235	2.237	3.763	5.933	-6.781	2.945	0.575	-5.355	0.394	6.159	2.894	-2.982	-1.962
D				0.000	-7.684	-1.477	-0.280	-15.420	-9.134	-6.721	-22.280	-6.275	1.273	-6.230	-11.495	-5.889
E					0.000	2.635	6.720	-11.065	1.199	-1.863	-13.216	-1.902	6.185	1.180	-6.649	-3.541
F						0.000	1.288	-10.841	-2.214	-3.583	-10.721	-3.553	2.089	-1.910	-7.205	-4.580
G							0.000	-14.866	-7.359	-6.297	-20.109	-5.928	1.389	-5.420	-10.935	-5.753
H								0.000	12.338	8.056	3.350	7.512	14.041	11.693	4.308	2.778
I									0.000	-2.735	-17.446	-2.671	6.133	0.296	-7.868	-3.946
J										0.000	-7.163	-0.170	6.364	2.647	-3.974	-2.435
K											0.000	6.336	16.019	14.217	2.036	1.064
L												0.000	6.112	2.617	-3.581	-2.277
M													0.000	-5.267	-10.365	-6.075
N														0.000	-7.375	-3.938
O															0.000	-0.023
P																0.000

# Preliminary Results <sub>15</sub>

**Table 35: Comparisons of the Education Attainment Inequalities (GINI) within the ECE Countries for Total Education**

females

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
Q	0.000	1.467	0.145	1.338	0.975	1.048	1.564	0.727	1.902	1.368	-0.184	1.933	0.444
R		0.000	-1.578	-0.170	-0.483	-0.626	0.120	-0.892	0.475	-0.192	-1.824	0.597	-1.370
S			0.000	1.423	0.970	1.084	1.697	0.686	2.152	1.473	-0.368	2.146	0.349
T				0.000	-0.333	-0.446	0.291	-0.731	0.664	-0.014	-1.683	0.770	-1.198
U					0.000	-0.042	0.592	-0.334	0.934	0.335	-1.254	1.015	-0.717
V						0.000	0.757	-0.347	1.217	0.459	-1.382	1.270	-0.813
W							0.000	-1.011	0.344	-0.321	-1.932	0.478	-1.502
X								0.000	1.426	0.753	-1.004	1.470	-0.392
Y									0.000	-0.724	-2.340	0.184	-2.019
Z										0.000	-1.732	0.826	-1.250
AA											0.000	2.338	0.712
AB												0.000	-2.002
AC													0.000

males

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
Q	0.000	2.181	1.358	1.272	0.976	1.118	1.455	0.701	2.461	1.132	1.316	1.720	0.658
R		0.000	-0.775	-0.778	-1.071	-0.962	-0.611	-1.601	0.275	-1.426	-0.807	-0.424	-1.497
S			0.000	-0.038	-0.326	-0.206	0.132	-0.734	1.043	-0.444	-0.036	0.347	-0.698
T				0.000	-0.279	-0.161	0.164	-0.663	1.031	-0.376	0.003	0.371	-0.634
U					0.000	0.121	0.444	-0.353	1.325	-0.038	0.291	0.660	-0.342
V						0.000	0.328	-0.494	1.221	-0.186	0.170	0.545	-0.474
W							0.000	-0.851	0.866	-0.582	-0.166	0.203	-0.810
X								0.000	1.903	0.398	0.691	1.115	-0.008
Y									0.000	-1.784	-1.074	-0.693	-1.770
Z										0.000	0.398	0.869	-0.375
AA											0.000	0.382	-0.658
AB												0.000	-1.052
AC													0.000

# Preliminary Results <sub>16</sub>

**Table 37: Comparisons for Intergenerational Mobility in education within the ECE countries for total schooling**

males

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
Q	0.000	-0.499	-7.374	-2.739	-12.968	-14.253	-8.752	-1.355	-5.866	4.510	-9.584	-2.956	-1.392
R		0.000	-6.489	-2.261	-11.351	-13.211	-7.585	-0.631	-4.860	4.791	-8.675	-2.229	-0.730
S			0.000	2.894	-3.881	-7.860	-0.189	8.210	3.048	14.470	-2.762	5.257	7.252
T				0.000	-5.835	-8.871	-3.277	2.193	-1.108	6.274	-4.905	0.730	1.977
U					0.000	-6.209	4.962	19.715	10.204	30.612	0.076	11.755	15.332
V						0.000	8.718	16.216	11.632	21.466	4.942	12.993	14.936
W							0.000	11.274	4.192	19.844	-2.994	6.642	9.305
X								0.000	-7.115	10.018	-10.722	-2.483	-0.231
Y									0.000	16.143	-5.993	3.156	5.684
Z										0.000	-16.331	-9.758	-8.132
AA											0.000	7.818	9.716
AB												0.000	1.985
AC													0.000

females

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
Q	0.000	0.140	-10.193	-12.324	-17.470	-9.670	-8.071	-3.037	-5.115	-1.181	-6.367	-10.342	-1.798
R		0.000	-12.668	-14.586	-23.011	-10.079	-10.714	-4.267	-7.026	-1.674	-8.576	-12.152	-2.413
S			0.000	-3.784	-8.451	-5.302	4.416	12.195	9.209	12.466	7.036	-1.650	11.154
T				0.000	-2.501	-3.581	7.838	14.064	11.710	14.386	9.970	1.788	13.294
U					0.000	-2.781	17.129	29.870	25.510	25.091	21.338	4.642	22.607
V						0.000	6.798	9.060	8.182	9.632	7.585	4.425	9.291
W							0.000	10.427	6.276	10.500	3.379	-5.252	8.886
X								0.000	-4.722	2.821	-7.186	-11.075	1.549
Y									0.000	6.160	-2.823	-8.839	4.675
Z										0.000	-7.996	-11.723	-0.905
AA											0.000	-7.245	6.472
AB												0.000	10.752
AC													0.000

# Preliminary Results <sub>17</sub>

All inequality coefficients among females in Arab countries are highly statistically significant and higher than those from CEE countries.

males

Table 39: Comparisons of the Education Attainment Inequalities (GINI) in the Arab countries and in the ECE countries for total schooling

females

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
A	2.519	3.956	3.426	3.349	3.147	3.253	3.475	3.035	4.124	3.362	3.396	3.663	2.963
B	0.942	2.093	1.690	1.650	1.487	1.565	1.746	1.338	2.220	1.551	1.668	1.875	1.311
C	2.063	3.231	2.814	2.762	2.597	2.680	2.863	2.477	3.362	2.717	2.791	3.004	2.433
D	1.980	3.073	2.686	2.640	2.485	2.562	2.734	2.366	3.195	2.585	2.665	2.863	2.328
E	0.790	2.439	1.836	1.767	1.538	1.650	1.907	1.350	2.635	1.684	1.803	2.107	1.301
F	0.653	2.380	1.745	1.673	1.434	1.551	1.819	1.235	2.588	1.585	1.711	2.029	1.186
G	1.964	3.344	2.842	2.776	2.582	2.681	2.895	2.452	3.504	2.749	2.814	3.068	2.395
H	5.580	8.245	7.113	6.844	6.482	6.718	7.097	6.623	8.625	7.573	7.041	7.585	6.306
I	4.530	6.200	5.555	5.431	5.197	5.333	5.584	5.162	6.405	5.618	5.516	5.838	5.027
J	1.728	3.471	2.817	2.724	2.482	2.609	2.876	2.340	3.683	2.739	2.780	3.107	2.258
K	-0.290	1.505	0.854	0.798	0.551	0.665	0.946	0.287	1.722	0.603	0.821	1.147	0.269
L	7.727	11.220	9.630	9.195	8.734	9.066	9.538	9.154	11.772	10.680	9.525	10.268	8.612
M	1.246	2.845	2.258	2.185	1.962	2.074	2.322	1.799	3.035	2.136	2.226	2.521	1.741
N	2.054	3.317	2.862	2.804	2.626	2.716	2.913	2.502	3.461	2.767	2.837	3.068	2.451
O	1.910	3.227	2.751	2.691	2.505	2.599	2.804	2.375	3.378	2.652	2.725	2.967	2.323
P	7.173	9.193	8.370	8.172	7.889	8.072	8.365	7.982	9.457	8.648	8.316	8.721	7.747

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
A	4.426	7.685	5.579	7.537	6.256	7.641	7.847	6.448	9.175	7.996	4.672	8.368	6.627
B	2.587	5.484	3.415	5.323	4.212	5.315	5.647	4.266	6.903	5.713	2.669	6.192	4.297
C	7.307	10.795	8.769	10.666	9.300	10.845	10.946	9.612	12.217	11.145	7.731	11.414	9.906
D	4.177	8.389	5.625	8.205	6.368	8.571	8.615	6.721	10.976	9.014	4.486	9.317	7.126
E	6.929	12.197	9.075	12.021	9.642	12.685	12.448	10.307	15.310	13.090	7.545	13.184	11.073
F	4.433	7.294	5.442	7.160	6.089	7.190	7.434	6.217	8.473	7.512	4.641	7.891	6.321
G	4.214	8.253	5.611	8.076	6.344	8.383	8.467	6.666	10.599	8.811	4.512	9.135	7.025
H	12.942	18.027	15.433	17.897	15.768	18.425	18.220	16.496	20.179	18.711	13.828	18.766	17.224
I	6.751	12.530	9.061	12.339	9.633	13.215	12.818	10.406	16.410	13.651	7.405	13.648	11.345
J	7.336	11.451	9.066	11.306	9.608	11.620	11.632	10.042	13.332	11.954	7.844	12.183	10.481
K	12.613	20.432	16.307	20.256	16.539	21.646	20.763	17.909	25.130	22.012	13.887	21.646	19.503
L	7.227	10.979	8.796	10.843	9.338	11.075	11.143	9.698	12.591	11.391	7.682	11.648	10.049
M	3.191	6.104	4.098	5.952	4.841	5.964	6.260	4.928	7.446	6.335	3.322	6.775	4.993
N	6.413	11.404	8.401	11.228	8.999	11.809	11.645	9.590	14.316	12.216	6.965	12.360	10.265
O	10.091	14.933	12.318	14.792	12.747	15.276	15.131	13.384	17.124	15.592	10.829	15.705	14.037
P	7.352	9.340	8.143	9.253	8.588	9.230	9.425	8.662	9.958	9.434	7.557	9.707	8.704



# Preliminary Results <sub>18</sub>

By comparing similar samples from Arab countries with ECE countries we observe that all Arab countries have significant lower or equal intergenerational mobility in education compared to Hungary (V) and Croatia (S).

females

**Table 40: Comparisons for Intergenerational Mobility in education in the Arab countries and in the ECE countries for total schooling**

males

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
A	2.070	2.228	-2.991	-4.621	-5.932	-6.153	-1.557	0.851	-0.102	1.616	-0.724	-3.653	1.287
B	-4.674	-5.787	-21.094	-21.424	-37.686	-12.280	-21.601	-14.304	-17.937	-8.787	-19.306	-18.354	-9.293
C	3.136	4.085	-9.527	-11.925	-20.780	-8.693	-6.898	0.687	-2.493	2.791	-4.397	-9.417	1.797
D	0.111	0.355	-15.571	-16.809	-32.609	-10.242	-14.811	-5.948	-10.117	-1.786	-12.030	-13.797	-2.707
E	3.750	5.265	-11.492	-13.494	-29.828	-8.795	-9.505	1.630	-3.390	4.020	-6.074	-10.487	2.628
F	-4.359	-5.468	-21.486	-21.602	-39.993	-12.152	-22.551	-14.856	-18.835	-8.635	-20.173	-18.411	-9.150
G	-0.968	-1.004	-13.825	-15.578	-24.546	-10.484	-12.079	-5.629	-8.422	-2.810	-9.947	-13.093	-3.515
H	23.511	29.825	16.835	9.966	11.538	0.372	25.995	36.924	33.334	32.304	29.714	11.697	29.882
I	5.159	6.596	-6.880	-9.697	-17.483	-7.763	-3.675	4.123	0.940	5.643	-1.091	-7.276	4.530
J	0.546	0.922	-14.916	-16.289	-31.588	-10.052	-13.919	-4.999	-9.143	-1.103	-11.111	-13.308	-2.061
K	8.232	9.218	0.800	-1.943	-4.051	-4.460	3.434	7.700	6.040	8.581	4.904	-0.462	7.919
L	3.281	4.178	-8.643	-11.140	-18.626	-8.503	-5.933	1.034	-1.848	2.952	-3.614	-8.775	2.022
M	1.190	1.622	-11.202	-13.327	-21.561	-9.475	-8.977	-2.270	-5.108	0.104	-6.752	-10.902	-0.713
N	2.432	3.297	-11.359	-13.457	-24.719	-9.137	-9.133	-0.773	-4.389	1.807	-6.424	-10.745	0.770
O	-0.209	-0.059	-16.852	-17.726	-36.651	-10.426	-16.944	-7.492	-12.189	-2.432	-14.057	-14.556	-3.358
P	3.074	3.161	0.100	-0.926	-1.552	-2.814	0.970	2.362	1.814	2.802	1.454	-0.363	2.609

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
A	2.519	3.956	3.426	3.349	3.147	3.253	3.475	3.035	4.124	3.362	3.396	3.663	2.963
B	0.942	2.093	1.690	1.650	1.487	1.565	1.746	1.338	2.220	1.551	1.668	1.875	1.311
C	2.063	3.231	2.814	2.762	2.597	2.680	2.863	2.477	3.362	2.717	2.791	3.004	2.433
D	1.980	3.073	2.686	2.640	2.485	2.562	2.734	2.366	3.195	2.585	2.665	2.863	2.328
E	0.790	2.439	1.836	1.767	1.538	1.650	1.907	1.350	2.635	1.684	1.803	2.107	1.301
F	0.653	2.380	1.745	1.673	1.434	1.551	1.819	1.235	2.588	1.585	1.711	2.029	1.186
G	1.964	3.344	2.842	2.776	2.582	2.681	2.895	2.452	3.504	2.749	2.814	3.068	2.395
H	5.580	8.245	7.113	6.844	6.482	6.718	7.097	6.623	8.625	7.573	7.041	7.585	6.306
I	4.530	6.200	5.555	5.431	5.197	5.333	5.584	5.162	6.405	5.618	5.516	5.838	5.027
J	1.728	3.471	2.817	2.724	2.482	2.609	2.876	2.340	3.683	2.739	2.780	3.107	2.258
K	-0.290	1.505	0.854	0.798	0.551	0.665	0.946	0.287	1.722	0.603	0.821	1.147	0.269
L	7.727	11.220	9.630	9.195	8.734	9.066	9.538	9.154	11.772	10.680	9.525	10.268	8.612
M	1.246	2.845	2.258	2.185	1.962	2.074	2.322	1.799	3.035	2.136	2.226	2.521	1.741
N	2.054	3.317	2.862	2.804	2.626	2.716	2.913	2.502	3.461	2.767	2.837	3.068	2.451
O	1.910	3.227	2.751	2.691	2.505	2.599	2.804	2.375	3.378	2.652	2.725	2.967	2.323
P	7.173	9.193	8.370	8.172	7.889	8.072	8.365	7.982	9.457	8.648	8.316	8.721	7.747

# Conclusions

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- ▶ The decreasing levels of inequalities among females with still high levels in comparison to males
- ▶ The intergenerational mobility of females does exist in most Arab countries with few exceptions.
- ▶ The situation is better in ECE countries where both inequality and intergenerational mobility being more adequate except for few countries.
  
- ▶ Therefore the results say that:
  - ▶ Arab countries are invited to promote further economic policies to reduce the levels of inequality and intergenerational mobility mainly among females, through ensuring more incentives for families to educate and for the promotion of employment.
  - ▶ Similar recommendations could be set for ECE countries but the undergoing policies in these countries seem to account for the consequences of inequality and low intergenerational mobility.

# Conclusions

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- ▶ The main recommendations:
  - ▶ Ensuring instruments that promote access to the highest levels of education with means to reduce drop-outs with the development of incentives for the support of females and males from poor neighborhoods
  - ▶ Ensuring that this access is facilitated to all household categories including the poorest segments with the inclusion of the roles of vocational education as a component of the overall educational system
  - ▶ Ensuring higher intergenerational mobility with new generations accessing higher levels of education compared to their parents
  - ▶ Monitoring and evaluating the inequality and intergenerational concerns