REF2021

Institution: University of East Anglia

Unit of Assessment: 17 – Business and Management Studies

Title of case study: Improving the measurement of the impact of competition policy

Period when the underpinning research was undertaken: 2010 – December 2020

Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	**Role(s) (e.g. job title):**	**Period(s) employed by submitting HEI:**
Peter Ormosi	Associate Professor of Competition Economics	2007 – to present

Period when the claimed impact occurred: September 2013 – December 2020

Is this case study continued from a case study submitted in 2014? No

1. Summary of the impact

Governments set competition policy to ensure that market competition is not thwarted in a way that might harm the economy and society. Before 2010, the effectiveness of competition policy was not systematically evaluated in most countries, with the result that national and international competition authorities had only a partial understanding of the impact of their interventions. UEA research made methodological and evidential contributions to underpin a more rigorous approach to evaluation which has been adopted by the Organisation of Economic Cooperation and Development (OECD), the European Commission, and several national competition authorities. The result was the creation of new evaluation processes, whilst widening the scope of evaluation to new areas identified by UEA research, for example, to account for the deterrent effect of competition law.

2. Underpinning research

The Centre for Competition Policy (CCP) at UEA has a distinguished track record of conducting policy relevant research and prompting policy change. The research programme of CCP member Ormosi (in the Norwich Business School) has focused on several key research questions addressing how to evaluate the effects of competition policies, in collaboration with CCP colleagues including Prof Stephen Davies and Dr Franco Mariuzzo in the School of Economics.

I. Providing a methodological toolkit to raise the awareness of competition policy evaluations

Ormosi and Davies (2012, output 3.1) published one of the first comprehensive reviews of the different methods that can be used in various functions of policy evaluation. From their earlier work with competition authorities, they realised that competition authorities often have limited resources to conduct impact evaluations. By producing an improved framework, Ormosi and Davies' research sought to remove this barrier to the adoption of more rigorous evaluation and development of both existing and novel policy instruments. These methods included those for accountability purposes (theory driven simple simulations), and for ex-post impact evaluation (causal inference methods where the choice of the control group is well-founded in economic theory). Ormosi further translated the key results and recommendations from [3.1] via a series of policy reports (including [3.5], [3.6]). These reports discussed various competition policy scenarios and how impact evaluation should be conducted in each of them, formulating the most relevant questions competition authorities should be asking when conducting these evaluations.

II. Evaluating the deterrent effect of competition policy

Policymakers have long recognised deterrence as one of the most important functions of competition law and policy. Despite this, there was no consistent empirical framework for gauging the magnitude of this deterrent effect. Therefore, previous evaluations of the impact and consumer benefits of competition policy largely neglected deterrence. This resulted in only the direct effect

of competition policy being estimated. However, policies which are effective as deterrents might forestall significant harms from occurring in the first instance. This omission could lead both to the value of competition policy overall being underestimated, and incorrect judgments as to which of several options is the most effective in the long run.

To overcome this obstacle, Ormosi and co-authors looked at various possibilities to evaluate how much harm competition policy deters. As an example, they studied the problem of unlawful collusion among competing firms in the form of cartels. An important difficulty in studying cartels is that, by their nature, they are secret; cartels are generally only observed once members of the cartel are caught engaging in illegal activity. Ormosi developed an innovative and novel approach to estimate the proportion of undetected cartels in an economy [3.2]. His proposed method borrows capture-recapture methods from ecology to estimate the parameters of partially observed populations. Ormosi estimated that fewer than one in five cartels is detected.

Ormosi and co-authors leveraged this model to estimate the deterrent effect of competition policy on cartel formation. First, [3.4] provides theoretical and empirical evidence that cartels with very small or very high price increasing effects are more likely deterred. Using this, [3.5] builds a conceptual framework which establishes what information is required for estimating the magnitude of cartel harm in the economy. With the help of this framework, they estimate that even on conservative assumptions, effective competition policy can deter over half of the harms from all cartels, and the deterred harms would amount to seven times the harm arising only from detected cartels.

3. References to the research

UEA authors are in bold.

3.1 A comparative assessment of methodologies used to evaluate competition policy
Davies, S.W., Ormosi, P.L.
Journal of Competition Law and Economics, **2012**, 8(4), 769-803.
DOI: 10.1093/joclec/nhs025

3.2 A tip of the iceberg? The probability of catching cartels
Ormosi, P.L.
Journal of Applied Econometrics, **2014**, 29(4), 549–566. DOI: 10.1002/jae.2326

3.3 Does enforcement deter cartels? A tale of two tails
Bos, I., **Davies, S.W.**, Harrington, J.E.Jr, **Ormosi, P.L.**
International Journal of Industrial Organization, **2018**, 59, 372-405.
DOI: 10.1016/j.ijindorg.2018.04.005

3.4 Quantifying the deterrent effect of anti-cartel enforcement
Davies, S.W., Mariuzzo, F., Ormosi, P.L.
Economic Inquiry, **2018**, 56(4), 1933-1949. DOI: 10.1111/ecin.12574

3.5 A review of merger decisions in the EU: What can we learn from ex-post evaluations?
Ormosi, P. **Havell, R**. and **Mariuzzo, F**.
European Commission, **2015.** DOI: 10.2763/84342

3.6 Lessons learned from the OECD's ex-post evaluation workshop,
Duso, T and **Ormosi, P**
Organisation for Economic Co-operation and Development, **2015** *DAF/COMP/WP2(2015)8*
https://goo.gl/AxFR93

4. Details of the impact

Competition laws and competition authorities are established with the goal of promoting competition for the benefit of consumers. Having a clear and effective framework for evaluating key public policy interventions in pursuit of well-functioning economies is central to the well-being of society in general. Although UK competition authorities have always been in the vanguard of such evaluations internationally, up until around 10 years ago, these were only done regularly in the largest economies. Moreover, past evaluations sidestepped some important considerations, due to lack of evidence and a clear methodological and analytical framework. This resulted in

evaluations that missed potentially the most important function of competition laws and policies: their deterrent effect.

I. Driving the creation of a methodological toolkit to raise the awareness of competition policy evaluations

The research of Ormosi and collaborators has contributed to changing the work priorities of several authorities, as awareness of the importance of competition policy impact evaluation has grown and more competition authorities began to undertake such evaluations.

I.a Driving the creation of the OECD toolkit

The OECD Competition Division, with its 37 member countries, is one of the largest international stakeholders in the area of competition policy. UEA research [3.1] was instrumental in the OECD Competition Division's decision to direct a quarter of their available resources to start a three-year strategic project to assemble a best practice guide for member and non-member countries. Previously no resources were used for impact evaluation. As ███████ (Head of OECD Competition Division at the time of the project ███████████████) writes,

"*...I discussed with the Committee a changed approach, under which we would focus our work for the next three years at least on no more than two 'strategic themes'. To obtain this agreement, I needed to motivate the Committee and to provide some ideas for outputs, and a project plan. One of the areas we thought to develop was measuring the impact of competition policy. I was lucky just at that time to read Davies and Ormosi's working paper "The Impact of Competition Policy: What are the Known Unknowns?" – which as its title suggests was perfectly suited to our needs. […] As a result of this work, the Committee endorsed our proposal to devote about one quarter of its time to this topic, as one of its two strategic projects over 2012-2015.*" ([5.1], referring to working paper versions of outputs [3.3] and [3.4]).

As the central part of this strategic project, the OECD developed a Reference Guide on evaluating the impact of competition enforcement [5.2]. The Guide references [3.1, 3.5, 3.6] in 20 places. This OECD Reference Guide provides competition authorities around the world with a best practice toolkit to evaluate the impact of competition policy, and many member and non-member countries choose to follow these guides to create their own guidelines. Anticipating this, ███████ ██ concludes in his testimonial that:

"*I therefore want to put on the record that I greatly appreciate the work that Drs Davies and Ormosi have done in this area. It has already significantly affected the work of the OECD in the field of competition policy, and through our work will also certainly have an effect on policies and therefore economic outcomes in OECD countries and beyond.*" [5.1].

The influence of this research on the OECD has continued with 7 references in a 2020 publication [5.3] by the OECD Committee on Consumer Policy.

I.b Impacting OECD member states' impact evaluation guidelines

The inclusion of UEA research in the OECD Reference Guide provided a channel which brought the work to the attention of competition authorities which were at the early stages of setting up their impact evaluation systems. The Spanish competition authority (Comisión Nacional de los Mercados y la Competencia – CNMC) used this to underpin their own impact evaluation guidelines [5.4]. ███████████████ (Head of Cabinet and Chief Economic Advisor of the President) writes,

"*We have found the works of Professor Stephen Davies and Dr Peter Ormosi […] very useful in constructing these guidelines. […] we have relied on their recommendation to use moving average estimate of consumer benefits to smooth out annual fluctuations between years with exceptionally big and small consumer savings; to justify the need to conduct the evaluations after the activity, but using ex ante information; to discuss the role of selection bias; or to identify the types of conservative benchmarks to use when calculating relevant turnover. […] Having clear guidelines to estimate the consumer benefits of what we do has been particularly important in order to demonstrate that the public resources dedicated to the CNMC lead to consumer benefits that are several times larger...*" [5.5].

Similarly, the Hungarian Competition Authority (HCA) had had limited experience in impact evaluations, having only first designed their impact evaluation guidelines in 2013. Informed by the OECD recommendations incorporating UEA research, they have updated their guidelines, drawing on [3.1, 3.5, and 3.6] (22 references). ▮▮▮▮▮▮▮▮ (Chief Economist of the HCA) wrote that Ormosi and Davies' contributions '*have played a pivotal role in the success of our work in this area in a number of ways*' [5.6].

This line of research has led to conceptual changes in how competition authorities approach evaluation of their policies. Following Ormosi's presentation at an OECD event in 2015 [3.5], ▮▮▮▮▮▮▮▮ Principal Adviser at the European Commission, noted,

"*Dr Ormosi*['s] *role was to draw lessons from ex-post evaluations presented by national competition authorities. He made a number of interesting suggestions on how to conduct proper ex-post evaluations. This would contribute to promote the work on ex-post economic evaluations to the European competition authorities.*" [5.7]

Following on from the OECD Reference Guide, the World Bank in 2014 invited Ormosi and Davies to develop an impact evaluation framework for the Competition Authority of Kenya. The World Bank wrote,

"*As a result of Dr, Ormosi and Dr. Davies work, the CAK* [Competition Authority of Kenya] *is on course to adopt and systematically use the designed frameworks.*" [5.8]

Finally, between 2017 and 2020 Ormosi was repeatedly called upon by the Competition and Markets Authority (CMA) (and its predecessor the OFT) to provide academic guidance to constructing their annual impact evaluation reports. In this capacity, Ormosi repeatedly drew on the above listed research. As ▮▮▮▮▮▮▮▮ testifies:

"...*Ormosi has repeatedly reviewed the reports since. I understand that in their detailed reviews they frequently draw on the extensive research they have done in the area of competition policy evaluation. It is worth noting that the original guidelines were used as a model for such guidelines by the OECD and, hence, by a wide variety of national competition authorities.*" [5.9]

II. Providing evidence to include estimates of the deterrent effect in competition policy evaluations

Past evaluations sidestepped some important considerations, due to lack of evidence and a clear methodological and analytical framework. This resulted in evaluations that missed potentially the most important function of competition laws and policies: their deterrent effect. William Kovacic, former Chair of the U.S. Federal Trade Commission highlighted at the October 2013 OECD Conference: "*No modern development in antitrust law is more striking than the global acceptance of a norm that condemns cartels as the market's most dangerous competitive vice [but] is modern cartel enforcement attaining its* **deterrence** *goals?*"

If competition laws work well, and unlawful conduct is deterred, public resources are saved and harm on the economy and society is reduced. UEA research on cartel detection and deterrence [3.2, 3.3, 3.4] led competition authorities to re-assess the role of deterrence in setting and evaluating policy. As ▮▮▮▮▮▮▮▮ Chief Economist of the CMA, wrote, these works were key in producing a CMA report on deterrence [5.10] and changed CMA priorities, through the understanding of the value of prosecuting relatively small cartel cases, which have small direct effects but potentially large deterrent effects.

"*In this respect we have found the recent work by Davies and Ormosi into measuring deterrent effects extremely useful and timely* […] *it helps remind us not to deprioritise smaller enforcement cases (by demonstrating the important deterrent effect that these cases have, such as our estate agent cartel cases). It substantiates the belief that there is a large deterrent effect of cartel policy and that the positive impact figures for cartels that are detected are a significant 3.3 under-estimate of the overall impact of all our cartel work. In turn, this ensures that we do not concentrate proportionately too many of our resources on merger control and market investigations.*" [5.9].

Ormosi's work helped formulate impact evaluation priorities in the European Commission's Directorate-General for Competition (DG COMP) as well. Based on UEA's research on deterrence

[3.3, 3.4], the European Commission's DG COMP and the CMA organised a workshop on how competition authorities could measure deterrence. ▉▉▉▉▉▉▉ (DG COMP) wrote,

"*Dr Ormosi also highlighted the importance of the deterrent effects of competition policy* [...] *The Competition Directorate General has followed up on these various suggestions by organising in collaboration with the Dutch and UK competition authorities a... conference on "Looking beyond the direct effects of the work of competition authorities: Deterrence and macroeconomic impact*" [5.7].

5. Sources to corroborate the impact

5.1   Letter from the Head of the Competition Division, OECD (25.11.13).

5.2   OECD Reference guide on ex-post evaluation of competition agencies' enforcement decisions, April 2016.

5.3   OECD (2020) Measuring consumer detriment and the impact of consumer policy, April 2020.

5.4   Estimating the impact of competition enforcement by the Spanish Competition Authority, CNMC, 2017.

5.5   Letter from the Head of Cabinet and Chief Economic advisor of the President of the CNMC (13.4.20).

5.6   Letter from the Chief Economist of the Hungarian Competition Authority (15.4.20).

5.7   Letter from the Principal Advisor of the European Commission Competition DG (5.6.15).

5.8   Letter from the Global Competition Policy Lead, Trade and Competitiveness, World Bank (23.4.15).

5.9   Letter from the Chief Economic Advisor, Competition and Markets Authority (CMA) (9.4.20).

5.10   CMA report on deterrence (7.9.17).