The modern university: too big to fail?

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Universities are an extraordinarily long-lived group of institutions, with unprecedented wealth and reach.

Why is this the case?
Was their success inevitable?
And will it continue?
## Institutions with (more or less) longevity

<table>
<thead>
<tr>
<th>Name</th>
<th>Founded/Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic Church</td>
<td>30 Edict of Milan 313</td>
</tr>
<tr>
<td>University of Bologna</td>
<td>1088</td>
</tr>
<tr>
<td>University of Oxford</td>
<td>1096 (1167)</td>
</tr>
<tr>
<td>Harvard University</td>
<td>1636</td>
</tr>
<tr>
<td>East India Company</td>
<td>1600: wound up 1874</td>
</tr>
<tr>
<td>Standard Oil</td>
<td>1870: wound up 1911</td>
</tr>
<tr>
<td>Bethlehem Steel</td>
<td>1857: wound up 2001</td>
</tr>
<tr>
<td>IBM</td>
<td>1911</td>
</tr>
</tbody>
</table>
Today, higher education is a mass undertaking

- Institutions enrolling many tens of thousands have become the norm

- This growth has been meteoric and recent

- It has also been very expensive, with the state paying far higher proportions of vastly larger budgets than ever before
Small scale higher education: the Somerville College Oxford student body in 1885
Today: mass enrolments and mass accreditation
University student numbers in three major European states

France 2018 adjusted for population change

Germany 2018

UK 2018
## Current graduation rates (2017: source OECD)

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of adults aged 25-34 who have completed tertiary education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>52</td>
</tr>
<tr>
<td>Canada</td>
<td>61</td>
</tr>
<tr>
<td>France</td>
<td>44</td>
</tr>
<tr>
<td>Germany</td>
<td>31</td>
</tr>
<tr>
<td>Japan</td>
<td>60</td>
</tr>
<tr>
<td>Netherlands</td>
<td>47</td>
</tr>
<tr>
<td>Poland</td>
<td>44</td>
</tr>
<tr>
<td>Switzerland</td>
<td>50</td>
</tr>
<tr>
<td>UK</td>
<td>52</td>
</tr>
<tr>
<td>USA</td>
<td>48</td>
</tr>
<tr>
<td>OECD average</td>
<td>44</td>
</tr>
<tr>
<td>EU21 average</td>
<td>42</td>
</tr>
</tbody>
</table>
Growth can still go further

- China enrolled 0.26% of its population in higher education in 1949, 1.55% in 1978, 43% in 2016
- In Taiwan, 2/3 of a cohort proceeds to higher education; in South Korea it is 80% - and 2/3 graduate
Large differences exist in annual expenditure per FT university student (US $s at PPP): 2013 Source: OECD
But the cost is high for taxpayers and individuals everywhere

- OECD average is 1.5% of GDP compared to 3.5% on average for all other forms of education combined

- Maintenance costs also need to be factored in and are often not covered (whether or not tuition is ‘free’)
Where next?

Is the position of universities impregnable?
Why have they become so huge and rich, and will these reasons endure?

History reminds us that their growth has not been smooth – or inevitable
The origin of the modern university

• Mediaeval foundations, accepted and indeed encouraged by the state, but also answering ultimately to the Church (and Pope)

• Unique, though fluctuating, levels of autonomy reflected the existence of two rival and powerful sources of power – the secular state and the Catholic Church

• Endowments, also linked to Church beliefs and practices, further underpinned independence. But as Church power waned, universities’ position also changed and often weakened
France: an early and successful start...
The Revolution and its aftermath

• Libertarianism and renewed/enhanced central control

• All universities were abolished along with all licensing – anyone should be allowed to be a doctor or lawyer

• Napoleon then created a single central body, l’Université de France (1808), with authority over primary, secondary and university education

• Falloux Act of 1850 introduced major changes (especially for secondary schools). However, autonomy for individual universities, and the name university, were restored only in 1893
England’s mid-17\textsuperscript{th} century peak: Members of Parliament 1563-1642

Source: Stone, 1964
Percentage of young males entering higher education: England in the 17th and 20th centuries
Fast forward to the present

- **Secular** societies in which churches, even if established, no longer act as a second major source of power
- The state dominates, unchallenged
- Universities dominate professional training and also have a new role, that of scientific research. Both depend on and exist through state funding and state activity
- State revenues for higher education far outstrip private spending
The drivers of growth and of decline

• The job market – and especially the ‘public sector’ job market

• The Church

• The state
## The modern labour market

<table>
<thead>
<tr>
<th>Year</th>
<th>Professional &amp; Technical</th>
<th>Semi-Skilled or Operatives</th>
<th>Agricultural Employment</th>
<th>Employment Rate for Adult Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>5% of workforce in</td>
<td>30%</td>
<td>Sizeable</td>
<td>Few married women employed</td>
</tr>
<tr>
<td></td>
<td>professional &amp; technical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>occupations.</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>25% of workforce in</td>
<td>15%</td>
<td>Very few</td>
<td>Employment rate for adult women</td>
</tr>
<tr>
<td></td>
<td>professional and technical</td>
<td></td>
<td>employed in agriculture.</td>
<td>almost as high as for men.</td>
</tr>
<tr>
<td></td>
<td>occupations.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Does this explain the huge growth in university enrolments?

Only up to a point. Very large numbers of graduates hold ‘non-graduate’ jobs.
Participation rates in higher education: proportion of age cohort entering higher education by age 34
Soaring enrolments driven by:

• Politicians’ responsiveness to electoral demands
• Political beliefs about what encourages growth
• Commitments to equality
• Changing labour market demands
• Rising wealth
• Qualification and ‘signalling’ spirals which create strong pressure to enrol in higher education
• Changing job opportunities
• Citizen demands fuelled by these changes
The belief in education for growth

• Governments around the world have become convinced that education fuels growth
• Both increased levels of university participation and research spending are seen as ‘silver bullets’
• As growth has faltered, faith in education spending has risen
Virtuous Circle: Skills

- Economic development
- Investment
- Economic investment
- Education
- Skills
Belief in the economic centrality of universities, and willingness to spend generously, relates not only to universities’ traditional role in developing ‘skills’ but also to the perceived importance of research.
The appearance of the modern research university

• Research university model developed in 19th century Germany – professors with ‘apprentice’ research students, freedom to select field of enquiry

• Product of small competing German states outdoing each other: exported to US and later elsewhere

• Alternative French model – a single national teaching ‘Corporation’ and separate specialist research facilities

• Universities regarded as central to research and development activity within countries

• Huge research establishments within universities.
The growth of the scientific profession in the USA (source: de Solla Price)
Researchers per million inhabitants 2007-13 (source: UNESCO)
The Lisbon Strategy (2000)
Intended to make Europe ‘the most competitive and dynamic knowledge-based economy in the world’

Focus on research and on educational attainment and especially on years of schooling/percentage qualified at ‘high’ levels.

The Strategy encapsulated conventional wisdom
EU states signed up to

• A substantial annual increase in per capita investment in human resources

• Ensuring that ‘the number of 18 to 24 year olds ... who are not in further education and training should be halved by 2010’
But is this faith in education, and in universities, justified?
Declining returns (1)

- Much of the belief in the power of higher education to transform the economy is based on the fact that graduates earn more.
- The average income gain that individuals get from a degree is going down.
- Large and increasing proportions of recent graduates work in non-graduate jobs – typically at least a third.
Declining returns (2)

- In 2004 the UK lifetime pay premium for obtaining a degree was 41% compared with pay across the UK as a whole.
- But by 2017—just 13 years later—it had reduced to 24%.
- In the US, earnings for males between the 50th and 80th percentiles have stagnated in real terms (although the top 20% have done very well).
- But because the gap between college graduates and high school drop outs has widened, college remains a “high return” choice for the individual—as opposed to society.
Labour productivity growth, total economy (smoothed)

Source: Bergeaud et al 2016
Western productivity: the advent of the productivity slump

GROWTH OF LABOUR PRODUCTIVITY PER HOUR
(previous ten years, fitted trend) (source: Conference Board)
Participation rates in higher education: proportion of age cohort entering higher education by age 34
More higher education is seen as a progressive policy. How true is this?

- Since the 1980s there has been a huge increase in access to higher education across the world
- There has been no corresponding decline in income inequality
- There is virtually no correlation at all between a country’s level of inequality in human capital (access to education) and its level of income inequality
- There is no relationship between changes in nations’ educational inequality and changes in income inequality
So will people walk away?

This is very unlikely
The ‘rent’ attached to a professional degree

- ‘Licensing' is very important in the labour market. If only the licensed can pursue an occupation, this increases the income of the licence-holder.

- This may secure higher standards and protection for the public. But it also creates barriers to entry and generally raises prices.

- In the modern labour-market, the move to ‘objective’ criteria has also tended to fuel a rise in licensing.
‘Rent’ as a function of modern values

- Our societies are distinctive, and new, in the way in which we legitimise decisions and justify privilege.
- We aim to be ‘meritocracies’, meaning that we think individual rewards should be tied to ‘objective’ measures of individual performance – including, very often, educational performance.
- This systematically favours holders of formal certificates, and leads to many jobs becoming *de facto* graduate entry
• Employers and other gatekeepers are faced with ever growing numbers of credentialled applicants. They are more or less forced to use rules for ranking and selecting among those who are formally equivalent. **Universities are perceived as increasingly unequal.**

• The combination of scale with the use of university education as the main legitimate route into the elite **gives prestigious universities enormous market power.**
Employers’ view of where the formally qualified are to be found: 1950
Employers’ view of where the formally qualified are to be found: 2000

Graduates
Employers’ perceptions of the labour market: 2050?
Faced with these pressures it is very hard for people to reject higher education. This is true even though they are aware that most universities no longer deliver the rewards that any university once did.
So too big to fail?

- Yes – no government is going to close down institutions which provide a legitimate way of allocating life chances
- Yes – no government is going to say to increasing numbers of its citizens that they are not going to get a lottery ticket
- But governments may lose faith in both ‘more degrees’ and (perhaps) ‘more research’ as priorities for higher spending
Too big to fail – but perhaps brought low by size?

• It seems extremely likely, indeed almost inevitable, that university hierarchies will become more marked.

• It is extremely likely, indeed almost inevitable, that the quality of education which most students receive will decline. Governments under fiscal strain will not maintain let alone increase the real ‘unit of resource’.

• Increased government oversight and regulation are extremely probable. And yet autonomy is at the core of universities’ achievement.