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The Gap between Educational & Social Intergenerational Mobility in Arab Countries

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Abstract:

With a high rate of unemployment in most Arab countries, this paper investigates the relationship between social and educational mobility. World Bank databases on income and unemployment rates are used for the assessment of both types of mobility. The attained results show that Arab countries are facing large discrepancies between education trends and income mobility. Eastern and Central European countries, with similar economic trends, show also similar patterns of mobility. While the literature review reports the pervasive nature of such phenomenon, Arab countries need adequate policies to overcome the likely negative impacts from the low economic and high education mobility.

Keywords: Intergenerational income; intergenerational educational attainment; Arab countries; Eastern European economies

JEL: J62; I25.

Introduction

Social or economic mobility refers to progress made by economic agents in climbing the social ladder while educational mobility refers to the changes taking place in education attainment. Both types of mobility attempt to refer to the status of a new generation relative to the older one. Both types of mobility are consequently pertaining to the medium and longer terms of an economy and society.

In the past history and for different economies, education attainment appears to be positively driving social mobility such that higher school attainment used to lead to higher social status and thus ensures social mobility, mainly for the less economically endowed groups. This is mainly true in most countries under past guaranteed employment schemes and labor market controlled economies. Earlier work includes that of Fields (1980) with a survey

of the literature on education and income distribution in developing countries. The effects of education on income are underlined to include better welfare through the distribution of income as education leads to higher income, employment, and better working conditions.

With the liberalization and openness of these economies, jobs are mainly under free market mechanisms with no obvious links between education and guaranteed employment. This on-going era, has been showing that the former social ladder, is no more functional and more education does not necessarily guarantee a higher job and remuneration. This might mean lower mobility in some economies. But, on the other hand education is becoming more accessible and open to more and more people than before, with a continuous increase in school attainment.

Arab and Eastern Central European economies (ECE) have been concerned with the major shifts taking place in both the global and education economies. Evidence from the Arab countries suggests that contrary to other developing regions, education and labor market policies have generally been associated with high demand for higher levels of education. Arab countries overall started out with low levels of education. This has led to an increase in educational attainment. Instead of observing an increase in economic mobility across generations, the Middle East and North African countries appear with low and sometimes declining social mobility among the increasingly educated segments. Other new facts are reported by other authors for other economies showing that the discrepancies between social and educational mobility are pervasive and concern all economies with high access to learning and mainly in tertiary education.

The current paper attempts to look at the links between social and education mobility in the context of Arab countries with comparisons with the ECE countries as they are similarities in the shifts in both markets and education in these two sets of countries. After introducing a literature review related to intergenerational mobility and its likely linkage with education, the

methods used and the data mobilized in assessments are introduced. Results are then underlined and discussed.

I. Literature Review

Studies by the World Bank (2010) and the ILO (2012, 2013a and 2013b) stress the need for Arab countries to have more jobs by 2025, only to maintain the current unemployment levels and prevent them from increasing. Dhillon and Yousef (2009) show that the duration of unemployment for new graduates is long in Arab countries: 3 years in Morocco and 2.5 years in Egypt. Chamlou, Moghadam, and Karshenas (2016) emphasize that Middle East and North Africa (MENA) countries have made good progress in educating women, with schooling attainments getting closer to those of men. But most of MENA women remain out of the labor force. Having so few women working is costly for the countries in the region, limiting their economic size and growth prospects. The International Labor Organization has been conducting the school to work transition surveys in more than 30 countries between 2012 and 2015. The Arab countries included up to now are Egypt (2012, 2014) with respectively 5198 and 5758 observations, Jordan (2013) with 5405 surveys, the Occupied Palestinian Territories (2013) with 4320 observations besides an older survey for Syria (2007). There are also surveys for ECE countries where the more recent is of 2015. The key results of these surveys as they appear respectively in different publications of ILO are shown as ONEQ (2014) for Tunisia, Sadeq and Elder (2014) for Palestine, Mryyan and Barcuccu (2014) for Jordan, Alissa (2014) for Syria, El Zanaty and Associates (2007) and Barsoum, Ramadan and Mostafa (2014) for Egypt. Elder, Barcucci, Gurbuzer, Perardel and Principi (2015) analyze the estimates for Central and Eastern Europe (Albania, Bosnia and Herzegovina, Bulgaria, Georgia, Hungary, Kosovo, FYR Macedonia, Montenegro, Romania and Serbia); Kyrgyzstan, Republic of Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan); and high-income countries (Croatia, Czech Republic, Estonia, Latvia, Lithuania, Poland, Russian Federation,

Slovenia and Slovak Republic), among others. The discrepancies between education outcomes and labor markets appear to be the main reasons for the existing gap between social and education mobility in Arab countries.

The above issues have been also tackled from the perspective of intergenerational mobility. Salehi-Isfahan, Belhaj-Hassine and Ragui (2014) analyze equality of opportunity in educational achievement in some Arab countries. As discussed in Binzel (2011) and in Binzel and Carvalho (2015), the available empirical studies of intergenerational mobility suggest that the transmission of economic status across generations is higher in less developed countries than in developed ones as the expansion of education allows for more social mobility in developing economies. But, Carvalho (2015 & 2016) when focusing on Egypt, document a contemporaneous decline in social mobility among educated youth and develop a model to show the impacts of an unexpected drop in social mobility combined with inequality.

When surveying the most recent papers on intergenerational social and education mobility, series of results can be outlined. Economic inequality in urban China as high intergenerational persistence of education is expected to be a barrier to equal opportunities in children's education attainments and their future labor market outcomes (Magnani and Zhu, 2015 & Mok and Wu, 2015). For Vietnam (Dang, 2015) estimates explicitly reveal that this country has intermediate degrees of income mobility across generations. Black, Devreux, Lundborg, Majlesi (2015), and Gibbons (2011) emphasize that wealth transmission is not because children from wealthier families are more talented but that, even in relatively egalitarian Sweden, wealth generates wealth implying that the position of adoptive parents matters in intergenerational mobility. While Machin (2004) paints a depressing picture for those who believe education can promote increased intergenerational mobility, Lefgren, McIntyre and Sims (2015) consider that applied researchers have been drawn to models that attribute the demonstrated cross-country differences in intergenerational income transmission

to government interventions in education. This is the case for Cyprus, Senegal and Scotland and some Asian countries that increased spending in both private and public higher education (Andreou and Koutsampelas, 2015, Ianneli and Paterson, 2005, Mok and Neubauer, 2015, and Dumas and Lambert, 2011). Altzinger, Cuaresma, Rumlmaier, Sauer and Schneebaum (2015) emphasize that the persistence of socioeconomic outcomes across generations is as a barrier to a society's ability to use its resources efficiently. Torche (2015) reviews the sociological and economic literature on intergenerational mobility and Goldthorpe (2015) suggests that sociological frameworks about mobility with its mediation through education, be further enriched with economic approaches and empirical testing with theories originating in the economics of labor markets. Van Heka, Kraaykampa and Wolbers (2015) address the dynamic effects of parental socio-economic features on the educational attainment in the Netherlands. With regard to this, Turcotte (2011) observes that in the last 25 years there has been an increase in the number of young adults completing university in comparison with past generations.

New evidence on trends in intergenerational mobility in the U.S. using administrative earnings records is introduced in the research of Chetty, Hendren, Kline, Saez and Turner (2014). The results are confirmed in Chetty, Hendren, Kline and Saez (2015). They find that the most robust way to measure intergenerational mobility is by ranking parents by parental income and by ranking children by their income when they are adults. For each percentile of parent's income, they compute the average rank of the income of the children when adults.

The occupational careers of men if the intergenerational status is disrupted by the failure to proceed with the parental level of educational attainment in Germany, is discussed by Diewald, Schulz and Baier (2015). Solon (2015) addresses the framework of "Multigenerational mobility" to refer to the associations in socioeconomic status across three or more generations. Erzsebet and Goldthorpe (2015) examine trends in mobility in Britain on

the basis of data from three successive birth cohort studies. The authors advance on previous research in measuring individuals' educational attainment not only in absolute but also in relative terms and show that measuring education in these two different ways leads to significantly differing results. Mazumder (2005a; 2005b) considers that previous studies, relying on short-term fathers' earnings, have estimated the intergenerational elasticity to be approximately 0.4. Using administrative data on parents and children, it is estimated to be around 0.6. The paper of Pastore and Roccisano (2015) provides new evidence on the inheritance of educational inequality in Azerbaijan, China, Egypt, Iran, Kosovo, Mongolia, Nepal and Syria where the ILO carried out the first "School-to-Work Transition survey". The results show different patterns of correlations between the level of intergenerational mobility, the educational upgrade and the role of parents' in sons' and daughters' education. The paper seeks to update knowledge through new estimates of mobility in earnings. Given data limitations on more recent cohorts, an indirect approach to assessing more recent mobility trends is adopted. Bukodi, Goldthorpe, Waller and Kuha, (2015) remind the readers about the importance of social mobility as it is now a matter of political concern in Britain. The results confirm that there has been no decline in mobility. Torche, F. (2014) introduces equality of opportunity as prompted by new data to show the development of studies of intergenerational mobility in Latin America over the past decade. Goldthorpe (2012) notes the consensus developed in political and also media circles that social mobility in Britain has been in decline. On the consensus view, as construed in political circles, educational policy is seen as the crucial instrument for increasing mobility; but on the alternative view, what can be achieved in this way, whether in regard to absolute or relative mobility, appears far more limited. Greenstone, Looney, Patashnik, and Yu. (2013) discuss The Hamilton Project policy memo as it provides thirteen economic facts on the growth of income inequality and its relationship to social mobility in America; on the growing divide in educational opportunities

and outcomes for high- and low-income students; and on the pivotal role education can play in increasing the ability of low-income Americans to move up the income ladder. Ichino, Karabarbounis and Moretti, (2010) address the Political Economy of Intergenerational Income Mobility and consider that intergenerational elasticity of income is the best measure. The authors conclude that international comparisons of intergenerational elasticity of income are not particularly informative without accounting for differences in politico-economic institutions. Güell, Pellizzari, Pica, and Rodriguez (2015) apply a new measurement model of intergenerational mobility to a combination of Italian data allowing producing comparable measures of intergenerational mobility of income for 103 Italian provinces. They find that higher income mobility is positively associated with a variety of “good” economic outcomes, such as higher value added per capita, higher employment, higher schooling and higher openness. They also find that within Italy, “the Great Gatsby Curve” exists and could be used to guide new policies. But Jerrim and Macmillan (2015) consider that relatively limited cross-national work has empirically been including education. While the number of studies of intergenerational income mobility has been growing (Corak, 2004, 2006; 2013a; 2013b and 2016), the literature on this topic for the developing countries is still limited (Binzel, 2011). But, the intergenerational measure is also useful for the understanding of the generational transmission between parents and children in education. Accounting for inequality adds more insights to intergenerational research as new policies could be provided. There are several studies that look at the links to inequality measures. The limits of intergenerational mobility are discussed in series of papers. Andrews and Leigh (2009), Breen (1997), Blanden and Machin (2004), Corak (2006) and d'Addio (2007) suggest new methodological features for studies of intergenerational mobility.

II. Methods and Data

1. Methods

Intergenerational income mobility measured by a linear regression model in which the logarithm of the child's income Y_{child} (in adulthood) is a function the logarithm of the parent's income: Y_{parent} :

$$\ln(Y_{child}) = \alpha + \beta \ln(Y_{parent}) + \varepsilon.$$

The regression coefficient β is the so-called income elasticity and ε is the error term indicating other influences not associated with parental income. The elasticity (β) represents the fraction of income that is transmitted. Empirical estimates of β tend to lie between 0 and 1. The intergenerational elasticity of income is generally considered one of the best summary measures of the degree to which a society gives equal opportunities of success to all its members, irrespective of their family background.

2. Data

The data from earlier research (Driouchi, Boboc, Titan and Achehboune, 2016) and mainly the elasticity of intergenerational mobility in school attainment are used to study the relationship between income mobility and the intergenerational mobility in education attainment.

In order to determine the intergenerational mobility in income, generations twenty years away from each other are considered. The data are then transformed to logarithms. Linear regressions are used to estimate elasticities related to income. To estimate income mobility, World Bank data are mobilized to include per capita Gross Domestic Product (GDP), Gross National Income (GNI) and adjusted income per capita. These three measures of income are used in the absence of direct data on income.

III. Results

The attained results are respectively provided for Arab and ECE countries. They concern social mobility as measured by intergenerational income elasticity, mobility in educational

attainment and the likely relationships between the above two measures. Unemployment is also taken into consideration.

1. Intergenerational economic mobility measured by per capita GDP (constant 2005 US dollars) for Arab countries

Countries such as Morocco, Tunisia and Libya appear to be exhibiting higher elasticity in relation to intergenerational economic mobility. This shows a high level of intergenerational immobility with respect to GDP per capita. All the other Arab countries show lower elasticity implying higher mobility throughout generations.

Table 1: Intergenerational economic mobility measured by per capita GDP (constant 2005 US dollars) for Arab countries

Countries	Coefficient	t-statistic	N	t-critical	
				0.05	0.01
Algeria	0.328	4.818	30	1.697	2.457
Bahrain	-0.226	-4.961	21	1.721	2.518
Egypt	0.720	25.603	30	1.697	2.457
Iraq	0.414	2.094	30	1.697	2.457
Jordan	-0.241	-1.048	30	1.697	2.457
Kuwait	-0.423	-1.590	15	1.753	2.602
Lebanon	0.210	1.306	20	1.725	2.528
Libya	-1.931	-3.000	10	1.812	2.764
Mauritania	-0.166	-1.087	30	1.697	2.457
Morocco	0.940	14.683	30	1.697	2.457
Oman	0.095	8.341	30	1.697	2.457
Qatar	0.441	2.084	10	1.812	2.764
Saudi Arabia	-0.195	-2.175	30	1.697	2.457
Sudan	-0.480	-0.763	30	1.697	2.457
Syria	0.340	6.784	30	1.697	2.457
Tunisia	0.895	11.923	30	1.697	2.457
UAE	0.513	2.762	30	1.697	2.457
West Bank	0.262	2.512	15	1.753	2.602
Yemen	-0.015	-0.057	15	1.753	2.602

2. Intergenerational economic mobility measured by per capita GDP (constant 2005 US dollars) in ECE

Based on GDP per capita, Bulgaria, the Czech republic, Macedonia, Montenegro, Poland and Slovakia do show high levels of elasticity implying high level of immobility throughout

generations. All the other ECE economies exhibit high level of economic mobility of newer generations.

Table 2: Intergenerational economic mobility measured by per capita GDP (constant 2005 US dollars) for ECE countries

Countries	Coefficient	t-statistic	N	t-critical	
				0.05	0.01
Albania	0.335	0.828	25	1.708	2.485
Bosnia & Herzegovina	0.273	7.656	15	1.753	2.602
Bulgaria	1.059	2.558	25	1.708	2.485
Croatia	0.446	4.340	15	1.753	2.602
Czech Republic	0.861	3.899	15	1.753	2.602
Estonia	0.525	5.361	15	1.753	2.602
Hungary	0.789	8.765	20	1.725	2.528
Kosovo	0.548	9.529	10	1.812	2.764
Latvia	0.593	5.647	15	1.753	2.602
Lithuania	0.559	1.133	6	1.943	3.143
Macedonia	0.965	3.857	20	1.725	2.528
Montenegro	0.854	5.524	15	1.753	2.602
Poland	0.917	19.356	20	1.725	2.528
Romania	-0.742	-1.709	25	1.708	2.485
Serbia	0.729	5.289	15	1.753	2.602
Slovakia	0.983	9.698	15	1.753	2.602
Slovenia	0.423	4.147	15	1.753	2.602

3. Intergenerational economic mobility measured by GNI per capita (constant 2005 US\$) for Arab Countries

When using GNI per capita, Egypt and Morocco and Sudan, appear to be showing with high statistical significance, higher elasticity as a signal of immobility of the economic status across generations. The other few countries left have elasticity estimate not statistically different from zero. This means that the estimates attained indicate that the economic status of newer generations is mainly driver by a while noise and no link could be established with the economic situation of the older generation.

Table 3: Intergenerational economic mobility measured by GNI per capita (constant 2005 US\$) for Arab Countries

Countries	Coefficient	t-statistics	N	t-critical
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				5%	1%
Algeria	0.109	1.057	30	1.697	2.445
Egypt	1.436	29.477	30	1.697	2.445
Jordan	-0.098	-0.293	30	1.697	2.445
Lebanon	-0.155	-0.245	15	1.753	2.602
Morocco	1.722	15.855	30	1.697	2.445
Sudan	-1.273	-1.626	30	1.697	2.445

4. Intergenerational economic mobility measured by GNI per capita for ECE countries

With the use of GNI per capita, Macedonia, Bulgaria, the Czech republic, Latvia, Romania, Montenegro and Serbia are showing higher elasticity implying that immobility of economic status is occurring in these countries. Croatia, Slovenia and Hungary appear to be having more economic mobility. But, Estonia is exhibiting no link with the income of the older generation.

Table 4: Intergenerational economic mobility measured by GNI per capita (constant 2005 US\$) for ECE countries

Countries	Coefficient	t-statistics	N	t-critical	
				5%	1%
Estonia	-0.559	-0.525	12	1.782	2.681
Macedonia	1.046	4.201	13	1.771	2.650
Latvia	0.787	7.166	14	1.761	2.624
Croatia	0.436	3.423	15	1.753	2.602
Czech Republic	0.859	4.706	15	1.753	2.602
Hungary	0.558	4.424	15	1.753	2.602
Romania	1.213	4.872	15	1.753	2.602
Serbia	0.799	7.529	16	1.746	2.583
Slovenia	0.670	6.931	16	1.746	2.583
Montenegro	0.809	5.425	18	1.734	2.552
Bulgaria	1.351	3.039	25	1.708	2.485

5. Intergenerational economic mobility measured by the adjusted net national income per capita (current US\$) for Arab countries

When attempting the use of the adjusted net national income per capita, it appears that Bahrain, Egypt, Morocco, Tunisia, Oman, Qatar and Yemen have higher immobility in economic intergenerational transfers.

Table 5: Intergenerational economic mobility measured by the adjusted net national income per capita (current US\$) for Arab countries

Countries	Coefficient	t-statistics	N	t-critical	
				5%	1%
Algeria	0.386	1.241	25	1.708	2.485
Bahrain	1.219	10.133	25	1.708	2.485
Egypt	3.307	6.842	25	1.708	2.485
Jordan	0.445	0.998	25	1.708	2.485
Kuwait	0.233	0.432	25	1.708	2.485
Lebanon	0.747	3.621	20	1.725	2.528
Mauritania	0.409	3.798	30	1.697	2.457
Morocco	1.704	8.744	30	1.697	2.457
Oman	1.329	4.439	30	1.697	2.457
Qatar	1.039	1.762	30	1.697	2.457
Saudi Arabia	0.095	0.317	30	1.697	2.457
Syria	-0.374	-2.367	30	1.697	2.457
Tunisia	1.731	14.584	30	1.697	2.457
Yemen	1.181	5.545	20	1.725	2.528

6. Intergenerational economic mobility measured by the adjusted net national income per capita (current US\$) for ECE countries

Under the adjusted net national income per capita, Albania, the Czech Republic, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania and Slovakia show higher elasticity with the implied high level of economic immobility. But, Albania has the highest level according to the statistical estimates. It is followed by Moldova, Macedonia, Romania and then Poland.

Table 6: Intergenerational economic mobility measured by the adjusted net national income per capita (current US\$) for ECE countries

Countries	Coefficient	t-statistics	N	t-critical	
				5%	1%
Albania	2.557	5.015	20	1.725	2.528
Bulgaria	0.249	0.326	25	1.708	2.485

Croatia	0.726	3.847	15	1.753	2.602
Czech Republic	0.955	3.383	15	1.753	2.602
Hungary	0.711	2.972	15	1.753	2.602
Latvia	0.986	8.693	20	1.725	2.528
Lithuania	1.021	10.798	20	1.725	2.528
Macedonia, FYR	1.264	2.846	15	1.753	2.602
Moldova	1.399	7.303	15	1.753	2.602
Poland	1.006	10.516	20	1.725	2.528
Romania	1.155	5.616	20	1.725	2.528
Slovakia	0.849	4.888	15	1.753	2.602
Slovenia	0.681	3.459	15	1.753	2.602

7. Elasticity for intergenerational mobility in educational attainment

The elasticity of educational attainment is obtained from a previous paper of Driouchi, Boboc, Gamar, Titan and Achehboune (2016). In such a paper, all Arab countries appear to have estimated elasticity that is highly statistically significant and below one at the exception of Mauritania where the estimated coefficient is around one. This implies that all countries except Mauritania exhibit higher mobility for educational attainment meaning that new generations are enjoying higher attainment compared to the older ones. Mauritania appears to be at the limit as it has lower mobility in educational attainment.

Table 7: Elasticity for intergenerational mobility in educational attainment in Arab countries. Source: Driouchi, Boboc, Gamar, Titan and Achehboune (2016)

Country	Independent	R²	Obseventions
Algeria	0.643 (4.572)	0.749	10
Bahrain	0.378 (5.835)	0.829	10
Egypt	0.750 (7.221)	0.882	10
Iraq	0.510 (14.477)	0.968	10
Jordan	0.692 (17.749)	0.978	10
Kuwait	0.486 (5.831)	0.829	10
Libya	0.595	0.904	10

	(8.122)		
Mauritania	1.051 (13.806)	0.965	10
Morocco	0.670 (17.847)	0.978	10
Qatar	0.590 (11.910)	0.953	10
Saudi Arabia	0.780 (9.794)	0.932	10
Syria	0.566 (7.696)	0.894	10
Sudan	0.778 (8.224)	0.906	10
Tunisia	0.655 (12.339)	0.956	10
UAE	0.699 (13.437)	0.963	10
Yemen	0.947 (4.572)	0.749	10

(all estimated coefficients statistically highly significant)

Table 8: Elasticity for intergenerational mobility in educational attainment in ECE countries. Source: Driouchi, Boboc, Gamar, Titan and Achehboune (2016)

Countries	Total Education ECE	
	Elasticities	tstatistics
Albania	0.577	5.183
Bulgaria	0.553	5.518
Croatia	0.994	12.567
Czech	1.028	10.483
Estonia	1.219	28.112
Hungary	1.450	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

8. Unemployment Processes

The above results are confirmed by the unemployment processes that are estimated based on World Bank unemployment data 1991-2013. Most Arab countries have unemployment rate processes that are non-stationary with estimated autoregressive of order one (AR,1) process

and with coefficient higher or equal to 1. These countries include Bahrain, Qatar, Oman, Kuwait and UAE but all have low unemployment average rate. Saudi Arabia with a low unemployment rate shows a stationary process for unemployment rate. Other countries such as Egypt, Libya, Mauritania, Sudan and Yemen do show explosive pattern for their unemployment rates. But Algeria, Iraq, Morocco, Tunisia and West Bank/Gaza exhibit very high unemployment rates.

Table 9: Unemployment Processes in Arab Countries

Country	AR(1) coefficient	Average rate unemployment
Algeria	0.98	19.72
Bahrain	1.00	7.11
Egypt	1.01	10.04
Iraq	0.98	18.71
Jordan	0.99	14.30
Kuwait	1.03	1.44
Lebanon	0.98	7.71
Libya	1.00	19.52
Mauritania	1.00	21.87
Morocco	0.98	10.94
Oman	1.00	7.99
Qatar	0.99	0.60
Saudi Ar.	0.99	5.55
Sudan	1.00	14.98
Syria	0.99	9.32
Tunisia	0.99	14.74
UAE	1.00	3.17
West Bank/Gaza	0.99	22.73
Yemen	1.00	14.75

In comparison with ECE countries, Bulgaria, Serbia and the Slovak Republic show explosive patterns in unemployment rates. Other countries such as Albania, Croatia, and Poland have very high unemployment rates while Romania and the Czech Republic exhibit the lowest average rates. These series of patterns are similar to those shown for Arab countries. The following table summarizes the result for ECE countries.

Table 10: Unemployment Processes in ECE countries

Country	AR(1) coefficient	Average
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		unemployment rate
Albania	0.99	14.53
Bulgaria	1.00	10.10
Croatia	1.01	12.42
Czech R.	1.01	6.33
Estonia	0.98	9.57
Hungary	0.98	8.60
Poland	0.99	13.21
Romania	0.99	7.10
Serbia	1.01	16.70
Slovak R.	1.00	14.22
Slovenia	1.02	9.32

9. Social and educational mobility

Bahrain, Egypt, Morocco, Tunisia and Yemen show high social immobility with high mobility in education attainment. In these countries, the higher educational attainment of newer generations appear to not be accounted for by social intergenerational mobility. Qatar appears to have lower social mobility but higher intergenerational mobility in educational attainment. While social mobility in Algeria is not statistically different from zero, educational mobility appears to be high implying that an important discrepancy might exist in the economy. The same situation prevails in Jordan, Kuwait and Saudi Arabia according to the estimates. The high social mobility as estimated for Mauritania shows the central role of educational attainment that needs to be enhanced. But none of the Arab countries included in these estimations is showing high mobility in both social and educational mobility.

Table 11: Social and educational mobility in Arab countries.

Countries	Social Mobility	Educational Mobility
Algeria	0.386	0.643
Bahrain	1.219**	0.378
Egypt	3.307**	0.750
Jordan	0.445	0.692

Kuwait	0.233	0.486
Mauritania	0.410**	1.051
Morocco	1.704**	0.670
Qatar	1.039*	0.590
Saudi Arabia	0.094	0.780
Syria	-0.374*	0.566
Tunisia	1.731**	0.655
Yemen	1.181**	0.947

10. Likelihood of Links between unemployment, social and educational mobility

This exercise is attempted respectively for Arab and ECE countries using the available few observations as they are introduced in table 12.

Table 12: Overall outcomes for Arab and ECE countries

Countries	Social Mobility	Educational Mobility	Average rate unemployment
Algeria	0.386	0.643	19.72
Bahrain	1.219	0.378	7.11
Egypt	3.307	0.750	10.04
Jordan	0.445	0.692	14.30
Kuwait	0.233	0.486	1.44
Mauritania	0.410	1.051	21.87
Morocco	1.704	0.670	10.94
Qatar	1.039	0.590	0.60
Saudi Arabia	0.095	0.780	5.55
Syria	-0.374	0.566	9.32
Tunisia	1.731	0.655	14.74
Yemen	1.181	0.947	14.75

Countries	Social Mobility	Educational Mobility	Average rate unemployment
Albania	0.335	0.577	14.53
Bulgaria	1.059	0.553	10.10
Croatia	0.446	0.994	12.42
Czech Republic	0.861	1.028	6.33
Estonia	0.525	1.219	9.57

Hungary	0.789	1.450	8.60
Latvia	0.593	0.906	9.70
Poland	0.917	0.811	13.21
Romania	- 0.742	0.524	7.10
Serbia	0.729	0.919	16.70
Slovakia	0.983	0.918	14.74
Slovenia	0.423	0.649	9.32

But regression analysis provides a better view about linkages. For Arab countries, the best regression attempted to link unemployment rate to educational mobility and social mobility shows that unemployment rate is related to educational mobility at the 5 % significance level. This would mean that the higher (the lower) educational mobility, the higher (the lower) is unemployment. The related coefficient is 0.612.

Table 13: Unemployment, Social and Educational Mobility in Arab Countries

Dependent variable	Observations	R²	Social Mobility	Educational Mobility
Unemployment rate	11	0.374	-0.028 (t-sta : -0.107)	0.612 (t-stat : 2.317)

For ECE countries, no statistically significant result is attained through the best regression that is attempted to link educational mobility to unemployment rate and social mobility.

Table 14: Unemployment, Social and Educational Mobility in ECE Countries

Dependent variable	Observations	R²	Unemployment	Social Mobility
Educational mobility	9	0.210	-0.121 (t-sta : -0.358)	-0.428 (t-stat : -1.266)

But over all arab and ECE countries, social mobility, education mobility and unemployment appear to exhibit no statistically significant correlation.

Table 15: Correlations between Unemployment, Social and Educational Mobility in Arab and ECE Countries

		SM	EM	UN
SM	Pearson Correlation	1	,054	,062
	Sig. (2-tailed)		,803	,772
	N	24	24	24
EM	Pearson Correlation	,054	1	,243
	Sig. (2-tailed)	,803		,252
	N	24	24	24
UN	Pearson Correlation	,062	,243	1
	Sig. (2-tailed)	,772	,252	
	N	24	24	24

IV. Discussion and Conclusion

There are discrepancies between social mobility in most Arab countries in comparison with ECE economies. This could be related to the nature of the economic transition experienced by each group of economies. For Arab countries, the social mobility is almost stationary or decreasing in comparison to educational attainment. This says that the current ladder of social mobility is becoming less accessible to younger generations that have higher educational attainment than in the past.

This has led some authors to relating this situation to the 2011 political changes that took place in Egypt, Tunisia, Libya and Yemen. Some other authors have looked at the other political and social consequences of these discrepancies. Bahrain, Egypt, Morocco, Tunisia and Yemen show low social mobility with high mobility in education attainment. In these countries, the higher educational attainment of newer generations appear to not be accounted for by social intergenerational mobility. Qatar appears to have lower social mobility but higher intergenerational mobility in educational attainment. While social mobility in Algeria is not statistically different from zero, educational mobility appears to be high implying that

an important discrepancy exists in the economy. The same situation prevails in Jordan, Kuwait and Saudi Arabia according to the estimates. The high social mobility as estimated for Mauritania shows the central role of educational attainment that needs to be enhanced. But none of the Arab countries included in these estimations is showing high social and educational mobility. In comparison with ECE countries, Montenegro, Serbia and the Slovak Republic show explosive patterns in unemployment rates. Other countries such as Albania, Croatia, and Poland have very high unemployment rates while Romania and the Czech Republic exhibit the lowest average rates.

These trends as shown for Arab countries, require further policy responses in relation to the enhancement of employment possibilities, income and access to social benefits that would accompany the mobility in educational attainment. These countries need to set the political objectives of replacing the former social ladder with market driven processes. While this concern general skills, they mainly apply for higher skilled labor.

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