



European Expert Network
on Economics of Education

Evolving elasticity of demand for higher education

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EENEE Policy Brief 2025

Introduction

The dynamics of higher education are shifting as institutions face the dual challenges of maintaining enrolments amid rising tuition costs, and adapting to new pathways such as non-degree credentials. This policy brief examines the elasticity of demand for higher education – namely, how tuition costs influence enrolment – and explores the transformative potential of non-degree credentials (NDCs) such as micro-credentials and digital badges. Drawing on recent literature, this policy brief highlights actionable insights for policymakers and educators to align higher education with evolving societal and labour market demands.

Tuition costs and elasticity of demand

Tuition costs are a critical factor influencing demand for higher education, with elasticity varying by discipline, geography and anticipated returns. A study focusing on the United States demonstrates¹ how adjustments to tuition costs enrolment rates differently, depending on the disciplines. For instance, fields such as engineering exhibit relatively inelastic demand, as prospective students perceive higher returns, while arts and humanities show greater sensitivity to cost changes. In the case of the aforementioned study, differential tuition policies were able to enhance revenues by over USD 4 million annually just at one school, while still maintaining levels of enrolment in high-demand fields.

In Cyprus, the perceived rate of return has been shown to play a decisive role in students' decisions to pursue higher education, particularly during economic downturns. During recessions, social class becomes an even more significant determinant, with disadvantaged students disproportionately affected by increases in tuition costs.² This underlines the importance of targeted financial aid to ensure equitable access, particularly for low-income and minority students.

Globally, fields with higher expected returns, such as STEM, tend to exhibit lower elasticity.³ These findings emphasise the need for nuanced tuition policies that account for differences between disciplines. For instance, subsidising tuition in fields that offer higher public value but lower private returns, such as teaching and social work, could address labour shortages while maintaining financial sustainability for institutions.

Non-economic factors influencing demand

Beyond tuition costs, non-economic factors have a significant influence on demand for higher education – for example, through the way in which students' self-concept and social capital shape their academic

¹ Menzies, M.D. III, (2017). *Tuition Elasticity at the College Level and Its Effect on Differential Tuition Rates* (Doctoral dissertation).

² Menon, M. E., Markadjis, E., Theodoropoulos, N., & Socratous, M. (2017). Influences on the intention to enter higher education: the importance of expected returns. *Journal of Further and Higher Education*, 41(6), 831-843.

³ Shin, J.C., & Milton, S. (2007). Student response to tuition increase by academic majors: empirical grounds for a cost-related tuition policy. *Higher Education*, 55,719-734.



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choices.⁴ The literature highlights how “*guanxi*” – a culturally specific form of social capital – guides Chinese students from diverse socio-economic backgrounds in pursuing postgraduate education.⁵ These findings suggest that non-economic barriers, such as limited access to networks or mentorship, can impede equitable participation in higher education.

Gender-based disparities are particularly pronounced in STEM fields, with six key factors deterring women from entering maths-intensive disciplines, including cognitive ability, preferences, and societal biases.⁶ Research underscores the need for targeted interventions, such as mentoring programmes and curricula that challenge stereotypes, to encourage female participation in STEM. Addressing these barriers has the potential to not only boost enrolment in these fields but would also ensure a more diverse and inclusive workforce.

Emerging megatrends, such as the rise of artificial intelligence (AI) and the climate crisis, further influence academic pathways. Although comprehensive studies on these trends are limited, there are some insights⁷ into students’ motivations that enable us to categorise these into career aspirations, intrinsic interests, altruism, and the pursuit of accessible options. Policymakers should leverage these insights to design programmes that align with evolving student priorities while addressing global challenges.

As participation in higher education grows to become almost universal among younger cohorts, it is more and more important to avoid sweeping claims about the drivers of elasticity in demand that do not reflect students’ rich and varied experiences, based on gender and social background as well as areas of study. On the other hand, where policies affect higher education as a whole, their impact on demand should be assessed in a nuanced way, reflecting the differentiated channels and outcomes for different target groups.

The role of non-degree credentials (NDCs)

The landscape of higher education is transforming rapidly with the emergence of non-degree credentials (NDCs) such as micro-credentials and digital badges. Defined as competency-based learning models, these credentials address skills mismatches and enhance employability.⁸ For instance, micro-credentials align with formal qualifications but are tailored to specific competencies, offering a flexible and targeted approach to upskilling.⁹

Interest in micro-credentials seems to be widespread, attracting the attention of leaders in education, policymaking and politics.¹⁰ A comprehensive literature review conducted for the European Commission found¹¹ that 54 % of the existing research on micro-credentials, including major reports and articles in academic journals, had been published during the two years that preceded the study. This enthusiasm reflects increasing importance of micro-credentials for industries facing talent shortages, particularly in AI

⁴ Guo, J., Marsh, H. W., Morin, A. J., Parker, P. D., & Kaur, G. (2015). Directionality of the associations of high school expectancy-value, aspirations, and attainment: A longitudinal study. *American educational research journal*, 52(2), 371-402..

⁵ Liu, D. (2020). The role of social capital/Guanxi in students’ decision-making about postgraduate education in China: An explorative case study. *Frontiers of Education in China*, 15(3), 453-481.

⁶ Wang, M.-T., & Degol, J.L. (2017). “Gender gap in STEM: Current knowledge, implications for practice, policy, and future directions.” *Educational Psychology Review*, 29(1), pp.119-140.

⁷ Skatova, A., & Ferguson, E. (2014). Why do different people choose different university degrees? Motivation and the choice of degree. *Frontiers in psychology*, 5, 90978.

⁸ Ahsan, K., Akbar, S., Kam, B., & Abdulrahman, M.D.A. (2023). Implementation of micro-credentials in higher education: A systematic literature review. *Education and Information Technologies*, 28(10), 13505-13540.

⁹ Oliver, B. (2019). Making micro-credentials work for learners, employers and providers. Retrieved from dteach.deakin.edu.au/microcredentials.

¹⁰ Brown, M., & Nic Giolla Mhichil, M. (2022). Unboxing micro-credentials: An inside, upside and downside view. *Culture and Education*. doi: <https://doi.org/10.1080/11356405.2022.2102293>

¹¹ Brown, M., Nic Giolla Mhichil, M., Beirne, E., & Mac Lochlainn, C. (2021). State-of-the-art literature review on micro-credentials: A report for the European Commission. National Institute for Digital Learning, Dublin City University. <https://ni4dl.files.wordpress.com/2022/09/mc-final-draft-literaturereview-2021.pdf>.



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and sustainability. Employers are prioritising skill-specific hiring, with demand for AI skills often commanding wage premiums comparable to doctoral qualifications.¹² However, the integration of NDCs into traditional higher education remains challenging, involving institutional hurdles such as inadequate technological infrastructure and resistance to curriculum reform.¹³

Despite these challenges, the potential for competency-based hiring to redefine employability is high.¹⁴ Employers value the transparency of NDCs in demonstrating specific skills, yet students' perceptions remain mixed. Students often view digital badges as less prestigious than traditional degrees.¹⁵ Bridging this perception gap will require collaborative efforts between higher education institutions and industry stakeholders to standardise and validate such credentials.

Bridging the perception gap around non-degree credentials requires a dual approach: transparent communication of their benefits, coupled with integration into existing education systems. By addressing these challenges, institutions can position NDCs as integral tools for workforce readiness. While obstacles remain, the rise of non-degree credentials offers an opportunity to reimagine education for a rapidly evolving labour market. With strategic collaboration, these innovative models can redefine how we approach lifelong learning and employability.

¹² Ehlinger, G.E. & Stephany, F. (2023). Skills or Degree? The Rise of Skill-Based Hiring for AI and Green Jobs. *SSRN Electronic Journal*. CESifo Working Paper No. 10817, <http://dx.doi.org/10.2139/ssrn.4665577>.

¹³ Hartnett, M.K. (2021). How and why are digital badges being used in higher education in New Zealand? *Australasian Journal of Educational Technology*, 37(3), 104–118.

¹⁴ Gauthier, T. (2020). The value of microcredentials: The employer's perspective. *The Journal of Competency-Based Education*, 5(2), e01209.

¹⁵ Zhou, L., Chen, L., Fan, Q., & Ji, Y. (2019). Students' perception of using digital badges in blended learning classrooms. *Sustainability (Switzerland)*, 11(7), Article 2151.



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