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UK universities: from a Triangle of Sadness to a Brighter Future

Shitij Kapur

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About the author

Professor Shitij Kapur is Vice-Chancellor of King's College London. He studied and taught in leading universities in five countries and four continents before choosing to return to the UK.

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UK universities are held in high regard all over the world – envied for their excellence and widely emulated. 17 of the UK's universities are in the top 100 of the QS World University Rankings, second only to the US[1]; and the UK has one of the world's best university graduation completion rates.[2]

Yet for the last few years UK universities[3] have been caught in a "Triangle of Sadness" between aspiring but anxious students burdened with debt; a stretched government ambivalent about the public good of universities; and beleaguered university staff who feel caught in the middle. This article delves into this Triangle, highlights the features which have led to the success of the UK system as well as its current predicament, and proposes steps to a secure a brighter and sustainable future.

1. The Triangle of Sadness

The UK has the most indebted graduates in the world.[4] Over 90 per cent of UK graduates take out a loan, with an average debt of around £45,600.[5] By contrast, about 60 per cent of US graduates take out a loan, with an average debt of only $28,400.[6] This comparison is even more striking when you consider that, on the eve of the financial crisis in 2008, UK graduates earned 8 per cent less than their US equivalents – a gap has since mushroomed to 27 per cent.[7]

It is true that the student loan models in the UK are income-contingent and "forgivable", in that students who do not earn enough do not pay it all back, but in the English system we have reached an absurd situation where 73 per cent of those who enrolled in 2022/23 may default,[8] meaning a future government will have to pay off at least part of this debt. And yet these loans, for fees and maintenance, barely cover the cost of accommodation in some jurisdictions, requiring more students to work longer in part-time

jobs while they are at university. Combined with uncertain job prospects in a tepid economy and deep worries about environmental sustainability, nearly half of UK undergraduates report mental health issues and a quarter report a diagnosed mental health condition.[9] Thus, the "lucky ones" who make it to university aren't feeling as lucky anymore.

University education is an expensive endeavour – what differs across the world is who pays for it. After government transfers to private sources are taken into account, the student pays, on average across the OECD, 30 per cent of the cost of universities for education and public sources provide 67 per cent. The situation is reversed in the UK, with 72 per cent coming from the student and other private sources, and the government making the lowest proportional contribution in the OECD.[10] The student fees, set in 2012 at a maximum of £9,000 per year, and uplifted to only £9,250 in 2017, are now worth only £6,000.[11] Given this, one might expect that a government that thought £9,000 was fair in 2012 might now be willing to provide more support. But recent announcements from both major political parties were silent on this challenge. A Public First survey of general public sentiment around this issue showed that there was little sympathy for a blanket higher fee, but strong support for higher maintenance grants and a progressive fee regime (i.e., those who are better off pay more) along with a higher fee for those subjects in higher demand.[12]

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This impasse has led us to 100 of 144 UK universities reporting an operating deficit in 2021-22,[13] and has, no doubt, helped create the conditions for one of the longest-running industrial disputes in our sector's history. The pressures on staff are real – it now takes more academic and professional staff support to create a university graduate than before, as universities compete to provide a broader range of specialisms and additional services for students in terms of mental health and academic support, as well as career advice and placements. Universities have managed this by, on the one hand, leaning on international fees and, on the other, increasing the number of fixed-term and "precarious" contracts for staff, such that only 67 per cent of university academics are permanent employees, in contrast to 94 per cent in the rest of the labour market.[14]

While education funding hangs in a limbo, the relative research standing of UK universities has also stalled. In 2012, the UK produced 7 per cent of the of the world's academic papers; today it produces 6 per cent. One might understand this dilution given the extraordinary rise of academic research in China. However, what is more concerning is that the UK used to account for 15 per cent of the world's topmost papers, and now accounts for just 11 per cent.[15] China has not only dramatically increased the volume, but also the quality, of its outputs, while the UK's own output quality has plateaued – leading to a relative decline in the top echelons of science. This calls into question the achievability of a "Science and Technology Superpower"[16] status for the UK on a lasting basis, a vision liked by politicians of all parties, and so vital to our future economic success.

> "The UK has a 'high-quality, high-touch, high-cost' university model."

To add to this Triangle of Sadness is the estimated 131,000 extra 18-year-old school and college leavers in the UK who will be seeking university admission by 2030.[17] This is the equivalent of setting up four new King's College Londons a year till the end of the decade. Yet, with the current fee regime, no university will have the ability or incentive to accommodate these students.

The current system has reached its best-by date.

2. UK universities – the model, the funding, the system

The UK has a "high-quality, high-touch, high-cost" university model. With our relatively strong showing in the top 100 universities in the world, and an 80 per cent graduation rate, against an average of 64 per cent for the OECD,[18] the quality of the system is world-leading. However, this quality is achieved, in part, through a low student-teacher ratio. The UK's leading research universities report a ratio close to 13:1, while similar universities in the Netherlands have ratios of 21:1; in Canada it is 23:1; and in Australia, 34:1.[19] Universities in the UK typically have a ratio close to 14:1, while those in Europe and the OECD generally have a ratio of 18:1. Added to this, UK universities have 1.13 professional staff for one academic staff member, against an EU average of 0.82.[20] Since staff salaries are the single biggest expense of universities, it is not

surprising this model requires above-average resourcing for world-leading outcomes.

One aspect of this model that makes it staff-intensive is the researcher-led teaching – a model becoming increasingly difficult to deliver with constrained resources. While lectures are still mostly delivered by research-active academics, large proportions of tutoring, marking, one-on-one tutorials and pastoral care are delegated to graduate teaching assistants (PhD students) or hourly-paid lecturers. This is not surprising given that researchers need to devote exceptional effort, way beyond work hours, to publish in highly selective journals and compete for grants which they have a one in four chance of getting.[21] Thus, hiring a researcher to teach is significantly costlier than an expert teacher, but whether this is what leads to quality outcomes is less than clear. As a result, the system is currently centred around an ideal of the "triple-threat academic" who excels in research, teaching and administration but who often has to delegate due to other work demands. One could design teaching teams which include researchers, teachers and learning specialists working together for better student outcomes. The learning would still be research-informed and research-infused, just not researcher-led.

This system is supported mainly by individual loan-supported fees, but the fees for the individual are unrelated to the cost of the subject, or to its demand, or to the "graduate wage premium" the individual enjoys. A nurse and a dentist who graduate in England pay essentially the same for their education – even though the cost of educating the latter is much greater. When they leave university, one will end up with a far higher salary with which to pay back their equal student loan. This would not matter if the government were subsidising the cost and the fees were merely a token. It matters greatly when a student is taking out a personal loan to subsidise the outcomes of another.

It is a particular Catch-*22* for nurses, teachers, and social workers in the UK, where the government effectively sets their fees, their debt and their wages in a way that is making these professions increasingly unattractive. To manage the cost versus price discrepancies, university managers move funds around from one course to another – often taking money from teaching to support research, and from class-based courses to support lab-intensive

courses. While the government does provide a modest subsidy for expensive subjects, that uplift is far from sufficient to cover the extra cost of capital and operations to support the more expensive courses. If it is indeed in the national interest to defray the cost of certain subjects, it should be done through the public purse, not through charging the nearest available neighbour.

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One group who do pay a “premium” fee are international students. Here the UK competes well in the international market, and this has been the key source of surplus that has sustained research at UK universities. This extra resource for research is needed because UK research funding bodies calculate the full economic cost of research but deliberately pay only 80 per cent of it – expecting the 20 per cent to be found from teaching income and other internal resources of the university. The government does additionally provide a core bloc formula grant called QR funding to supposedly defray this cost. However, audits consistently show that universities are being forced to do even government-supported research at a discount, making research precariously dependent on the surplus generated by international student fees. This has meant that in the last few years universities have sought to double international student income, but research income has increased only by about 16 per cent, such that research is now a smaller percentage of the overall income at English universities in 2022 (20 per cent) than it was in 2016 (23 per cent).[22]

Simply put, this current method of funding the nation’s fundamental and basic research via the surplus of international student fees is inherently precarious. To the degree that the presence of a research environment directly contributes to teaching, it is fair to add it to individual student fees. But beyond that, research that is done in the public interest is a public good, and the public purse should primarily support it to ensure it is sustainable. The UK’s ambition to become a Science and Technology Superpower cannot be left to the vagaries of decisions about study destinations by students and affluent parents in overseas nations.

Finally, the governments across the UK have opted for relatively undifferentiated university systems. As former polytechnics have become universities, nearly 150 institutions are striving to produce world-leading research. For a country its size, the UK has a much higher university density than most. In the case of England, a single regulatory body treats all universities – from the world-leading, research-dominant Oxbridge to a regional talent provider – in a single framework, with a single tariff. Contrast this with California, a state with a GDP comparable to the UK's, and with as many world-leading universities in the top 100 as the UK, which has a well differentiated system of research universities, teaching universities and state colleges that is serving the economy and individuals rather well.

The undifferentiated system in the UK has fostered a welcome egalitarian culture. However, as funding becomes ever more limited, and international competition more intense, it will be very hard to compete without the critical mass provided by the division of labour found in a well differentiated system.

For the present, higher education in the UK is neither a real market, nor a strategically managed system. Universities are hoping for more money to maintain this struggling system. The government is hoping that universities will keep finding productivity gains to defray the rising costs while making room for around 131,000 new UK-domiciled 18-year-olds a year by 2030. This is wishful thinking. It's time for a reset.

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3. Steps to success

The goal here is not to figure out what UK universities need in order to be world-leading. The goal is to secure our world-leading system so that it can serve the future of our nation and students. To do this, first, we must stop the erosion and decline of quality. Second, we secure the science and technology leadership that supports our economic prosperity. Third, we design a sustainable system for the students of tomorrow.

3.1 Stop the erosion of resource and decline of quality

The £9,250 fees, set in 2012, are now worth around £6,000 in real terms. In the last three years alone, inflation has eroded 20 per cent of the resource of universities. To put this in perspective, schools in the UK have received inflation-adjusted uplifts to allow them to maintain the unit of resource per pupil compared to 2012.

Absent any relief, universities will need to keep recruiting more and more international students to be able to afford to teach their domestic counterparts – making the education of UK students hostage to shifting geopolitics and fuelling national concerns about too many immigrants.

If universities cannot recruit more international students, they will be forced to replace loss-making UK admissions with international ones, inviting a vicious discourse that pits "home" student versus "foreign" student. Or, worse still, the whole system will be allowed to decline in quality – with the first to suffer being the students. Even if the UK's quality drifted down from its current high performance to the average OECD level, it would mean 15 per cent fewer entrants will graduate, thrusting unpayable loans and a sense of personal failure on tens of thousands of young people every year.

Where is this money to be found? Should it be higher personal loans for students or should it be public support via the government? At first glance, UK students are already leaving with one of the highest debts, and not necessarily the best returns from their degree. And at the same time the UK government's upfront contribution seems to be proportionally one of the lowest. However, given the very high default rates of the current system, the picture is a little less clear as many students will end up paying less than their debt, and governments more than their upfront share. It is hard to model precisely what will happen in 40 years when the loans finally fold. But what is clear in the students' minds is that any increase in fees that leads to higher loans will only put a downward pressure on university enrolment. Therefore, this decision must be taken carefully, in light of our ambitions for the future shape and size of the post-high school tertiary education system.

However this money is found, it is understandable that if a government did provide an inflation-related uplift, it would wish to assure itself of the UK's world-leading quality. Precisely such a system was implemented by Jo Johnson and the May government in 2017. It provided the only uplift in the decade, from £9,000 to £9,250, and it was planned that further inflation-related uplifts would be forthcoming, with these linked to quality as determined by the Teaching Excellence Framework. The system was observed for just the first year, 2017-18, and then in the fog of government changes and compromises that followed, this commitment was lost. Such a system needs to be revived soon. Any inflation-related uplift must be tied to assurance of quality.

3.2 Secure our research leadership and economic prosperity

The UK's future prosperity depends on its high-tech services and industries and its ability to generate competitive advantages in the green economy, AI and digital sectors. Universities, especially academics, are sometimes allergic to being seen as cogs in an economic wheel. But contributing to this revolution, with ideas and skills, is not an optional "nice-to-do" for our academics and universities, it is central to their future. No country sustains world-leading universities in the absence of growing economic prosperity. But the university system cannot respond to future research opportunities if it is straddled with finding the deficit of 20 per cent in every research project it undertakes. Universities will be forced into doing research only if they can recruit more international students or replace domestic students with international. This Faustian cross-subsidy must stop.

That said, the record of UK universities needs improvement. While the UK outdoes Germany, Switzerland and the Netherlands when it comes to top-ranking universities, and publishes a comparable number of papers in co-authorship with industry, it lags significantly behind these nations in the level of research collaboration between universities and industry. Nearly 25 per cent of the research funding in German, Dutch and Swiss universities is in collaboration with industry – that figure is 10 per cent for the UK.[23] The average university researcher in these European nations obtains around US$50,000 or more in industry funding, while that figure is just US$1,700 for UK researchers.[24] This is not the

fault of researchers. It speaks to the nature of our industries, to our structures and history, and mostly to incentives for academics and industry. This must change.

Fortunately, the Comprehensive Spending Review announced the ambition to increase R&D spending from £14.9 billion in 2021 to £22 billion in 2026.[25] This opportunity must focus on two ambitions. First, it should break the unhealthy dependence of research on cross-subsidisation from international student fees. The UK government should fund the complete cost of the research it sponsors. Obviously, fully funding individual research projects may mean that fewer grants will be funded, and the system will need to become more selective. For the long-term sustainability of our research base, it is better to have a properly funded competitive system than a precariously funded expansive one.

The second ambition should be to focus new resources on the areas that are critical for the future economic competitiveness of the UK, by creating schemes and incentives that draw closer university research, industry innovation and new start-ups. That is a bargain that academics and universities must accept in the service of the country's strategic growth ambitions and their own long-term sustainability.

3.3 Create a sustainable system for the students of tomorrow

> "...you cannot change university systems with every new government."

The UK is going to see a significant demographic bulge in the next few years, with 200,000 more 18-year-olds in 2030 than in 2020.[26] If even half of them wish to go to university, this means finding space for 100,000 more university students (and UCAS projects even more will want to). Participation in higher education varies greatly – 38 per cent of German 25- to 34-year-olds have completed some form of tertiary education; the OECD average is 47 per cent, as it is in Israel; the US is at 51 per cent; and Canada and Korea lead the pack, with 67 per cent and 70 per cent respectively.[27] The UK is currently at 57 per cent – and has shown a significant widening of participation across socioeconomic groups as the overall participation rate has increased.[28] Should we increase, hold steady or decrease our

participation rate? What do we offer the thousands of 18-year-olds who do not go to university? And who should decide?

“Perhaps it is time to seek a differentiated system – with greater specialisation across institutions and cost-effectiveness within them.”

The answers to these questions are not self-evident. Canada has a much higher participation rate than the US, yet the latter produces far more technology-enhanced prosperity per capita. Germany has a much lower proportion of graduates but is held up as an exemplar of university-industry collaboration, even though its universities are not particularly highly ranked. Israel and South Korea file more patents per person than the other nations, but with widely different levels of participation, yet both invest a high percentage of their GDP in research, though not necessarily via universities. So there is no simple formula. The UK has to decide what's right for itself. This must be agreed, across political parties, across the nations, across generations – because you cannot change university systems with every new government or have too divergent a strategy within one country with devolved nations. Out of this should emerge projections for the number of university graduates we would like to see in 2030, which universities can then prepare for. This is too important for our quasi-market, quasi-managed system to work out by trial and error.

Even if we do not increase the current rate of participation, UCAS estimates there will be 38 per cent more UK students seeking university places by 2030 than there are today.[29] How does one fund this? Our undifferentiated system tasks all universities to do everything. Perhaps it is time to seek a differentiated system – with greater specialisation across institutions and cost-effectiveness within them.

Meanwhile, the current system sets a single fee regardless of the cost of the subject, the demand for it, or its economic advantage. This is not fair or efficient. The reasonable fees for any individual subject that a university receives should be split across the person and the public, depending upon some relative apportionment of the expected personal versus public gain of a particular education. Australia and Canada have already implemented such a system, as have other countries. For example, in Canada, the domestic tuition for nursing and education is, respectively, roughly C$6,000 and

C$5,000 per year, whereas for law it is C$13,000 and dentistry C$23,000.[30] And finally, students don't just need a fairer system for fees, they need the means to live. Current maintenance loans have fallen significantly behind recent inflation, particularly on housing costs. This needs a onetime correction for now, and a sustainable deal for the future.

Whatever solution we reach, there won't be enough new money to meet all expectations. This is where universities will have to find structural efficiencies and new ways of operating – through creative use of digital, online and artificial intelligence tools. In just the last few months, generative AI is already changing how admissions are processed, how students are taught, how tutorials are provided and how operations are managed.

> "All jewels need repolishing and an occasional reset. The time is now."

This future is here. Institutions like Arizona State University are showing how on-campus and online, both at scale, can be combined in a top research university, while at the same time increasing access and decreasing cost through new technologies. Digital approaches and AI could well be the "Spinning Jenny" of the university enterprise – creating an advantage for UK universities, just as the Jenny catapulted Manchester to the forefront of the Industrial Revolution. If the UK can be one of the first jurisdictions to develop and demonstrate how these new tools can be incorporated into the daily working of modern, large, public universities, it will yield reputational advantages and commercial opportunities in a world that needs tens of millions more university graduates in the 2030s and beyond.

The UK higher education system is the envy of the world and one of the crown jewels of this country. All jewels need repolishing and an occasional reset. The time is now.

References

1. QS World Rankings 2024. https://www.topuniversities.com/university-rankings/world-university-rankings/2024

2. OECD (2022) *Education at a Glance 2022*. https://www.oecd-ilibrary.org/education/education-at-a-glance-2022_3197152b-en

3. Higher Education funding models vary between UK nations, which means that the discussion of fee amounts and structure is focused on the English context, but the more general points on the pressures facing universities and the need for a rethink on model apply across all nations.

4. Push, A. (2022) "Student Debt by Country: College Costs and Student Loans Around the World", Lending Tree. https://www.lendingtree.com/student/student-debt-by-country/#:~:text=Out%20of%20the%20multiple%20countries,average%20of%20%2428%2C400%20at%20graduation

5. House of Commons Library (2023) *Student Loan Statistics*, p. 4. https://researchbriefings.files.parliament.uk/documents/SN01079/SN01079.pdf

6. Push, A. (2022) op. cit.

7. Burn-Murdoch, J. (2023) "Britain's graduates are being short-changed while America's are rich", *Financial Times*, 28 October. https://www.ft.com/content/570d23b3-d286-4cb9-a319-b49cc4056f52

8. House of Commons Library (2023) op. cit.

9. Student Minds (2023) *Student Minds Research Briefing – February '23*. https://www.studentminds.org.uk/uploads/3/7/8/4/3784584/student_minds_insight_briefing_feb23.pdf

10. OECD (2023) "Spending on tertiary education". https://data.oecd.org/eduresource/spending-on-tertiary-education.htm#indicator-chart

11. Weale, S. (2023) "Minister rules out lifting cap on student tuition fees in England", *The Guardian*, 2 August. https://www.theguardian.com/education/2023/aug/02/minister-rules-out-lifting-cap-on-student-tuition-fees-in-england

12. Kernohan, D. (2023) "Are opinions about university funding shaped by education?", Wonkhe, 9 October. https://wonkhe.com/blogs/are-opinions-about-university-funding-shaped-by-education/

13. Universities and Colleges Employers Association (2023) "Further financial deficits confirm that there is no possibility of new or revised pay offers". https://www.ucea.ac.uk/news-releases/4may23/

14. Higher Education Policy Institute (2023) *Comparative Study of Higher Education Academic Staff Terms and Conditions*. https://www.hepi.ac.uk/wp-content/uploads/2023/05/Comparative-Study-of-Higher-Education-Academic-Staff-Terms-and-Conditions.pdf

15. SciVal Benchmarks (2023). https://www.scival.com/benchmarking/analyse

16. See for example: Department for Science, Innovation and Technology (2023) *Science and Technology Framework – taking a systems approach to UK science and technology*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1140217/uk-science-technology-framework.pdf

17. UCAS (2023) "What is the journey to a million?". https://www.ucas.com/about-us/journey-million/what-journey-million

18. OECD (2019) "Status of full-time bachelor's students at various timeframes after entry". https://www.oecd-ilibrary.org/education/status-of-full-time-bachelor-s-students-at-various-timeframes-after-entry-2017_65f978e5-en Figures cited are for those who complete bachelor's programmes or equivalent by the end of the theoretical duration of the programme plus three years.

19. *Times Higher Education* (2023) "World University Rankings 2024". https://www.timeshighereducation.com/world-university-

rankings/2024/world-ranking#!/length/25/sort_by/scores_citations/sort_order/asc/cols/stats

20. Avenali, A., Daraio, C. and Wolszczak-Derlacz, J. (2022) "Determinants the incidence of non-academic staff in European and US HEIs", *Higher Education*, vol. 85, pp. 55-83, Table 5. https://link.springer.com/article/10.1007/s10734-022-00819-7/tables/5

21. UK Research and Innovation (2023) "What we've funded". https://www.ukri.org/what-we-do/what-we-have-funded/

22. Higher Education Statistics Agency (2023) "Higher Education Provider Data: Finance". https://www.hesa.ac.uk/data-and-analysis/finances

23. *Times Higher Education* (2020) *University Industry Collaboration: The vital role of tech companies' support for higher education research.* https://www.timeshighereducation.com/sites/default/files/the_consultancy_-_university_industry_collaboration.pdf

24. Ibid.

25. Department for Business, Energy and Industrial Strategy (2021) "BEIS research and development (R&D) budget allocations 2021 to 2022", 27 May. https://www.gov.uk/government/publications/beis-research-and-development-rd-budget-allocations-2021-to-2022/beis-research-and-development-rd-budget-allocations-2021-to-2022

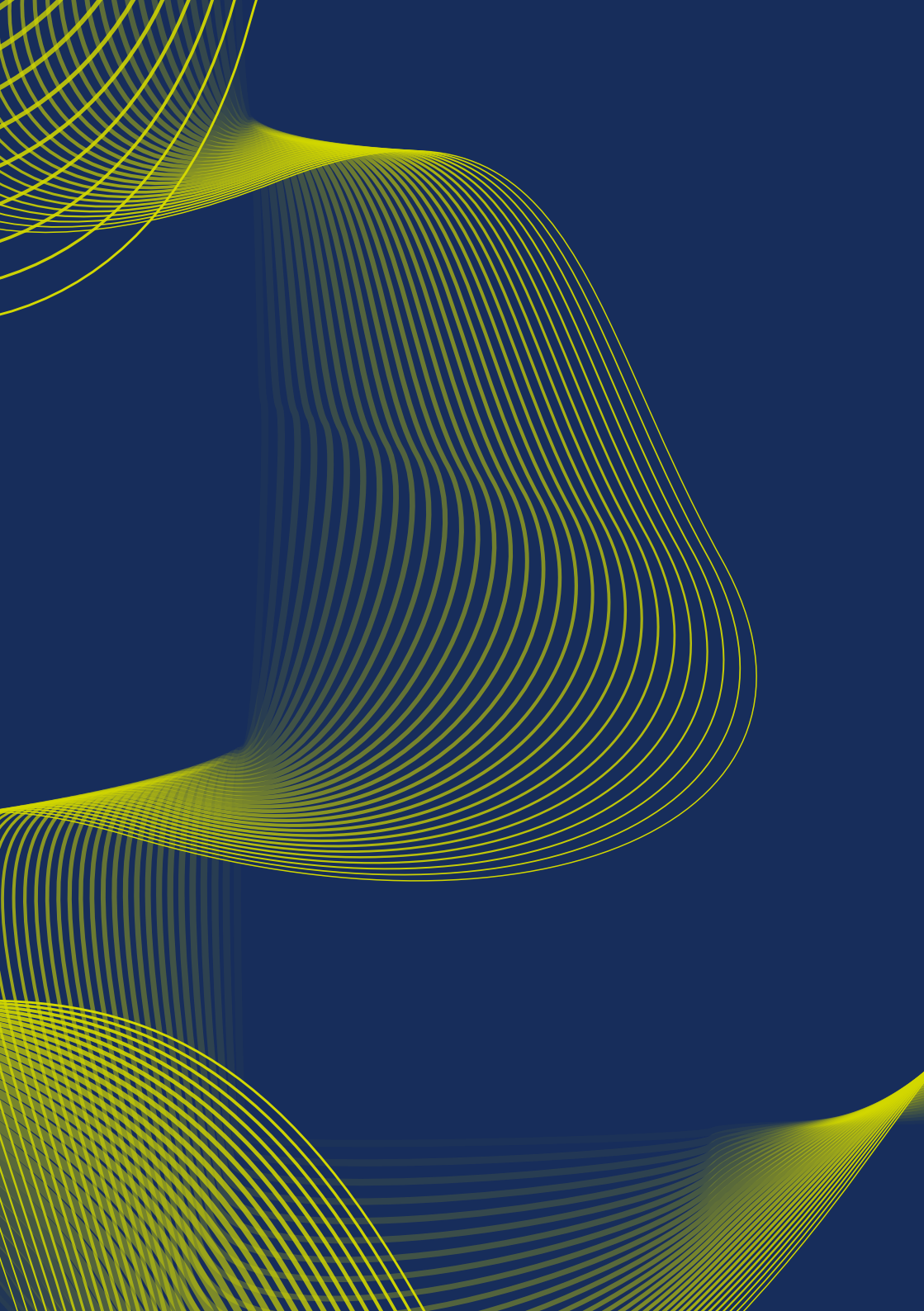
26. UCAS (2023) op. cit.

27. OECD (2023) "Population with tertiary education". https://data.oecd.org/eduatt/population-with-tertiary-education.htm

28. Ibid.

29. UCAS (2023) op. cit.

30. WordsRated (2023) "Canadian University Tuition Fee Statistics". https://wordsrated.com/canadian-university-tuition-fee-statistics/



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