



July 4th - 5th

XXXII MEETING

Economics of Education
Association

València



VNIVERSITAT
ID VALÈNCIA

VNIVERSITAT
ID VALÈNCIA



Jardí Botànic

VNIVERSITAT
ID VALÈNCIA
Facultat d'Economia



EvalPub
Evaluació
Investigació
Pública

VNIVERSITAT
ID VALÈNCIA
Facultat d'Economia
Departament d'Economia Aplicada



DEPARTAMENT
D'ANÀLISI
ECONÒMICA



Ivie

inee

Proceedings of the XXXII Meeting of the Economics of Education Association

València, July 4th and 5th 2024

© Each paper's author
<http://www.economicsofeducation.com>
<https://2024.economicsofeducation.com/en/publications/>
Publisher: Asociación de Economía de la Educación
ISBN: 978-84-09-62803-2

Mauro Mediavilla Bordalejo
Paula Ballester Aguilera
Iván Vicente Carrión
(Eds.)

SCIENTIFIC COMMITTEE

- **President:** Mauro Mediavilla Bordalejo, Universitat de València & EVALPUB, Spain
- Caterina Calsamiglia, Institute of Political Economy and Governance, Spain
- José Manuel Cordero Ferrera, University of Extremadura, Spain
- Cinzia Daraio, University of Rome, Italy
- Peter Dolton, University of Sussex, England
- Jose García Clavel, University of Murcia, Spain
- Héctor Gertel, University of Córdoba, Argentina
- Jose María Gómez Sancho, University of Zaragoza, Spain
- Sara M. González-Betancor, University of Las Palmas de Gran Canaria, Spain
- Giovanni González Espitia, Universidad ICESI, Colombia
- Luis Alejandro Lopez-Agudo, University of Malaga, Spain
- Stephen Machin, London School of Economics, England
- María Jesús Mancebón Torrubia, University of Zaragoza, Spain
- Martín Martín González, Universidad Europea de Canarias, Spain
- Sandra MacNally, University of Surrey, England
- Isabel Neira Gómez, University of Santiago, Spain
- Sylke Schnepf, European Commission's Joint Research Centre, Italy
- Elvira Vieira, ISAG – European Business School e Centro de Investigação em Ciências Empresariais e Turismo da Fundação Consuelo Vieira da Costa (CICET-FCVC), Portugal
- Ludger Woessmann, University of Munich, Germany
- Stefan Wolter, University of Bern, Switzerland

LOCAL ORGANIZING COMMITTEE

- **Coordinator:** Mauro Mediavilla Bordalejo, Universitat de València & EVALPUB
- Luis Eduardo Vila Lladosa, Universitat de València
- José Manuel Pastor Monsalvez, Universitat de València
- Nerea Gómez Fernández, Universitat de València & EVALPUB
- Ángel Soler Guillén, Universitat de València
- Gisela Rusteholz, Universitat de València & EVALPUB
- Iván Vicente Carrión, Universitat de València
- Paula Ballester Aguilera, Universitat de València
- Edgar Perales Ceballos, Universitat de València
- Luis Alejandro Lopez-Agudo, Universidad de Málaga
- María Jesús Mancebón Torrubia, Universidad de Zaragoza
- Martín Martín González, Universidad Europea de Canarias
- Sara M. González-Betancor, Universidad de Las Palmas de Gran Canaria

PRESENTACIÓN

La Asociación de Economía de la Educación (<http://www.economicsofeducation.com>) fue fundada en Barcelona el 30 de marzo de 1992, con objeto de agrupar a profesionales e investigadores que centren su interés y dedicación en temas relacionados con el campo de la Economía de la Educación. Es una asociación sin ánimo de lucro, de carácter voluntario y sus fines son los siguientes:

- a) Promover y difundir los estudios de Economía de la Educación y formar y perfeccionar expertos en esta materia.
- b) Promover contactos e intercambios profesionales, confrontando los trabajos e investigaciones sobre el tema entre las diversas personas e instituciones interesadas en el mismo, tanto nacionales como de otros países.
- c) Organizar, por sí sola o en colaboración con otras organizaciones o entidades, congresos o reuniones y otras actividades científicas de Economía de la Educación.
- d) Editar publicaciones relacionadas con la materia y mantener o promover la formación de bibliotecas especializadas sobre la misma.
- e) Promover la formación de una base de datos estadísticos homogénea y procurar su mantenimiento y actualización.
- f) Cualquier otra función relacionada con el campo específico de la Economía de la Educación, quedando excluido todo ánimo de lucro.

Además, promueve la difusión y la transferencia de conocimientos a la sociedad y a los gestores públicos en los más diversos ámbitos de la educación en colaboración con el Instituto Nacional de Evaluación Educativa (Ministerio de Educación y Formación Profesional) y el Instituto de Estudios Fiscales (Ministerio de Hacienda).

Desde 1992, las Jornadas de Economía de la Educación han venido celebrándose bajo la dirección de la Asociación de Economía de la Educación (AEDE). Las XXXII

Jornadas de la AEDE 2024 fue acogida por Universitat de València. En este encuentro se promovió el debate sobre temas tales como el vínculo entre educación y mercado laboral, los determinantes del rendimiento académico, la evaluación de políticas educativas, la educación superior, la desigualdad dentro del sistema educativo, el capital humano, así como otros aspectos más generales relacionados con el género y el bienestar en el contexto educativo.

Este libro electrónico contiene los resúmenes de las ponencias presentadas durante la celebración de las XXXII Jornadas de la AEDE.

PRESENTATION

The Economics of Education Association (<http://www.economicsofeducation.com>) was founded in Barcelona on March 30th 1992, with the aim of grouping academics who, together with researchers, directed their efforts primarily to issues related to the Economics of Education. It is a non-profit organization, performed on a voluntary basis and it serves the following purposes:

- a) To promote and disseminate studies of Economics of Education, as well as provide training and retraining of experts.
- b) To encourage professional contacts and exchanges, sharing the work and research on the subject among the various individuals and institutions interested in it, both in Spain and abroad.
- c) To organize -alone or in collaboration with other organizations or entities- conferences or meetings and other scientific activities on economics of education.
- d) To publish literature related to the subject and maintain or promote the creation of specialized libraries.
- e) To promote the development of a homogeneous statistical database and ensure it is maintained and updated.
- f) Any other function related to the specific field of Economics of Education, with non-profit purposes.

Furthermore, it promotes the dissemination and transfer of knowledge to society and public managers in various fields of education in collaboration with the National Institute for Educational Evaluation (Ministry of Education and Vocational Training, Spanish Government) and the Institute of Fiscal Studies (Ministry of Finance, Spanish Government).

Since 1992, the Education Economics Conferences have been held under the direction of the Association of Education Economics (AEDE). The XXXII AEDE Conference 2024 was hosted by the University of Valencia. This meeting fostered debate on topics such as the link between education and the labor market, the

determinants of academic performance, the evaluation of educational policies, higher education, inequality within the educational system, human capital, as well as other more general aspects related to gender and well-being in the educational context.

This e-book contains the summaries of the presentations given during the XXXII AEDE Conference.

INTRODUCCIÓN

Las XXXII Jornadas de la Asociación de Economía de la Educación se desarrollaron en la Facultat d’Economia de la Universitat de València durante los días 4 y 5 de julio de 2024. El presente libro de actas recoge los resúmenes de todos los trabajos presentados en ellas.

En las XXXII Jornadas de la AEDE se presentaron un total de 55 comunicaciones, de naturaleza tanto teórica como aplicada, distribuidas entre 18 sesiones paralelas. Éstas versaron sobre los siguientes temas: Determinantes del rendimiento educativo; Docencia en educación; Habilidades no cognitivas; Educación y género; Educación y mercado de trabajo; Sobre-educación; Educación y bienestar; Elección escolar; Política educativa; Igualdad y educación; Educación e inmigración; Función de producción educativa; Retornos de la educación; Educación vocacional; Eficiencia en la educación; Capital humano y desarrollo económico; Educación y mercado de trabajo; Gestión y planificación educativa y, por último; Movilidad intergeneracional educativa.

En el primer día de las jornadas, el conferencista invitado fue el doctor Hessel Oosterbeek profesor de Economía en la Universidad de Amsterdam quien hizo una ponencia con el título “The (un)importance of school assignment”. El doctor Julien Grenet (Paris School of Economics), por su parte, se encargó de la segunda ponencia con el tema: “The Effects of Social Diversity at School: Evidence from a Desegregation Program”.

Aprovecho la oportunidad para hacer llegar mi agradecimiento personal y el de toda la junta de la AEDE al conjunto de personas y entidades que han hecho posible el éxito de las XXXII Jornadas de la Asociación de Economía de la Educación. A la Facultat d’Economia, al Departament d’Economia Aplicada, al Departament d’Anàlisi Econòmica; al grupo de investigación Evaluación Económica Pública

(EvalPub) y al aula de gastronomía; todos ellos dependientes de la Universitat de València; al Instituto Valenciano de Investigaciones Económicas (IVIE) por su apoyo; al Instituto de Estudios Fiscales por su apuesta por estas Jornadas desde hace ya tantas ediciones y al Instituto Nacional de Evaluación Educativa con quien comenzamos una relación de colaboración que no dudo será muy provechosa para ambas instituciones.

Por último, estas jornadas no serían posibles sin la colaboración desinteresada del Comité Científico y su rigurosidad y puntualidad en el trabajo de evaluación de las comunicaciones y; evidentemente del Comité Organizador. Éstos últimos son el alma de las jornadas y los responsables últimos del éxito obtenido.

¡A todos y todas muchas gracias!

Mauro Mediavilla Bordalejo
Coordinador del Comité Organizador de las XXXII Jornadas de AEDE

INTRODUCTION

The XXXII Conference of the Association of Education Economics was held at the Faculty of Economics of the University of Valencia on July 4 and 5, 2024. This proceedings book contains the summaries of all the papers presented at the conference.

A total of 55 papers, both theoretical and applied, were presented at the XXXII AEDE Conference, distributed across 18 parallel sessions. These sessions covered the following topics: Determinants of Educational Performance; Teaching in Education; Non-Cognitive Skills; Education and Gender; Education and the Labor Market; Over-Education; Education and Well-Being; School Choice; Educational Policy; Equality and Education; Education and Immigration; Educational Production Function; Returns to Education; Vocational Education; Efficiency in Education; Human Capital and Economic Development; Education and the Labor Market; Educational Management and Planning; and, finally, Intergenerational Educational Mobility.

On the first day of the conference, the keynote speaker was Dr. Hessel Oosterbeek, Professor of Economics at the University of Amsterdam, who delivered a lecture titled “The (un)importance of school assignment.” Dr. Julien Grenet (Paris School of Economics) delivered the second keynote lecture on the topic: “The Effects of Social Diversity at School: Evidence from a Desegregation Program.”

I would also like to extend my personal gratitude, as well as that of the entire AEDE board, to all the individuals and entities that made the success of the XXXII Conference of the Association of Education Economics possible. Special thanks go to the Faculty of Economics, the Department of Applied Economics, the Department of Economic Analysis; the Public Economic Evaluation Research Group (EvalPub) and the Gastronomy Classroom, all of which are part of the University of Valencia; to the Valencian Institute of Economic Research (IVIE) for their support; to the Institute of Fiscal Studies for their long-standing commitment to these

conferences; and to the National Institute for Educational Evaluation, with whom we have begun a collaborative relationship that I am confident will be very beneficial for both institutions.

Finally, these conferences would not be possible without the selfless collaboration of the Scientific Committee and their rigor and punctuality in evaluating the papers, and, of course, the Organizing Committee. The latter are the heart of the conference and the ultimate reason for its success.

Thank you all very much!

Mauro Mediavilla Bordalejo

Coordinator of the Organizing Committee of the XXXII AEDE Conference

ÍNDICE

CAPITULO 1: PISA	15
Una cuantificación de la transmisión intergeneracional de la lectura recreativa en siete países europeos	16
Efecto de los factores no cognitivos en el desempeño de los estudiantes latinoamericanos en la Prueba Pisa 2022	17
Eficiencia en el uso de las nuevas tecnologías (TIC) para la educación en España y la OCDE. Diferencias en resultados para estudiantes con altas capacidades	18
CAPÍTULO 2: EDUCACIÓN Y MERCADO LABORAL	19
Secular changes in educational attainment and the quality of the highly skilled – Evidence from Germany	20
Between Ambiguity, Suppletivity and Vacuum: The Legal Complexity of Private Higher Education in Portugal	21
“ <i>This time it’s different</i> ” – Generative Artificial Intelligence and Occupational Choice .	22
Estimating Returns to Education in a Developing Country: Recent and Heterogeneous Evidence from Colombia, 2008-2021	23
Rendimiento y desajuste educativo de los egresados universitarios en México	24
Determinación de las condiciones económicas, ingresos, pobreza y empleo, a partir del Shap values en Colombia, 2019-2020	25
¿Qué factores determinan el éxito en la transición de la universidad al mercado laboral? Un análisis multinivel aplicado al sistema universitario español	26
New evidence on the impact of learning in a foreign language on educational outcomes	27
Reaching for gold! The impact of a positive reputation shock on career choice	28
Math Skills, Selection in Training Firms, and Post-Training Wages	29
Sobreeducación en graduados universitarios: el origen familiar importa	30
Desajuste educativo y salud mental en España.	31
Determinantes y efectos salariales del desajuste educativo horizontal en el mercado laboral de México	32
CAPITULO 3: DETERMINANTES DEL DESEMPEÑO ACADEMICO	33
Weathering the Storm: How do Free Compulsory Education and Early-life Shocks Shape Long-Term Education Attainment?	34
Harnessing community resources to enhance learning.....	35
The long run impact of increased compulsory education age. Evidence from administrative data in the Netherlands	36
High-Crime Environments and Educational Efficiency: A Spatial Case Study	37
The power of a meal. School feeding and its educational effects in Colombia.....	38
Comparing High Achievers and Low Achievers: An Examination of Student Inputs versus School Inputs in the Educational Outcomes of English Adolescent	39

A systematic review of empirical studies using data from large-scale international assessments with a longitudinal approach.....	40
Mapping Economics starters' quantitative skills. What role do they play in the relationship between students background and academic performance?	41
Strategic learning and academic performance among elite college students: empirical evidence from China	42
The impact of primary school math skills on academic achievement in lower secondary school	43
CAPITULO 4: EDUCACIÓN Y GÉNERO.....	44
Intra-household bargaining power and expenditure on children's education in Brazil ..	45
Gender Discrimination in Access to Higher Education	46
Gender role and socioeconomic status in the early school leaving phenomenon.....	47
Are parents an obstacle to gender-atypical occupational choices?	48
Gender academic achievement gap in the Colombian higher education.....	49
Does Homework really Improve Student Achievement?	50
Neighbour and Peer Effects on College-Major Choices	51
CAPITULO 5: EDUCACIÓN SUPERIOR	52
Do peers' and teachers' interactions influence dropout among upper secondary school students in online environments?	53
The impact of the Student Number Cap Removal on Entry Standard and High Education Access – Evidence from the UK.....	54
Four decades of educational mobility	55
Exploring Student Disengagement in Higher Education: An Empirical Analysis in Social and Legal Studies.....	56
CAPITULO 6: BRECHAS DE CAPITAL HUMANO.....	57
Desempeño académico y brecha de género en STEM: Evidencia empírica para Colombia	58
Brechas de capital humano en el Valle del Cauca.....	59
Sobreeducación y sus Retos: Estudio Empírico de Graduados de Máster en España ..	60
CAPITULO 7: EDUCACIÓN Y DESIGUALDAD	61
Welfare Implications of Unequal Outside Options in Centralized College Admissions. 62	
The Effects of Attending High Track Schools: Evidence from Hungarian Centralized School Assignments	63
CAPITULO 8: POLÍTICA EDUCATIVA.....	64
Efecto de las políticas públicas en el trabajo de las mujeres con estudios universitarios. Un estudio del 2005 al 2022	65
Género y carreras STEM: el papel de la educación extraescolar durante la Educación Primaria en la Comunidad Autónoma de Euskadi	66

Competencias financieras y brecha de género. Un estudio a partir de la Encuesta de Competencias Financieras.....	67
CAPITULO 9: CAPITAL HUMANO	68
Understanding Improvements in Reading Performance in Liberia: The Centrality of Text	69
The Urban Learning Premium – Evidence from Peru	70
Market access, the skill premium and human capital in Spain (1860-1930).....	71
CAPITULO 10: ENSEÑANZA Y EDUCACIÓN	72
Teacher for life? Quantitative research into determinants of the retention of first and second career teachers in Flanders	73
Grade inflation and the COVID-19 Pandemic among Higher Education: An Empirical Analysis of a Top Comprehensive European University	74
Job Satisfaction of the UK Graduates: The Role of Job Attributes Match Level and Educational Mismatch	75
CAPITULO 11: EDUCACIÓN Y MEDIO AMBIENTE	76
Direct and Indirect Effects of Bullying on Academic Performance.....	77
Financial and economic literacy in and beyond tests: Investigating the role of Vocational vs. General Education and educational level	78
The role of anxiety in academic performance: An international perspective	79

CAPÍTULO 1
PISA

CHAPTER 1
PISA

Una cuantificación de la transmisión intergeneracional de la lectura recreativa en siete países europeos

MAURO MEDIAVILLA

Universitat de Valencia & EVALPUB, Spain

JOSÉ JOAQUÍN GARCÍA CLAVEL

Universidad de Murcia, Spain

En el presente estudio se aborda el efecto del entusiasmo lector de los padres sobre la capacidad lectora de sus hijos. Para ello se ha utilizado una aproximación cuasi-experimental (Dif in Dif) a partir de PISA 2018, usando los valores plausibles de cada estudiante en Matemáticas y Lectura. Los resultados obtenidos indican que el hábito lector de los padres ayuda a la mejora en la competencia lectora de sus hijos en cuatro de los siete países analizados (Alemania, Irlanda, Italia y Malta). En todo caso, que ayuda significativamente más a la lectura que a las matemáticas, competencia en la que posiblemente también se beneficien, aunque menos. Asimismo, el efecto sobre la competencia lectora que supone tener en casa unos padres a los que les gusta leer se potencia cuando también el joven es aficionado a la lectura. Por tanto, se comprueba la existencia de un efecto positivo de la lectura por placer de los padres (a partir del ejemplo) en la competencia lectora de los adolescentes, sin la necesidad de ningún tipo de imposición.

Efecto de los factores no cognitivos en el desempeño de los estudiantes latinoamericanos en la Prueba Pisa 2022

RAFAEL ANTONIO VIANA BARCELÓ

Universidad Industrial de Santander, Colombia

En el presente estudio basado información contenida en la base de datos de Pisa 2022, correspondiente a Chile, Colombia, México, Perú y Uruguay, Se analiza el efecto de las cinco categorías de factores no cognitivos propuesto por Farrington et al. (2012), sobre los resultados de los estudiantes en la prueba Pisa 2022. Para estimar el efecto, inicialmente se estiman las puntuaciones de eficiencia de los estudiantes de los países anteriormente mencionado en la prueba Pisa. Posteriormente por medio de ecuaciones estructurales se procede a estimar los efectos directos e indirectos de las variables no cognitivas en la eficiencia. Entre los resultados más llamativos encuentran que la variable perseverancia ejerce un efecto directo negativo en la eficiencia, mientras que el comportamiento académico medido ejerce un efecto directo positivo.

Eficiencia en el uso de las nuevas tecnologías (TIC) para la educación en España y la OCDE. Diferencias en resultados para estudiantes con altas capacidades

GREGORIO GIMÉNEZ ESTEBAN

Universidad de Zaragoza, Spain

MAURO MEDIAVILLA

Universitat de València & EVALPUB, Spain

LUIS VARGAS-MONTOYA

Universidad de Costa Rica, Costa Rica

La literatura en economía de la educación destaca el potencial del uso de las TIC (Tecnologías de la Información y la Comunicación) para mejorar el aprendizaje, si bien el aprovechamiento en el uso de las TIC puede diferir en función de las características de los alumnos. Nuestra hipótesis es que los alumnos de altas capacidades se podrían beneficiar más, ya que suelen tener ventaja a la hora de estudiar de manera autónoma y a un ritmo diferente al de sus pares. En este contexto, utilizamos un modelo lineal jerárquico con datos de la base PISA 2018 para comprobar si existen diferencias en el aprovechamiento de las TIC en función de las capacidades académicas de los alumnos. El objetivo es generar evidencia que ayude a la toma de decisiones por parte de las autoridades educativas en relación con la forma más eficiente de dar las clases (basada en el uso de TIC o en la enseñanza tradicional) para el caso de los alumnos con altas capacidades. La investigación revela que la relación entre las variables uso de tecnología tanto dentro como fuera de las aulas y para enseñanza y ocio (USESCH) y la puntuación en matemáticas y ciencias es negativa y significativa, tanto para los estudiantes españoles como para el conjunto de estudiantes del resto de los países de la OCDE. A su vez la relación entre las variables uso de tecnología en las aulas para la enseñanza (ICTCLASS) y la puntuación en matemáticas y ciencias es positiva y significativa para los estudiantes españoles y negativa y significativa para el conjunto de los estudiantes del resto de los países de la OCDE. En referencia específicamente a los estudiantes de alta capacidad, en el caso de España, las relaciones halladas no difieren (salvo un caso) entre los estudiantes de alta capacidad y sus pares. Por su parte, para los estudiantes del resto de países de la OCDE, la relación entre el uso de tecnología y las puntuaciones en matemáticas y ciencias es positiva y significativa. Por tanto, en el caso de estudiantes con alta capacidad el uso de las nuevas tecnologías en el aula con fines educativos conlleva un incremento en su rendimiento académico. Para el caso de un uso más general de las TIC los resultados no son concluyentes. Desde el punto de vista de las políticas públicas, esta investigación aporta evidencia sobre la importancia de contemplar las características propias de los alumnos a la hora de diseñar programas, planes y estrategias pedagógicas y la relevancia del diseño de política pública a implementar.

CAPÍTULO 2
EDUCACIÓN Y MERCADO
LABORAL

CHAPTER 2
EDUCATION AND LABOUR MARKET

Secular changes in educational attainment and the quality of the highly skilled - Evidence from Germany

MIRIAM STURM

University of Tuebingen, Germany

In light of continuously rising tertiary education shares occurring together with inter-cohort differences in skill premia, discussions have emerged in Germany as to whether these differences can be explained by a declining (academic) ability of the highly educated. Showing this empirically is challenging since changes in educational shares necessarily translate into changes in relative supplies, making it hard to disentangle quality effects from supply effects. Exploiting the federal organisation of the German education system, this paper resolves the issue by exploiting regional variation in educational shares: By comparing persons of the same age who work in the same region at the same time - thus facing the same skill prices -, but who received their university entry certificate (Abitur) in different German states, the current study aims to isolate supply effects from the presumed effects of educational expansion on the quality of the highly skilled. The results indeed tend to imply decreasing college wages with larger shares of cohort members formally qualified for tertiary education, suggesting that educational expansion is linked to a decline in the average ability of the highly educated. Furthermore, the analysis points to spillover effects on selection into the medium-skilled group with completed vocational training, possibly induced by a changing pool of applicants for vocational training as relatively more young persons have the additional alternative to pursue a college degree.

Between Ambiguity, Suppletivity and Vacuum: The Legal Complexity of Private Higher Education in Portugal

MARIA ELISABETE FERREIRA FERNANDES

University of Vigo, Center for Research on Higher Education Policies (CIPES), University of Porto,
University of Maia, Portugal

EVA MARÍA DE LA TORRE GARCÍA

Universidad Autónoma de Madrid, Instituto Interuniversitario de Investigación Avanzada sobre
Evaluación de la Ciencia y la Universidad (INAECU), Spain

MARIA DE LOURDES MACHADO-TAYLOR

Lusófona University, Center for Research on Higher Education Policies (CIPES), University of Porto
, University of Vigo, Spain

In focusing on the Portuguese context, this article provides comprehensive analysis of the legal framework governing higher education (HE) and the academic profession. It outlines the legal distinctions between public and private HE sectors, emphasizing differences in employment relationships, career systems, and the challenges stemming from a lack of comprehensive regulatory norms for the private sector. It details the legal definitions and distinctions between labor contracts and service provision contracts, based on judicial decisions, while also highlighting the ambiguity and challenges in characterizing the "teaching contract" in the private sector. It addresses the unique case of cooperative institutions and the implications for academic staff who are also cooperators. The reform of the Legal Regime of Higher Education Degrees and Diplomas (RJGADES) is analyzed, emphasizing the shift towards greater stability and professionalization of the academic profession. The authors underscore the legal complexities of Portugal's higher education system, identifying regulatory gaps concerning private HEIs and advocating for legislative amendments to rectify these shortcomings.

“This time it’s different” – Generative Artificial Intelligence and Occupational Choice

CHRISTIAN GSCHWENDT

University of Bern, Switzerland

STEFAN C. WOLTER

University of Bern, Switzerland

DANIEL GOLLER

University of Bern, Switzerland

The announcement and public deployment of the generative AI ChatGPT in November 2022 led to a shock shift in perceptions of how AI can impact future workplaces. In this paper, we show the causal influence of the launch of ChatGPT on the search behavior of young people for apprenticeship vacancies. There is a strong and long-lasting decline in the intensity of searches for vacancies, which suggests great uncertainty among the affected cohort. What is far more interesting, however, is that the individual occupations were affected by the slump to very different degrees. Occupations involving primarily cognitive tasks are particularly affected by the shock in perception, with the largest decline in supply. Similarly, those occupations with the highest language requirements experienced the sharpest decrease in supply – an area of expertise in which, at first glance, a large language model such as ChatGPT is most likely to replace jobs. While our results indicate that search queries fell less sharply in occupations considered at high risk of automation in earlier studies, they are entirely consistent with more recent expert estimates of the impact of AI on occupations, i.e., occupations that are highly exposed to AI technology in general and language models in particular were also significantly more affected by the decline in search queries. This indicates that young people, like experts, expect generative AI to affect occupations that were previously considered low risk, rather than those that were always considered high risk and that generative AI could be seen as a "game changer" in the interplay between digitalization and labor market developments.

Estimating Returns to Education in a Developing Country: Recent and Heterogeneous Evidence from Colombia, 2008-2021

CARLOS GIOVANNI GONZÁLEZ ESPITIA

Universidad Icesi, Colombia

This paper aims to estimate the returns to education in Colombia using data from the household survey carried out by the National Administrative Department of Statistics for the period 2008 – 2021, in which the information is homogeneous. We find substantial variation in the results by the OLS, Heckman method, and Quantile regressions; we show evidence that the OLS method overestimates many of the returns to education. The main results show that the returns to education have been decreasing over time and that on average they are greater than 10%. Another result shows that there is a high heterogeneity in returns due to individual characteristics such as gender, characteristics of the educational system such as education levels and characteristics of the context such as the region where the individuals reside. Women's returns are on average 3.5 percentage points higher than men's, averaging 9%. By educational levels, the returns to university education are the highest (20%) and the only ones that grow over time. There is great heterogeneity in the regions, the returns are higher in the most urbanized areas and lower in the periphery of the country, the largest differences are up to 10 percentage points. Finally, we find evidence of an effect of the Covid-19 pandemic on returns, with a negative effect for primary and secondary education and a positive effect for higher education. These results are relevant for families and policy makers because they show that post-compulsory investment and especially higher education is profitable.

Rendimiento y desajuste educativo de los egresados universitarios en México

ANGÉLICA BEATRIZ CONTRERAS CUEVA

Universidad de Guadalajara, Mexico

PAMELA MACIAS ALVAREZ

Universidad de Guadalajara, Mexico

El conocimiento de las condiciones del capital humano de un país contribuye a construir una sociedad más equitativa y con mejores oportunidades para el desarrollo de los trabajadores. El objetivo de este estudio es analizar, primero, la desigualdad por género y por nivel de educación del trabajador, posteriormente, medir el desempeño educativo de los trabajadores con educación superior, bajo el supuesto de que la desigualdad de ingresos disminuye para los trabajadores con educación superior, analizando si el posible descenso se debe a un desequilibrio educativo en la ocupación dentro del nivel educativo, más que a la desigualdad entre niveles educativos. Los datos para el análisis corresponden a la Encuesta Nacional de Ocupación y Empleo del año 2022, los resultados se estimaron con estadísticas de frecuencia, la ecuación de ingresos de Mincer y la regresión cuantílica diferenciando el análisis por género. De los principales resultados se destaca que el desajuste educativo afecta aproximadamente al 50% de los trabajadores con educación superior, los trabajadores con ocupaciones ajustadas a su formación tienden a obtener mayor rendimiento, sin embargo, la brecha salarial dentro del nivel de estudio persiste, independientemente del género y de que los empleos estén ajustados a la formación educativa.

Determinación de las condiciones económicas, ingresos, pobreza y empleo, a partir del Shap values en Colombia, 2019-2020

ANGEL GALVIS CABALLERO

Asesor Área Metropolitana de Bucaramanga, Dirección General, Colombia

GEOVANNY CASTRO ARISTIZABAL

Profesor Asociado, Universidad de Santander, Colombia

El presente trabajo emplea técnica de Shap values para conocer la forma en la que se correlacionan las características socioeconómicas, incluido el nivel educativo, sobre el índice de ingresos, pobreza y ocupación, en Colombia con el ánimo de analizar el efecto que tuvo en el año 2019 y realizar pronósticos para el 2020 usando el método de machine learning XGBoost . Para este propósito se empleará la información de la Gran Encuesta Integrada de Hogares -GEIH- del Departamento Administrativo Nacional de Estadística -DANE-

¿Qué factores determinan el éxito en la transición de la universidad al mercado laboral? Un análisis multinivel aplicado al sistema universitario español

IÑAKI IRIONDO MUGICA

Universidad Complutense de Madrid, Spain

La expansión de la educación superior a lo largo de las últimas décadas ha estimulado una demanda creciente de información sobre la empleabilidad de las instituciones educativas. En España la inserción laboral de los titulados universitarios tiene un especial interés dadas las dificultades que han experimentado los jóvenes en su transición al mercado de trabajo, especialmente en la gran recesión y también durante la crisis del COVID. Algunos autores proponen la necesidad de vincular la financiación de las instituciones de educación superior a las tasas de inserción laboral y a la calidad de los empleos de los egresados. En España, la nueva Ley Orgánica del Sistema Universitario establece en el artículo 56 que el sistema de financiación de las universidades dependerá, entre otros indicadores, de la tasa de inserción laboral. No obstante, existen numerosas dificultades para tratar de medir la contribución de las universidades en la empleabilidad de sus titulados, en la medida que difiere la oferta de titulaciones, el perfil de los titulados y, entre otros factores, las características de los mercados laborales locales. El objetivo de este trabajo es analizar los resultados de inserción laboral del sistema universitario en España a partir de los datos que elabora el Sistema Integrado de Información Universitaria (SIIU) del Ministerio de Universidades. Las variables disponibles para el análisis son las siguientes: la tasa de afiliación, la jornada laboral, la temporalidad, el desajuste educativo y la base de cotización anual. La principal virtud de esta información estadística es que permite identificar la titulación y la universidad donde el titulado ha cursado sus estudios. El trabajo tratará de controlar los sesgos que pueden ocasionar la desigual oferta de estudios de cada universidad, a la hora de estimar los distintos modelos.

New evidence on the impact of learning in a foreign language on educational outcomes

LUIS PIRES

Universidad Rey Juan Carlos, Spain

MARÍA JESÚS MANCEBÓN-TORRUBIA

Universidad de Zaragoza, Spain

Mauro Mediavilla

Universitat de València & EVALPUB, Spain

JOSÉ MARÍA GÓMEZ SANCHO

Universidad de Zaragoza, Spain

A Content and Language Integrated Learning (CLIL) method, in which some subjects are taught in a foreign language (English), was initiated in Spain in 2005 and has progressively extended to half of public schools. The results have been very positive; however, it has been argued that studying subjects in a foreign language may reduce the educational outcomes of students. This paper evaluates this criticism in the Madrid bilingual program adopting a Propensity Score Matching approach, with the PISA 2015 and 2018 data. The model defines a homogenous student subsample from bilingual and nonbilingual schools in terms of the observable characteristics that may jointly influence both the selection of school type and educational scores. Our results, robust to the sample and unobservable hidden bias, indicate that the Madrid bilingual program, in addition to improving students' English level, does not reduce the skills of subjects taught in English or in Spanish.

Reaching for gold! The impact of a positive reputation shock on career choice

DANIEL GOLLER

University of Bern, Switzerland

STEFAN C. WOLTER

University of Bern, Switzerland

We analyze the causal influence of a positive reputation shock for a particular occupation on career choice. In the unpredictable event that a young adult from one's own country wins a (gold) medal in a particular occupation at the World Championship of Vocational Skills (WorldSkills), searches for apprenticeship vacancies increased significantly by around 7 percent in this profession. Most importantly, the increase in searches for apprenticeship vacancies in the current year has also led to 2.5 percent more contracts being signed in the winning occupation, and there are indications that these apprenticeships have a better match between employers and employees.

Math Skills, Selection in Training Firms, and Post-Training Wages

MAHDI GHOLAMI

LMU, Germany

SAMUEL MÜHLEMANN

LMU, IZA Bonn, ROA Maastricht, Germany

This paper analyzes the association between an individual's mathematical skills in ninth grade, the subsequent selection process in firm-based apprenticeship training, and post-training skilled worker wages. Using data from the National Educational Panel Study and the Institute for Employment Research, we show that math skills are associated with training placements in larger and higher-paying firms, as well as higher subsequent skilled worker wages. Furthermore, we apply instrumental variables regression to account for measurement error in standardized math test scores. We find that a one-standard deviation increase in math skills is initially associated with a 36% increase in initial post-training earnings, reducing to 10% after five years. Our results suggest that math skills help school leavers find an apprenticeship in firms in which they have a comparative advantage, thereby increasing allocation efficiency. Moreover, when we control for observable cognitive and non-cognitive skills, we find that female school-leavers sort into lower-paying training firms. This selection accounts for a significant portion of the gender wage gap observed later among women who continue their careers as skilled workers within their training firms.

Sobreeducación en graduados universitarios: el origen familiar importa

NURIA LEGAZPE MORALEJA

Universidad de Castilla-la Mancha, Spain

CECILIA ALBERT

Universidad de Alcalá, Spain

MARÍA ÁNGELES DAVIA RODRÍGUEZ

Universidad de Castilla - La Mancha, Spain

Este artículo estudia las diferencias en los logros laborales al inicio de la trayectoria profesional de los egresados universitarios jóvenes asociadas a su origen familiar medido a través del nivel educativo de los padres. Para ello, explotaremos una submuestra de la Encuesta de Inserción Laboral de Universitarios de 2019, realizada por el Instituto Nacional de Estadística. La estrategia empírica va a consistir en dos pasos: en primer lugar, estimaremos unos modelos probit para analizar el riesgo de sobreeducación y, en segundo lugar, se aplica un análisis de descomposición para observar como las diferencias en las características observables contribuyen a explicar la brecha de sobrecualificación según el origen familiar. La muestra está compuesta por personas relativamente homogéneas en cuanto a su edad, experiencia y capital humano, y sin embargo en el análisis descriptivo inicial se advierten en ellos diferencias por origen familiar. Dicho origen puede estar condicionando los resultados en el mercado de trabajo a través del tipo de estudios universitarios y de institución donde los jóvenes los cursan. También representan diferencias en las posibilidades que estos tienen de establecer ciertas estrategias de movilidad geográfica, búsqueda de empleo y adquisición de experiencias significativas. Resultado de todo ello es el riesgo de sobreeducación diferencial que se advierte en los jóvenes cuyos padres no han alcanzado la educación superior. Sin embargo, los resultados destacan dos aspectos reseñables: el primero, que la desventaja media es menor para los jóvenes que tienen logros académicos especiales (calificaciones superiores a las de su titulación, estudios de postgrado, etc.); y el segundo, que también es menor en quienes han contado con el apoyo de las instituciones para su inserción laboral, en especial el de las propias universidades y los servicios públicos de empleo, que contribuyen de esta manera a la igualdad de oportunidades.

Desajuste educativo y salud mental en España.

INMACULADA GARCÍA MAINAR

Universidad de Zaragoza, Spain

VÍCTOR MANUEL MONTUENGA GÓMEZ

Universidad de Zaragoza, Spain

La evidencia empírica de que un mayor nivel educativo lleva asociado un mejor estado de salud ha sido cuestionada en los últimos años desde dos frentes. Por un lado, esta relación positiva no tiene un carácter monótono y solamente puede confirmarse hasta los estudios de nivel secundario, pero no superiores. Por otro lado, si se tiene en cuenta la posible causalidad inversa entre educación y salud, esa relación positiva se atenúa. Estas conclusiones son mucho más evidentes cuando lo que se estudia es el caso de salud mental. La existencia de desajuste educativo puede explicar que mayores niveles alcanzados no supongan mejoras en la salud, sino justo lo contrario, por el sentimiento de frustración, caída de satisfacción laboral o estrés psicológico que se sufren. No obstante, esta relación también puede traer causa inversa si es el hecho de tener algún tipo de enfermedad mental lo que haga que una persona esté desajustada en su puesto de trabajo. El objetivo de este artículo es analizar la relación entre el desajuste educativo (concretamente la sobreeducación) de trabajadores con estudios superiores y algunos indicadores más o menos directos de salud mental en España, permitiendo la posibilidad de que las dos variables se influyan mutuamente. Los datos utilizados proceden de la European Health Interview Survey, para los años 2014 y 2020. La selección de individuos incluye a aquellos que trabajan y tienen estudios superiores. Las variables objeto de estudio son dos indicadores del estado de salud, depresión diagnosticada, y la variable que indica si el trabajador está sobreeducado o no. Además, se incluyen otras variables de control de tipo personal, del empleo y del lugar de residencia. Para tener en cuenta la simultaneidad en la determinación de ambas variables se estima por el método de máxima verosimilitud simulada, produciendo estimaciones que son eficientes e identifican la dirección de causalidad. Los resultados obtenidos apuntan a que una mayor sobreeducación no conduce a un peor estado de salud mental, pero sí que el tener problemas de depresión puede llevar a que la persona trabajadora esté sobreeducada en su puesto de trabajo.

Determinantes y efectos salariales del desajuste educativo horizontal en el mercado laboral de México

CÉSAR MANUEL TREJO LUCERO

Universidad Autónoma de Baja California, Mexico

MARÍA ÁNGELES DAVIA RODRÍGUEZ

Universidad de Castilla - La Mancha, Mexico

SANTOS LÓPEZ LEYVA

Universidad Autónoma de Baja California, Mexico

Determinantes y efectos salariales del desajuste educativo horizontal en el mercado laboral de México. Resumen Este trabajo, busca aportar a la literatura empírica que aborda el desajuste horizontal en los mercados laborales de países de rentas medias. Para ello se aborda el caso de México, que en décadas recientes experimentó una expansión educativa que ha resultado en una oferta laboral cualificada cuya distribución por ámbitos de conocimiento no necesariamente coincide con la de la demanda de trabajo cualificado (lo que se conoce como desajuste horizontal). Esta situación no es deseable e implica subutilización de habilidades. Utilizando un pool de segundos trimestres del periodo 2013-2021 de la Encuesta Nacional de Ocupación y Empleo que emite el Instituto Nacional de Estadística, Geografía e Informática de México, se mide el desajuste horizontal con un índice de ajuste (Vecchia et al, 2023); se obtiene la incidencia y la distribución del desajuste horizontal por perfiles sociodemográficos y características del empleo; con modelos Probit y Probit-Heckman se estiman los determinantes del desajuste horizontal y se corrige el sesgo de selección; subsecuentemente, se estiman los efectos salariales por mínimos cuadrados ordinarios y se subsana el sesgo de selección y se efectúan regresiones de cambio endógeno para remediar la endogeneidad. Entre los principales hallazgos sobresalen: los asalariados especializados en estudios de Agronomía y veterinaria, así como Ingeniería, manufactura y construcción, tienen mayor riesgo de estar desajustados horizontalmente que los que cuentan con estudios relacionados al campo de estudio de Educación; un asalariado informal tiene mayor riesgo de estar desajustado horizontalmente en comparación a uno formal; un asalariado informal desajustado horizontalmente obtiene una prima salarial en comparación a uno formal, pero al tratar la endogeneidad se convierte en una penalización; los asalariados especializados en campos de estudios relacionados a los servicios, son los que reciben la mayor penalización salarial en comparación a los de Educación.

CAPÍTULO 3
DETERMINANTES DEL
DESEMPEÑO ACADÉMICO

CHAPTER 3
DETERMINANTS OF ACADEMIC
PERFORMANCE

Weathering the Storm: How do Free Compulsory Education and Early-life Shocks Shape Long-Term Education Attainment?

WENJING PENG

Peking University, China

YAOJING WANG

Peking University, China

We explore how early-life shocks interact with subsequent human capital investments to impact individuals' long-term education attainment. Leveraging the rollout of free compulsory education reform in rural China and early-life rainfall shocks as two sources of exogenous variation, we employ cohort difference-in-differences and triple-differences methods to identify the causal effects on educational outcomes. We show that exposure to the reform significantly improves grade completion during compulsory schooling. Conversely, early-life adverse rainfall substantially decreases educational attainment, leading to an average decrease in schooling of 0.2-0.4 years. However, longer exposure to the reform mitigates these adverse effects, with approximately three additional semesters of enrolment compensating for a one-standard-deviation increase in early-life extreme rainfall exposure. Our findings suggest a dynamic substitutability rather than complementarity between family and government human capital investments.

Harnessing community resources to enhance learning

CALLY ARDINGTON

University of Cape Town, South Africa

Large and heterogenous classes, coupled with a lack of resources and teacher expertise, particularly in mathematics and African languages, makes it difficult for South African teachers to implement effective pedagogical practices. The result is poor curriculum coverage and a focus on teacher-led instruction and communalized whole-class activities with limited targeted individual practice and feedback. In several developing countries with large classes, policymakers have attempted to use teacher assistants to help with classroom management and provide additional small group or one-on-one support. With an extremely high youth unemployment rate, harnessing the potential of unemployed youth holds particular promise in South Africa. This paper provides experimental evidence on the impact of placing community youth in classrooms on learning outcomes in the early grades. We conduct a randomized control trial across 120 schools of a programme designed to improve the content knowledge and pedagogical skills of teachers while providing them with high-quality supporting materials. In addition in half of the treatment schools, each teacher was assigned a teacher assistant recruited from the community. We find that teacher assistants are highly effective in improving foundational literacy and numeracy outcomes (effect sizes of 0.5 standard deviations) when rigorous recruitment and selection is in place, high-quality learner and teacher materials are available in classrooms, comprehensive training is provided, and continuous support is offered. In late 2020, in response to COVID, the government introduced a youth employment initiative that has so far placed around 840 000 youth on short term contracts as assistants in public schools. This initiative has established the organisational, political and financial feasibility of operating a community teacher assistant programme at scale. This paper demonstrates that it is also feasible to meaningfully impact learning outcomes and provides a model for recruitment, training and mentoring to achieve that.

The long run impact of increased compulsory education age. Evidence from administrative data in the Netherlands

HANNELORE NELISSEN

KU Leuven, Belgium

DE WITTE KRISTOF

KU Leuven, Belgium

Following the importance of a high school degree, compulsory education age gradually expanded in the last decades. However, the long term impact of ever increasing compulsory education ages is unclear, giving rise to debates about its effectiveness. In this paper, we exploit a quasi-experiment that increased compulsory education age from 17 to 18 years in the Netherlands. Using detailed micro administrative data, we examine its long run impact on the labor market and continuing education. We observe that the increase in compulsory education age resulted in a reduction in student dropout by approximately 1 percentage point, and an increase in high school, colleges, and adult education graduation rates by approximately 0.4 to 0.8 percentage points. However, no significant effect is observed with respect to labor market outcomes. This finding holds particular significance in the current socio-economic context, where lifelong learning and continuous education are incredibly important. Nevertheless, it is crucial to recognize the divergent impact of the policy across educational tracks, emphasizing the need for tailored approaches for each track.

High-Crime Environments and Educational Efficiency: A Spatial Case Study

SEBASTIÁN LÓPEZ ESTRADA

Pontificia Universidad Javeriana Cali, Colombia

JOSE ALEJANDRO MUÑOZ

Pontificia Universidad Javeriana Cali, Colombia

Education plays a fundamental role in the economic development and well-being of society, mainly due to its generation of significant social externalities. Nevertheless, the context in which children grow up plays an important role both in their education, and well-being. Specifically, urban crime has consequences on educational performance and achievement. The consequences range from a reduction in performance on standardized tests to an increased likelihood of teacher attrition or turnover, and temporary school closures. This study analyzes the relationship between high-crime environments and educational efficiency of 301 schools located in Cali in the year 2018, through the Saber 11 standardized test and school pass rates. The main objective is to calculate the potential loss of efficiency in the schools due to the crime environment; to do this, a conditional robust non-parametric approach is applied, incorporating homicides as an environmental variable. Results show three main findings. First, it is clear there is a negative effect of homicides on educational efficiency; the schools lose efficiency about 1,05% in average in Cali (Colombia) for operating in these environments. Second, the relationship between crime and net educational efficiency loss is not linear; it has an inverted-U shape. Finally, since a certain level of homicides, the schools can start developing tolerance in front of increasing crime levels without necessarily repercussions in their efficiency because they can absorb the effects of a high crime environment better without increasing the loss of efficiency. This study makes two principal contributions to the literature. this is the first study to measure the relationship between urban crime and educational efficiency responding to the call to develop the intersection of this research field. Second, quantify the crime events around the school perimeter and knowing the immediate and closest neighborhood context, observing the schools' exposure to urban crime.

The power of a meal. School feeding and its educational effects in Colombia

SOFIA COLLANTE ZÁRATE

Universidad de los Andes, Colombia

FABIO SÁNCHEZ TORRES

Universidad de los Andes, Colombia

CATHERINE RODRIGUEZ ORGALES

Universidad de los Andes, Colombia

Working Paper Link Does a meal make a difference in the educational process? This article presents the impacts of the Colombian School Feeding Program (PAE) on educational indicators in the country. The estimates use census information and exploit the different levels of exposure to the program by households between 2012 and 2019, when a massive expansion of the program occurred. The results indicate that the PAE increases the retention of students in the school system and improves educational achievement. The results indicate that a student who is a beneficiary of the program, compared to his brother or sister who is not, has a 10% lower probability of being absent and dropping out of the educational system and a 6% lower probability of repeating a grade. In addition, the probability of taking the Saber 11 test (a test taken at the end of secondary education) increases by 25%, and the score on that test increases by around 0.1 standard deviations. Thus, the program encourages students to attend school, which increases the years studied and learning.

Comparing High Achievers and Low Achievers: An Examination of Student Inputs versus School Inputs in the Educational Outcomes of English Adolescent

AMIRA ELASRA

The department of Economics, University of Warwick, United Kingdom

This paper investigates the association between sets of inputs and the educational outcomes of English adolescents. By linking the Longitudinal Study of Young People in England and Ofsted data, the paper employs the Context-Input-Process-Outcome model to compare the correlation of students and school inputs with cognitive and post-school outcomes. Using Nonlinear Canonical Correlation Analysis, the paper compares the profiles of the high achievers and the low achievers showing consistency with existing literature. Specifically, high achievers tend to exhibit positive attitudes toward school, benefit from supportive home learning environments, express greater eagerness to pursue university education, and belong to higher socio-economic backgrounds. Furthermore, the results reveal that student inputs exert a greater influence than school inputs in shaping these profiles.

A systematic review of empirical studies using data from large-scale international assessments with a longitudinal approach

JOSÉ MANUEL CORDERO FERRERA

Universidad de Extremadura, Spain

MARTA GONZÁLEZ-CAVA

Universidad de Extremadura, Spain

Educational research has shown an increasing interest in using large-scale international assessments to analyze trends over time and exploring the influence of multiple potential determinants of student achievement. The present paper presents a systematic review of empirical studies using data from those surveys and adopting a longitudinal approach, with special attention paid to those using causal inference techniques. Using the PRISMA protocol, a comprehensive search is conducted in multiple scientific databases. The selected studies are classified according to the methodological approach adopted and the topic addressed. This research should be useful for practitioners interested in exploiting the information available in these international assessments to identify causal relationships in this framework.

Mapping Economics starters' quantitative skills. What role do they play in the relationship between students background and academic performance?

DANIEL CERNIN

University of Southampton, United Kingdom

THOMAS GALL

University of Southampton, United Kingdom

PANAGIOTIS GIANNARAKIS

University of Southampton, United Kingdom

EMANUELA LOTTI

University of Southampton, United Kingdom

Diagnostic tests on incoming students' existing skills are widely used in Higher Education to identify gaps relevant for academic success. Previous research suggests a link between initial gaps and early academic outcomes, but there is limited evidence for Economics, which heavily relies on quantitative skills. Our contribution is, firstly, to identify the extent to which Economics students differ in their pre-existing quantitative skills, including by demographic characteristics. Second, we examine potential links between identified gaps and first semester marks. Third, we evaluate different diagnostic tests by their predictive power for academic outcomes. Our research will be useful for identifying changes in the curriculum and delivery to mitigate possible dependences of academic outcomes on background. We randomly assign incoming Economics students of a post-Covid cohort at a Russell Group university to different versions of a maths and stats test. We use three treatments, differing in the extent of required translation of textual information into mathematical formulae and the use of self-assessment questions. Combining test results with demographic information from administrative and survey data, we map students' pre-existing knowledge overall and by demographic stratum (gender, geographic origin, socio-economic background). We then use first semester module marks to identify links between demographic characteristics and academic performance, mediated by individual pre-existing knowledge, and to identify test versions that best predict academic performance. We find little evidence of gender bias, but female home students slightly underperform male ones in statistics. We find little evidence of bias based on SES, but some based on ethnicity. While there is little evidence for an overall bias between home/international students, there are significant differences at question level, cancelling out in the aggregate. This may reflect different school curricula. Interestingly, overseas do not perform worse than home students in questions relying on processing textual information, both across and within test-treatments.

Strategic learning and academic performance among elite college students: empirical evidence from China

JUNLIN JI

Beihang University, China

WENJUAN GAO

Beihang University, China

YAN HU

Beihang University, China

JIANG WANG

Beihang University, China

AIM The present study aimed to empirically analyze the impact of different learning approaches, in particular strategic learning, on student's academic performance and investigate the underlying mechanisms. **METHODS** The study conducted a cross-sectional survey among 692 undergraduates at a top university in China, employing a multistage stratified random sampling approach. The learning approaches of college students were evaluated using the Approaches and Study Skills Inventory for Students (ASSIST-short-version) scale. Descriptive statistics and regression analyses were utilized to explore the relationship between academic performance and learning approaches. Additionally, qualitative interviews were conducted to complement quantitative findings, clarifying the mechanisms through which strategic learning approaches influence learning outcomes. **RESULTS** Quantitative findings demonstrate that employing a strategic learning approach benefits the academic performance of elite college students but has a detrimental impact on their publication of research papers. In contrast, the deep learning approach significantly improves both their academic performance and research output. Surface learning approaches notably hinder students' academic achievements. Qualitative analysis suggests that while a strategic learning approach enhances students' GPA through systematic planning and active adaptation, it may impede the development of their research capabilities due to utilitarian course selection, one-sided learning, shallow engagement, and blind competition. The adoption of a strategic learning approach is closely associated with the higher education talent evaluation system, the teaching environment, and students' habitual learning patterns. **CONCLUSION** The study contributes to the theoretical understanding of learning approaches by addressing the gap in existing literature, which tends to overemphasize deep and surface learning approaches while overlooking the strategic learning approach. These findings offer practical insights for optimizing students' learning strategies.

The impact of primary school math skills on academic achievement in lower secondary school

MELISA DIAZ LEMA

Politecnico di Milano, Italy

CHIARA MASCI

Politecnico di Milano, Italy

MARA SONCIN

Politecnico di Milano, Italy

TOMMASO AGASISTI

Politecnico di Milano, Italy

Several studies indicate that mathematical achievement during the early years of primary school serves as a reliable predictor of students' subsequent performance and that academic challenges that emerge early tend to persist throughout the school path. According to the Italian National Evaluation Committee for Education (INVALSI), proficiency in mathematics was observed in only 56% of 8th graders in A.Y. 2022. This study aims to uncover the most relevant math skills in primary school, as extracted from standardized tests in grade 2 and 5, that significantly impact proficiency at the end of lower secondary school. The analysis utilizes data from three different national cohorts of primary school students who were tested in grade 2 (school years: 12-13, 14-15, and 15-16) and grade 5 (school years: 15-16, 17-18, and 18-19). It matches the students' patterns in four prevalent areas of math literacy (relationships and functions, data and predictions, numbers, and space and figures) with the likelihood of being a student at-risk at grade 8 (school years: 18-19, 20-21, and 21-22). In this respect, at-risk students are defined as those that do not reach the minimum proficiency in the test and thus are at-risk of educational poverty and implicit/explicit dropout. To explore students' patterns on math literacy during primary school, the study relies on a latent class analysis, while for the prediction of at-risk students at the end of lower secondary schools, the study compares multilevel statistical and machine learning models. The research makes a twofold contribution. Firstly, it provides a national-level modeling of pupils' math skills in primary school over time. Secondly, the findings enable the identification of potential areas of improvement at the primary school level, allowing educators and policymakers to develop targeted interventions that enhance specific math skills and promote long-term academic success for students.

CAPÍTULO 4:
EDUCACIÓN Y GÉNERO

CHAPTER 4:
EDUCATION AND GENDER

Intra-household bargaining power and expenditure on children's education in Brazil

FERNANDO POZZOBON

Santa Catarina State University, Brazil

MARCOS VINICIO WINK JUNIOR

Santa Catarina State University, Brazil

HENRIQUE CRUZ

São Paulo School of Economics, Brazil

Family spending on education contributes to the formation of human capital and children's success in the labor market. Unlike other household expenditures, the decision on the amount of investment in education depends on altruism toward the children and expectations about the rates of return on investments. Bargaining power among household members is another determinant of family decisions. There is a lack of research on the role of gender pay inequality in the allocation of household spending on children's education. Thus, this study examines the relationship between women's bargaining power and household education expenditures in Brazil. The mother's bargaining power measure is given by the ratio between the mother's income and the sum of the father's and mother's income. Considering that the model's dependent variable is the fraction of parents' income spent on their children's education we use Fractional Probit Models. The data used were taken from the 2017-2018 POF, the national household budget survey carried out by the Brazilian Institute of Geography and Statistics (IBGE). Only households with at least one school-aged child (up to 17 years old) were kept in the sample. Additionally, households where grandparents contribute to the family income or families in which the father or mother was not present were removed from the sample since it is difficult to identify the heads of the household, which may jeopardize the analysis of bargaining power. The models were estimated considering POF's sample weights, and the database used comprises 25,722 observations. The results show that the increase in a mother's bargaining power increases spending on children's education. In the extreme case, the increase in bargaining power may represent a greater share of spending on education in the family budget of, on average, 1.15p.p. However, alternative specifications identified that this evidence results from increased spending only on daughters.

Gender Discrimination in Access to Higher Education

CHAREYRON SYLVAIN

Université paris-est créteil, erudite, tepp-cnrs, France

FILS-AIME BERLANDA DESUZA

Université gustave eiffel, erudite, tepp-cnrs, France

L'HORTY YANNICK

Université gustave eiffel, erudite, tepp-cnrs, France

This study explores the influence of gender on selection for master's-level higher education programs in France. In February 2022, some 2,100 master's programs at a broad range of French universities were tested by sending simple requests for information from fictitious students to the program managers. The study found no significant gender-based differences in the treatment of applicants. However, we do observe a difference in ease of access for women to science and technology master's programs compared to arts, literature and languages programs: women are relatively more likely to obtain a positive response from the latter than from the former.

Gender role and socioeconomic status in the early school leaving phenomenon

DE WITTE KRISTOF

KU Leuven, Belgium

JOSÉ M. PASTOR

University of Valencia, Ivie, Spain

ANGEL SOLER GUILLÉN

University of Valencia, Ivie, Spain

IVÁN VICENTE CARRIÓN

University of Valencia, Spain

That boys tend to suffer more the early school leaving phenomenon than girls is common knowledge, explained by various factors, where the relevance of each one is not clear since there is no consensus in the literature. These elements are classified as push factors if they are related to what make students to drop out school from inside like, since boys tend to suffer more the learning breakdown. Additionally, there are also pull factors if they are what make students to drop out school, but in this case from outside, mainly because the labor market seems more profitable alternatives to school for boys. The effect of these factors could vary according to the students' socioeconomic status of origin and the gender role of the country. Therefore, we could expect some heterogeneity in the early school leaving phenomenon, where the previous mentioned gender gap is not constant. Given some scarce previous evidence, girls seem to be more resilient in low socioeconomic levels where the gender gap could be higher than in socioeconomically advantaged contexts, but less is known about the heterogeneity in terms of gender roles. In order to fill this gap in the literature, we use a sample of individuals between 18 and 24 years old from the EU-27 countries, since the main database is the EU-SILC between 2011 and 2019. Thus, we apply logit regressions with both countries, and years fixed. This paper can argue that the gender gap appears mainly between individuals from socioeconomically disadvantaged contexts, where boys have a significant higher probability to drop out of school than girls. However, the commented gender difference is stronger in countries where gender roles, measured using the Gender Gap Index from the World Economic Forum, are more prevalent, especially for medium and low socioeconomic status levels.

Are parents an obstacle to gender-atypical occupational choices?

STEFAN C. WOLTER

University of Bern, Switzerland

THEA ZÖLLNER

University of Bern, Switzerland

Despite numerous measures intended to enhance gender equality, gender-specific study and career choices have remained a persistent concern for policymakers and academics globally. While an extensive literature explores determinants influencing gender-specific career and study choices, this literature focuses predominantly on women not choosing male dominated occupations and in particular not going into STEM occupations. We add to this literature by focusing on explicitly stated parental preferences, using a large-scale randomized survey experiment (N=6000) in Switzerland. The focus on parents is motivated by the observation that adolescents consistently mention their parents as the single most important factor influencing their career choices. The setting of the experiment is a realistic situation that the majority of Swiss parents is faced with. Because the adolescents looking for an apprenticeship are underage, parents need to sign the training contract and have thereby the possibility to steer or veto a preference of their child. Adolescents have the choice of about 240 different occupations to train, of which most have a distinctive gender imbalance. The surveyed adults are presented with a choice situation, in which their hypothetical daughter or son has been proposed two different training occupations, of which one is a predominantly female and the other a predominantly male. Their hypothetical child asks their advice which occupation she or he should choose. The pair of occupations, presented to the adults comes from a random sample of 105 pairs and the surveyed people are not informed about the gender distribution of the two occupations. Results show that adults are gender-neutral when it comes to advice a daughter but have a pronounced preference for male occupations, when advising sons. Furthermore, if one of the occupations belongs to the category of STEM occupations, adults have a preference for these, irrespective of the gender of their hypothetical child.

Gender academic achievement gap in the Colombian higher education

SONIA ALEXANDRA AGUDELO AYALA

Universidad de Antioquia, Colombia

ONEIDA PATRICIA CÁRCAMO MÉNDEZ

Universidad de Antioquia, Colombia

We analyze academic performance gender gaps in the Colombian higher education in 2018. We focus on investigating in which extent the academic performance gap between females and males at the end of the undergraduate programs is driven by gender gap in the previous academic background. This analysis is conducted using data on Saber Pro tests, a national examination, which includes three different cognitive tests: quantitative reasoning, critical reading, and English reading comprehension. The data was provided by the Colombian Institute for the Evaluation of Education –ICFES–. To estimate the gender gaps, we use two decomposition methods, the Oaxaca-Blinder decomposition (1973) and the RIF decomposition (Firpo, Fortin and Lemieux; 2009). Both methods allow us to disentangle the total gap into two components: explained and unexplained component. Our findings give empirical support that men achieved significantly higher scores than women in all three tests. When the differences are evaluated in the mean, we found that the extension of the gaps are: 17.06 points in quantitative reasoning, 7.03 points in English reading comprehension and 4.24 points in critical reading. We also found evidence that the explained part has a greater weight, around 55% for the quantitative reasoning and critical reading tests, and 66% for the English test. Although the total gap and its components are not constant across quantiles, our most outstanding result, but not surprising, is that the academic performance in secondary education plays a key role in driving the gender gaps in higher education. Under this light, we provide an insightful discussion about the key role that the higher education institutions should be played in closing these gender gaps and call for a far-reaching policy measures on closing the gender gap in previous stages of higher education, that is, in primary and secondary education.

Does Homework really Improve Student Achievement?

DARRAGH FLANNERY

University of Limerick, Ireland

DONAL PALCIC

University of Limerick, Ireland

JOSÉ JOAQUÍN GARCÍA CLAVEL

Universidad de Murcia, Spain

The effectiveness of homework as a method to enhance student performance continues to be a source of debate within educational policy in many countries. The evidence base around this is relatively sparse (Fan et al., 2017) with some evidence of a positive correlation between the provision of homework and student academic achievement. However, even within this sparse literature, studies that utilise causal methods and/or examine heterogeneities around this relationship are rare. In this context, this study takes advantage of variation within students and between subjects from a large-scale education international dataset (TIMSS 2019) to estimate the relationship between both the frequency and intensity of homework on student performance. More specifically, we use a sample of over 150,000 high school students across 30 countries and employ a student fixed effects model which accounts for observable and unobservable individual-specific factors, such as unobserved ability. In terms of our main findings, the analysis presented in table 3 below shows that assigning homework every day, as opposed to not assigning homework every day, increases student test scores by 0.057 standard deviations. This effect is robust to the inclusion of teacher controls, instructional time and the variety of fixed effects included in our model. We also find that the effect of homework estimated in our baseline model is concentrated in males, increasing tests scores by 0.10 standard deviations for boys but a statistically insignificant effect estimated for females. Finally, to shed further light on possible differences across groups of countries, we estimate our model by whether or not a student resides in an OECD country. These show that gender differences are most stark in non-OECD countries compared to more developed countries. Specifically, we see that females benefit from greater homework frequency in OECD countries but to a lesser degree than males in the same group of countries. However, males in non-OECD countries benefit significantly from receiving homework while females derive no academic benefit.

Neighbour and Peer Effects on College-Major Choices

ANNIKA BACKES

IWH Halle, Martin-Luther-University Halle-Wittenberg, Germany

DEJAN KOVAC

IWH Halle, Germany

Choosing a college and major is an important decision as it influences life trajectories. Despite the significance of this topic, little is known about how these choices are made through neighbour influences at the individual level. In this paper we investigate, how older neighbours and peers influence college and major application decisions of individuals. We use the universe of high school and college admission data in Croatia from 2009-2015 exploiting time and program variation in admission cutoffs within an RDD. We analyse the impact on college-major choices of older neighbours on younger student-peers by comparing students whose older neighbours enrolled to a program to those whose older neighbours nearly missed the enrolment status. We find causal evidence that having an older neighbour that got enrolled to a program increases the probability to apply to this program by about 20% (evaluated at the sample mean) compared to having a neighbour that barely missed the admission score. We find that this effect only holds for the closest neighbours in terms of both distance and age difference. A heterogeneity analysis shows that female students are more likely to be influenced by older neighbours' choices, and male older neighbours' admission has a larger impact on both male and female students compared to female older neighbours. The effect is stronger if the student-neighbour pair lives in a city or region that does not have a university, implying that the value of information in rural areas is higher. We find evidence that students do not follow their older neighbours to programs with low or medium demand, but instead we find a higher probability to apply for programs when the older neighbour got admitted to a high demand - elite program.

CAPÍTULO 5
EDUCACIÓN SUPERIOR

CHAPTER 5
HIGHER EDUCATION

Do peers' and teachers' interactions influence dropout among upper secondary school students in online environments?

MELISA DIAZ LEMA

Politecnico di Milano, Italy

LIDIA ROSSI

Politecnico di Milano, Italy

TOMMASO AGASISTI

Politecnico di Milano, Italy

This study delves into the extent to which interactions with peers and teachers influence student dropout in online learning environments. Drawing upon data from over a million users in various types of upper secondary schools engaged with an Italian Learning Management System (LMS) between September 2019 and July 2021, our research assesses two key aspects. Firstly, we identify the most effective machine learning (ML) technique for predicting educational platform dropout. Subsequently, we investigate the distinct contributions of peers and teachers in elucidating this phenomenon. Our findings reveal that ensemble methods excel in predicting dropout incidents, probably given the complex relationship between diverse user interactions and student platform engagement. Moreover, integrating both peer and teacher interactions significantly improves model performance compared to relying solely on student interactions. Notably, peer interactions alone prove sufficient for predicting individual student dropout. This study emphasizes the nuanced roles of peer and teacher behaviors in dropout prediction, contributing to the ongoing discourse on refining strategies in online education to enhance student retention and success.

The impact of the Student Number Cap Removal on Entry Standard and High Education Access – Evidence from the UK

LIANGZHI DAI

University of Dundee, United Kingdom

YU ZHU

University of Dundee, United Kingdom

Higher Education (HE) is a “devolved matter” in the UK. While most school leavers from the rest of the UK rely on student loans to cover substantial tuition fees (£9,250 per annum since 2017), “young students” from Scotland can attend Scottish universities free of tuition fees. On the other hand, Scotland has maintained strict student number caps to moderate costs. This paper examines the impact of the student number cap removal implemented in 2015 for HE institutions in England only, on entry standard and HE access for English versus Scottish domicile students. Using the tailored individual-level administrative data from the Higher Education Statistical Agency (HESA) covering the universe of all students attending UK universities since 2011, we are able to evaluate the significant expansion of HE in England induced by the policy change, on a number of outcomes, including institution and subject choice, degree class obtained, as well as progression to postgraduate degrees or labour market outcomes 18 months after graduation, controlling for gender, ethnicity, socio-economic background, neighbourhood deprivation, school type and student’s prior attainments. Consistent with theoretical predictions, our results show consistent reductions in the average University and College Admissions Service (UCAS) tariff points for post-expansion English domicile students, relative to their Scottish counterparts, of nearly 20 points (equivalent to one A-Level grade). The estimates are robust to subsamples by gender, broad degree subjects studied, and parental social class, indicating wide impact. Moreover, using a Naive Bayes Model machine learning approach, we find strong evidence of a positive spillover effect of the English HE expansion on Scottish domicile students, whose secondary school grades were inadequate to qualify them for the free Scottish HE places. We interpret the relative increase in the flow of Scottish students to universities in England, despite having to pay substantial tuition fees, as evidence of depressed demand for HE in Scotland due to the remaining number cap, especially for socio-economically disadvantaged students. Our findings highlight the unintended consequences of the Scottish flagship free HE policy.

Four decades of educational mobility

DONGSHU OU

The Chinese University of Hong Kong, Hong Kong

The persisting associations between parents' educational attainments and children's educational outcomes have been well documented in the developed world (Torche, 2019), although until recently the literature was primarily focused on such persistence from fathers to children (Azam, 2016). The role played by mothers in their children's education has been increasingly recognized in the study of intergenerational social mobility studies (Beller, 2009; Minello and Blossfeld, 2017). However, there is still too little research on intergenerational education mobility in Hong Kong (Lam and Liu, 2019). Our paper is the first to document the degree of intergenerational transmission of education over the last four decades. In particular, we investigate whether parent-child educational persistence differ for sons and daughters and how such difference has evolved over time. Besides gender differentiation, our study examines the heterogeneous effects of intergenerational education mobility, in terms of immigration status, as well as at different levels of education. We found that 1. The intergenerational education persistence has decreased over the years in Hong Kong, which implies that there is a high intergenerational education mobility. This speaks directly about the positive impact of Hong Kong's education expansion policies in the past three decades and benefits of the increased educational opportunities. 2. Different than previous literature in other countries, intergenerational education mobility is higher for daughters than for sons. 3. Parent's education, especially mother's education has been increased sharply from less than primary level (4-5 years) to post-compulsory level (10-11 years) in the past three decades, the association of mother's education with children's educational attainment has become stronger than that of father's education. The father-son association is stronger than mother-daughter association in educational persistence until 2021. 4. Consistent with Lam and Liu (2019), we find that second-generation Mainlander immigrants have a higher intergenerational education mobility than Hong Kong natives. 5. However, in terms of predicted probability of getting a higher level of education than their parents' attainment for the children, native Hong Kong with better parental educational background seems to have the best chance to move upward in their educational attainment.

Exploring Student Disengagement in Higher Education: An Empirical Analysis in Social and Legal Studies

SARA M. GONZÁLEZ-BETANCOR

Universidad de Las Palmas de Gran Canaria, Spain

ALEXIS JORGE LÓPEZ PUIG

Agencia Canaria de Calidad Universitaria y Evaluación Educativa (ACCUEE). Gobierno de Canarias, Universidad de Las Palmas de Gran Canaria (ULPGC), Spain

MARIA EUGENIA CARDENAL DE LA NUEZ

Universidad de Las Palmas de Gran Canaria, Spain

GUACIMARA GIL SÁNCHEZ

Universidad de Las Palmas de Gran Canaria, Spain

The paper explores the phenomenon of university disengagement, focusing on the differentiation between changing programmes and leaving the institution. In the literature on the subject, the term transfer is typically used for the former, referring to the change of studies, while the term dropout refers to the latter, meaning resignation from the university. In this article, we use Tinto's (1994) model to analyse the possible differences between the characteristics of students who change their studies and those who drop out of university. Our analysis compares both profiles using census data from the University of Las Palmas de Gran Canaria (ULPGC). We conduct a comprehensive analysis of the factors influencing dropout and transfer among students in Social and Legal Studies at ULPGC. We distinguish between students who drop out completely and those who transfer to another programme within two years of their initial enrolment. Employing multinomial logistic regression and a structural equation model, we use administrative data from ULPGC and categorise variables according to the dimensions outlined in Tinto's model (family background, individual characteristics, previous education, study conditions, and performance). Our framework aims to identify the dimensions that have a greater impact on students' choices. The analysis of the mediating effects of grades and the indirect effects of pre-university conditions on dropout confirms the premises of Tinto's model, which posits dropout as a process in which students' experiences at the university interact constantly with external factors. We demonstrate that a combination of family, academic, and contextual factors influences the likelihood of university dropout. Tinto's model is also valid for explaining transfer. For dropout, the most influential factors include parents' educational level, the pathway to university, and study conditions such as part-time enrolment and financial support. In contrast, the most prominent factors for transfer are the number of options in career choice and being a working student. These findings highlight the need for a personalised approach to addressing retention and transfer in higher education, considering the different experiences and needs of students; specifically, identifying those students most at risk of dropping out and providing support measures tailored to their experiences.

CAPÍTULO 6
BRECHAS DE CAPITAL HUMANO

CHAPTER 6
HUMAN CAPITAL GAPS

Desempeño académico y brecha de género en STEM: Evidencia empírica para Colombia

MARIA INES BARBOSA CAMARGO

Universidad de la Salle, Colombia

Aunque el acceso a educación superior y el rendimiento educativo de niñas y mujeres han aumentado en las últimas décadas, las mujeres siguen estando muy subrepresentadas en los programas universitarios de Ciencia, Tecnología, Ingeniería y Matemáticas (STEM). Además, las diferencias en el rendimiento académico de niveles académicos previos (secundaria) siguen explicándose tanto por variables de índole socioeconómica como por inequidades en las oportunidades educativas. En este contexto, este trabajo tiene como objetivo general analizar si el rendimiento académico obtenido en educación secundaria influye en la elección de carrera universitaria en Colombia, y si dicha elección puede explicarse a partir de brechas de género. Para ello, se hace uso de los resultados de las pruebas de Estado, realizadas por el Instituto Colombiano para la Evaluación de la Educación (ICFES), que proporciona información detallada sobre la caracterización individual, familiar y de los establecimientos educativos de estudiantes de secundaria y de educación superior en Colombia para descomponer las fuentes de la brecha de género en STEM. Los resultados muestran que el puntaje obtenido en matemáticas y ciencias afecta la elección de programas STEM, y el efecto es mayor en mujeres, una vez se ha controlado por variables de antecedentes socioeconómicos del estudiante y de disparidades entre colegios. Estos hallazgos son clave para el diseño de políticas públicas encaminadas a promover la igualdad de género particularmente en el acceso a la educación y en las oportunidades de inserción laboral de las mujeres en Colombia.

Brechas de capital humano en el Valle del Cauca

JHON JAMES MORA RODRIGUEZ

Universidad Icesi, Colombia

Este artículo analiza la existencia de Brechas de Capital Humano en el Valle del Cauca(Colombia). A partir de la definición de brechas de capital humano en Cantidad, Calidad y pertinencia se realiza un análisis para 10 sectores de la economía Vallecaucana. De igual forma, se analiza la función de emparejamiento por ocupaciones encontrando que existen rendimientos constantes en la función de emparejamiento.

Sobreeducación y sus Retos: Estudio Empírico de Graduados de Máster en España

MARTÍN MARTÍN-GONZÁLEZ

Universidad Europea de Canarias, Spain

SALVADOR ORTIZ

Universidad Autónoma de Madrid, Spain

MARÍA JANO

Universidad Autónoma de Madrid, Spain

España padece altas tasas de sobreeducación entre quienes tienen estudios universitarios, con consecuencias negativas para los salarios, la productividad y la satisfacción laboral. La reforma educativa del Espacio Europeo de Educación Superior (EEES), unida a la expectativa de que una formación más amplia y especializada que ofrece mejores oportunidades laborales, ha incrementado significativamente la demanda de másteres. Utilizando datos de la encuesta EILU-2019 del Instituto Nacional de Estadística, exploramos varias definiciones de sobreeducación utilizando modelos de elección discreta para determinar los factores que explican la probabilidad de experimentar este desajuste, teniendo en cuenta los perfiles sociodemográficos, educativos y laborales de los titulados, y cuantificar los efectos marginales. Esta cuestión es especialmente relevante dada la escasez de evidencia empírica sobre titulados de máster y la falta de consenso teórico sobre la mejor forma de medir la sobreeducación. Los resultados indican que las variables de mayor impacto son el campo de estudio, los conocimientos teóricos, la movilidad internacional y el segundo idioma.

CAPÍTULO 7
EDUCACIÓN Y DESIGUALDAD

CHAPTER 7
EDUCATION AND INEQUALITY

Welfare Implications of Unequal Outside Options in Centralized College Admissions

LAURA HURTADO-MORENO, United States.

This paper studies the role of socioeconomic status in shaping students' school choices and allocations under the Boston mechanism. Using a dataset that combines students' socioeconomic information, strategic admission choices, and admission outcomes from a centralized higher education admission system in Colombia that uses the Boston mechanism, we document a striking segregation trend: students from higher socioeconomic backgrounds are twice as likely to select top-tier programs as their first choice, compared to applicants from lower socioeconomic backgrounds, leading to segregation in school admissions. To understand this dynamic, we build a structural model of school choice and estimate students' preferences under unequal outside options. This approach enables us to assess the welfare implications of socioeconomic disparities. By simulating adjustments to the Boston mechanism and considering alternative admission frameworks, we evaluate potential welfare improvements.

The Effects of Attending High Track Schools: Evidence from Hungarian Centralized School Assignments

THILO KLEIN

ZEW Mannheim, Pforzheim University, Germany

SARAH MCNAMARA

ZEW, Mannheim, Germany

MAXIMILIAN BACH

Statistisches Bundesamt (Destatis), Germany

Though the use of tracking policies to stratify students is commonplace, there is mixed evidence concerning the effect of ability-based tracking on student performance in a causal sense. This paper studies heterogeneity in the effects of attending high-track schools in a hierarchically ordered system where students are assigned to tracks after the 8th grade. Exploiting data from the Hungarian centralized assignment mechanism in a quasi-experimental framework, we isolate the causal effect of grammar school attendance on student performance two years post-match. We find that grammar school attendance increases students' university aspirations, and noticeably improves academic performance independent of socioeconomic status (SES), baseline test scores, and parents' academic achievements, particularly in mathematics. These are not driven by peer effects in terms of baseline achievement, though we find small peer spillovers based on graded measures of diligence and behavior, particularly for females. Given there exist inequalities in track attendance by socioeconomic background, despite evidence that low-ability students equally benefit from grammar school attendance in a value-added sense, this potentially reinforces educational inequality.

CAPÍTULO 8
POLÍTICA EDUCATIVA

CHAPTER 8
EDUCATION POLICY

Efecto de las políticas públicas en el trabajo de las mujeres con estudios universitarios. Un estudio del 2005 al 2022

ANGÉLICA BEATRIZ CONTRERAS CUEVA

Universidad de Guadalajara, Mexico

NOÉ RENE LUNA PLASCENCIA

Universidad de Guadalajara, Mexico

PAMELA MACIAS ALVAREZ

Universidad de Guadalajara, Mexico

NANCY MARICELA GONZÁLEZ ROBLES

Universidad de Guadalajara, Mexico

VERÓNICA ALCALÁ SEVILLANO

Universidad de Guadalajara, Mexico

La participación de las mujeres en la actividad económica es esencial para el crecimiento económico, razón por la que los gobiernos deben establecer programas sociales que garanticen su inclusión en el mercado laboral con empleos de calidad y bien remunerados, además de establecer programas para generar una mayor equidad entre hombres y mujeres. Esta investigación tiene como objetivo analizar los efectos de las políticas públicas en la empleabilidad de las mujeres por nivel de estudio y como ha sido su evolución en el ingreso, esto con el propósito de conocer, por un lado, el funcionamiento de la acción pública y, por otro, conocer como los problemas de desigualdad afectan a las mujeres en México. El análisis se aplicó a los datos de la Encuesta Nacional de Ocupación y Empleo (ENOE) de los años 2005 a 2022, los resultados se estimaron primeramente, con la aplicación de la técnica ANOVA comparando el ingreso promedio de hombres y mujeres por año dentro de cada periodo de gobierno, posteriormente con la prueba de Tukey, se obtuvieron las diferencias entre las tasas promedio de empleo, tomando en cuenta el sexo, se repite el proceso para el ingreso promedio por periodo y nivel de estudios. Los principales resultados demuestran que existen pocos programas sociales en México que apoyen la inclusión de las mujeres en el mercado laboral, las mujeres con niveles altos de educación tienen mayor probabilidad a estar empleadas seguidas por las que tiene estudios de técnico superior. Las mujeres sin hijos o con uno, muestran mayor tendencia a emplearse.

Género y carreras STEM: el papel de la educación extraescolar durante la Educación Primaria en la Comunidad Autónoma de Euskadi

ALEJANDRA TORRES MARTÍNEZ

Personal investigador contratado UPV/EHU, Spain

CRISTINA PIZARRO IRIZAR

Profesorado permanente UPV/EHU, Spain

ARANTZA UGIDOS OLAZABAL

Profesorado permanente UPV/EHU, Spain

Nuestro proyecto de investigación se plantea examinar las diferencias de género en la elección de actividades extraescolares durante las etapas de Educación Primaria y Bachillerato, y estudiar si existe relación entre el tipo de extraescolares que se practica durante la primera etapa y la posterior elección de Bachillerato STEM. . (Ciencia, Tecnología, Ingeniería y Matemáticas), que da acceso a ocupaciones con salarios medios más elevados. La razón es que, al contrario de que la educación obligatoria, el campo de las actividades extraescolares es muy amplio y ha sido poco analizado en la literatura. Según Baker y Milligan (2016), es en estas etapas donde se dan las primeras diferencias de género, en parte originadas por las decisiones de las familias y, en parte, por las propias habilidades y gustos de niños y niñas. El principal objetivo es realizar un riguroso análisis cuantitativo, mediante modelos de elección discreta, de la probabilidad de elegir Bachillerato STEM y sus determinantes (género, número de hermanos y hermanas mayores, nivel educativo, situación laboral y sector profesional de las familias, rendimiento académico y actividades extraescolares practicadas). Nuestras hipótesis de partida es que existe una relación significativa entre el género, la práctica de según qué actividades extraescolares y la elección de Bachillerato STEM. Es importante comprender si estas elecciones tempranas pueden tener un impacto en la trayectoria educativa y profesional de los individuos. Si fuera así, los resultados de esta investigación podrían ayudar a establecer estrategias educativas que promuevan la igualdad de géneros desde las primeras etapas.

Competencias financieras y brecha de género. Un estudio a partir de la Encuesta de Competencias Financieras

MARÍA JESÚS MANCEBÓN-TORRUBIA

Universidad de Zaragoza, Spain

GEOVANNY CASTRO ARISTIZABAL

Profesor Asociado, Universidad de Santander, Colombia

In this study, our aim is to evaluate the fiscal and financial competences of doctoral students at the Campus Iberus. To achieve this, we implemented a pilot experiment consisting of offering these students the opportunity to participate in a specific online educational program on financial and fiscal literacy. Approximately 100 students volunteered to participate in this program, which involved completing eight online classes (50% on financial literacy and 50% on fiscal literacy). They also answered a pre-questionnaire designed to evaluate their competences before receiving the classes (baseline), gathered information about their personal and family situations, and provided details about their financial/fiscal experiences. Additionally, they completed a post-course questionnaire aimed at evaluating the program's efficacy in improving competences and financial/fiscal attitudes. The program was implemented in the last week of October 2023, and we are currently organizing the database and developing the specification of our estimation model. In the next months, we will finish this study, and we hope to benefit from comments and suggestions from our AEDE colleagues in Valencia.

CAPÍTULO 9
CAPITAL HUMANO

CHAPTER 9
HUMAN CAPITAL

Understanding Improvements in Reading Performance in Liberia: The Centrality of Text

ALICIA MENENDEZ

University of Chicago, United States

URSULA HOADLEY

University of Cape Town, South Africa

ANNA SOLOVYEVA

NORC at The University of Chicago, United States

While many low-income countries have demonstrated impressive progress in access to education, this progress has not yet been matched with improvements in the quality of education and academic outcomes. The research reported in this paper examined the impact of the Read Liberia intervention, a program that provided teacher training and coaching, and teaching and learning materials, reaching 57,600 students in grades 1 and 2 in 640 schools. We exploited the randomized assignment of schools to the program and found a large positive effect on students' ability to read and understand grade-appropriate text. Literacy among students in intervention schools doubled, on average, compared to control schools. This impact corresponds to an effect size of 0.6 of a pooled standard deviation. Although structured pedagogy programs such as Read Liberia assume they improve instructional practices, our analysis of the program implementation data, suggests that the improvements in reading performance are driven by the availability and utilization of Read Liberia reading materials and not by improved teaching practices in schools. This confirms research literature suggesting that high-quality and well-leveled learning materials in the hands of students may have a positive impact on reading skills independent of changes in instructional practice.

The Urban Learning Premium - Evidence from Peru

SONJA FAGERNAS

Dept. of Economics, University of Sussex, United Kingdom

JUAN MANUEL DEL POZO SEGURA

NFER, United Kingdom

PANU PELKONEN

Dept. of Economics, University of Sussex, United Kingdom

Persistent regional inequalities in education and rapid urbanisation are common features in emerging economies. We examine the urban learning or schooling premium in Peru using three approaches: 1) estimating the effect of local population density on learning with a register of primary school pupils, 2) studying changes in learning with a panel sample of rural-urban movers, and 3) census-based estimations on the effect of the duration of urban exposure during childhood on school attainment. All methods confirm that urban areas are more conducive to higher learning outcomes, although the magnitude of the effect varies by method and outcome. The results suggest that a large part of the unconditional urban premium is due to measurable differences in school resources, but that factors such as the local socio-economic environment and average school size also play a role. Sibling comparisons with census data suggest that timely progression in the school system is not driven by selection or family effects, but rather, urban exposure. Overall, the results suggest that the ongoing urbanisation within developing and emerging economies is likely to provide a mechanical boost to aggregate learning outcomes.

Market access, the skill premium and human capital in Spain (1860-1930)

RAFAEL GONZÁLEZ-VAL

Universidad de Zaragoza & IEB, Spain

JULIO MARTINEZ-GALARRAGA

Universitat de Barcelona, Spain

DANIEL A. TIRADO

Universitat de València, Spain

PAU INSA-SÁNCHEZ

Università degli Studi di Siena, Italy

This paper explores the relationship between market access and human capital in the context of an industrializing economy, in this case Spain between the late nineteenth and early twentieth centuries. Specifically, we examine whether differences in regional accumulations of human capital could be related to market access. To do this, we empirically test the relationship between education variables and market access for Spanish provinces between 1860 and 1930. We then focus on the mechanism that may be mediating this relationship, i.e. the skill premium. The results suggest that there were sizeable provincial differences in the skill premium, the explanation for which would be that those provinces with the highest market access specialized more in skill-intensive sectors in which higher wages were paid.

CAPÍTULO 10
ENSEÑANZA Y EDUCACIÓN

CHAPTER 10
TEACHING AND EDUCATION

Teacher for life? Quantitative research into determinants of the retention of first and second career teachers in Flanders

VAN BELLE JACOB
KU Leuven, Belgium

MIKE SMET
KU Leuven, Belgium

Flanders faces great and growing teacher shortages within the entire compulsory education system. One of the reasons thereof is early attrition from the profession. Although extensive research on teacher attrition has been conducted, there is a need for research accurately tracking attrition decisions, as a large part of studies measure attrition intention instead or only measure attrition at an arbitrarily chosen moment. In addition, research based on factual data is warranted, to complement studies into career choices that focus more on the role of psychological processes (e.g. motivation). In recent years, policy measures have been aimed at second career teachers (SCT's), as they are considered a promising group to address the shortages. However, before they can be considered a solution, more longitudinal research is necessary to understand their attrition rates and contributing factors. This study investigates when teachers leave the profession and what characteristics on personal (e.g. gender, study grant), job (e.g. duration of assignments, tenure status), and school level (e.g. experience of the school team, SES composition) influence that decision. In addition, this study examines if the moment of attrition differs between first career teachers (FCT's) and SCT's, and whether different characteristics influence the attrition decision. Data from administrative databases are analyzed through survival analysis, using Kaplan-Meier and Cox Proportional Hazard models. Separate models are computed for FCT's and SCT's. Preliminary analyses show that the ratio of SCT's to FCT's has increased significantly over the past decade. However, SCT's have a significantly lower survival rate than FCT's. Moreover, multiple characteristics influence the retention of FCT's differently than that of SCT's (e.g. type of teacher education, the instability of assignments), suggesting that both groups require different policy approaches. Further analyses will be carried out during February 2024, leading to further insight into objective determinants of (early) teacher attrition.

Grade inflation and the COVID-19 Pandemic among Higher Education: An Empirical Analysis of a Top Comprehensive European University

MAXIME FRANÇOIS

KU Leuven, Belgium

The 2023 PISA results are clear : academic performances of 15-years old students keep declining and still, grades at higher education levels remain constant or growing. This is the result of a widely spread phenomenon among European universities and in the United States called “Grade inflation” or the tendency of the grading practices to become increasingly lenient over time. The problem has recently reached an upper level during the COVID-19 pandemic. Indeed, “tolerance” or “grade leniency” were specifically asked by academic institutions in these times, leading to important consequences on students and universities. As grades increase, they lose their signaling power which affects the students’ value and the institutions’ reputation. Furthermore, grade inflation implies less distinction between “weak” and “strong” students as the same high grade is reachable by “weak” students coming from institutions more subject to grade leniency. This paper aims to answer two research questions. First, what is the magnitude of the intrinsic grade inflation regardless of the pandemic and, second, what are the consequences of the leniency policy during COVID-19 on the grade inflation? The purpose is to disentangle two sides of the problem by putting the health crisis and the common grade inflation aside. We will use the personal information and the exam results of almost 29 000 students enrolled in a top comprehensive European university. More specifically, we follow each student during their entire academic path, which allows us to run a panel data course fixed effect model. By using panel data with course and student fixed effects, we find an inflation between 0.012-0.024 Standard Deviation (SD) through years, with an important raise of the grades around 0.04-0.13 SD during the two years of the pandemic. In addition, we conduct Coarsened Exact Matching analysis to control for the fact that students' ability change through time and to highlight strong from weak individuals. It appears that only the latter are subject to a positive grade inflation by 0.1 real value point each year, while no significant increase was noted among strong students.

Job Satisfaction of the UK Graduates: The Role of Job Attributes Match Level and Educational Mismatch

BEI CHEN

Lancaster University, United Kingdom

According to Armstrong (2006) the term of job satisfaction describes the emotions and perceptions individuals hold regarding their employment. When these attitudes are positive and favourable, it denotes job satisfaction. Conversely, negative and unfavourable feelings toward one's work denote job dissatisfaction. As job satisfaction can be regarded as one of the most critical factors in terms of the efficiency and effectiveness of a business organization (Aziri, 2011). Thus, understanding job satisfaction can yield significant benefits, not just for employees, but also for the overall health and success of the organization. Previous studies have found job characteristics such as job security, promotion opportunities, salary, contribution to society (Ting, 1997; Bender and Roche, 2013, 2016), organizations characteristics such as organizational commitment, relationship with supervisors and colleagues (Ting, 1997) have significant effects on job satisfaction. On the other hand, educational mismatch is found to have an adverse effect on job satisfaction and earnings (Battu et al., 1999; Allen, 2001; Bender and Heywood, 2011; Green and Zhu, 2010). In this paper, we argue that some employees might voluntarily accept educational mismatch in order to pursue the desired job attributes (such as job security, work-life balances, promotion or career development, etc.). By expanding the focus beyond the traditional viewpoint of educational mismatch as a detrimental condition, we highlight its potential role as a strategic choice for individuals seeking certain job characteristics. This perspective broadens our understanding of job satisfaction and its influencing factors, and offers more nuanced insights for employers, educators, and policymakers in their pursuit to enhance job satisfaction and organizational effectiveness.

CAPÍTULO 11
EDUCACIÓN Y MEDIO AMBIENTE

CHAPTER 11
EDUCATIONAL AND
ENVIRONMENT

Direct and Indirect Effects of Bullying on Academic Performance

GISELA RUSTEHOLZ

Universitat de València & EVALPUB, Spain

MAURO MEDIAVILLA

Universitat de València & EVALPUB, Spain

Given the increase in mental health problems in children and adolescents in Spain since the pandemic, and the increase in reported cases of bullying by teachers, it is important to begin to analyse the relationship between these variables. The aim of this article is to create and estimate, from the bibliographical background, a model of relationships between variables that allows us to know the direct and indirect effects of bullying on academic performance and mental health, for students in the 4th year of Compulsory Secondary Education (ESO) in Spain. For this purpose, we will use the methodology of Structural Equation Models (SEM), which allow us to construct direct, indirect and interaction relationships between variables, as well as to estimate latent variables from other observed variables. The database to be used is PISA 2018 and PISA 2022. The result of this analysis determines that there is a direct negative relationship between the variables bullying and academic performance, but also an indirect relationship mediated by a deterioration of mental health.

Financial and economic literacy in and beyond tests: Investigating the role of Vocational vs. General Education and educational level

MADDALENA DAVOLI

University of Zurich, Switzerland

LAURA BRUNNER

University of Zurich, Switzerland

Financial and economic literacy are pivotal for financial empowerment in modern economies (Bernheim & Garrett, 2003; Lusardi & Mitchell, 2014). Despite extensive studies on financial literacy determinants (e.g., age (De Bassa Scheresberg, 2013), income (Lusardi & Tufano, 2015), gender (Bucher-Koenen et al., 2017), and civil status (Brown & Graf, 2013)), the link between financial and economic literacy and type of education -namely, vocational and general upper-secondary education-remains understudied. This study addresses this gap by examining the impact of education types on financial and economic literacy, using Switzerland as a case study because of its diverse educational landscape. This paper asks three critical questions: first, how do different education types shape financial and economic literacy, and second, do specific vocational occupations contribute to financial knowledge accumulation, and if so, which occupations and content areas are responsible? Findings reveal significant differences between middle-skilled vocational education and training (VET) and general education (Gymnasium) graduates in financial literacy, with the latter performing significantly better. We find no significant differences between middle-skill VET and Gymnasium graduates for economic literacy. To ensure a fairer comparison we focus on upper middle-skill VET and Gymnasium graduates, as these two are more likely to be drawn from a similar part of the students' ability distribution. We find that, among these two groups, the differences in financial literacy are less pronounced than shown above. Interestingly, upper middle-skill VET occupations outperform Gymnasium graduates in economic literacy. The study highlights variations in financial and economic literacy outcomes across educational levels and vocational occupations, specifically distinguishing between upper middle-skill and all middle-skill VET categories. Future analyses aim to employ instrumental variables estimation for a more rigorous understanding of such gaps, leveraging the randomness in educational choices based on vocational training vacancies and general upper-secondary schooling opportunities.

The role of anxiety in academic performance: An international perspective

ÁLVARO CHOI DE MENDIZÁBAL

Universidad de Barcelona, Spain

NATALIA OLIVETE PEIRONA

Universidad de Zaragoza, Spain

JAVIER VALBUENA

Universidad de Zaragoza, Spain

The effect of anxiety on academic performance is ambiguous. It can be related to better results thanks to a higher motivation or to worse results by preventing students from reaching their maximum potential. In cases where anxiety is related to poorer educational performance, the direction of this relationship is also unclear, with lower-achieving students being more likely to have higher levels of anxiety. Previous studies have mostly found a negative correlation between test anxiety and students' academic performance. With all this in mind, the aim of the present study is to analyze the relationship between test anxiety levels and students' academic performance, as well as to study the personal, family, and institutional characteristics that affect this relationship. For this purpose, we use the 2015 edition of the Programme for International Student Assessment (PISA), which is the only edition that includes information on test anxiety. To study in more detail the institutional characteristics that affect the relationship between anxiety and educational outcomes, we complete our database with the report "Education at a Glance", which includes indicators of the educational systems of OECD countries, specifically the types of assessments they carry out. We focus our interest on assessments that have academic consequences for students (high-stakes exams). We carried out the analysis considering the hierarchical structure of the data through a multilevel linear model. The present study contributes to understanding the relationship between students' anxiety levels and their educational performance from an international perspective in a context where mental health is increasingly important for educational policy decisions.