



WORLD
ECONOMICS
CUP

World Economics Cup

WEC 2023

“The Way to Recovery and Revival”



WEC 2023

WEC 2023, a global celebration of economic knowledge, reached its pinnacle on October 14, 2023, with the International Final. The finest minds from each continent, selected from a pool of 2284 students spanning 50 countries, came together to compete and represent their nations and regions.

Competitors won both individual and team awards at the WEC 2023.

Individual Awards

World Gold, Silver and Bronze awards are given to TOP 5%, TOP 5%-TOP 20%, TOP 20%-TOP 40% of competitors respectively based on their aggregated scores on "Fundamentals" (individual score), "Deep Comprehension" (individual score) and "Thinking and Innovation" (team score).

Team Awards

World Gold (Top 10), Silver (Top 20), Bronze (Top 30) Awards will be awarded to the participating school teams in a tiered scheme based on their team average of individual aggregated scores. The specific rankings of Global Top 10 school teams will also be announced and recognized.

The names of global top 10 school teams on "Thinking and Innovation" will be announced as well and the winning teams will receive special certificates on this module.

All the competitors will get certificates of participation from WEC.

For environmental protection and easy access, all certificates of WEC 2023 will be e-certificates. Competitors can access their certificates through a web link and could choose to print the certificate directly or download the certificate as a PDF file.

WEC 2023 by the Numbers

4th

Year

5

Continental

50

Participating
Countries
and Regions

421

Participating
Teams

2284

Competitors



Armenia



Austria



Azerbaijan



Bangladesh



Brazil



Cambodia



Canada



China



Colombia



Egypt



Fiji/ South Pacific



Finland



France



Germany



Ghana



Hong Kong, China



India



Indonesia



Italy



Japan



Kazakhstan



Laos



Latvia



Malaysia



Mexico



Monaco



Nepal



New Zealand



Nigeria



Norway



Pakistan



Panama



Poland



Portugal



Romania



Russia



Saudi Arabia



Singapore



South Korea



Sweden



Switzerland



Thailand



the Philippines



Turkey



UAE



Uganda



UK



United States



Vietnam



Zimbabwe



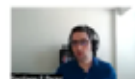
WEC 2023 Online Experience

The WEC 2023 Week online experience was a dynamic and intensive journey that brought together the finest economic minds. Finalist teams, representing their countries and regions, engaged in a diverse range of activities throughout the week. These activities were designed to test their economic knowledge, foster deep comprehension, and apply their skills to real-world challenges.

During the WEC Week, participants completed five objective tests to evaluate their economics fundamentals and deep comprehension, complemented by four insightful online lectures delivered by expert professors. The pinnacle of the WEC Week experience lay in the real-world problem-solving challenge. Participants were tasked with applying their economics knowledge to address critical issues within a tight 24-hour timeframe.

Insights from the model

- There are **winners** and **losers** from migration
- Overall, migration is welfare improving
 - Why? Because it moves workers from low to high productivity areas
- Model makes two simplifying assumptions:
 1. Immigration **does not change** labor demand
 2. Immigrants and natives are **perfect substitutes**



- How do co

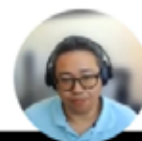
Rational belief

A and B are rational. Moreover, A knows that B is rational. How can we use this assumption?

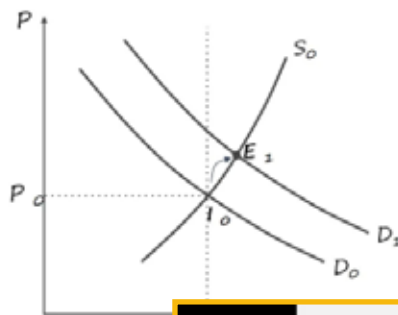
Country B

| Profit convention: A, B (in \$M) | | Country B | |
|-------------------------------------|---------------------|--------------------|---------------------|
| Country A | $q_A = \text{Low}$ | $q_B = \text{Low}$ | $q_B = \text{High}$ |
| | $q_A = \text{High}$ | 100, 100 | 1, 200 |
| | | 200, -5 | 0, 0 |

- B still has a dominant strategy which is to always choose High.
- Since A knows that B is rational, it is correct for A to believe that B will choose High.
- Therefore: A will choose Low.



Comparative Statics



Comparative statics studies how an equilibrium changes when one of its causal determinants changes exogenously.

We study how the market equilibrium changes when the income of the population increases, assuming that the good in question is normal.

We cannot say what path the market will take from E_0 to E_1 .

The drainage tract model

The model. The drainage tract model is due to Wilson (1967):

- There are two bidders, a **neighbor**, developing an oil tract adjacent to the **drainage tract**, and a **non-neighbor**.
- The **neighbor** drills an offset control well; information translate into a random signal X . The neighbor deduces the value $H = \mathbb{E}[V|X]$.
- The **non-neighbor** exclusively relies on public information; only knows the distribution of H : $F(h) = \text{Prob}[H \leq h]$.

First-price auction. The bidders submit sealed bids. The bidder submitting the highest bid exceeding the reserve price R gains the right to extract oil and pays the amount bid.

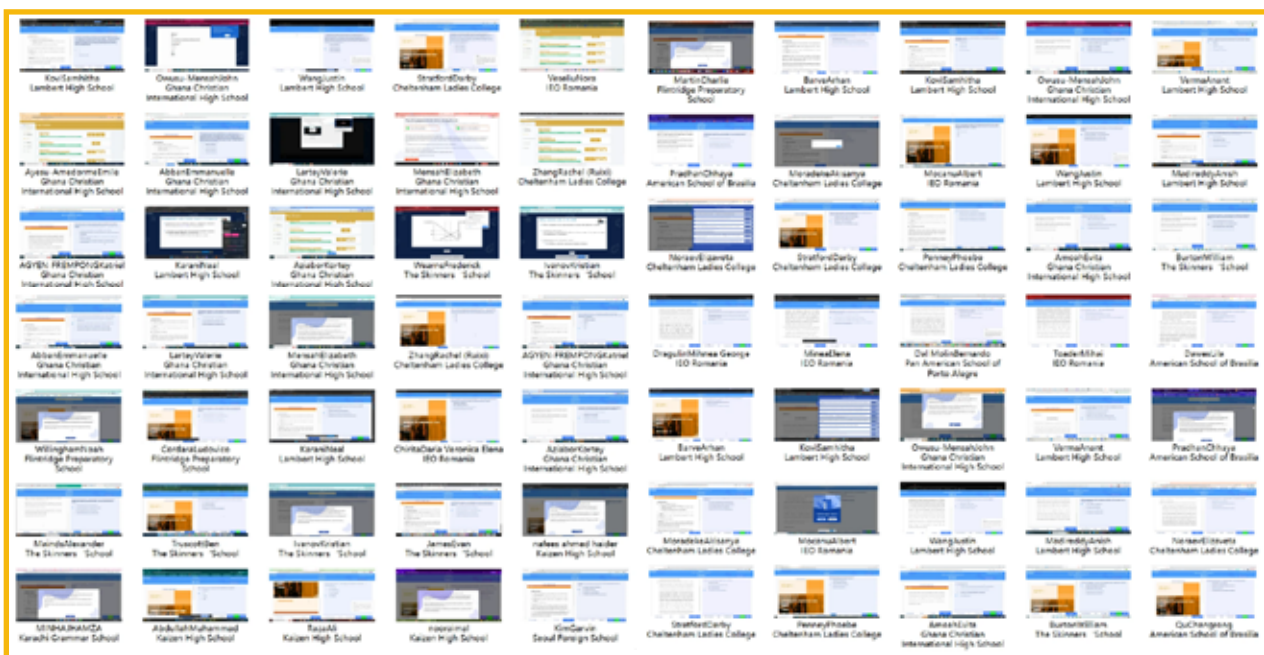


Christopher Sandmann (ISE)

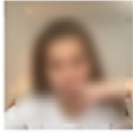
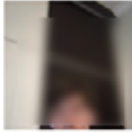
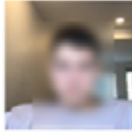

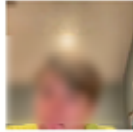
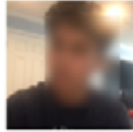


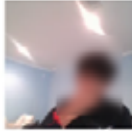
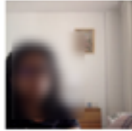
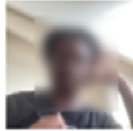
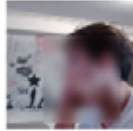
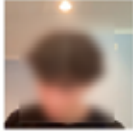

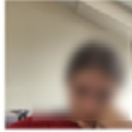
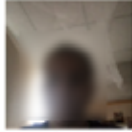
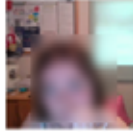
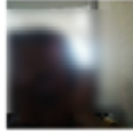


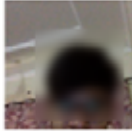
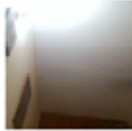
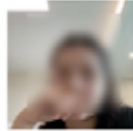
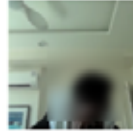
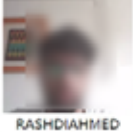
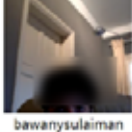

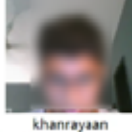
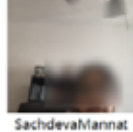
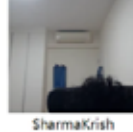
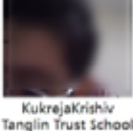
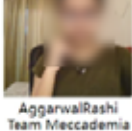
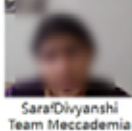
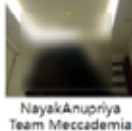
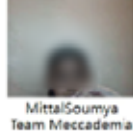
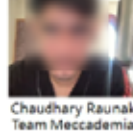
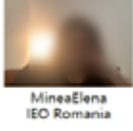
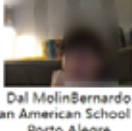
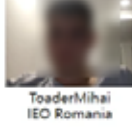
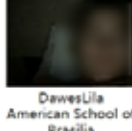
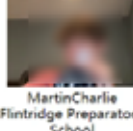
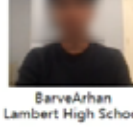
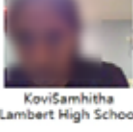


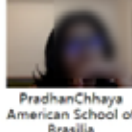

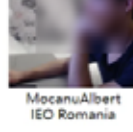

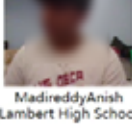
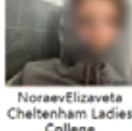
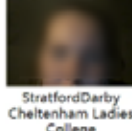
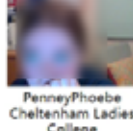
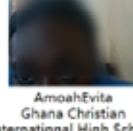
Asymmetric Auctions: Theory and Practice

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*Deep Comprehension Online Lectures



*Participants watch lectures and answer questions on the WEC online examination system

| | | | | | |
|--|--|---|---|---|---|
|  Mineae Elena IEO Romania |  Dal Molin Bernardo Pan American School of Porto Alegre |  Toader Mihai IEO Romania |  Daves Lila American School of Brasilia |  Martin Charlie Flintridge Preparatory School |  Barve Arhan Lambert High School |
|  Kovi Samhitha Lambert High School |  Owusu Mensah John Ghana Christian International High School |  Verma Anant Lambert High School |  Pradhan Chhaya American School of Brasilia |  Moradeke Akisanya Cheltenham Ladies College |  Mocanu Albert IEO Romania |
|  Wang Justin Lambert High School |  Madireddy Anish Lambert High School |  Noraev Elizaveta Cheltenham Ladies College |  Stratford Darby Cheltenham Ladies College |  Penney Phoebe Cheltenham Ladies College |  Amoah Eviita Ghana Christian International High School |
|  Hong Hyejoo Seoul Foreign School |  Choi Yunjeong Seoul Foreign School |  Arshad Abdullah Kaizen High School |  Chaudhry Amal Kaizen High School |  Dunsby Zia Seoul Foreign School |  Rao Kapur Aditya Tenglin Trust School |
|  RASHDIAHMED Karachi Grammar School |  bawansulaiman Karachi Grammar School |  motiwalaabdul rafay Karachi Grammar School |  khanrayaan Karachi Grammar School |  Sachdeva Mannat Tenglin Trust School |  Sharma Krish Tenglin Trust School |
|  Kukreja Krishiv Tenglin Trust School |  Aggarwal Rashi Team Meccademia |  Sara Divyanshi Team Meccademia |  Nayak Anupriya Team Meccademia |  Mittal Soumya Team Meccademia |  Chaudhary Raunak Team Meccademia |
|  Mineae Elena IEO Romania |  Dal Molin Bernardo Pan American School of Porto Alegre |  Toader Mihai IEO Romania |  Daves Lila American School of Brasilia |  Martin Charlie Flintridge Preparatory School |  Barve Arhan Lambert High School |
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**The exam system is real-time proctored.*

Solution 2: Making Sure That The RPA Does Not Prevent Legitimate Price Differentiation

Monopolist (with perfect Price Discrimination) Monopolist (with Single Price)

In the short run, the RPA will decrease CS and PS and lead to DL. In the long run, it will cause cost-push inflation and decrease economic growth.

Tradeoff #1 (SHORT RUN):

Market impacts:

- Limit pricing ends, profit maximization begins.
- $P_{max} \rightarrow P_{min}$
- Q_{min} decreases to Q_{max}

Change in Producer Surplus

- Increase in producer surplus for plaintiff firms (in other market)
- Decrease in producer surplus for defendant firms

Loss of Consumer Surplus

- Higher prices from producers after RPA
- Less CS & less choice
- Ex. Utah Pie

Figure 6: Defendant Response to Intervention

Q3: The ins and outs of Second-degree price discrimination

a. What market characteristics enable price discrimination to expand output?

- Market structures such as monopoly markets enhance the occurrence of price discrimination.
- Potential for customer segmentation

b. Using a graph, illustrate how second-degree price discrimination increases consumer surplus.

Ans: i. Quantity discounts
ii. Bundling

1c

What goods violate the law of one price?

- Big Mac (Big Mac Index)**
 - ¥24.40 in China (\$3.34 USD)
 - \$5.81 in USA
- Insulin**
 - \$98.7 in USA
 - \$21.48 in Chile
- Almost all goods violate the law of one price!

30 Years Big Mac Index
Average price per unit across
regions of Insulin in 2019

| Country | Average price per unit |
|-----------|------------------------|
| USA | \$98.7 |
| Chile | \$21.48 |
| Japan | \$14.40 |
| Germany | \$10.00 |
| France | \$8.00 |
| UK | \$7.00 |
| Australia | \$6.00 |

**Participants prepared the Thinking and Innovation and submitted the video within 24 hours.*

Distinguished Lecturers

WEC 2023 was enriched by the invaluable contributions of four renowned lecturers who shared their expertise and insights with our participants. Each lecturer brought a unique perspective to the world of economics, making the event a truly enriching experience.

We express our heartfelt appreciation to these esteemed scholars for their dedication to education and their willingness to impart their knowledge to the next generation of economists.



Christopher Sandmann

Professor of Economics, London School of Economics



Santiago Pérez

Professor of Economics, UC Davis



Jose Miguel Abito

Professor of Economics, Ohio State University



Sebastian Galiani

Professor of Economics, University of Maryland

WEC 2023 Winners

Team Awards Top 10 Team (Team Average Performance)

| Ranking | Country/Region | School | Average Score |
|---------|----------------|--|---------------|
| 1 | Pakistan | Kaizen High School - Team 3 | 533.33 |
| 2 | United States | Lambert High School - Team 1 | 526.5 |
| 3 | Singapore | Tanglin Trust School - Team 1 | 521 |
| 4 | South Korea | Seoul Foreign School - Team 1 | 504.6 |
| 5 | Pakistan | Karachi Grammar School - Team 2 | 488.8 |
| 6 | Romania | Cambridge School of Bucharest | 487.8 |
| | | International British School of Bucharest | |
| | | International School of Bucharest | |
| 7 | Romania | British School of Bucharest | 465.5 |
| | | Cambridge School of Bucharest | |
| 8 | UK | Cheltenham Ladies College - Team 1 | 463.8 |
| 9 | UK | The Skinners' School - Team 1 | 411.5 |
| 10 | Ghana | Ghana Christian International High School - Team 3 | 408.2 |

Top 10 Thinking and Innovation Team

| Ranking | Country/Region | School | Score |
|---------|----------------|--|-------|
| 1 | Romania | Cambridge School of Bucharest | 128 |
| | | International British School of Bucharest | |
| | | International School of Bucharest | |
| 2 | South Korea | Seoul Foreign School - Team 1 | 126 |
| 3 | Ghana | Ghana Christian International High School - Team 3 | 125 |
| 3 | Romania | British School of Bucharest | 125 |
| | | Cambridge School of Bucharest | 125 |
| 3 | Singapore | Tanglin Trust School - Team 1 | |
| 6 | UK | Cheltenham Ladies College - Team 1 | 124 |
| 7 | United States | Flintridge Preparatory School - Team 1 | 123 |
| 7 | Pakistan | Kaizen High School - Team 3 | 123 |
| 7 | United States | Lambert High School - Team 1 | 123 |
| 7 | UK | The Skinners' School - Team 1 | 123 |

Individual Awards Economics (Aggregated) Top 30

| Ranking | Country/Region | Name | School | Score | Award |
|---------|----------------|------------------------|---|-------|--------|
| 1 | Singapore | Krishiv Kukreja | Tanglin Trust School | 570 | Gold |
| 2 | South Korea | Garvin Kim | Seoul Foreign School | 545 | Gold |
| 3 | United States | Neal Karani | Lambert High School | 544 | Gold |
| 4 | Pakistan | Ali Raza | Kaizen High School | 538 | Gold |
| 5 | Pakistan | abdullah arshad | Kaizen High School | 536 | Gold |
| 5 | Singapore | Aditya Rao Kapur | Tanglin Trust School | 536 | Gold |
| 7 | South Korea | Hyejoo Hong | Seoul Foreign School | 535 | Gold |
| 8 | Pakistan | Muhammad Abdullah | Kaizen High School | 534 | Gold |
| 8 | Pakistan | amal chaudhry | Kaizen High School | 534 | Gold |
| 10 | Pakistan | aimal noor | Kaizen High School | 530 | Silver |
| 10 | United States | Justin Wang | Lambert High School | 530 | Silver |
| 10 | South Korea | Jia Dunsby | Seoul Foreign School | 530 | Silver |
| 13 | Pakistan | haider nafees | Kaizen High School | 528 | Silver |
| 14 | United States | Anant Verma | Lambert High School | 524 | Silver |
| 15 | United States | Anish Madireddy | Lambert High School | 523 | Silver |
| 16 | United States | Arhan Barve | Lambert High School | 522 | Silver |
| 17 | United States | Samhitha Kovi | Lambert High School | 516 | Silver |
| 18 | Singapore | Krish Sharma | Tanglin Trust School | 512 | Silver |
| 19 | Romania | Maria Timbolschi | International British School of Bucharest | 500 | Silver |
| 20 | Romania | Andrei Anghel | Cambridge School of Bucharest | 498 | Silver |
| 21 | Romania | Nora Veseliu | Cambridge School of Bucharest | 495 | Silver |
| 22 | South Korea | Yunjeong Choi | Seoul Foreign School | 493 | Silver |
| 23 | Pakistan | rayaan khan | Karachi Grammar School | 491 | Silver |
| 23 | UK | Ben Truscott | The Skinners' School | 491 | Silver |
| 25 | Pakistan | AHMED RASHDI | Karachi Grammar School | 490 | Silver |
| 26 | Pakistan | HAMZA MINHAJ | Karachi Grammar School | 489 | Silver |
| 27 | Pakistan | abdul rafay motiwala | Karachi Grammar School | 488 | Silver |
| 27 | Romania | Mihai Toader | British School of Bucharest | 488 | Silver |
| 29 | Romania | Tania Florea | Cambridge School of Bucharest | 487 | Silver |
| 30 | Pakistan | sulaiman bawany | Karachi Grammar School | 486 | Silver |
| 30 | Romania | Mihnea George Dragulin | International School of Bucharest | 486 | Silver |

Fundamentals TOP 30

| Ranking | Country/Region | Name | School | Score |
|---------|----------------|------------------------|---|-------|
| 1 | South Korea | Garvin Kim | Seoul Foreign School | 99 |
| 1 | Pakistan | Ali Raza | Kaizen High School | 99 |
| 1 | Pakistan | abdullah arshad | Kaizen High School | 99 |
| 1 | South Korea | Hyejoo Hong | Seoul Foreign School | 99 |
| 1 | Pakistan | Muhammad Abdullah | Kaizen High School | 99 |
| 1 | Pakistan | amal chaudhry | Kaizen High School | 99 |
| 1 | Pakistan | aimal noor | Kaizen High School | 99 |
| 1 | Pakistan | haider nafees | Kaizen High School | 99 |
| 1 | Singapore | Krish Sharma | Tanglin Trust School | 99 |
| 10 | South Korea | Jia Dunsby | Seoul Foreign School | 96 |
| 11 | Romania | Tania Florea | Cambridge School of Bucharest | 95 |
| 11 | South Korea | Seohyun Choi | Seoul Foreign School | 95 |
| 13 | Romania | Nora Veseliu | Cambridge School of Bucharest | 94 |
| 13 | Ghana | Katriel AGYEN-FREMPONG | Ghana Christian International High School | 94 |
| 15 | Singapore | Krishiv Kukreja | Tanglin Trust School | 93 |
| 15 | Singapore | Aditya Rao Kapur | Tanglin Trust School | 93 |
| 17 | United States | Justin Wang | Lambert High School | 87 |
| 17 | Pakistan | AHMED RASHDI | Karachi Grammar School | 87 |
| 17 | Romania | Mihai Toader | British School of Bucharest | 87 |
| 17 | Romania | Elena Minea | Cambridge School of Bucharest | 87 |
| 21 | United States | Anish Madireddy | Lambert High School | 86 |
| 21 | Romania | Maria Timbolschi | International British School of Bucharest | 86 |
| 21 | Pakistan | rayaan khan | Karachi Grammar School | 86 |
| 21 | Pakistan | HAMZA MINHAJ | Karachi Grammar School | 86 |
| 21 | Ghana | Uriel Yeboah Afreh | Ghana Christian International High School | 86 |
| 26 | Pakistan | abdul rafay motiwala | Karachi Grammar School | 85 |
| 26 | Brazil | Changrong Qu | American School of Brasilia | 85 |
| 26 | Ghana | Evita Amoah | Ghana Christian International High School | 85 |
| 29 | UK | Alexander Mains | The Skinners' School | 84 |
| 30 | United States | Neal Karani | Lambert High School | 83 |
| 30 | United States | Anant Verma | Lambert High School | 83 |
| 30 | South Korea | Yunjeong Choi | Seoul Foreign School | 83 |
| 30 | Pakistan | sulaiman bawany | Karachi Grammar School | 83 |
| 30 | Romania | Albert Mocanu | Cambridge School of Bucharest | 83 |
| 30 | Ghana | John Owusu-Mensah | Ghana Christian International High School | 83 |
| 30 | Ghana | Emmanuella Alale | Ghana Christian International High School | 83 |

Deep Comprehension TOP 30

| Ranking | Country/Region | Name | School | Score |
|---------|----------------|------------------------|---|-------|
| 1 | Singapore | Krishiv Kukreja | Tanglin Trust School | 352 |
| 2 | United States | Neal Karani | Lambert High School | 338 |
| 3 | South Korea | Garvin Kim | Seoul Foreign School | 320 |
| 3 | United States | Justin Wang | Lambert High School | 320 |
| 5 | Singapore | Aditya Rao Kapur | Tanglin Trust School | 318 |
| 5 | United States | Anant Verma | Lambert High School | 318 |
| 5 | United States | Arhan Barve | Lambert High School | 318 |
| 8 | Pakistan | Ali Raza | Kaizen High School | 316 |
| 9 | Pakistan | abdullah arshad | Kaizen High School | 314 |
| 9 | United States | Anish Madiredy | Lambert High School | 314 |
| 9 | United States | Samhitha Kovi | Lambert High School | 314 |
| 12 | Pakistan | Muhammad Abdullah | Kaizen High School | 312 |
| 12 | Pakistan | amal chaudhry | Kaizen High School | 312 |
| 14 | South Korea | Hyejoo Hong | Seoul Foreign School | 310 |
| 15 | Pakistan | aimal noor | Kaizen High School | 308 |
| 15 | South Korea | Jia Dunsby | Seoul Foreign School | 308 |
| 17 | Pakistan | haider nafees | Kaizen High School | 306 |
| 18 | South Korea | Jessica Shin | Seoul Foreign School | 294 |
| 19 | Romania | Andrei Anghel | Cambridge School of Bucharest | 292 |
| 20 | Singapore | Krish Sharma | Tanglin Trust School | 288 |
| 21 | Romania | Maria Timbolschi | International British School of Bucharest | 286 |
| 21 | UK | Ben Truscott | The Skinners' School | 286 |
| 23 | Pakistan | rayaan khan | Karachi Grammar School | 284 |
| 23 | South Korea | Yunjeong Choi | Seoul Foreign School | 284 |
| 25 | Pakistan | AHMED RASHDI | Karachi Grammar School | 282 |
| 25 | Pakistan | HAMZA MINHAJ | Karachi Grammar School | 282 |
| 25 | Pakistan | abdul rafay motiwala | Karachi Grammar School | 282 |
| 25 | Pakistan | sulaiman bawany | Karachi Grammar School | 282 |
| 25 | UK | Rachel (Ruixi) Zhang | Cheltenham Ladies College | 282 |
| 30 | Romania | Mihnea George Dragulin | International School of Bucharest | 278 |

