## Laudation for Professor Rachel Griffith

Delivered in Wuppertal on 12th of June 2015 by Hendrik Jürges

**[Motivation:** for her original contributions to the econometric study of competition, economic policy, and their effects on innovation and productivity]

Magnifizenz Rector Koch,

Secretary of State Dr. Horzetzky,

Members of Parliament,

Dear Colleagues,

Dear Students,

Ladies and Gentlemen,

Dear Rachel,

It is a great pleasure and pride to participate in this ceremony honoring Rachel Griffith, one of the most distinguished economists in Europe and worldwide.

This is the third time the Schumpeter School of Business and Economics at the University of Wuppertal gives the Schumpeter School Award to a scholar who has conducted theoretical or empirical Schumpeterian research of outstanding quality and importance.

Our two past prize-winners, David Audretsch and Dietmar Harhoff, have been extraordinary in their own right, in contributing to research on patents, entrepreneurship, and innovation.

Now, "the third time it's tradition", is a popular saying in Germany, but this time is again special. It the first time we honor an economist who has not spent a significant part of her career in a German-speaking country.

Thus today, the award ceremony is held in English for the first time. I believe this is just a logical step for our department in its endeavor to become more visible internationally.

Rachel Griffith is an exceptionally broad and productive economist. I find her career and work nothing short of being extremely impressive. Of course, as you will learn later on, I am not alone in this judgement.

What amazes me is that she has made valuable contributions to several distinct fields in economics, starting with public finance, especially corporate taxation, moving to the economics of innovation and productivity, and most recently to food consumption and nutrition policy.

Before telling you more about her work and why it has been so influential, I will briefly summarize the most important stages of her academic career.

Presently, Rachel Griffith is Professor of Economics at the University of Manchester in the UK and Deputy Research Director at the Institute for Fiscal Studies (or IFS), possibly the most prestigious think tank in public economics worldwide.

She is an Elected Fellow of the British Academy, Editor of the *Economic Journal*, one of the leading journals in economics, and a Research Fellow of the Centre for Economic Policy Research (CEPR). And last but not least, she is currently presiding the European Economic Association as the first female economics to ever hold that position.

Rachel Griffith was born in Boston in the United States. When she was 16, her step father got a job in Copenhagen, so the family moved to Europe. Once in Europe, she studied European geography, or in other words, she travelled around rather than continue school.

But after some time, she decided to continue her education, and she went back to the United States where she studied economics at the University of Massachusetts in Boston.

After graduating in 1985, she went back to Europe to work as Head of Research at the EIRIS Foundation in London. EIRIS is a charity that works for firms in the financial district providing advice on ethically responsible investment decisions.

Her work there was to construct "fair" performance measures for fund managers when investment firms had imposed an ethical constraint on them. What sounds like a mere technical exercise is actually quite fascinating work which could have important applications in other fields as well, such as performance measurement in the health care and education systems.

During her time at EIRIS, Rachel Griffith had the time and energy to complete a Master's degree in econometrics and forecasting, part time in the evenings, at the City of London Polytechnic, where she also became a part-time lecturer. In fact, the study of econometrics was a crucial step on her academic path, as econometrics has become one of the key pillars of her work as an economist.

In 1993, Rachel Griffith started working as Senior Research Economist at the Institute for Fiscal Studies, which she has not left ever since. Here she initially worked and published on the dual relationship between market structure and innovation and on how taxes affect research and development. Both questions have become recurrent themes of her scholarly work.

After a few years, Rachel Griffith became Director of Productivity and Innovation Research at IFS. During that time she also completed her Ph.D. at Keele University on "Taxes, the location of multinationals and productivity", under the supervision of public economist Michael Devereux. This research was published in the two top journals in Public Finance, the *Journal of Public Economics* and *International Tax and Public Finance*.

In 2003, after a brief stint as Senior Economist at the Competition Commission (the equivalent of our *Monopolkommission*), Rachel Griffith took up a position as Reader in Industrial Organization at the University College London, and was promoted to Professor in 2007.

UCL is not only – according to some metrics – the third best University in the UK (after Oxford and Cambridge), it is also very conveniently located, just a stone's throw from IFS. Since 2010, she is now at the University of Manchester.

What sets Rachel Griffith apart from many of her colleagues, is that she spent considerable time doing research outside of the ivory tower, as we sometimes label our universities.

As a result, her work is clearly relevant for solving real-world problems, be it the efficient design of the tax system, the regulation of competitive and not so competitive markets, or – most recently – policies to improve the health and lifestyles of the population.

Much of her work is geared towards linking theory to empirics in order to influence the policy debate.

The practical relevance of her research is also reflected in her work as a policy advisor. For instance, Rachel Griffith has served as Expert Advisor on Corporate Taxation and Innovation to the European Commission and as Academic Panelist of the UK Competition Commission.

We honor Rachel Griffith for her research in the Schumpeterian tradition. Her work on innovation and productivity is especially ground-breaking, and continues to have a large impact on research in this area.

The large number of citations that her publications have achieved bear witness to the importance and relevance as recognized by her fellow economists.

This and her other work was also recognized as outstanding when last year, she received the Birgit Grodal Award of the European Economic Association. This prize is given every two years to a European-based female economist who has made a significant contribution to the Economics profession.

Actually, when our prize committee met last year to discuss and determine our next prize winner, this was not yet public. But, when learning about Rachel Griffith receiving the Birgit Grodal Award, I have to say that I was very pleased, as it strongly affirmed our choice.

Rather than trying to give a summary of Rachel Griffith's entire work, which would go beyond my expertise as well as my time limits, I will focus on some key features of her most-cited work. You will hear more about it in Rachel Griffith's acceptance speech.

Last week, Google Scholar listed 2,444 citations of "Competition and Innovation: An Inverted-U Relationship", jointly written with a cast of distinguished co-authors and eventually published in the *Quarterly Journal of Economics* in 2005.

In the same year, Rachel Griffith also published a monograph with Philippe Aghion. The book has the programmatic title "Competition and Growth: Reconciling Theory and Evidence", and I can recommend it to anyone interested in modern economic analyses of growth. It is as entertaining as a serious economic growth can get.

The question raised and answered in these two related works is this: is competition good or bad for economic growth?

Let us first clarify what we mean by competition. Schumpeter's insight on the matter is often summarized in the following quote from "Capitalism, Socialism, and Democracy":

*It is not price competition what counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization... – competition which commands a decisive cost or quality advantage and which strikes existing firms... at ... their very lives. This kind of competition is... the powerful lever that in the long run expands output...*

Today we call this product market competition.

Schumpeter argued that in a dynamic economy, monopoly is preferable to perfect competition. The rationale is this: without the prospect of monopoly profits, firms would not innovate and hence there would be no economic growth.

This argument has become known as the Schumpeterian effect. However, Schumpeter actually continues:

*Competition of the kind we now have in mind acts not only when in being but also when it is merely an everpresent threat. It disciplines before it attacks.*

Thus competition or even the threat of competition also has its merits. Monopolies shielded from competition have little incentives to innovate.

Steve Jobs of Apple once put it this way:

"What's the point of making the product better when the only company you can take business away from is yourself?"

Competition fosters growth because it forces firms to innovate in order to survive.

Now imagine you were a policy maker, a little bit more than a decade ago, before Rachel Griffith published her research. You were trying to figure out which competition policy is needed to promote economic growth. Is it stricter anti-trust policies? Or is it better and longer patent protection?

Obviously economic theory had two contradictory answers for you. Then you could have asked empirical economists, researchers who had turned to the data to find an answer. However, you would have found that the real-world evidence was also mixed.

On the one hand, larger firms that dominate their markets seem to innovate more but on the other hand aggregate innovation is lower in more concentrated industries.

Moreover, it is unclear how much you could trust those results. The challenges we meet when trying to answer the question if competition is in fact good for growth are formidable.

To name but one important example: innovative firms tend to become larger and dominate their markets, so there is also a reverse link between innovation and competition.

Rachel Griffith's contribution to this debate was nothing less than to cut the Gordian knot on several accounts, theoretically and empirically.

First, she and her colleagues analyzed theoretical models in which industry insiders rather than outsiders innovate step-by-step. In this world, there are basically two types of industries: those where followers innovate to catch up with a market leader, and those with two or more market leaders who innovate to escape the competition of the others.

In the first type, the Schumpeterian effect is at work, because catching up is less interesting if competition with the leader will be strong.

In the second type, leaving the others behind is more interesting if current competition is strong. This is called the escape competition effect.

These models yield a couple of not so obvious testable predictions, such as that across the entire economy, at low levels of competition the escape competition effect will dominate, but at high levels of competition the Schumpeterian effect will dominate – which results in an "inverted-U relationship".

To test these predictions, and to meet the econometric challenges ahead, Rachel Griffith and colleagues used newly available longitudinal firm-level data.

A key contribution was to use these data to its greatest effect, developing and applying semi-parametric econometric models allowing for reverse causation and non-linearities of the sort described above.

These econometric models were both informed by the predictions of her theory and specifically geared towards answering her research questions. Moreover, she used her deep knowledge of the regulatory environment and its changes, on both national and EU levels, to uncover causal relationships in the data.

As every applied econometrician knows these days, a credible design owing to nature's experiments is at the heart of every good empirical research.

With key predictions confirmed by the data, Rachel Griffith's findings have a profound impact on policy.

Different sectors of the economy should ideally be treated differently, depending on the nature of competition in the sector. In sectors with very close competition (think about Apple v Samsung), market liberalization and tough antitrust policies provide firms at the technological frontier with incentives to escape the competition.

In unleveled sectors with one leader and many followers, a more lenient approach is preferable, so that those catching up share the fruits of limited competition and have stronger incentives to innovate.

As this example demonstrates, Rachel Griffith's research follows the ideal of combining institutional knowledge, economic theory building, and application of innovative econometric methods to generate new knowledge and insight that is not only intellectually stimulating but also policy relevant.

I am sure Schumpeter would have greatly appreciated her approach. To quote from his article in the first volume of *Econometrica*:

*The only way to a position in which our science might give positive advice on a large scale to politicians … leads through quantitative work. For as long as we are unable to put our arguments into figures, the voice of our science will never be heard by practical men.*

To cut a long story short: with Rachel Griffith we have chosen the perfect Schumpeter School Award winner. We are much honored to have her here in Wuppertal today.

I thank her for accepting our Schumpeter School Award for her original contributions to the econometric study of competition, economic policy, and their effects on innovation and productivity.

And as she is so close to the technological frontier in economic research, I wish her to remain highly innovative and productive in order to always escape the competition.

Congratulations!