numero 1/2024

costituzionalismo britannico e irlandese

ISSN 3035-1839
DOI: 10.69099/RCBI-2024-1-01-af1

Teoria e storia costituzionale

The University of Glasgow: a University for the World

Anton Muscatelli
Principal and Vice-Chancellor, University of Glasgow

costituzionalismo britannico e irlandese

numero 1/2024

The University of Glasgow: a University for the World**

di Anton Muscatelli*

Abstract (Ita): L'anno 2023 ha segnato il trecentenario della nascita di Adam Smith, padre dell'economia moderna e dell'economia politica, un gigante dell'Illuminismo scozzese e uno dei più famosi ex allievi e professori dell'Università di Glasgow. Questo articolo esplora la relazione di Smith con l'Università di Glasgow e come l'Università ha plasmato il rapido sviluppo dell'istruzione superiore in Scozia e la Gran Bretagna, in un periodo in cui il commercio e l'industria nascente portarono un enorme sviluppo economico e cambiamenti sociali. In seguito presentiamo come lo sviluppo dell'Università di Glasgow nel XXI secolo traccia un percorso simile all'illuminismo del XVIII secolo, centrato sull'interdisciplinarità e sulla collaborazione tra le varie discipline accademiche, mirata all'impatto sociale della ricerca universitaria.

Abstract (Eng): The year 2023 marked 300 years since the birth of Adam Smith, father of modern economics and political economy, a giant of the Scottish Enlightenment and one of the University of Glasgow's most famous alumni and professors. This paper explores Smith's relationship with the University of Glasgow and how he shaped the rapid development of higher education in Great Britain at a time when trade, commerce and early industry were booming, bringing great wealth and societal changes. It addresses a dynamic period for the University of Glasgow which created new disciplines and innovations linked to a vibrant external environment and evaluates how this translates to the University's activity in the 21st century.

Parole chiave: Economia; Università; illuminismo

Keywords: Economics; University; Enlightenment

Sommario: Introduction; Adam Smith and the University of Glasgow; The Contemporary University of Glasgow

Introduction

Last year, in 2023, we celebrated the tercentenary of the birth of one of the University of Glasgow's most famous alumni and professors, Adam Smith. Adam Smith was one of the giants of the Scottish Enlightenment, but he also exemplifies a period of rapid development of higher education in Scotland and Great Britain. This corresponded to the rapid societal changes linked to the development of trade and commerce and early industry which brought great wealth to Britain and ultimately led to the first industrial revolution. It was a dynamic period for the University of Glasgow which created new disciplines and new professorships linked to that vibrant external environment.

In many respects, the 21st Century is seeing a similar period of exciting change at the University of Glasgow. As I will set out below, the University is developing its physical and academic environment to adapt to the changing needs of society. We are increasingly bringing together the Arts, Humanities and Social Sciences[1] with the so-called STEM subjects (Science, Technology, Engineering and Medical Sciences) by changing our res-

** Contributo pubblicato senza peer review per la chiara fama dell'autore, ex art. 2, comma 5, del Codice etico.

* Principal and Vice-Chancellor, University of Glasgow

[1] * Contributo non sottoposto a *peer review* e pubblicato per chiara fama dell'autore, ai sensi dell'art. 2, comma 5 del Codice etico. ** Principal and Vice-Chancellor, University of Glasgow. These have been recently labelled as the SHAPE disciplines by the British Academy (https://www.thebritishacademy.ac.uk/this-is-shape/).

earch spaces and through the development of cross-cutting research themes, and by developing our teaching methods in both our undergraduate and postgraduate courses.
In the next section, we will highlight how Adam Smith's time as Professor in the University provides an interesting backdrop to the modern University. Following that we highlight how, over the last decade, our response to the challenges of the 21st Century (economic, societal and environmental) have created a response from our university community. Increasingly our strategy is defined by the positive impact which we have on the world, including our civic community. Our students and our colleagues see the importance of what we do through the prism of that impact, which includes the United Nations' Sustainable Development Goals (SDGs)[2].

As an economist and a social scientist, I see this evolution of the University in the 21st Century as a very exciting prospect. In a university in which societal, economic and environmental impact matters, the social scientist feels entirely at home. Our academics in fields ranging from economics to political science, to the law and the arts and humanities are central to our future research themes. Science and technology of course matter greatly to our progress and indeed our survival as humankind in this century. But none of that scientific and technological change can be applied without an understanding of its societal impact, or indeed the understanding of what it means to be human. As we shall see, this was also central to the University of Glasgow as seen through the eyes of Adam Smith and his contemporaries.

Adam Smith and the University of Glasgow

Adam Smith was born in Kirkcaldy in proximity of his date of baptism on 5th June 1723. He showed great academic talent at the Burgh School of Kirkcaldy, and studied mathematics, history, Latin and writing. He joined the University of Glasgow at the age of 14 as a student. He then moved to Oxford in 1740 (Balliol College) as a Snell Scholar – a scholarship which still exists today linking the University of Glasgow with Balliol College Oxford.
Although less is known about his time at Oxford, we know from his famous book The Wealth of Nations[3] that he was critical of the quality and style of teaching at Oxford. It is likely that this was linked to the stimulating atmosphere which he had enjoyed at the University of Glasgow. At the University of Glasgow Adam Smith was able to study under the guidance of Francis Hutcheson and Robert Simpson, some of the leading academic scholars of their day. He studied logic, metaphysics, maths, Newtonian physics, and moral philosophy.
In particular, he had a strong personal link to Francis Hutcheson, who is considered to be one of the fathers of the Scottish Enlightenment and was a great influence on both Smith and David Hume. Hutcheson held the Chair of Moral Philosophy at the University of

[2] These were set as part of the United Nations 2030 Agenda for Sustainable Development – see https://sdgs.un.org/goals.
[3] A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Glasgow Edition, Oxford, Oxford University Press/Liberty Fund, 1776.

Glasgow, in succession to Gershom Carmichael, and became the first professor to lecture in English rather than Latin. In addition, his force of personality made him an inspiring lecturer and orator not only within the University and in public lectures. Indeed, Smith referred to his mentor as «the never to be forgotten Hutcheson»[4].

Hutcheson led reform of teaching at the University of Glasgow, but he was also a strong supporter of reform more generally, arguing for freedom of expression and criticising privilege. He wanted to understand how society worked and who for, so that he could make it better, a view that Smith inherited. Hutcheson is also often dubbed the 'Father of the Scottish Enlightenment,' applying new methods and philosophies shaped by this new generation of thinkers. This period, with Smith and his friend David Hume as students of Hutcheson, marked the beginnings of Glasgow's – and Scotland's – Enlightenment. As a teacher, Adam Smith had a great reputation. As Keynes (1938) put it:

«Apart from his own master Hutcheson, Adam Smith was perhaps the first and greatest who have taught a modern subject in a modern way…»[5].

Smith was one of the central figures of the Scottish Enlightenment. He knew and was friends with all of the main figures. His closest friends were David Hume; Joseph Black the chemist who discovered Carbon Dioxide and Latent Heat; and the father of modern Geology, James Hutton. Among his fellow students were Tobias Smollett, the famous novelist who studied medicine; Rev. Alexander Carlyle, the noted diarist; Gavin Hamilton, the famous painter. Smith was also schoolfriends with the politician James Oswald of Dunnikier and with the famous architect Robert Adam who designed Culzean Castle and Bute House – now residence of Scotland's First Ministers.

Smith was a member of the main Enlightenment clubs and societies where ideas were exchanged and theories developed. He was also deeply interested in what the Scots called 'improvement', the practical application of science and technology to improve the lives of the population. This approach flows through to our activities as a University today, leveraging our research strengths for the benefits of the communities we serve[6].

In 1751, Smith was invited to return to the University of Glasgow as a Professor of Logic, but in 1752 took on the Chair of Moral Philosophy, previously held by his mentor. He published the first edition of the Theory of Moral Sentiments in 1759 based on his lectures[7]. He also held senior administrative positions at the University, responsible for the purchases of library books, and the recruitment and retention of staff. Indeed, our University Library still holds many of the books which Smith purchased and which give an insight into his very diverse interests. Today, the University Library still holds several of Smith's purchases, including a copy of Diderot's Encyclopédie.

Adam Smith's interests spanned the academic disciplines, and he lectured on history, language as well as philosophy and jurisprudence. He is seen as the father of modern political economy and economics, in part because he thought about economic forces in a systematic way.

[4] See I.S. Ross, *The life of Adam Smith*, Oxford, Oxford University Press, 1995.
[5] J.M. Keynes, *Adam Smith as Student and Professor*, in *Economic History*, vol. 4, n. 13, 1938, pp. 33-46.
[6] See https://www6.gla.ac.uk/explore/adamsmith300/explorelearn/life/biography/.
[7] A. Smith, *Theory of Moral Sentiments, Glasgow Edition*, Oxford, Oxford University Press/Liberty Fund, 1759.

In 1776, Smith published the first edition of An Inquiry into the Nature and Causes of the Wealth of Nations. The work sought to explore, through historical and contemporary examples, what made or caused nations to be wealthy. Much of this discussion investigated the influence of commerce upon contemporary society, for better and for worse.

The influence of Smith's thought through The Theory of Moral Sentiments, The Wealth of Nations, and the few other writings which still survive such as his Lectures on Jurisprudence is still current today, nearly three centuries later. It is impossible to provide a short account of the ways in which his thought has influenced not only economics, but the social sciences as a whole. A short guide to his thinking is provided by my colleague Chris Berry[8]. Jesse Norman's recent biography usefully places his contribution in the context of the Scottish Enlightenment[9].

In a recent special issue[10] of the National Institute Economic Review to commemorate "Adam Smith at 300", a number of economists highlight important ways in which Smith's thought still pervades economics today. His principles of taxation and trade are still frequently referred to in modern theory. But much more widely as this special issue demonstrates, Smith speaks to wider issues of trust in society, and in understanding phenomena such as colonialism.

One of the most striking themes in the Wealth of Nations is of course Britain's relationship with its rebellious colonies in North America. Smith couched his economic arguments in the context of the contemporary issues of his day, including his interest in the "American question"[11]. This is a really good example of how he focused on economic issues as interdependent with political and international relations issues: his was very much a political economy perspective. His analysis of the problem which Britain faced in the late 1770s tells us that he would have been very alert to the interdependence we face in 2024 between our international relations and our economic future in the UK.

As I pointed out in a lecture in Kirkcaldy Auld Kirk in 2023, Smith also speaks to important contemporary debates around productivity and education[12].

In my lecture I touch on the issue of technology and how Smith might have viewed this today. Of course, technological improvements both in agriculture and early 18th Century industrial society were different from what we have witnessed in the 20th and 21st Century. As a sophisticated thinker, who understood the impact of technological progress in early industrial society, I have no doubt he would have understood the skills-biased nature of technological progress and the issues of labour-capital substitution as highlighted[13] by Autor, Goldin and Katz and Acemoglu and Johnson.

[8] C. J. Berry, *Adam Smith: A Very Short Introduction*, Oxford, Oxford University Press, 2018.
[9] J. Norman, *Adam Smith: What he Thought and Why it Matters*, London, Allen Lane, 2018.
[10] *National Institute Economic Review*, Vol. 265, 2023.
[11] David Hume chastised Smith for the delay in publishing the Wealth of Nations by saying that «If you wait for the fate of America to be decided you may wait long…». He eventually published the first edition in 1776.
[12] See R. Mullin, C. Smith, R. Mochrie, *Adam Smith: The Kirkcaldy Papers*, Kirkcaldy, Adam Smith Global Foundation, 2023.
[13] See D. Autor, C. Goldin, L.F. Katz, *Extending the Race between Education and Technology*, in *NBER Papers in Economics*, n. 26705, 2020, and D. Acemoglu, S. Johnson, *Power and Progress*, New York, Basic Books, 2023.

Indeed, the fact that Smith thought of capital as both produced assets (such as buildings and machinery which facilitate and abridge labour) and non-produced assets (such as land improvement and human capital) suggests that he would have paid a lot of attention to how both investment in fixed and in human capital might constrain economic growth.

He would no doubt have been fascinated by the 21st Century productivity problem faced by many advanced economies, especially in Europe. Indeed, given the similarities which Smith noted between investments in human capital and in physical capital and technology, I wonder what he might have said in 2024 about our European debates on skilled immigration? It's almost impossible to speculate, but I suspect his dislike for arbitrary government controls would have suggested that countries like the UK might have had to consider how its attitudes towards constraining immigration hold back our economy.

Smith's natural 'liberal' attitude to systems of political economy would have made him an interesting actor in this policy debate. I think of Gary Becker's "Adam Smith Address" in 1992 in which he argued that for the US education and labour force quality play a key role in economic growth and global competitiveness[14]. Becker argued forcefully that the US must improve the quality of its labour force including increasing the inflow of more skilled workers, as well as improving education. Although colleagues will also suggest that Smith was a great advocate of the importance of social cohesion, and so might not have ignored this dimension if he was commenting today.

This fundamental understanding also highlights the sophisticated nature of Smith's thinking. He doesn't just look at issues from a single, ideological, viewpoint. Indeed, his whole approach to moral philosophy in the Theory of Moral Sentiments (part III ch.1.6) is based on the 'impartial spectator'. Smith believed that for us to understand our own moral conduct one must imagine what our conduct looks like to a disinterested spectator as an external judge.

But more importantly he would have been very concerned by forces threatening social and economic cohesion in modern democracies. I have little doubt that he would have been interested in what modern economists discuss around the importance of institutions which favour the emergence and sustenance of social norms and a cohesive civil society. The WoN is full of conditional discussions on a gradualist approach to policy-making. Smith would have put above all the importance of defending the stability of our liberal democracy and its institutions.

Beyond his academic contribution to his own disciplines, Smith was also known to move in the most intellectual social circles of his era and was a key influencer of his time. Biographers of Smith remark that he met anyone who was anyone in the 18th century: Benjamin Franklin, Voltaire, Quesnay, Turgot, playwright Dr Johnson, Sir Joshua Reynolds, Edmund Burke. Smith also acted as a policy adviser to the government and was hailed by William Pitt the Younger, the Earl of Shelburne, and the abolitionist William Wilberforce, as an expert on economic matters.

[14] See G.S. Becker, *The Adam Smith address: education, labor force quality, and the economy*, in *Business Economics*, vol. 27, n. 1, 1992.

Renowned engineer James Watt, another of Glasgow's famous alumni, was also a contemporary of Smith. Indeed, it was thanks to Smith's negotiation skills and position at the University that Watt was able to establish a workshop, allowing the development of scientific instruments and inventions, as well as the improvement of his steam engine.
Above all, Smith was a huge proponent of collaboration and a great supporter of his academic peers. While his own field of study focused more on philosophy, political economy and economics, he raised funds for a University observatory, a botanical garden, and a modern laboratory for chemists William Cullen and Joseph Black. Smith paved the way for a series of world-leading scholars, inventors, thinkers, creatives in Glasgow – Lord Kelvin (whose bicentenary we will celebrate throughout 2024), John Boyd Orr, James McCune Smith, John Logie Baird, Jocelyn Bell Burnell. Smith's legacy and the impact he had on the Scottish Enlightenment remain relevant for our University to this day, more than 300 years on.

The Contemporary University of Glasgow

The Scottish Enlightenment believed that science, learning and education would help banish superstition, ignorance and bigotry. They believed that the light of learning would improve society and help us lead happier and more fulfilled lives. To this day, our vision and activities as a University are very much shaped by these principles.
Without seeking to minimise the obstacles and challenges we have faced, we have sought to build on the legacy Smith left behind. As Smith and Hutcheson before him advocated, the University should be reformed and progressive, and there is much that can be done by our institution and our academics to better understand privilege and make society a fairer place. Indeed, it was Smith who wrote in The Wealth of Nations Book I that, «No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable.»[15] As a University we are seeking to embrace and drive change, while we remain steadfastly loyal to our civic and historic roots.
One way we have sought to do this, is by aligning much of our activity as a University to the 17 United Nations' Sustainable Development Goals (SDGs). The SDGs were adopted by all UN Member States as part of the Sustainable Agenda for 2030 and are a global pursuit to end poverty, halt the climate emergency and improve the lives and prospects of every human being[16]. Universities in and of themselves are drivers of sustainable development through their education, research, innovation and wider activities in the communities they serve. They provide the knowledge, skills and space for critical debate needed to solve the transnational challenges which the SDGs seek to address. Indeed, as this piece has highlighted, before the SDGs had even been conceived, the University and its leading figures had already been advancing the civic mission since the period of Enlightenment.
Furthermore, by taking on board the aims of the SDGs, this has allowed the University to think more creatively and strategically about how we can support sustainable development and measure our impact. While Smith and his peers were benchmarked by their academic

[15] A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, cit., p. 96.
[16] See https://sdgs.un.org/2030agenda.

r standard. Not only do we need to demonstrate the strength of our outputs when it comes to research, but we are rightly expected to be able to demonstrate a much broader portfolio of activity and impact.

As a research-intensive University, assessing our research performance using bibliometric data has provided a useful exercise to understand where our contribution might be strongest. In 2023, Glasgow was ranked 13th overall in the world in the Times Higher Education (THE) Impact Rankings for the contribution the University has made to the 17 UN SDGs[17]. Glasgow also placed 2nd in the UK and 1st in Scotland, performing 2nd overall in the world for SDG 11 concerned with sustainable cities and communities and 6th in the world for SDG 16, concerned with peace, justice and strong institutions. The University of Glasgow was not an early adopter of the THE Impact Rankings. We wondered how one could use a mix of qualitative data (mainly driven by case studies) and quantitative data measuring evidence of a university's contribution to each SDG. Initially, and incorrectly, we saw this measurement exercise as a way of mapping our activities onto the UN SDGs. In essence as a way of characterising our research, teaching and outreach activities in terms of the sustainable development goals. But this has been turned on its head: our strategies across the board are now being driven by the outcomes measured against the SDGs. More and more of our academics now consider how their work impacts on the SDGs and importantly they are feeling inspired, they are keener to collaborate and they are seeing the value of their work for society in real time, just as Smith and his peers did 300 years ago.

Increasingly we do not just want to be recognised as one of the best Universities in the world (as measured by conventional performance metrics), but we want to be the best university for the world.

For example, for SDG 1 (No Poverty), Glasgow researchers in the MRC/ CSO Social & Public Health Sciences Unit have led a national campaign to highlight austerity measures implemented in the UK. The study reports that an additional 335,000 deaths were observed across Scotland, England and Wales between 2012 and 2019 as a result of the measures which cut billions of pounds from public services and social security systems. It found that the loss of support caused by these cuts has resulted in people being swept up by a rising tide of poverty, poor housing, poor nutrition, poor health and social isolation, ultimately leading to premature deaths[18].

For SDG 11 (Sustainable Cities & Communities), the University's Centre for Sustainable, Healthy & Learning Cities & Neighbourhoods is working with eight research partners from seven Asian and African countries to conduct largescale household surveys in urban neighbourhoods in 14 cities. This survey is being used by researchers and governments to broaden understanding of the challenges facing local communities in the world's megacities. At home in the city of Glasgow, to address SDG 11 the University is also leading the development of the Glasgow Riverside Innovation District (GRID), focused on driving

[17] See https://www.timeshighereducation.com/impactrankings.
[18] See https://www.gla.ac.uk/news/archiveofnews/2022/october/headline_885099_en.html.

sustainable economic development in an area of the city synonymous with Glasgow's shipbuilding history but which has faced decades of industrial decline and deprivation.

For SDG 15 (Life on Land), the University recently celebrated the planting of 20,000 trees across 11 hectares at our Cochno Farm and Research Centre, as part of ongoing efforts to be a leading institution in sustainability. The University's Centre for Sustainable Solutions also launched the 'UrbanByNature' Scottish hub in collaboration with Glasgow City Council. This capacity-building programme is focused on promoting exchange among cities, researchers, SMEs and NGOs to build bridges with the nature-based solutions communities across Europe, Asia, Latin America and other interested regions.

Beyond the SDGs, the University has adapted its size and shape enormously since the time of Smith. We have invested over £1 billion in the development of the University campus, including our £116 million Mazumdar-Shaw Advanced Research Centre (ARC), the beating heart of cross-disciplinary research collaboration at the University. The ARC brings together academics at all stages of their careers to work together on key themes – from global sustainable development and digital chemistry to quantum technology and creative economies. It is a priority for our institution to offer opportunities to co-create knowledge and this includes working in partnership with private and public sector bodies across the world, and creating spaces on our University Estate which are designed to facilitate collaboration. Our programme of campus development has also seen us invest in the Clarice Pears Building, the new home for our School of Health and Wellbeing, focused on bringing together expertise from a range of disciplines to address major and complex health inequalities. In December 2023, the University also opened its new Adam Smith Business School and Postgraduate Taught Hub, named in honour of Smith and designed to foster the next generation of economists and innovators.

Focusing on impact through the SDGs does not mean investing less or focusing less on our disciplinary research. In the UK all universities' research is regularly evaluated across all disciplines every 6-7 years through what used to be known as the Research Assessment Exercise and is now known as the Research Excellence Framework (REF). In REF2021, the University of Glasgow was ranked the top University in Scotland in terms of research quality as measured by grade-point average; we were also ranked in the top 10 universities in the UK.

In terms of size, the University has also grown to become a major economic powerhouse within the UK, contributing £4.4bn annually to the UK economy. We are a major employer in the region, providing more than 1% of all jobs within and more than 12% of all jobs within the education sector. We are proud to welcome students from 140 countries and our student headcount stands at around 38,000. This growth is in line with our peers in the prestigious UK Russell Group, but importantly we have been able to diversify our student population, welcoming international students to our city whilst retaining and expanding our commitment to widening access for students in Glasgow.

Like Smith, we also understand the significant value of collaboration outside of our own University. For example, we are a founding member of Universitas[21], an international grouping of universities dedicated to setting worldwide standards for higher education. The University is also a founding member of The Guild of European Research-Intensive

Universities[19], is a partner to organisations such as the African Research Universities Alliance (ARUA), and also recently joined the CIVIS Alliance of European Civic Universities[20]. Glasgow, together with our European partners is leading research clusters to ensure greater collaboration between Europe and Africa. Despite Brexit, the University of Glasgow has been determined to maintain our links with universities and other institutions in the EU.

In the 21st Century University, publicly-funded research and impact go hand-in-hand. Public funding and research funding for universities are being squeezed and global competition is higher than it has ever been. This demands our sector steps up its game and makes clear the wider benefits universities can bring. In the business world, many more corporates are moving their focus to triple bottom line performance (financial, environmental and societal metrics). Similarly, universities are focused on a wider set of priorities which move from single-discipline research towards collaboration across disciplines and impact. As a University, we are focusing on those cutting-edge technologies which have the potential to boost the nation's productivity: life sciences, quantum, semiconductors, VR/XR, hydrogen. We are also working closely with our peers across the sector to understand where we can best combine our research strengths. For instance, in January 2024 we launched the Scotland Beyond Net Zero partnership with the University of Edinburgh which aims to help the country meet – and go beyond – its ambition of achieving net zero by 2045. This new coalition will see our two universities partner with fellow universities across Scotland to catalyse action and empower government, policymakers, organisations and industry to make informed change. This new venture will combine our strengths and address key challenges linked with the climate emergency, including clean energy, storage, decarbonisation, green transport, community empowerment and climate justice.

Finally, like Smith, we continue to be concerned today with how we deliver an excellent learning and teaching environment. As Universities we are responsible for teaching our students to have a global outlook and to develop a rigorous scientific mindset. We must provide students with the critical thinking skills and tools to challenge inconsistencies, particularly in the era of Artificial Intelligence. As with the period of Enlightenment, we see it as our duty to encourage the expression, creativity and ambitions of the generations of students who pass through our doors. We have invested significantly in a Learning and Teaching Strategy which seeks to ensure Glasgow delivers well-rounded graduates, equipped with the knowledge and skills needed to make a difference in their chosen career paths and to change the world. This has included investment in physical assets such as our James McCune Smith Learning Hub for undergraduates and a Postgraduate Taught Hub, but equally it has seen us invest in the student experience and in enabling infrastructure targeted especially at widening access into education. For example, we recently launched a suite of Sanctuary Scholarships available for applicants who are refugees, asylum seekers or those fleeing forced migration. We also launched our James McCune Smith PhD Scholarships to fund Black UK domiciled students to undertake PhD research

[19] See https://www.the-guild.eu.
[20] See https://civis.eu/en/discover-civis/the-civis-alliance.

at the University. Smith was hugely passionate about the value of education and we continue to uphold this principle to this day.

In summary, the University of Glasgow experienced a major renaissance during the Scottish Enlightenment, and this formed the foundations for its subsequent successes in the British scientific and industrial revolution. What is striking to me is how the approaches taken during that time, when key figures like Adam Smith made the University's history, still resonate strongly today.

Looking to the future, we intend to remain at the forefront of innovation and use our broad-based research to provide a strong foundation for economic development in our own city and beyond. Indeed, we estimate the University's economic impact totals around £4.4bn annually, with 42% of this generated by research activities[21]. We want to grow this impact and we have taken an active decision to further integrate our research with our wider University activity by launching Glasgow Changing Futures (GCF), an initiative committing us to integrate research, innovation, education, partnerships and influence to advance solutions to local, national and global societal challenges.

Furthermore, we are advancing our plans for the Glasgow Riverside Innovation District (GRID), a 770-acre site which hosts a vast amount of vacant and derelict land. Fundamental to our vision for GRID is the development of brownfield sites to deliver mixed-use developments, which include housing, commercial space, social infrastructure and public realm improvements. At present (and as part of the development of the University's £38M Precision Medicine Living Laboratory), the University is developing a Health Innovation Hub which will be built adjacent to the Queen Elizabeth University Hospital, one of Europe's largest acute medicine hospitals, which will create a space for academia, industry and the National Health Service to collaborate on the innovative solutions needed to address some of the major health challenges we face, from chronic disease to polypharmacy. Importantly, the GRID also covers a large area of the city with some of the highest levels of multi-deprivation in the UK and some of the most complex and challenging health issues and health inequalities in Scotland. The so-called 'triple helix' approach which exists between the University of Glasgow, the NHS and industry already within the Glasgow City Region provides an ideal platform to build existing collaborations and projects in R&D, at the same time offering an opportunity to create new partnerships and test new research approaches. Therein exists an opportunity to create a 'quadruple helix' of activity, integrating patients and the local community into these research collaborations. Overall, this means the geographical area encompassing GRID could provide the ideal environment for the University to combine its strengths in research with the strengths of the institutions already based in the local area, to make a real impact on the communities we serve. Like Smith and his peers, we are concerned with the improvement of society through innovation.

In many respects as we look at the University of Glasgow's research base in the 21st Century, we take inspiration from that period of the Enlightenment. We remain one of

[21] See https://www.gla.ac.uk/explore/economicimpact/.

the world's top Universities as recognized by international rankings. But above all, we are determined to be the best University for the world.