The development of university research the last 20 years – a “crisis paradox” for the researchers?

Presentation at the University of Tampere, 15 October 2007

Magnus Gulbrandsen, NIFU STEP and Centre for Advanced Study, Norway
Overview of the presentation

n The development of university research in Norway: seemingly very positive

n The researchers’ own perceptions: strengthened sense of crisis and negative spiral

n Nine hypotheses for this apparent “crisis paradox”

β Starting points for policy discussions and further investigations

β Probably relevant for many countries
The presentation is based on

- Book published by the Norwegian publisher Cappelen in 2005
- Title (translated) is “Research at the universities – framework conditions, relevance and results”
- Many chapters about different aspects of the development of university research
Statistics and surveys paint a positive picture of HE research

- 100 percent real growth in the funding of university research the last 20 years
  - Unevenly distributed, weak growth in natural science

- Reduced share of basic funding
  - About the same as in other OECD countries
  - University researchers have been very successful in attaining funding from competitive sources

- More staff, more competent staff
  - 80 percent growth in staff, close to a tripling of professors
  - 30 percent increase in publication productivity the last 20 years and more citations
Funding of university research

![Bar chart showing funding of university research across different fields and years (1981, 1991, 2001). The chart compares funding in human sciences, social sciences, natural sciences, technology, and medicine.](image-url)
A positive picture of HE research continued

- No changes in staff time use the last 20 years
  - Same number of hours per week
  - Same distribution on research, administration and teaching/supervision
  - Few perceive administrative duties as problematic

- More internationalisation
  - Much more scientific collaboration across national borders than before
  - Most faculty members have “internationalised”

- Exactly what the policy-makers wanted?
A state of crisis?

- Lots of evidence of unhappy academics
  - Public debate, surveys and qualitative studies
  - Strong words like “crisis”, “negative spiral” and “worst situation for ... ever” are common
  - Well-known from other countries

- But there are nuances in this picture
  - Not everyone is worried, and individuals are not worried about the same things
  - Opinions differ among faculty members
  - People can have “general worries” yet be content with their own working conditions

- Nine hypotheses for the “crisis paradox”
1. Unrealistic and unclear goals for public research

- The Norwegian “OECD Target” and the “Lissabon Target”
  - Statistics show that the targets are further away than ever due to low industrial R&D expenditure and high GDP
  - The industrial structure in Norway makes the target unrealistic

- Why use an input indicator as a goal?
  - GDP varies a lot
  - The goal says nothing about quality and priorities, and these issues remain hidden behind the big expenditure debate

- No wonder the researchers are unhappy when policy-makers maintain an unattainable goal
2. Bound resources

- Increased resources may be swallowed by expenditures beyond academics’ control
  - Higher salaries, equipment costs etc.
  - More funds do not give more opportunities
  - A more diverse funding base is challenging

- Other examples of “bound resources”
  - Stricter rules about spending and accountability
  - Research problems are defined externally
  - Earlier externally funded projects creates future needs
  - The Matthew effect increases differences

- Increasing research resources does not solve all problems
3. Massification and overload

- “Massification” most commonly used about the explosion in student numbers
  - More than 50 percent now enter higher education
  - Yields more resources, but student/staff ratio increased from 14 to 19 the last 20 years
  - Also functional overload or a “massification of tasks”?

- Side effects of massification
  - More researchers = more people get their projects approved but also more people get their proposals turned down
  - Tasks need to be organised differently
  - Can all teaching still be research-based?

- Massification may influence “energy”, “time” or concentration in ways that are difficult to study
4. Researchers as politicians and lobbyists

- Slower growth or even decline in public spending on science the last 20 years
  - Public research competes with other worthy activities for money and attention
  - More autonomy means that HEIs are increasingly expected to make hard priorities

- Researchers have become a better organised lobbyist group in many countries
  - U.S. clearest example but many others
  - Emphasising negative aspects is a common lobbying strategy

- The crisis paradox may partly be explained by this lobbying
5. The strategy of whining

Apart from obvious lobbying, whining seems common also in other contexts:

- Might be rooted in (national?) culture
- “The afflictions of affluence” – the more wealth, the more whining?

Whining and complaining can have other effects:

- Increased motivation, personal well-being
- Group identity through a “Common destiny, common comfort” process
- Possible sympathy from other groups
- “The role of the intellectual?”
6. The new social contract

n Many names for a recent “paradigm shift”
  ß “Mode 2”, “Triple Helix”, “Post-academic science”, “Pasteur’s Quadrant” etc.
  ß A dramatic change has taken place in the science-society relationship since the 1980s

n Many possible indirect impacts
  ß Faculty members (enjoying lifelong employment) remember “the good old days”
  ß The new social contract confuses the old arguments for support: instrumentalism (for funding) and cultural values (for autonomy), which may leave little but the “we lack resources” argument
7. Do research groups have good working climates?

- Empirical evidence that many academics are unhappy with their working climate
  - Unfriendly, hostile, envious or too competitive colleagues, poor or lacking leadership, lack of encouragement or criticism etc.

- But many studies find that the best research units are characterised by “tensions”
  - Mixture of “challenge” and “support”
  - The individuals with the highest scientific ambitions may find tensions productive and creative, but what about all the other ones?
  - The “run-of-the-mill” scientists may not be happy with the global competitive race for discovery and recognition

- Do the universities have good HR policies?
8. Problematic aspects of post-modern work life

Much discussion about challenging issues of work life today

- “Time squeeze”, being “burnt out” etc.
- Found more often in professions with long formal education and high autonomy

Can this be used to explain the lack of changes in time use?

- Although overall time spent on various activities seems fairly constant, maybe other characteristics have changed
- Many complain that the “slow” aspects of university life have gone

Difficult to change because this is tied to technological developments and intrinsic features of the academic profession?
9. Relative deprivation

n A feeling of powerlessness and loss of self-respect when a group has fewer material goods than a chosen reference group

β Studies show academics have lagged behind in salaries compared to other groups

β Academics have large networks and many possible reference groups, some of which will have much better research conditions and possibly salaries

n Common responses to relative deprivation

β Criticising others, increasing competitive climate

β Reducing or increasing own effort

β If the sense of loss cannot be rectified, the likely result is demotivation and pessimism
Short conclusions

- The “crisis paradox”: many indicators of inputs, outputs and quality for university research move in the right direction, but there seems to be an increasing feeling of crisis at the same time.

- Many different explanations for the paradox can be put forward, not all of them have to do with structural and political changes.

- Some of the dilemmas I have alluded to have no simple solution, others may require fairly radical organisational and leadership changes.
  - But they will never be content!
  - Research can be improved without increasing funding.
  - Trust, respect and autonomy?