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*Universidad San Pablo*

# Freedom of education in the world: analysis of its enablers and relationship with educational performance and income distribution

EDUCATION AND FAMILY STUDIES | REPORT 01

November 2023

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## **Authors**

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# Executive summary

Freedom of education must be understood as an effective plurality of educational offerings and a system of public funding that allows access to non-governmental schools (NGS) by families, regardless of their income level. It is a fundamental right that must be guaranteed in every country to respect human rights. This study describes trends in educational freedom across countries, analyzes its potential enhancers, and quantifies the relationship between educational freedom and the main representative indicators of educational system performance and income distribution.

## Typology of countries according to their degree of freedom of education

The first analysis of this report consisted of grouping the 81 countries of the OIDEI Freedom of Education Index (FEI) into four categories with homogeneous values of this metric and attempting to characterize each of the clusters. Although presenting different features, the degree of educational freedom within the group increases as the value of variables such as per capita income, human development, income distribution, economic freedom, and life satisfaction increases.

There is also a higher performance in characteristics of the educational system as educational freedom increases, both in terms of the indicators representing the overall learning level of students in the PISA tests, as well as the indicators representing equality of opportunities (equity) and social segregation in schools.

## Evolution of educational freedom in the first two decades of the 21st century

The degree of educational freedom tended to increase since the beginning of the 21st century in all regions. Almost 70% of the countries recorded an increase in FEI between 2002 and 2016, compared to 28% in which this index decreased. A process of convergence can be seen, as the countries that initially had a

lower level are those that to a greater extent have increased their FEI score in the 14 years between 2002 and 2016. However, some cases (Cuba, Democratic Republic of Congo, Saudi Arabia) show an involution, despite their low starting level.

## Freedom of education and its relation to other basic freedoms

A high correlation can be observed when comparing educational freedom with other basic freedoms in all countries and regions. Most freedoms in the analysis, specifically economic freedom, religious freedom, and freedom of expression and information, are guaranteed in most regions. However, no region presents desirable values when it comes to freedom of education. In those regions where educational freedom is most established (Europe and North America), the average levels are far from what would be optimal, considering as such the value of Group 4, made up of Belgium and the Netherlands. Consequently, in terms of freedom of education, there is a notorious potential for improvement in all regions of the world.

Correlations can also be distinguished between basic freedoms and individual indicators of the FEI. For instance, FEI Indicator 1 (legal possibility to establish and manage NGS) and religious freedom presented a strong correlation. Indicator 2 (public funding of NGS) is closely related to the proper functioning of the rule of law and, to a smaller extent, to the level of economic freedom. Indicator 3 (primary school enrollment rate) is also strongly linked with economic freedom and the functioning of the rule of law. Finally, Indicator 4 (share of NGS) shows no association with the other freedom variables.

## Freedom of education, performance of the education system, and income distribution

Some FEI indicators show a positive association with the school performance of countries in the PISA-2018 tests, although this relationship is lost when including certain control variables, such as the average economic and cultural level of the country, or the geographic region to which it belongs. Previous studies showed a better performance of the educational system associated with private and charter schools, using techniques that allow establishing causal relationships, which is manifested not only in the PISA competencies (mathematics, reading, science) but also in various aspects, including better foreign language learning.

Similarly, an association between FEI's Indicator 4 and certain variables representative of social segregation in schools is initially apparent but disappears when the per capita income level or geographic region is added to the equation. We thus must reject the hypothesis that freedom of education, as defined by the FEI, leads to greater segregation.

Finally, the FEI, and Indicator 2 in particular, is associated with a more equitable income distribution. This relationship remains, even after including control variables, such as per capita income and the geographic region to which the country belongs. In this sense, the idea that freedom of education increases inequalities must not only be rejected but the inverse association must be established.

## Conclusions

Based on this report and the extensive literature on the superior performance of non-state schools in most countries, we can conclude that there are advantages to moving towards greater educational freedom. Freedom of education respects the right of parents to choose the type of education for their children. Moreover, it achieves greater equity and reduces economic inequalities, boosting the performance of the education system and improving its efficiency.



# 1. The state of freedom of education in the world

## 1.1. What do we mean by freedom of education?

In this study, the Freedom of Education Index (FEI), provided by OIDEI in its 2002 and 2016 editions, represents a measurement of educational freedom. Four indicators construct this Index. First, **Indicator 1** shows the legal possibility of creating and managing non-governmental schools (NGS). For 2002, it only considered the legality of this right, being a variable with values of 100 (legal recognition) or 0 (otherwise). For the following edition, this indicator had 3 different sub-indicators: legal possibility of creating and managing NGS (80 points out of 100); constitutional recognition of freedom of education (10 out of 100); and legal recognition of homeschooling (10 out of 100).

**Indicator 2** reflects the public funding NGSs receive. This indicator is relevant since the lack of government funding for NGSs makes it difficult for lower-income families to access non-state institutions. Comparing both editions, only the scoring system has changed, while the categories remained the same. **Indicator 3** corresponds to the Net Enrollment Rate in primary education. Finally, **Indicator 4** captures the percentage of students enrolled in NGS.

This report analyses the trends and relationships of the overall FEI and each of its four indicators with other variables since each one describes hugely different circumstances. While Indicator 1 is the legal basis for the existence of a non-governmental educational offer, Indicator 2 measures the population's access to these schools, which should be reflected in the values of Indicator 4.

## 1.2. Typology of countries according to the OIDEF Freedom of Education Index

The hierarchical clustering technique classified the countries into relatively homogeneous groups according to their level of educational freedom. Four clusters were obtained, as shown in Table 1, with the following characteristics:

- **Group 1** consists of the four countries with the least educational freedom, whose average FEI value for 2016 is only 29.3. Two are African (Democratic Republic of Congo and Ethiopia), one Arab (Saudi Arabia), and one from Latin America and the Caribbean (Cuba). It is striking to note the relatively high average level of indicator 4 (NGS quota), of 25.7%, which paradoxically is higher than in group 2 and group 3. Thus, in some of the Group 1 countries, NGSs have a significant presence but are available only to families of a high socioeconomic level.
- **Group 2** is the largest group, with 49 countries, concentrated in Latin America and the Caribbean (28.6% of the total), Asia and the Pacific (24.5%) and Europe (22.4%), with an average OIDEF index of 53.6. The country with the lowest FEI value in this group is Belarus (43.9), and the highest is Romania (46.5).
- **Group 3** is mostly composed of European and North American countries (73.1%), including Spain, with an average FEI value of 69.2. Argentina is the country in the group with the lowest index value (64.5) and Denmark with the highest (79.2). The main difference between this cluster and group 2 is indicator 2 (public funding of NGS), with an average of 74.2, compared to 27.1 in group 2.
- Finally, the only two members of **group 4** are European (Belgium and the Netherlands) and in both cases, the FEI level is similar to the average value of the cluster (89.5). The two distinguishing features of this group are the high funding of NGS (average of 100, compared to 74.2 for group 3), and the share of NGS (60, compared to 11.6 for the previous cluster).

Table 1. Cluster based on Freedom of Education Index 2016 and countries that compose them. Mean, minimum, and maximum values.

Group	N° countries	Countries	FEI 2016					Indicator 2	Indicator 3	Indicator 4
			Mean	Std. Dev.	Minimum	Maximum	Indicator 1			
1	4	Cuba, the Democratic Republic of Congo, Ethiopia, Saudi Arabia.	29.3	6.0	24.4	36.8	42.5	0	72.7	25.7
2	49	<b>Europe and North America:</b> Belarus, Bulgaria, Canada, Croatia, Greece, Italy, Lithuania, Portugal, Romania, Switzerland, Turkey.	53.6	4.7	43.9	62.5	89.6	27.1	91.2	11.7
		<b>Africa:</b> Angola, Kenya, Nigeria, Rwanda, Senegal, South Africa.								
		<b>Arab States:</b> Algeria, Egypt, Jordan, Lebanon, Morocco.								
		<b>Asia and the Pacific:</b> Bangladesh, China, India, Indonesia, Iran (Islamic Republic of), Japan, Malaysia, Pakistan, Philippines, Sri Lanka, Thailand, Tanzania, Vietnam.								
3	26	<b>Latin America and the Caribbean:</b> Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Uruguay, Venezuela.	69.2	4.4	64.5	79.2	94.2	74.2	95.2	11.6
		<b>Europe and North America:</b> Austria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Norway, Poland, Russian Federation, Slovakia, Slovenia, Spain, Sweden, United Kingdom, United States.								
		<b>Asia and the Pacific:</b> Australia, New Zealand, Republic of Korea.								
4	2	<b>Latin America and the Caribbean:</b> Argentina, Chile, Guatemala, Peru.	89.5	0.2	89.3	89.6	95	100	97.5	60.0
Total	81	<b>Europe and North America:</b> Belgium, Netherlands.	58.3	11.8	24.4	89.6	88.9	42.7	91.9	13.5

Source: Own elaboration with OIDEI data

**Table 2. Distribution of clusters by region**

Group level of educational freedom		Region					Total
		Africa	Arab States	Asia and the Pacific	Europe and North America	Latin America and the Caribbean	
<b>1</b>	Number of countries	2	1	0	0	1	4
	%	50.0	25.0	0.0	0.0	25.0	100.0
<b>2</b>	Number of countries	7	5	12	11	14	49
	%	14.3	10.2	24.5	22.4	28.6	100.0
<b>3</b>	Number of countries	0	0	3	19	4	26
	%	0.0	0.0	11.5	73.1	15.4	100.0
<b>4</b>	Number of countries	0	0	0	2	0	2
	%	0.0	0.0	0.0	100.0	0.0	100.0
<b>Total</b>	Number of countries	<b>9</b>	<b>6</b>	<b>15</b>	<b>32</b>	<b>19</b>	<b>81</b>
	%	<b>11.1</b>	<b>7.4</b>	<b>18.5</b>	<b>39.5</b>	<b>23.5</b>	<b>100.0</b>

Source: Own elaboration with OIDEI data.

The following tables show the characteristics of each group in different variables representative of their level of economic development (per capita income and human development index), degree of economic freedom, personal income distribution, performance (quality and equity) of the educational system, and level of satisfaction declared by the population. A remarkably close relationship can be distinguished between the level of educational freedom and the above indicators representing the level of progress, material well-being, and performance of the educational system.

The biggest difference between the first and the last cluster is found in the Gross Domestic Product (GDP) per capita, which is 517.5% higher in cluster 4. In the human development index, the difference is 44.2%, in the Gini index -27.6%, and in the Percentage of income corresponding to the highest 10% of the population it is 26.9%. Regarding the degree of economic freedom, the difference is a notable 32.9%. Finally, the satisfaction with their lives declared by the population is also higher as the group has a higher level of educational freedom.



**Table 3. Average values of economic and social variables for each cluster and differences of the extremes.**

Variable	Group according to educational freedom	Average	Difference between group 1 and 4	Variable	Group according to educational freedom	Average	Difference between group 1 and 4
GDP per capita	1	7,129.4	517.5%	Gini Index	1	38.55	-27.6%
	2	9,678.6			2	39.84	
	3	32,156.7			3	33.28	
	4	44,025.9			4	27.90	
	<b>Total</b>	<b>17,715.2</b>			<b>Total</b>	<b>37.33</b>	
H.D.I.	1	0.64	44.2%	Percentage of income corresponding to the highest 10% of the population	1	n.a.	-26.9% (a)
	2	0.73			2	30.84	
	3	0.89			3	24.97	
	4	0.93			4	22.55	
	<b>Total</b>	<b>0.78</b>			<b>Total</b>	<b>28.13</b>	
Economic freedom	1	58.47	32.9%	Satisfaction with life	1	57.80	31.7%
	2	68.45			2	71.11	
	3	77.39			3	74.57	
	4	77.70			4	76.10	
	<b>Total</b>	<b>71.21</b>			<b>Total</b>	<b>72.34</b>	

(a) Compares group 2 with group 4 given the absence of data for group 1.  
Source: Own elaboration with OIDEI data.

Looking at some features of the educational system, such as its results and relation with wealth, we see that the clusters improve and become more equitable as the level of educational freedom increases. This is the case with the index of social segregation of students in schools, which decreases as the level of educational freedom increases (the social segregation index average of group 4 is 23% lower than that of group 2). Regarding test results, the average math, reading, and science tests of PISA 2015 and 2018 are better among countries with greater educational freedom (+14.8% difference between group 4 and group 2), while the other two representative indicators of the equity of the school system<sup>1</sup> are also clearly more favorable as the degree of educational freedom increases.

<sup>1</sup> Percentage of variance in PISA 2015 and 2018 mathematics, science, and reading test scores explained by family wealth, and the value of “B”, which reflects the relationship between the variation in family wealth and its impact on PISA 2015 and 2018 tests. For both indicators, the higher the value, the less equitable the education system turns out to be as PISA results are more influenced by the level of family wealth.

**Table 4. Values of education system indicators for each cluster and differences of the extremes.**

Variable	Group according to educational freedom	Average	Difference between group 2 and group 4
Social segregation index (a)	1	0.123	-23.3%
	2	0.160	
	3	0.153	
	4	0.123	
	<b>Total</b>	<b>0.155</b>	
PISA 2015 and 2018 results (math, reading, science).	1	n.a.	14.8%
	2	438.28	
	3	484.41	
	4	503.02	
	<b>Total</b>	<b>461.64</b>	
Percentage of variance in PISA scores explained by family wealth.	1	n.d.	-76.6%
	2	6.74	
	3	3.01	
	4	1.58	
	<b>Total</b>	<b>4.81</b>	

(a) The social segregation index measures whether the diversity of students within schools reflects the diversity of students at the country/economy level. The index ranges from 0 to 1, where 0 corresponds to no segregation and 1 to total segregation.

Source: Own elaboration with OIDEL data.

### 1.3. Evolution of the educational freedom since 2002

Attending to the values of the OIDEL freedom of education index, we observe a moderate advance in educational freedom in the world in recent years, going from a level of 53.4 in 2002 to 58.3 in 2016 – see Table 5. All regions except for the Arab States advanced. The region with the highest increase was Africa, with a growth of 12.6%, followed by Latin America and the Caribbean (+7.1%). Despite their progress, it should be noted that both regions had an extremely poor rating in 2002 and even in 2016 are far behind Europe and North America.

**Table 5. Evolution of the average Freedom of Education Index and its indicators (2002-2016).**

	2002					2016					Var. FEI 2016/02 (%)
Region	FEI	Indica- tor 1	Indica- tor 2	Indica- tor 3	Indica- tor 4	FEI	Indica- tor 1	Indica- tor 2	Indica- tor 3	Indica- tor 4	
Africa	41.9	84.4	13.3	66.7	7.0	47.2	88.7	23.3	74.6	15.0	12.6
Arab States	47.9	83.3	15.0	77.8	19.0	47.9	71.67	15.0	96.2	23.0	0.0
Asia and the Pacific	54.9	80.0	41.3	88.7	10.0	57.2	87.3	40.0	93.5	12.0	4.2
Europe	62.6	91.3	53.7	94.8	9.0	65.4	94.0	60.0	95.8	10.0	4.5
North America	60.5	95.0	45.0	95.0	8.0	61.9	95.0	50.0	95.0	8.0	2.3
Ibero-America and the Caribbean	52.4	87.9	34.7	91.3	17.0	56.1	87.9	34.7	91.3	17.1	7.1
<b>World</b>	<b>53.4</b>	<b>87.0</b>	<b>33.9</b>	<b>85.7</b>	<b>12.0</b>	<b>58.3</b>	<b>88.9</b>	<b>42.7</b>	<b>91.95</b>	<b>14.0</b>	<b>9.2</b>
<b>Standard dis.</b>	<b>13.58</b>	<b>15.57</b>	<b>34.26</b>	<b>14.73</b>	<b>13.81</b>	<b>11.79</b>	<b>15.81</b>	<b>28.77</b>	<b>9.78</b>	<b>16.78</b>	<b>-13.2</b>

Source: Own elaboration with OIDEI data.

If we group countries by region, we can see that the FEI score has improved for most of them -see Table 6-. The region with the highest percentage of improvement is the Arab States, where 83.3% of its countries improved their FEI score. In contrast to the global level, 23 countries reduced their FEI value, mainly in Asia and the Pacific, although in general there is a significant percentage of countries that have reduced their FEI score (28.4%).

A positive signal is that, between 2002 and 2016, the average growth in countries that increased their FEI score (+15.4%) is higher than the decrease (-12.2%) experienced by those that reduced their degree of educational freedom.

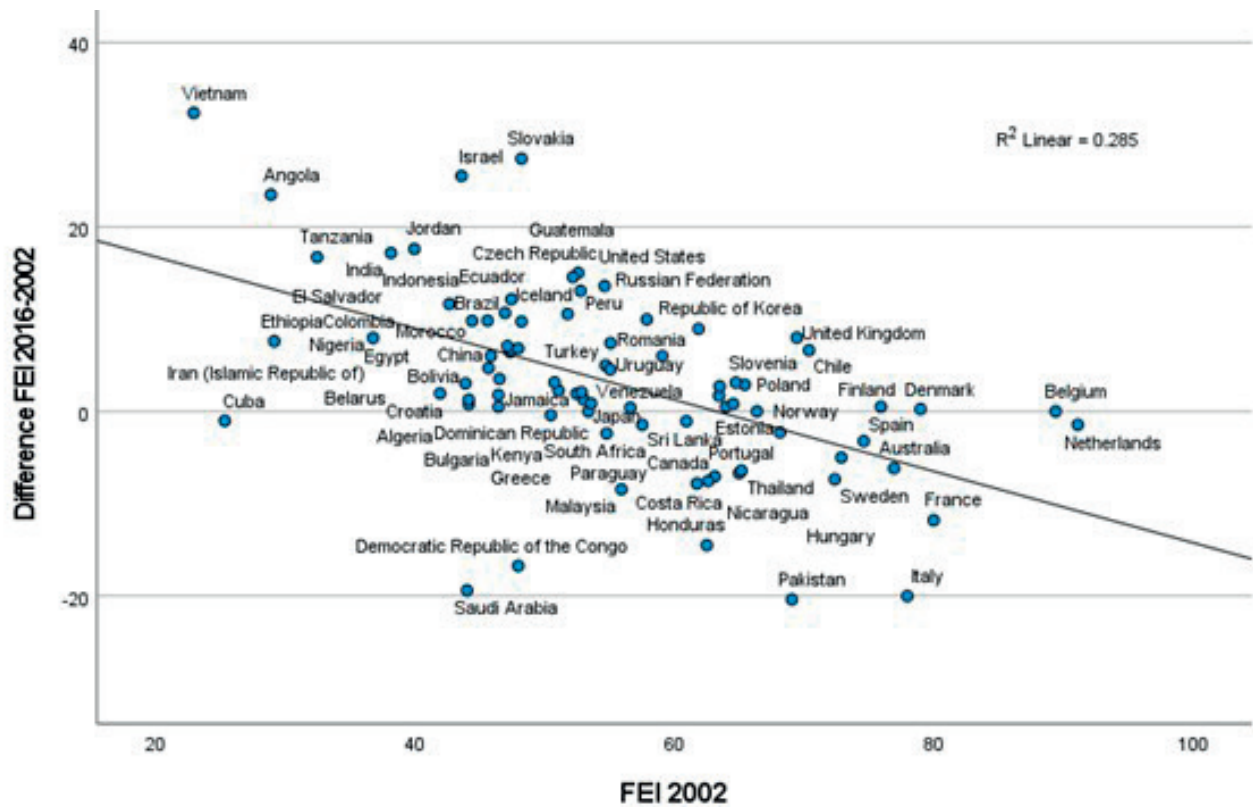
**Table 6. Cross table region and change in the Freedom of Education Index.**

Region		They reduced	Same	They increased	Total
Africa	N	3	0	6	9
	%	33.3	0	66.7	100
Arab States	N	1	0	5	6
	%	16.7	0	83.3	100
Asia and the Pacific	N	6	1	8	15
	%	40	6.7	53.3	100
Europe	N	7	2	21	30
	%	23.3	6.7	70.0	100
North America	N	1	0	1	2
	%	50	0	50	100
Latin America and the Caribbean	N	5	0	14	19
	%	26.3	0	73.7	100
<b>Total</b>	N	23	3	55	81
	%	28.4	3.7	67.9	100
<b>Change in FEI 2016/2022</b>		-12.2%	0	+15.4%	

Source: Own elaboration with OIDEI data.

There is an inverse relationship between the increase in the FEI in recent years and the value of this indicator in 2002, as Graph 1 presents and the decrease in the standard deviation (-13.2%) manifests it. Many of the countries that have made the greatest progress in educational freedom, such as Vietnam, Angola, Tanzania, India, and Jordan, are those that had lower FEI values in 2002 compared to the rest of the countries. However, there are exceptions. Countries such as Cuba, Saudi Arabia, and the Democratic Republic of Congo, have not progressed and have even reduced their degree of educational freedom, despite the low starting level.

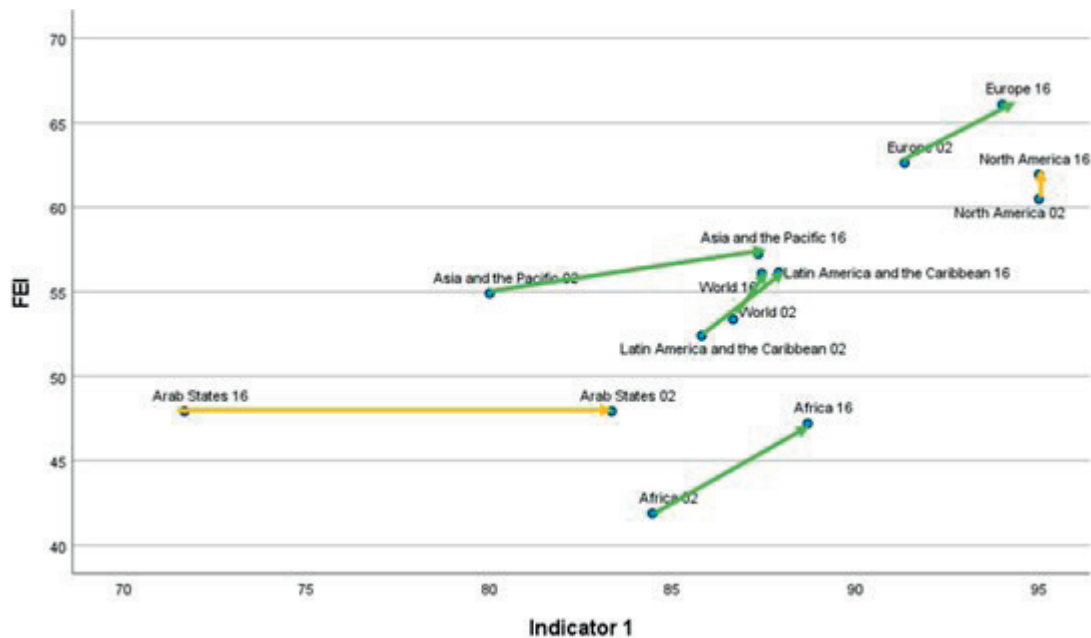
Graph 1: Change in Freedom of Education Index between 2022 and 2016 and the level of the INDEX in 2002



Source: Own elaboration with OIDEI data.

It is worth studying the evolution of the Freedom of Education Index and each of its component indicators. A clear positive trend is displayed in all regions when analyzing the evolution between 2002 and 2016 of this index with its Indicator 1 (legal possibility to create and manage NGS), except in North America, which already had a high value in the initial year, as shown in the Graph 2. The Arab States, despite improvements in the legal possibility of creating and managing NGS, stabilized its score in the FEI, because countries that were not part of the 2002 edition have been included in the 2016 study.

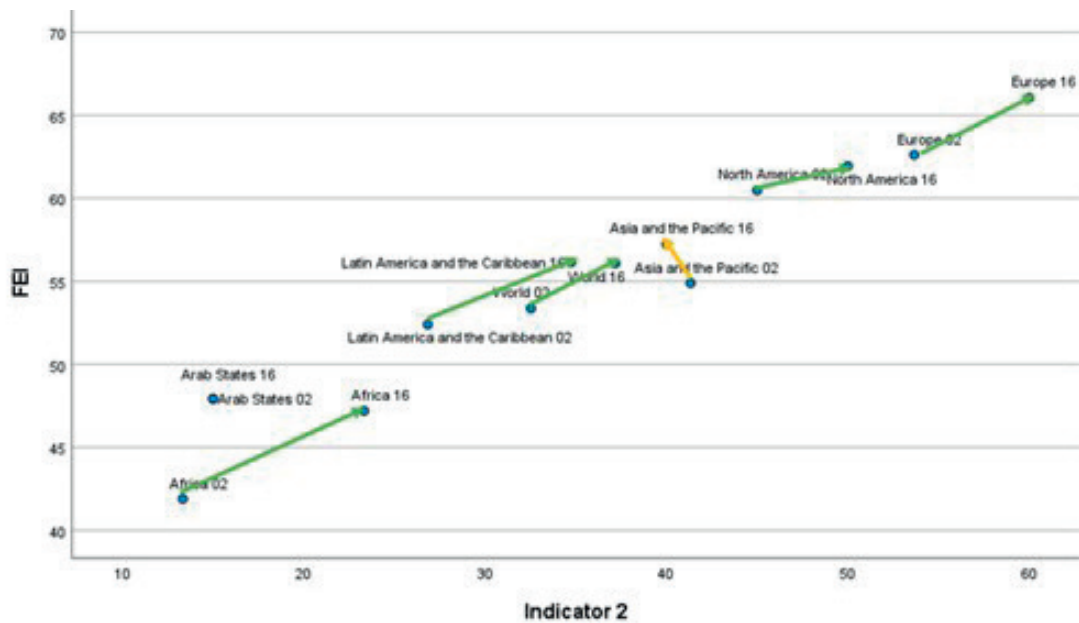
Graph 2: Evolution of Freedom of Education Index and Indicator 1 between 2022 and 2016 by region.



Source: Own elaboration with OIDEL data.

When it comes to the relationship between the FEI and its indicator 2 (public funding NGS) a positive trend of this relationship is repeated for most regions. Exceptions are Asia and the Pacific, where there is a slight involution, and the Arab States, which remain stable.

Graph 3: Relationship between the Freedom of Education Index and its Indicator 2 (2016).



Source: Own elaboration with OIDEL data.

## 1.4. The state of the different freedoms according to regions of the world

This section analyzes the levels of the diverse types of liberties (economic, political, and educational) in the different regions of the world, which will make it possible to identify the extent to which some geographical areas have a greater or lesser level of freedom, and according to which liberty is considered.

Economic freedom can be extracted from The Heritage Foundation's Index of Economic Freedom, which measures on scales from 0 to 100, obtaining an average of the numerous variables grouped into four sections:

1. Rule of law (property rights, governmental integrity, judicial effectiveness)
2. Size of government (government spending, tax burden, fiscal health)
3. Regulatory efficiency (business freedom, labor freedom, monetary freedom)
4. Open markets (freedom of trade, freedom of investment, financial freedom)

The Human Freedom Index, published by the Fraser Institute, takes into consideration religious freedom, freedom to form political parties, and freedom of expression and communication. This composite index is a measure of freedom understood as the absence of coercive constraint and uses different qualitative options to quantify each aspect of fundamental freedoms.

Regarding religious freedom, the Fraser Institute looks at two aspects. One, the right to practice and choose a religion and to convert peacefully, changing religion, also analyzing the extent to which individuals or groups have freedom of thought, conscience, and religion. Two, the repression of religious organizations by the government.

The analysis of freedom to form and participate in political parties considers barriers to parties, bans on organizations, and the autonomy of opposition parties. Concerning freedom of expression and communication, the Fraser Institute assesses direct attacks on the press, press prisoners, freedom of cultural and academic expression, harassment of journalists, government and internet censorship efforts, and self-censorship.

North America and Europe have the highest freedom average values, while the Arab countries are at the opposite extreme. If we look at the world average level of each type of liberty, freedom of education has one of the least satisfactory general levels, with no region reaching a high value. Religious freedom and freedom to form political parties are on the contrary pole since they are well established in most regions.

**Table 7: The state of freedom in its different dimensions around the world.**

	Freedom of education	Economic freedom	Rule of Law	Religious freedom	Freedom of expression and information	Freedom to form political parties	Mean
Africa	✗ 4.72	! 6.34	✗ 4.19	! 7.82	! 6.26	✓ 8.11	! 6.24
Arab states	✗ 4.79	! 6.30	✗ 4.59	✗ 4.84	✗ 4.76	! 6.27	✗ 5.26
Asia and the Pacific	✗ 5.72	! 6.98	✗ 5.16	! 6.99	! 6.25	! 7.13	! 6.37
Europe	! 6.54	! 7.66	! 6.92	✓ 8.77	✓ 8.45	✓ 9.39	! 7.95
North America	! 6.19	✓ 8.31	! 7.35	✓ 9.83	✓ 9.40	✓ 9.72	✓ 8.46
Latin America and the Caribbean	✗ 5.61	! 6.88	✗ 4.54	✓ 9.06	! 7.44	✓ 9.28	! 7.14
World	✗ 5.83	! 7.12	✗ 5.58	✓ 8.13	! 7.31	✓ 8.57	! 7.09

Source: Own elaboration with data from OI DEL and Fraser Institute (Human Freedom Index).



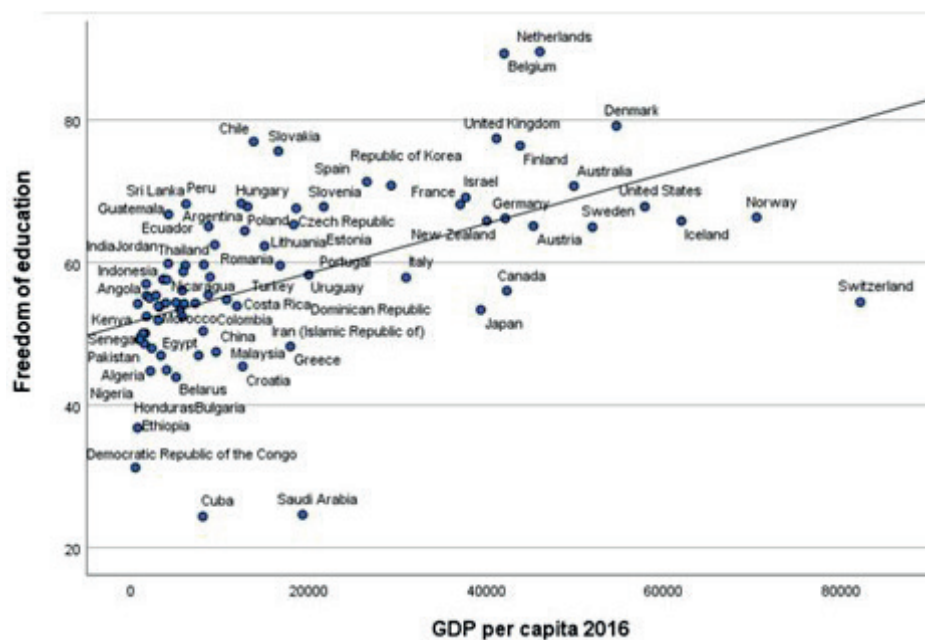
## 2. Explaining the different levels of freedom of education by country

### 2.1 Relationship between FEI and various indicators

This section studies the relationship between educational freedom and the different elements that can influence it. The analysis of the main representative indicators of political, economic, and religious freedom has the aim of understanding which characteristics are associated with the highest or lowest level of educational freedom among the countries of the world.

#### a) Level of development: GDP p.c., HDI

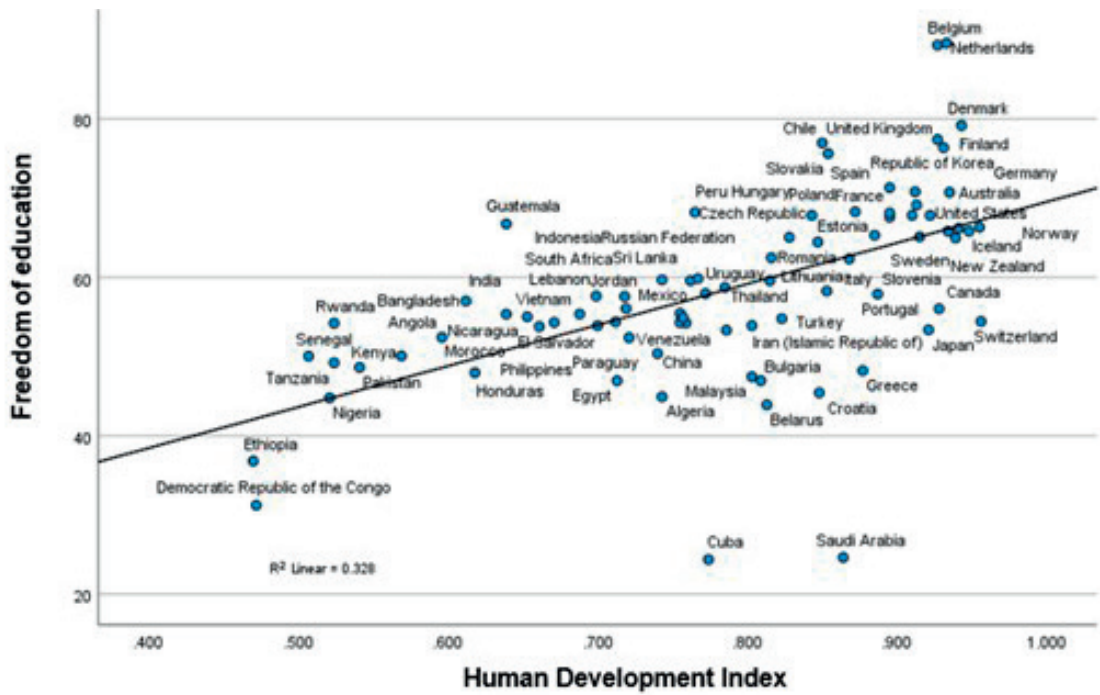
Graph 4: Ratio of Freedom of Education Index to GDP per capita (2016).



Source: Own elaboration with OIDEI and World Bank data.

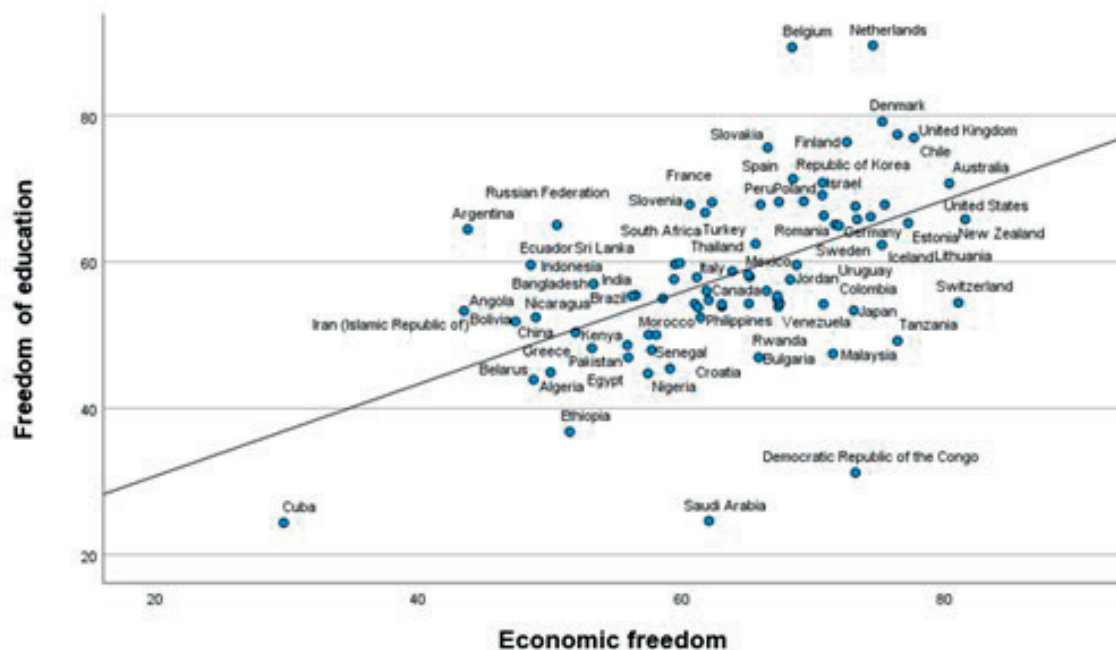
As can be seen in Graph 4, at low levels of GDP per capita, the positive trend between this indicator and the FEI is clear. However, above approximately US\$ 40 000, this relationship gets blurred and, to a certain extent, even inverted.

Graph 5: Relationship between the Freedom of Education Index and the Human Development Index



b) Economic freedom

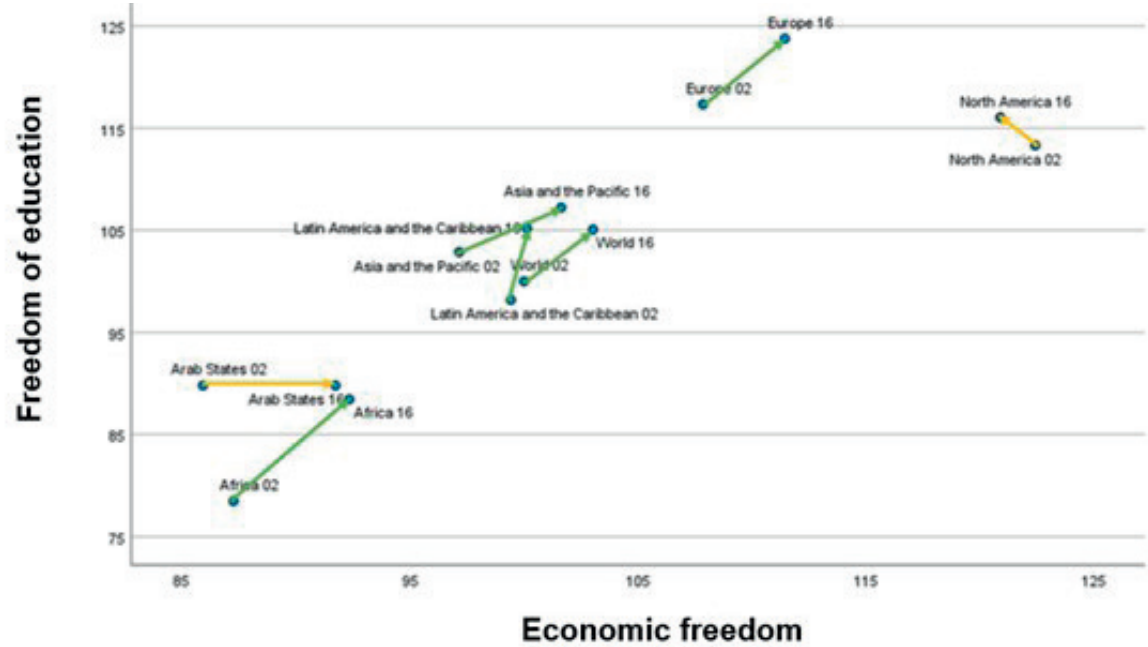
**Graph 6: Relationship between the Freedom of Education Index and economic freedom**



Source: Own elaboration with data from OIDEI and The Heritage Foundation.

The relationship between economic and educational freedom is positive and some countries have changed their positions in comparison with their 2002 scores. The Netherlands and Belgium have dominant positions in the Educational Freedom Index, visibly deviating from the regression. It is also notable that Cuba is an outlier, occupying one of the worst positions in both indices.

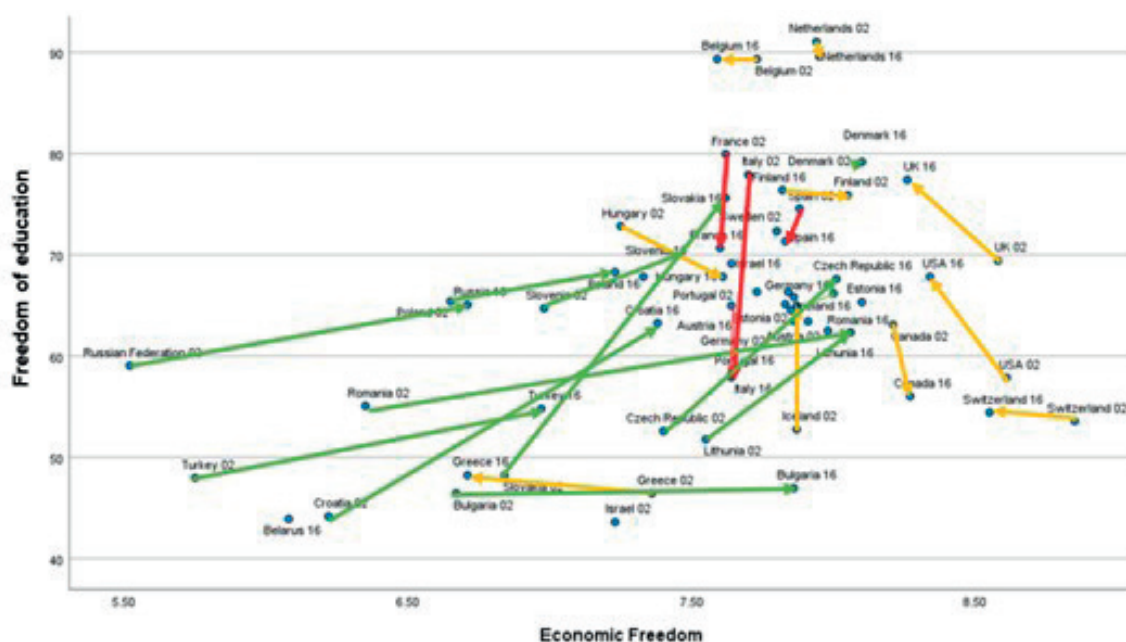
Graph 7: Relationship between the Freedom of Education Index and economic freedom by region.



Source: Own elaboration with data from OI DEL and The Heritage Foundation.

Graph 7 shows the evolution of the average values by region between the selected time. As can be seen, all regions improved their score on the freedom of education index during the first decades of the 21st century (on average), except for the Arab states. Similarly, most regions improved in economic freedom (on average), except for North America. We now proceed to analyze each region separately, to clarify and visualize the performance of each country.

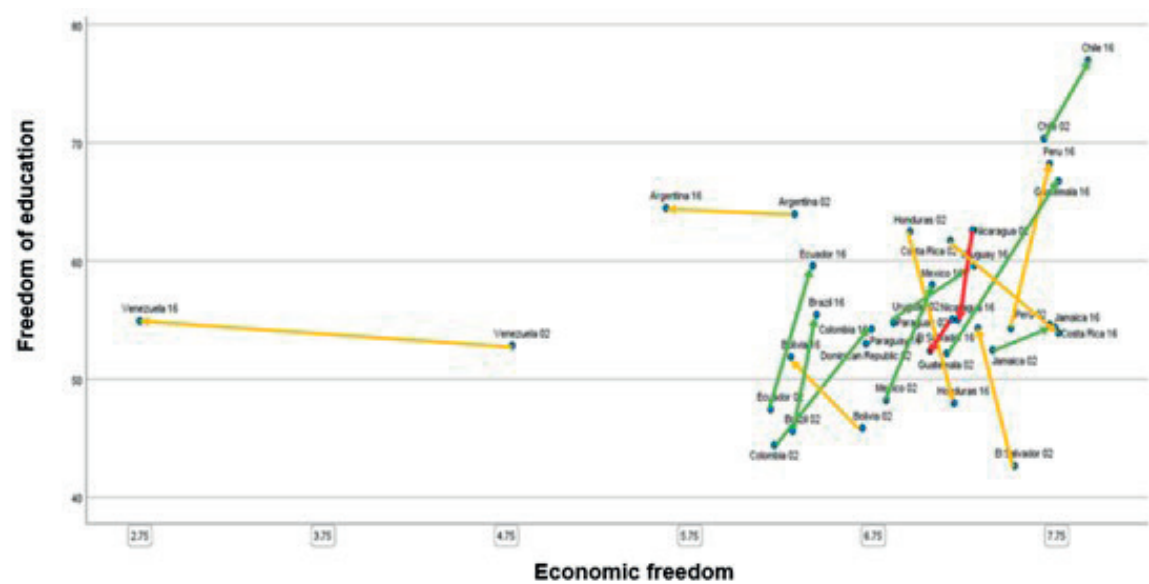
Graph 8: Relationship between the Freedom of Education Index and Economic Freedom: Europe and North America



Source: Own elaboration with data from OIHEL and The Heritage Foundation.

Europe and North America make up the largest region in the study. Some countries have a considerable overall economic improvement (Russia, Turkey, Romania, Croatia, Bulgaria, Poland, Lithuania, the Czech Republic, and Slovakia). Other countries had better development in 2002 for both indices compared to their scores in 2016, such as France, Italy, and Spain. Another group improved educationally, but stepped back economically (Belgium, United Kingdom, United States, and Switzerland), while others performed the other way around (Finland, Hungary, and the Netherlands).

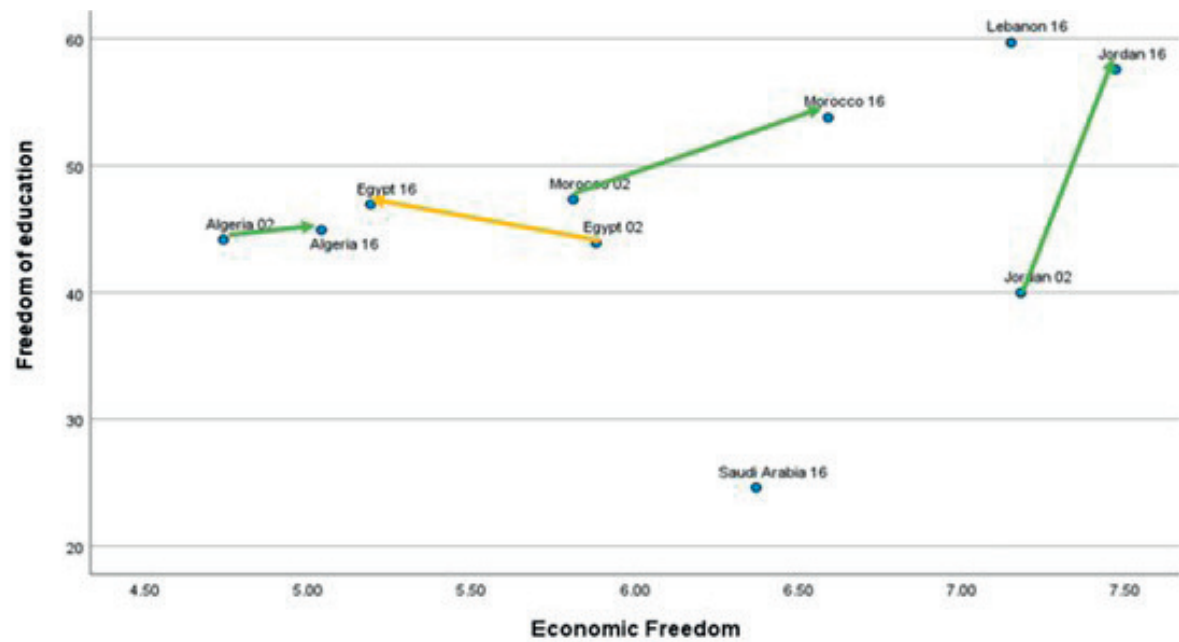
Graph 9: Relationship between the Freedom of Education Index and Economic Freedom: Latin America and the Caribbean



Source: Own elaboration with data from OIDEI and The Heritage Foundation.

The Latin American and Caribbean region presents, in general, an increasing trend in FEI scores, led by Chile and Guatemala. It is also worth noting the case of Venezuela, which is separated from the average value of the group in economic freedom, showing even worse performance for the second observation (although its educational freedom increased slightly). Argentina lags the average values in economic freedom, with notable involution. Also noteworthy is the case of Nicaragua, which worsened in both metrics.

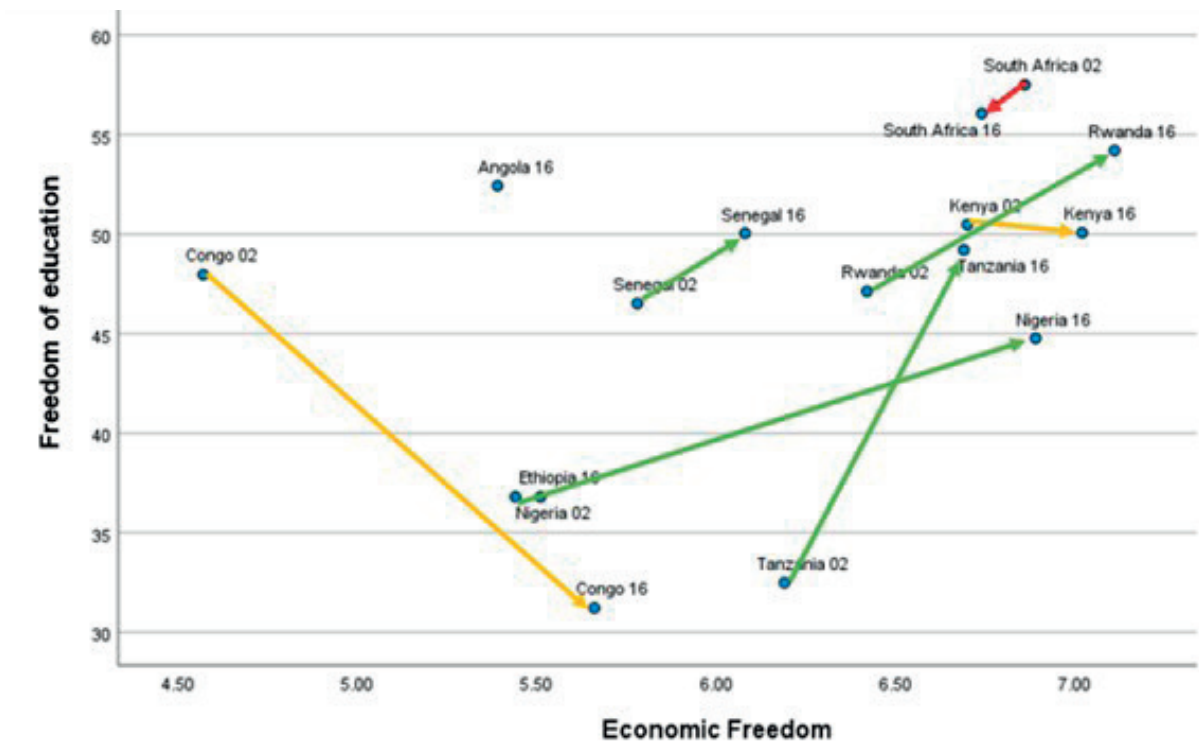
Graph 10: Relationship between the Freedom of Education Index and Economic Freedom: Arab States



Source: Own elaboration with data from OIDEL and The Heritage Foundation.

Data on the Arab States are limited to a few countries. An increasing trend in economic freedom is noted for Algeria, Morocco, and Jordan whereas Egypt demonstrated an increase in the FEI score and a decrease in Economic Freedom.

Graph 11: Relationship between the Freedom of Education Index and Economic Freedom: Africa

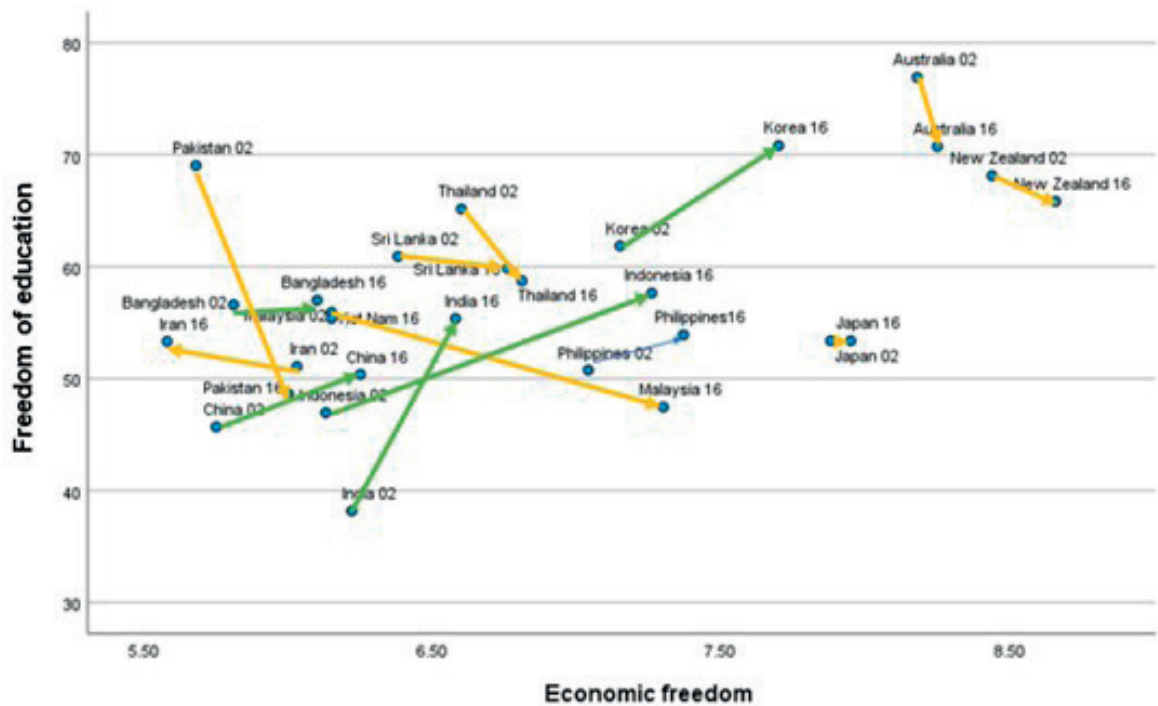


Source: Own elaboration with data from OIDEL and The Heritage Foundation.

Graph 11 shows the evolution of African countries. The growth trend is shared by most countries (Nigeria, Tanzania, Rwanda, and Senegal), improving both scores. Despite this, countries such as Kenya and Congo lowered their FEI score, while improving economically. In contrast, South Africa worsened its performance in both indices.



Graph 12: Relationship between Freedom of Education Index and Economic Freedom: Asia and the Pacific

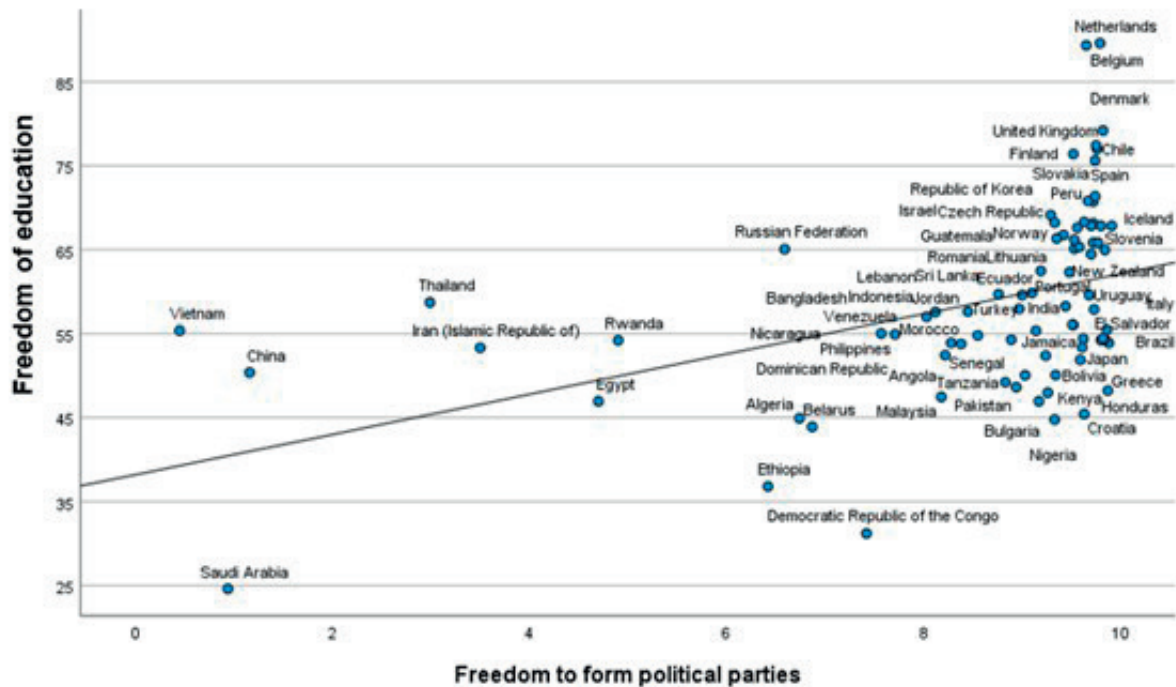


Source: Own elaboration with data from OI DEL and The Heritage Foundation.

Asia and the Pacific, like other regions, described an improving trend, with China, Bangladesh, Korea, India, Indonesia, and the Philippines standing out. Other countries improved economically but had worse educational performance (Pakistan, Malaysia, Sri Lanka, Thailand, Australia, and New Zealand). Japan maintained its FEI score and increased its economic freedom. Iran slightly improved its educational freedom but reduced its economic freedom. Australia and New Zealand, followed by Korea and Japan, are the leaders in the region when it comes to both freedom of education and economic freedom.

c) Freedom to create political parties

Graph 13: Relationship between the Freedom of Education Index and the freedom to create political parties.

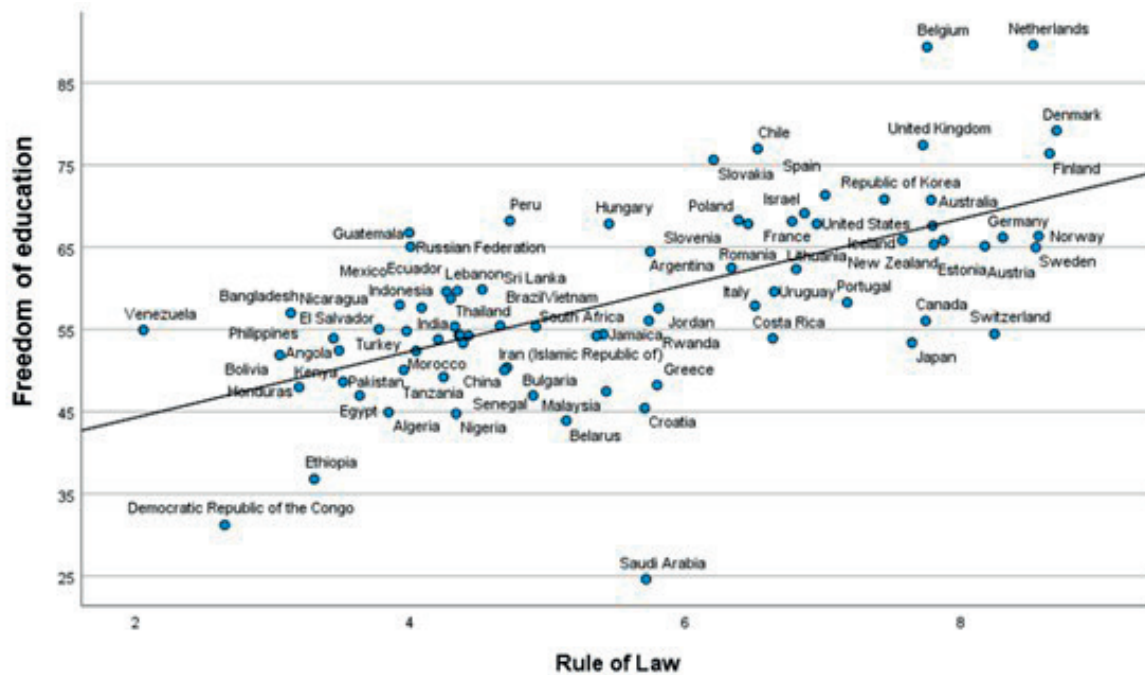


Source: Own elaboration with data from OIDEL and Fraser Institute.

The relationship between educational freedom and the freedom to create political parties is overall positive. The political one is mostly spread throughout the world, with a high score for most countries, the reason why they are concentrated in the right area of the graph. In contrast, less democratic countries, such as China, Vietnam, or Saudi Arabia, are outside the regression line and much further behind concerning this freedom.

As for the rule of law, it is found to be better distributed and adjusted to the regression line ( $R^2=0.389$ ). This shows that the freedom of education and the rule of law present a significant correlation coefficient and that both freedoms share a positive relationship. We have clear examples that fall out of the estimation, such as the Netherlands and Belgium, given their exceptional results on the freedom of education index. On the contrary, countries such as Saudi Arabia, Ethiopia, and the Democratic Republic of Congo are well below their corresponding freedom of education score, considering their performance on the “Rule of Law” metric.

Graph 14: Relationship between the Freedom of Education Index and the Rule of Law

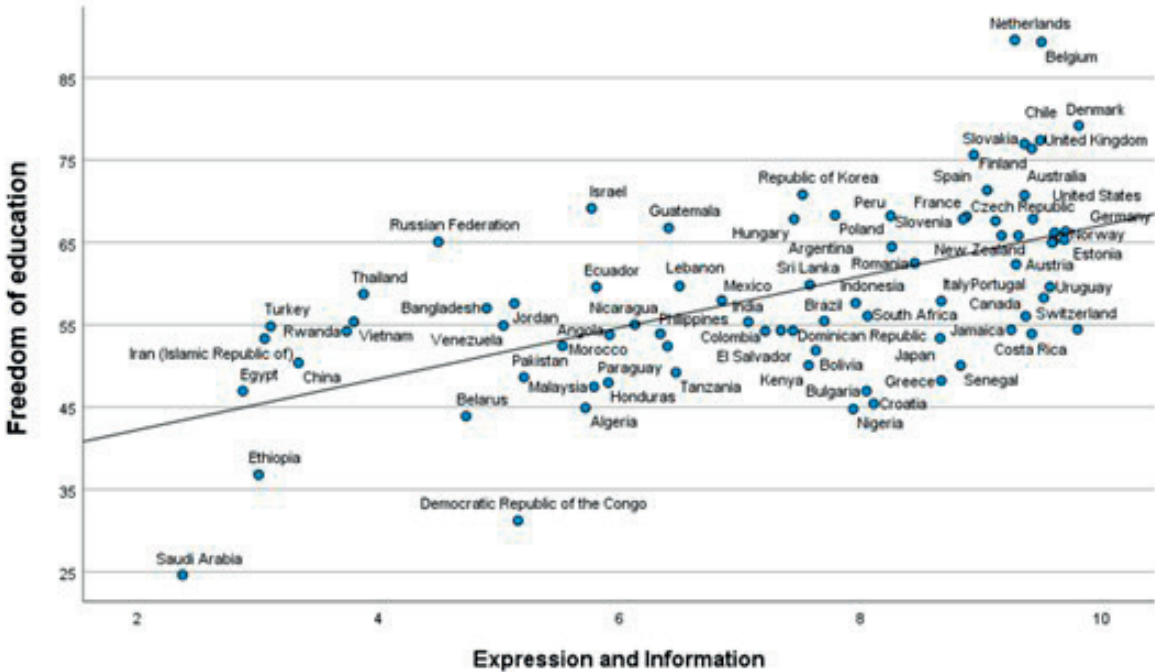


Source: Own elaboration with data from OIDEL and Fraser Institute.

#### d) Freedom of information

The positive relationship between freedom of education and freedom of expression and information can be seen in Graph 15. Countries such as the Philippines, Sri Lanka, Romania, and Nicaragua fit the regression line perfectly. However, other countries deviate considerably from their expected value, such as the Netherlands and Belgium, contrasting with Ethiopia, the Democratic Republic of Congo, and Saudi Arabia. These are the countries of greatest particularity in most of the joint analyses of freedoms, given their atypical performance on these indicators.

Graph 15: Relationship between the Freedom of Education Index and freedom of expression and information

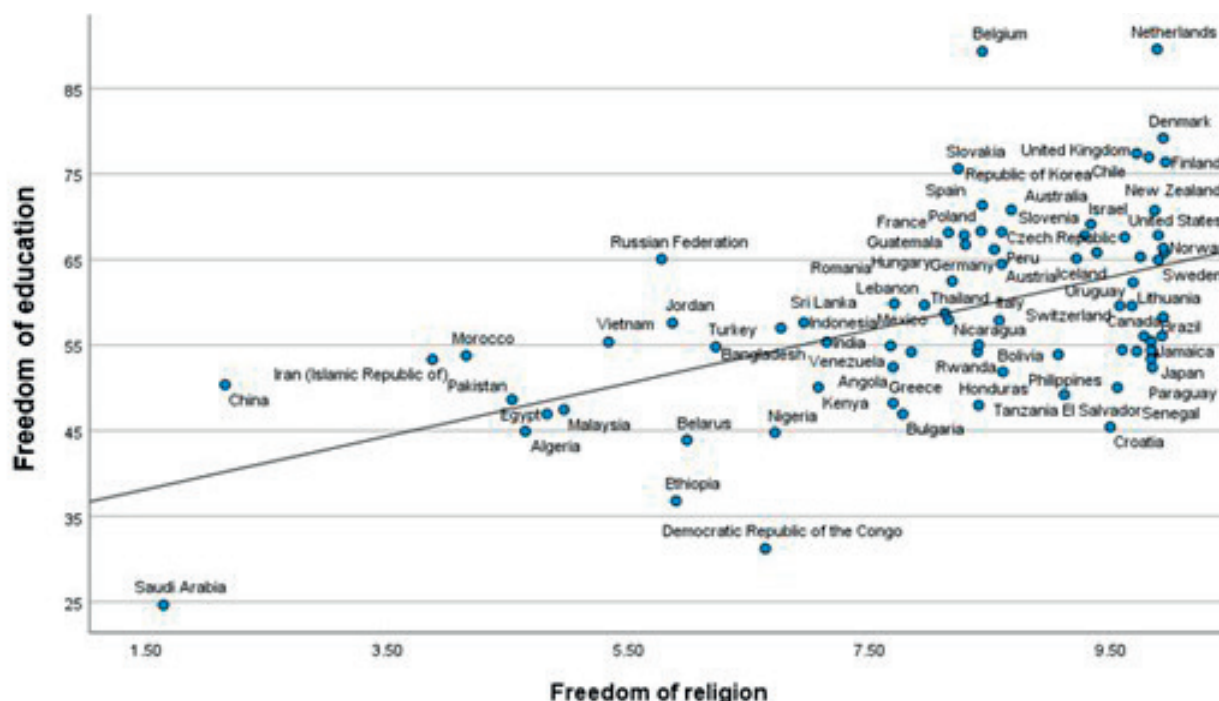


Source: Own elaboration with data from OIDEL and Fraser Institute.

e) Religious freedom

A positive relationship is also shown between religious and educational freedom. Saudi Arabia, as has been observed throughout this study, has extremely poor results for all freedoms, ranking last in most of them. In religious freedom, this country is accompanied by China, both far from the next value.

Graph 16: Relationship between Freedom of Education Index and Religious Freedom



Source: Own elaboration with data from OIDEL and Fraser Institute.

## 2.2. Correlations between variables representative of freedoms

The results of the bivariate correlations of the values of the above variables and the GDP p.c. of each country with the FEI and its components are shown in Table 8. The main conclusions we can draw are:

- The FEI is strongly correlated in the set of variables representative of the different forms of freedom, as well as with the level of economic development.
- The strongest association of FEI Indicator 1 (legal possibility to create and manage non-governmental schools) is observed with the proxy variable for religious freedom.
- The variable most strongly associated with Indicator 2 (public financing of NGS) is that representing the proper functioning of the rule of law, followed by the level of economic freedom.
- Indicator 3, which describes the Net Enrollment Rate in primary education, is also strongly associated with the functioning of the rule of law.
- Finally, Indicator 4 (quota corresponding to the NGS) does not show any significant association with the variables studied.

Table 8: Bivariate correlations: Freedom of Education Index indicators, GDP pc, and political and religious freedoms.

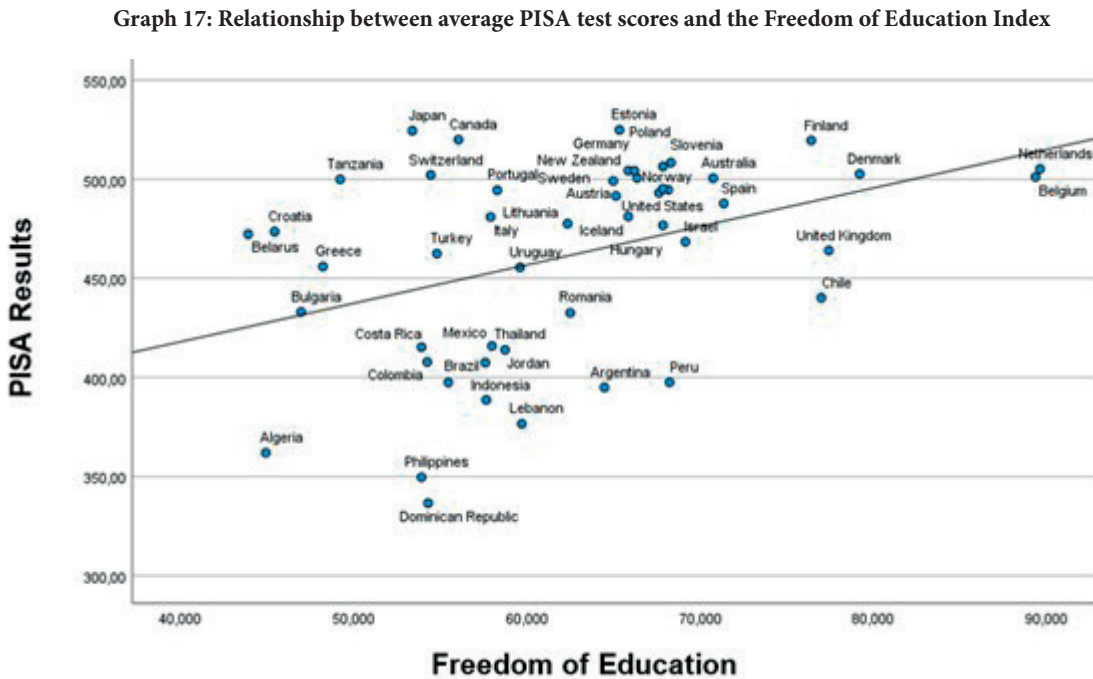
	FEI 2016	Indicator 1	Indicator 2	Indicator 3	Indicator 4	GDP per capita 2016	Economic freedom 2016	Rule of law	Religious freedom	Freedom of expression and information
FEI 2016	1									
Indicator 1	.594**	1								
Indicator 2	.912**	.347**	1							
Indicator 3	.448**	0.026	.320**	1						
Indicator 4	0.186	0.096	0.083	-.326**	1					
GDP per capita 2016	.518**	0.106	.557**	.391**	-0.046	1				
Economic freedom 2016	.532**	.269*	.524**	.328**	-0.079	.643**	1			
Rule of law	.624**	0.127	.643**	.495**	-0.115	.850**	.732**	1		
Religious freedom	.527**	.540**	.455**	0.158	0.02	.435**	.563**	.496**	1	
Freedom of expression and information	.578**	.392**	.553**	.234*	-0.015	.590**	.674**	.709**	.772**	1
Freedom to form political parties	.442**	.461**	.392**	0.048	0.081	.328**	.481**	.358**	.736**	.780**

Source: Own elaboration based on data from OIDEL, The Heritage Foundation, and Fraser Institute (Human Freedom Index).

### 3. Relationships between educational freedom, performance, and equality of opportunity

#### 3.1 Performance

In a previous section of this study, it was found that freedom of education is positively associated with better student results in international tests that measure the quality of education systems, such as PISA. In this sense, it is possible to explain the average scores in the PISA tests from the FEI value, obtaining a coefficient corresponding to the FEI of 1.941, and significant at 99%, given the p-value of 0.004. The relationship between both variables is shown in Graph 17.



Source: Own elaboration with OIDEI and OECD data.

To analyze the possible relationship between social segregation in school and the individual indicators of the index of educational freedom that could influence it (indicator 2 and indicator 4), four equations have been estimated, including in three of them as control variables the average economic, cultural, and educational level (ESCS) of each country and the geographic region.

**Table 9: Equation of results obtained in PISA tests (mathematics, reading, science)**

	Model 1 R <sup>2</sup> = 0.33 N 49	Model 2 R <sup>2</sup> = 0.44 N 49	Model 3 R <sup>2</sup> = 0.55 N 49	Model 4 R <sup>2</sup> = 0.75 N 49
	B coefficient values			
Constant	428.601***	482.574***	409.946***	438.439***
Indicator 2	0.945**	0.139	0.549**	0.077
Indicator 4	-1.038**	-0.586**	-0.390	-0.242
ESCS		-66.468***		56.285***
Asia and Pacific			18.233	40.848
Europe y North America			49.878**	46.708*
Latin America and the Caribbean			-17.758	23.419

\* p > 0.1; \*\* p >0.05; \*\*\* p > 0.01

Source: Own elaboration with OIDEL and OECD data.

Although in the first equation (Model 1), there is a positive association between Indicator 2 (public financing of NGS) and a negative association with Indicator 4 (NGS quota), these relationships lose consistency when including the cultural and economic level of the country and the geographic region as control variables.

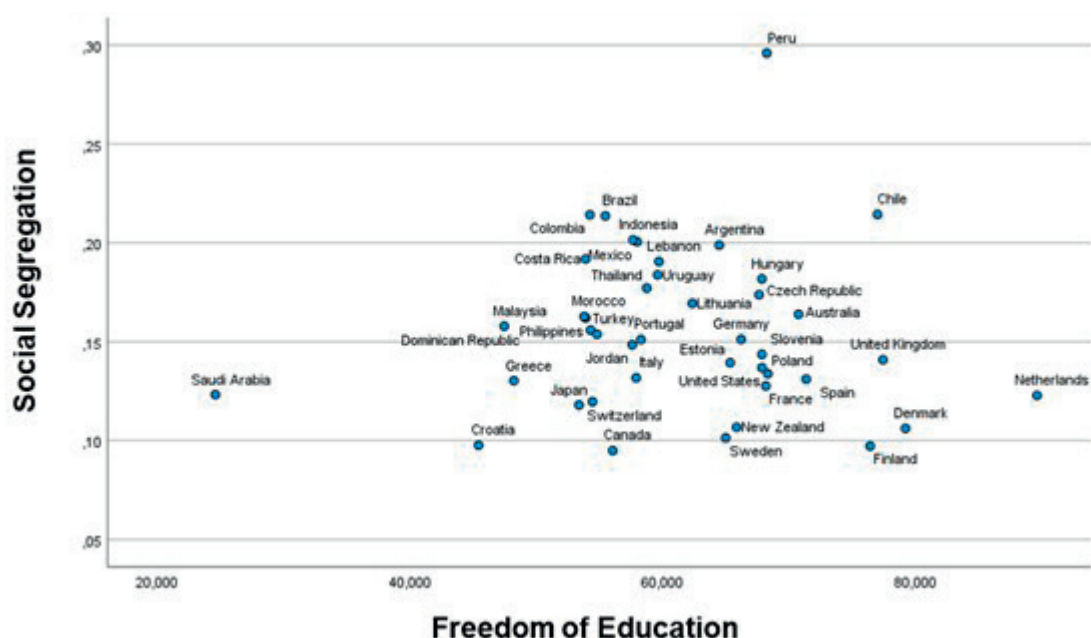
### 3.2 Equity and social segregation in schools

The first aspect analyzed has been the possible relationship between freedom of education and social segregation<sup>2</sup> existing in the schools of each country, according to PISA 2018, given that it is common to consider that private education tends to generate greater segregation. Graph 18 brings forward the absence of association between both variables.

2 The social segregation index measures whether the diversity of students observed within schools reflects the diversity of students observed at the country level. The index ranges from 0 to 1, where 0 corresponds to no segregation and 1 to total segregation (OECD, 2019).



Graph 18: Social segregation and Freedom of Education Index



Source: Own elaboration with OIDEI and OECD data.

To analyze the possible relationship between social segregation in schools and the individual indicators of the freedom of education index that could influence it (indicator 2 and indicator 4), four equations were estimated, including per capita income and geographic region as control variables in three of them.

Table 10. Equations of social segregation in schools.

	Model 1 $R^2 = 0.12$ N 42	Model 2 $R^2 = 0.44$ N 42	Model 3 $R^2 = 0.53$ N 42	Model 4 $R^2 = 0.66$ N 42
	B coefficient values			
Constant	15.343***	16.903***	19.827***	19.960***
Indicator 2	-0.021	0.025	0.08	0.028
Indicator 4	0.80**	0.051	0.028	0.028
GDP pc		-0.00014***		-0.0001***
Arab States			-5.280**	-5.043**
Asia and Pacific			-4.900**	-3.664**
Europe and North America			-7.225***	-5.352***

\*  $p > 0.1$ ; \*\*  $p > 0.05$ ; \*\*\*  $p > 0.01$

Source: Own elaboration with OIDEI and OECD data.

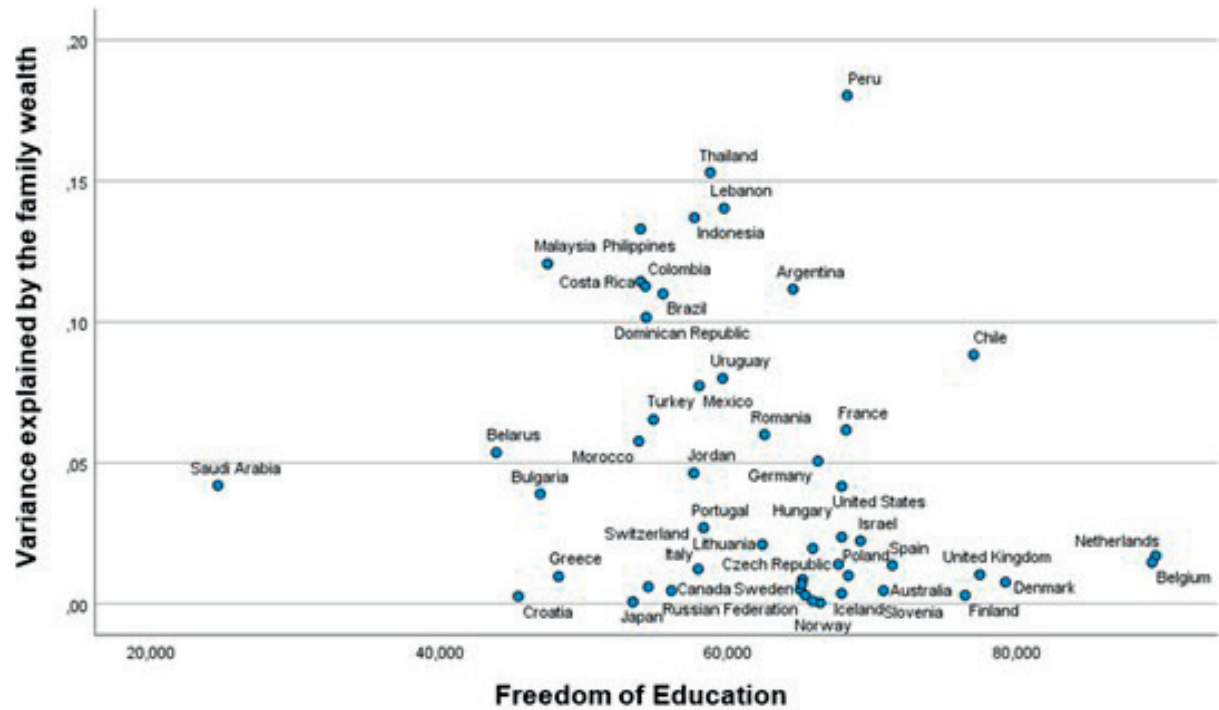
Considering the results, we must rule out the possible association between both variables, since, although Model 1 shows a positive association between segregation in Indicator 4, this disappears if we include a geographic region or per capita income as control variables. A strong association was found between income level and geographic region.

To estimate the relationship between FEI and educational equity, the first step consisted of calculating the influence that the family wealth<sup>3</sup> of each student has on math, reading, and science test scores in PISA 2018, by estimating the following equation:

$$PISA_{(m,l,c)} = c + B_1 \times WEALTH$$

From this estimate, we obtained the coefficient of determination of the above equation, which measures what percentage of the variance of the results is explained by the level of family wealth in each country. Graph 19 shows the values of this indicator, representative of the lack of equity, with the index of educational freedom, without showing a relationship between the two variables.

Graph 19: Variance explained by family wealth and Freedom of Education Index.



Source: Own elaboration with OIDEI and OECD data.

3 The household wealth index in PISA is derived from students’ information on the availability at home of an Internet link, a room of their own, the number of televisions, cars, rooms with bath or shower, smartphones, computers (desktop, laptop, or notebook), tablets, e-readers, that they have at home. In addition, countries added three specific household items that were considered appropriate measures of household wealth within the country context.

As was done previously, to analyze the possible relationship between the representative indicators of educational equity and the individual indicators that make up the freedom of education index, four equations have been estimated, including per capita income and geographic region as control variables.

**Table 11: Equations of the variance explained by family wealth in PISA 2018.**

	Model 1	Model 2	Model 3	Model 4
	R <sup>2</sup> = 0.25	R <sup>2</sup> = 0.45	R <sup>2</sup> = 0.59	R <sup>2</sup> = 0.66
	N 51	N 51	N 51	N 51
	B coefficient values			
Constant	6.807***	8.023*	11.106*	11.032**
Indicator 2	-0.072***	-0.024	-0.033*	-0.010
Indicator 4	0.111***	0.085**	0.052	0.050
GDP pc		-0.0001***		0.00008**
Arab States			-4.899	-4.549*
Asia and Pacific			-2.332	-1.245
Europe and North America			-7.693***	-6.169***

\* p > 0.1; \*\* p > 0.05; \*\*\* p > 0.01

Source: Own elaboration with OIDEL and OECD data.

According to the results obtained, Indicator 2 is statistically significant in two of the equations and with a negative sign, indicating that when the state subsidizes private schools its education system becomes more equitable. Indicator 4 is also significant in two other equations, although in this case, the sign is the inverse, indicating that the higher the share of non-state schools, the less equitable the system.

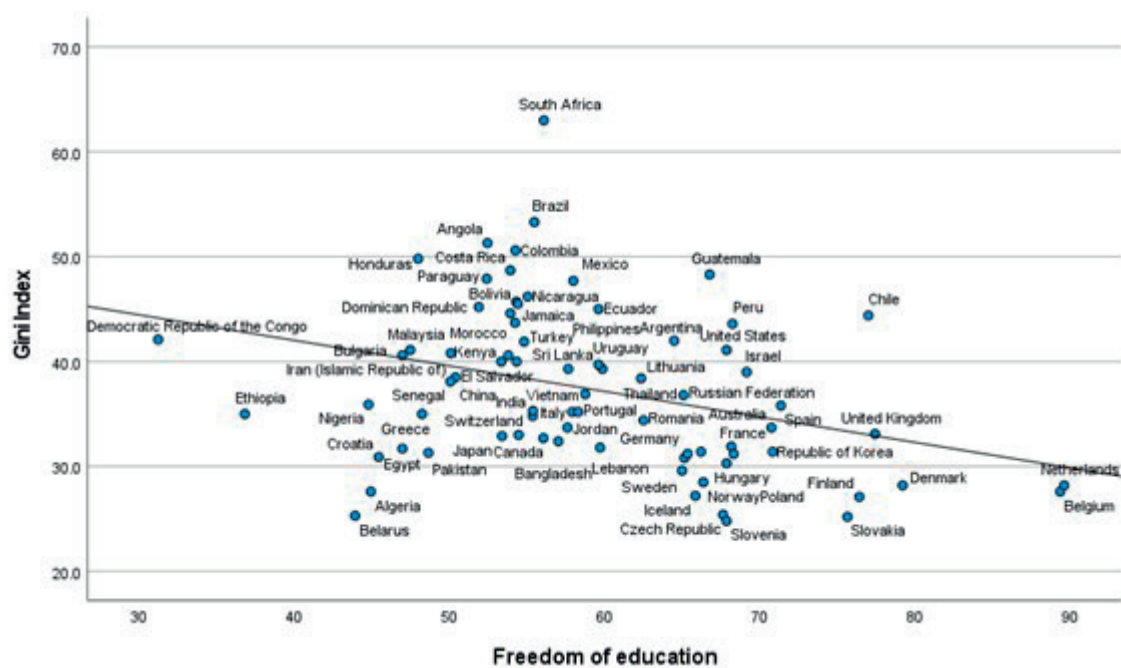
The association between per capita income and equity is positive, although if we include the regions as variables, it becomes negative, making this relationship ambiguous. Finally, concerning the coefficients of the regions, the greater equity that characterizes the countries of Europe and North America is notable, with a level of significance at 1% in both equations.

In conclusion, it can be stated that, although global freedom of education is independent of equity, two associations have been identified, a positive one between equity and Indicator 2 (public funding of NGS), and another, of inverse sign, with Indicator 4 (share of students in NGS over the total).

### 3.3. Income distribution

A final aspect analyzed is the possible relationship between freedom of education and income distribution. The next graph, which relates educational freedom to income inequality, measured by the Gini index<sup>4</sup>, shows that as higher is the educational freedom, the society is the more egalitarian.

Graph 20: Relationship between the Freedom of Education Index and the Gini Index

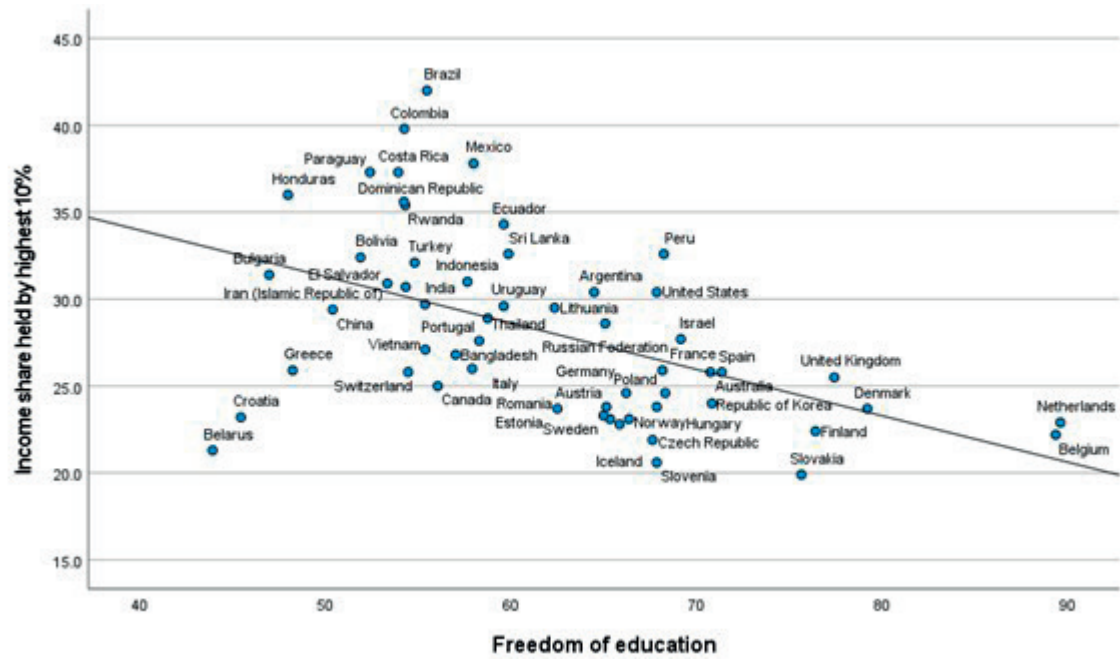


Source: Own elaboration with OIDEI and World Bank data.

The positive relationship between income distribution and freedom of education can be verified if another representative indicator of the first variable is used, such as the percentage of income held by the richest 10% of the population -see Graph 21.

<sup>4</sup> This index takes a value between 0 and 100. The closer the Gini coefficient is to 100, the more unequal the distribution.

Graph 21: Relationship between the percentage of income earned by the top 10% of the population and the Freedom of Education Index.



Source: Own elaboration with data from OIDEI and World Bank.

To empirically test the relationship between each FEI indicator and personal income distribution, four equations have been estimated. In these, the dependent variable is the value of the Equity factor, calculated from the Gini index, and the percentage of income accumulated by the 10% of the population with the highest income. As independent variables, together with Indicators 2 and 4 of the FEI, per capita income and geographic region have been included.

Table 12 shows the robust positive association between Indicator 2 (public financing of NGEs) and greater income distribution. In all equations, this variable is statistically significant at 1% in two equations and 5% in the other two.

**Table 12. Personal income distribution equations**

	Model 1	Model 2	Model 3	Model 4
	R <sup>2</sup> .30	R <sup>2</sup> .38	R <sup>2</sup> .71	R <sup>2</sup> .71
	N 56	N 56	N 56	N 56
	B coefficient values			
Constant	0.804***	0.869***	1.63***	1.627**
Indicator 2	-0.019***	-0.013**	-0.008***	-0.008**
Indicator 4	0.013	0.012	-0.001	-0.001
GDP pc		-0.000016**		0.000002
Africa			-1.511	-0.158
Asia and Pacific			-1.216***	-1.214***
Europe and North America			-1.727***	-1.696***

\* p > 0.1; \*\* p > 0.05; \*\*\* p > 0.01

Source: Own elaboration with OIDEI and World Bank data.

On the one hand, Indicator 4 (share of NGS) appears irrelevant in all equations, so empirically it is proven that there is no association between the presence of non-state schools and income inequality. On the other hand, the higher income distribution in Europe and North America and Asia and the Pacific is significant.

## 4. In conclusion: reasons to move towards greater educational freedom.

Given the analyses carried out in this report, some conclusions can be drawn that reinforce the desirability of moving towards greater educational freedom for several reasons:

1. **Respect for the rights of parents.** According to the Universal Declaration of Human Rights, the first objective of education is “the full development of the human personality”, and Article 26 states that “parents shall have a prior right to choose the kind of education that shall be given to their children”. Pretending to argue that this right can be implemented in a system of government monopoly is equivalent to talking about democracy in a one-party system (Grau, 2023).
2. **Effects on educational equity and economic inequalities.** This study has shown that there is a direct relationship between educational freedom and equity. Public financing of non-state schools is the best way for the administration to guarantee equality of educational opportunities, social mobility, and more equitable distribution of income. Several studies have shown that non-state education is associated with better labor market insertion and higher wages (Green et al. 2017), even controlling for the effect derived from the higher socioeconomic status of families (Moulin, 2023; Sass et al. 2016).

Making this type of school available to low-income families is desirable as it enhances equity. The countries with the best results in international knowledge tests are those with the least inequality, suggesting the existence of a virtuous circle between equity and efficiency in improving educational outcomes (Freeman, Machin, and Viarengo, 2010). It is important, therefore, to recognize that private education and educational freedom are not synonyms since, if there is no public funding for private education, the improvement in income distribution will not occur.

3. **Higher educational achievement.** Research carried out in recent years has concluded that there is a positive relationship between educational freedom and academic results. Several authors have shown that the competition that non-state schools exert over public schools can promote improvements in test results, with the ultimate consequence of achieving higher educational performance.

This aspect has been studied both internationally (West and Woessmann, 2010), in European countries (Agasisti, 2011; 2013; Sanz-Magallón et al. 2012), and in developing economies (Muralidharan and Sundararaman, 2013; Tooley et al. 2009). Higher educational attainment of the population translates into higher economic growth, as well as notable social improvements (Hanushek and Woessmann, 2012). Furthermore, several studies show the superiority of NGS outcomes when employing differentiated pedagogical methodologies (see, e.g., Cheng et al. 2017; Randolph, J. et al., 2023).

4. **Improving economic efficiency.** The management of educational centers by the public sector often presents a problem of excessive inefficiency-x, due to waste and lower incentives for public employees to reduce costs (Sanz-Magallón et al., 2020; 2022). In the case of Spain, the much lower cost per student at subsidized schools compared to public schools is significant, which in turn is accompanied by better academic results in these NGS (Doncel et al. 2012; Mancebon et al. 2019).

The advantages of non-state centers in terms of greater efficiency may be particularly relevant in developing economies, where public services often present significant quality problems and inefficiencies (Tooley et al. 2009). It should be noted that, nevertheless, in the case of certain European countries, some studies have attributed better management to public schools (Bryson and Green, 2020), which shows that they can significantly improve their performance if certain conditions are met, such as having good teachers, high autonomy and adequate incentives (Hanushek and Woessmann, 2011).



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