

A guide to OFT's Impact Estimation methods

July 2010

OFT 1250

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1 INTRODUCTION

- 1.1 The OFT has agreed a performance target with HM Treasury under the Comprehensive Spending Review (CSR) settlement 2007 to deliver direct financial benefits to consumers of at least five times that of its cost to the taxpayer (referred to as the 5:1 target). To meet this target, the OFT publishes annual average estimates of impact in terms of monetary savings to consumers in its annual report and Positive Impact notes.
- 1.2 This document is a guide to the methodologies used to estimate the impact of OFT's work for this purpose. It does not cover the other performance target that looks at additional wider benefits of OFT's work such as deterring anti-competitive behaviour and increasing consumer confidence.¹

Scope of impact estimation/ areas covered

- 1.3 OFT's annual Positive Impact notes present annual average estimates of direct financial benefits to consumers² from OFT projects completed over the previous three financial years. This is to avoid year to year fluctuations in the impact estimates due to the lumpiness of our work. The first Positive Impact note published in 2005-06 covered consumer savings from our mergers and CA98 work. Over the years, we have extended the scope of our impact estimation work (see figure 1.1).
- 1.4 We currently estimate the impact of our work in the following areas:
- competition law enforcement
 - merger control

¹ For more on the OFT performance target under CSR 2007, please see OFT955, March 2008

² The term 'consumer savings' refers to direct financial benefits to consumers in this report and Positive Impact notes.

- market studies and reviews of orders and undertakings, and market investigation references (collectively referred to as 'markets work' in this document)
- consumer protection enforcement.³

This does not comprise the full extent of the OFT's work and the total estimate of consumer savings is therefore conservative.

Figure 1.1: Areas of OFT's work covered by Impact estimation since 2005

		Positive Impact				
		2005/6	2006/7	2007/8	2008/9	2009/10
OFT projects and programmes	Enforcement of competition law	✓	✓	✓	✓	✓
	Merger Control	✓	✓	✓	✓	✓
	Markets work	✗	✗	✓	✓	✓
	Scam busting	✗	✓	✓	✓	✓
	Non-scam consumer protection enforcement	✗	✗	✗	✓	✓
	Consumer education	✗	✗	✗	✗	✗
	Competition Advocacy	✗	✗	✗	✗	✗
	Consumer Codes Approval Scheme	✗	✗	✗	✗	✗
	Partnership work	✗	✗	✗	✗	✗

³ We may not be able to report impact estimates for consumer protection enforcement under two separate categories (scams and non scams) in the future. In 2009, the OFT restructured the group previously responsible for consumer protection work (to further increase the impact of its consumer protection work) and the scams work was incorporated into the overall consumer protection enforcement umbrella.

Findings from the independent review

- 1.5 In 2009, we commissioned a comprehensive review of our methodologies to further improve our ability to estimate the impact of our work. The independent review, carried out by Professor Stephen Davies, confirmed the overall rigour and prudence of our methods. It also suggested a few possible modifications.⁴ We have revised our approach to take into account some of the suggestions. Some of the other changes suggested require more work and we will be considering these in the future.⁵ These methodological changes have been discussed briefly in the relevant sections of this document.

Structure of document

- 1.6 Section 2 describes our overall approach to impact estimation for Positive Impact purposes. The specific methodologies to estimate consumer savings resulting from our work on competition enforcement, merger control, market studies and reviews of orders and undertakings, and consumer protection enforcement are presented in sections 3 to 6.

⁴ S. Davies, January 2010, OFT1164

⁵ See OFT1164r, January 2010

2 OVERALL APPROACH TO ESTIMATING IMPACT

Introduction

- 2.1 This section presents details of the overall approach and assumptions applied in estimating the impact of OFT's work. We view our methodology as work in progress and will continue to develop it. Over the years, we have refined our methods and extended the scope of our impact estimation work (see figure 1.1). We use evidence from academic literature to inform our work and continue to monitor developments in this area; any changes to our methods are reviewed by an academic expert before they are implemented.

Definitions and Assumptions

Consumer Welfare

- 2.2 The OFT's goal is to 'make markets work well for consumers' and our impact target focuses solely on the direct financial benefits to consumers. The pursuit of consumer welfare in the short term is most likely to maximise total welfare over the longer term. It works to drive up productivity, innovation and economic growth and promote general trust in markets and improve consumer confidence.
- 2.3 The independent review of our methods carried out by Professor Stephen Davies confirms that consumer welfare is an appropriate measure for our purposes as any alternative total welfare standard would require dynamic analysis that would not be feasible – especially within the context of a comprehensive impact estimation programme. Given the challenges associated with the quantification of dynamic impacts and their absence from this analysis, a methodology based on total welfare would be misleading since static total welfare would not provide a fair reflection of the value of our work.⁶

⁶ See paragraph 6.5, page 37 of S. Davies, January 2010, OFT1164.

Direct financial benefits to consumers

2.4 The direct financial benefits to consumers that we measure through our impact estimation methodology include:

- decrease in price
- monetized improvements in quality, range or service
- monetized time savings
- benefits that consumers gain from making better informed choices about what goods to purchase.

2.5 As mentioned in paragraphs 2.2-2.3, we focus on estimating the benefit to consumers of OFT's actions. We do not estimate the potential impact of the OFT's decisions on business.⁷

2.6 Many of the beneficial outcomes of the OFT's work are not quantifiable and are not included in the total consumer savings estimate used to calculate the benefit cost ratio - for example, our estimates do not include any psychological detriment averted by our actions, deterrence effect of our competition enforcement work,⁸ or impact of increased competition on productivity.

Ex ante and Ex post estimates

2.7 For discrete, time-limited projects we will first include an estimate of their impact in the annual report for the year in which the project is

⁷ The OFT aims to gain a better understanding of the impact on businesses while carrying out ex-post evaluations wherever possible, but we do not incorporate ex ante estimates of regulatory costs within our impact estimation reporting.

⁸The consumer savings point estimates used to calculate the benefit cost ratio do not include the deterrence effect of our work. However, the Positive Impact notes do present an indicative range of estimates that provide a guide of the scale of the deterrence effect of our competition work.

completed. For market studies, or other work that recommends action by OFT or other agencies, we use ex post estimates from evaluations when available and if not, rely on ex ante estimates of impact. We will publish ex ante estimates of impact in the annual report for the year that the recommendations are implemented. In the case of ex post estimates from evaluations of market studies, we include those OFT interventions that have had an impact on consumers during the relevant financial period.⁹

- 2.8 Most of our impact estimates are 'ex ante' in the sense that the full impact of our actions is not observable. They are based on the best information available at the time of estimation – which is typically once the intervention has been completed and the final decision has been taken (for market studies however it is once recommendations have been implemented) but the full impact from it is not observable. Using information obtained through monitoring the market both during the project and after its completion, these ex ante impact estimates are updated (upwards or downwards) if we obtain better data in the process of monitoring.
- 2.9 Where available, we use ex post estimates of impact that are based on evidence gathered after the full impact of OFT actions have been realised. These are more robust than ex ante estimates and do not need to be monitored. However, we cannot rely solely on ex post estimates as these are only available for a small subset of our projects.¹⁰ Also, ex post evaluations might be conducted several years after the initial recommendations were implemented and the resulting benefits to consumers realised, preventing their inclusion in a report that covers the previous three years.

⁹ When including ex post estimates from evaluations, we ensure that ex ante estimates from the original investigation have not already been included so that there is no double-counting.

¹⁰ It is not proportional to carry out in depth ex post evaluations for all our projects as these are quite costly.

Assumptions

- 2.10 Where the problem is in an upstream market and benefit arises in the first instance to business customers, we assume full pass-through of benefits to final consumers, unless strong evidence shows otherwise, as in the vast majority of cases it is disproportionately time consuming to determine the level of this pass-through. Thus, for example, an increase in manufacturer competition that results in lower wholesale prices is assumed in turn to result in lower retail prices and is treated as a direct benefit. A benefit to final consumers could also arise from addressing an anti-competitive situation between a supplier and a business customer.
- 2.11 We focus solely on estimating the impact of market interventions undertaken by the OFT. We take as given that all interventions not overturned on appeal are warranted.¹¹ We assume that the institutional structure is sufficient to ensure that poor decisions, or planned decisions, are identified and corrected.
- 2.12 Where possible, we base our estimates on information obtained during our investigations. This information has already gone through a rigorous process of internal peer-review and the potential, and at times actual, external review by the Competition Appeals Tribunal (CAT). Where the relevant information is not clearly contained in the case documents, we have made assumptions based on international best practice, academic research, and case officer expertise.

Presenting the results

- 2.13 Where possible we present ranges to reflect the uncertainty of the estimates. We do not provide project-specific estimates or assumptions where there might be information that is confidential and needs to be protected.

¹¹ Should an appeal result in an overturn of an OFT/CC decision, the impact estimates will be accordingly reviewed in the subsequent year.

- 2.14 We use the Consumer Price Index to take account of inflation. All figures are rounded to the nearest one million pounds. We discount future consumer savings by 3.5 per cent (the HMT-endorsed Social Time Preference Rate).¹²
- 2.15 To avoid any chance of prejudicing our fine-setting process, and also as the consumers receive no direct benefits from the fines, we do not offset fines against our costs or include them as part of our benefits. We will record fines recovered separately. Finally, we do not include redress benefits from private actions in our consumer savings estimates.

Conservatism of our estimates

- 2.16 All of our general and case-specific assumptions are conservative. We do not claim that estimates of our impact exactly capture consumer savings. Rather, by using conservative assumptions that are supported by the available evidence and/or academic literature, we ensure that it is unlikely that less than our estimate has been saved.
- 2.17 It is not possible to estimate the impact of all of our work. Our impact estimates do not cover all OFT projects (for example support provided to Trading Standards Services across the country) and exclude indirect benefits of our work that are not easily quantifiable in monetary terms (such as reducing psychological distress or dynamic benefits from competition such as increase in innovation). They also exclude the deterrence effect of our interventions.
- 2.18 Our ex ante estimates are based on the best information available at the time. Where evidence is weak, the underlying assumptions used to estimate impact are very conservative. The estimates are revised upwards or downwards if necessary as we gather more information through monitoring impact or conducting ex post evaluations.

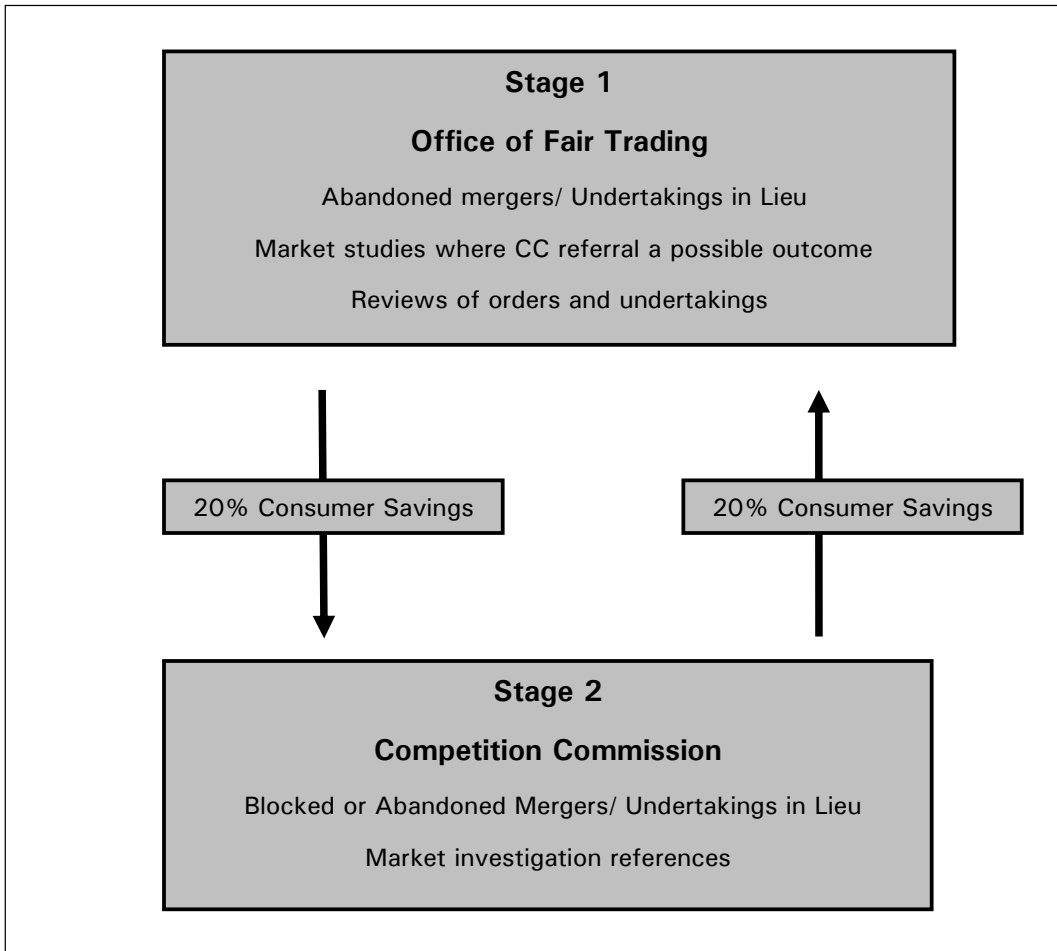
¹² 'The Green Book: Appraisal and Evaluation in Central Government', HMT.

Apportioning benefits between the OFT and CC

- 2.19 The OFT and the Competition Commission (CC) together operate the merger and market investigations regimes and the consumer savings for these areas are jointly considered. The OFT is the first stage authority in a two stage process. It investigates mergers and undertakes market studies and if any significant competition concerns are identified, may refer the case to the CC.
- 2.20 We have agreed an 80-20 rule to split impact estimates with the Competition Commission where the majority of impact would go to the 'main actor' body. In the merger regime for example, the OFT would be the 'main' body where undertakings are accepted in lieu of reference, whereas the CC would be the 'main' body if the merger was referred. The CC would be the main body for market investigation references while the OFT would be for market studies (that could get referred to the CC) and reviews of orders and undertakings.¹³ The specific percentages applied in the apportionment (80:20) is broadly based on costs incurred by the organisations on the mergers and market investigations.

¹³ For each intervention, the primary agency will estimate its benefits according to the methodology it considers most appropriate - on the grounds of proportionality and given that the primary agency is closest to the intervention, these estimates will be adopted by the other agency.

Figure 2.1: Apportioning benefits between the OFT and CC



3 COMPETITION LAW ENFORCEMENT

Introduction

- 3.1 The OFT engages in a range of activities to promote compliance with the Competition Act (CA98), including formally investigating and taking enforcement action against anti-competitive practices and giving informal advice. Under the Enterprise Act 2002 (EA02), we can also investigate and prosecute individuals who have dishonestly been involved in cartel activity.
- 3.2 The immediate impact of these investigations may be to stop anti-competitive actions leading to measurable consumer savings. In addition, they may deter future anti-competitive conduct. Some actions are cleared after formal investigation. These investigations also have significant benefit since they establish legal precedent and regulatory stability and transparency.
- 3.3 For the purpose of the 5:1 target, we focus on the direct financial benefit to consumers from our competition enforcement interventions. However, Positive Impact 09-10 attempts to estimate the magnitude of the deterrent effect of our competition enforcement work and reports an indicative range of estimates. This was one of the suggestions made in the independent review report.¹⁴ The review also suggested that we revise our default price overcharge assumption from 10 to 15 per cent and adopt a standard default duration of six years.¹⁵ We have accepted both suggestions and revised our method accordingly.

¹⁴ See paragraph 6.14, page 42 of S. Davies, January 2010, OFT1164.

¹⁵ See paragraph 6.11, page 40 of S. Davies, January 2010, OFT1164.

Methodology

- 3.4 To estimate the likely impact of our interventions in all cases (irrespective of whether the infringement decision included a finding of effect) we rely on a combination of: i) case team knowledge and judgement and ii) rules of thumb based on academic research and international best practice. The inclusion in these figures of consumer savings estimates for those cases where the decision was based solely on the anticompetitive object of the parties' conduct should not be treated as constituting or implying a formal finding as to the effect of the infringement.

Scope

- 3.5 We estimate consumer savings for those Chapter I (anti-competitive agreements), Chapter II (abuse of dominance) and EA02 (cartel offences) cases where an infringement decision has been issued against the undertakings concerned, one or more individuals have been convicted of the cartel offence, or where all the parties in a case have admitted their involvement in the infringement. In the latter case, only a portion of the total benefit is imputed and the rest will be imputed once the infringement decision has been issued or, where there is an ongoing parallel criminal investigation, once all investigations have been completed.¹⁶ This approach does not impact on the total benefits estimated for a particular case but has an effect on how benefits are allocated across years of the Comprehensive Spending Review (CSR) period (2008-2011).¹⁷

¹⁶ We do not claim any benefits from criminal investigations where the court rules against the OFT.

¹⁷ This is the period covered by OFT's Comprehensive Spending review 2007 settlement agreed with HMTreasury.

Calculating the Impact estimate

3.6 In what follows we use cartels as an example to show how we estimate consumer benefits in this area:

- First, we estimate the annual impact (a) on consumers of price-fixing by multiplying the turnover (t) of the affected goods and services by the price increase (p) caused by agreement. Mathematically:

$$a = t \cdot p \quad (2)$$

- Second, we estimate future consumer savings (f), by multiplying the annual impact by the number of years we believe the cartel may have remained operational, but for the OFT's intervention (c), and adjusting to take account of the social discount rate (ρ).¹⁸ Mathematically:

$$f = \sum_{s=1}^c a / (1 + \rho)^s \quad (3)$$

Turnover

3.7 In Chapter I cases, we use the turnover of the parties' involved in the infringement in the relevant market for the affected goods and service. It is likely that the price of goods or services competing with those offered by the colluding firms will also have increased, independent of who produces them. However, in the interests of conservatism, unless there is strong evidence otherwise we assume that only the goods or services of the colluding parties are affected by the cartel, and that the price of the goods or services of other firms in the market are unaffected.

3.8 Were a cartel to have a vertical aspect we would use the turnover of the goods or services in the downstream market closest to the consumer.

¹⁸ We apply the HM Treasury endorsed social discount rate of 3.5 per cent. See 'The Green Book: Appraisal and Evaluation in Central Government', HMT.

- 3.9 In Chapter II cases, we determine the relevant turnover for the affected goods and service based on case team advice.¹⁹

Price rise

- 3.10 Ideally, the price rise caused by the anti-competitive practice has been identified during the investigation. Where this information has not been identified, case officers may be able to estimate a likely price effect, perhaps from price analysis. At other times we apply rules of thumb that are conservative interpretations and consistent with international best practice and recent academic research.
- 3.11 Where hard core anti-competitive practices involve, for example, price-fixing, market sharing or bid-rigging and case specific information is not available, we adopt the estimated price rise of 15 per cent as the default. We previously used a 10 per cent price rise as default but revised it upwards in response to Professor Davies's comments in the independent review. He referred to recent academic evidence that supported a median overcharge of 17-30 per cent.²⁰
- 3.12 Where the immediate customers in the relevant market are not themselves consumers, we assume that higher prices are passed through to final consumers.
- 3.13 Practices that restrict competition but do not consist of price-fixing, market sharing or bid-rigging agreements also lead to consumer harm, for example – predatory conduct. We recognise that there is uncertainty as to the likely impact of such practices. Our estimates will be informed by information obtained during the investigation and case

¹⁹ Note that this may be different from the total turnover of the relevant market. In principle, in the interests of conservatism, we would only include turnover of the infringing party and those of any competitors driven out of the market or otherwise harmed by an action of the infringing party.

²⁰ Connor J, July 2009.

team judgement. In the absence of case specific information, we will adopt a 15 per cent default price increase. Here again, we have revised our previous default assumption of 5 per cent price increase. The independent review found the 5 per cent to be quite arbitrary and recommended that we apply the same default assumption as for cartel cases.

Time

- 3.14 In the absence of case specific information, we assume an anti-competitive practice would have lasted 6 years from inception. This is consistent with standard international practice. In Positive Impact notes, 06-07 to 08-09, we estimated the expected future duration of a cartel using a method that defined expected future duration as a function of the historic duration of a cartel. Professor Davies commented in his review that this was debatable and inconsistent with standard international practice. We have therefore reverted back to using the 6 year default duration.
- 3.15 Our assumptions used to calculate impact are revised by the case team. Should they be considered inappropriate for the specificities of the case, we will rely on the knowledge and judgement of the case team to derive conservative estimates of impact.

4 MERGER CONTROL

Introduction

- 4.1 The OFT is the first stage of a two stage merger regime. Under the Enterprise Act 2002, it has the duty to review merger situations and refer to the CC any cases where there is a realistic prospect of a substantial lessening of competition in UK markets. The OFT has the power to accept Undertakings in Lieu (of CC reference) (UiL) from the merging parties, if these are deemed to address potential concerns highlighted in the course of its investigations.
- 4.2 Potentially harmful merger situations might lead to lower competition harming consumers in several ways, including higher prices, lower quality, less choice and longer term effects such as reduced incentives for innovation. The most measurable of these are price effects, which we use as an indicator of potential consumer harm in estimating the impact of our merger control work.
- 4.3 Positive Impact 05/06 assumed that consumer savings arising from merger control amounted to one per cent of the turnover in the affected market for one year. This methodology was drawn from competition authorities in the US and the Netherlands. As part of its continued efforts to improve impact estimation methodologies, the OFT deemed this simple approach unrealistic as mergers are very unlikely to be blocked if they lead to such modest increases in price levels. For Positive Impact 06/07, we developed a more detailed methodology that uses merger simulation. It is no longer a 'lower-bound' estimate of the consumer savings from our merger decisions, instead representing a 'sensible point-estimate'.
- 4.4 The simulation model estimates consumer savings from proposed mergers blocked or amended by the OFT. The impact estimates for mergers included in the 5:1 target also include benefits to consumers from mergers blocked or amended by the CC.

- 4.5 The point estimates included in the 5:1 target calculations only include direct financial benefits to consumers and do not include estimates for any deterrent effect of the UK merger regime. However, Positive Impact 09-10 presents an indicative range of estimates for varying values of elasticities, and includes an approximate estimate of the deterrent effect of our merger control work.
- 4.6 The independent review of our impact estimation methods suggested that we review the assumed elasticity values we typically use and take into account efficiency savings when estimating impact of our mergers work.²¹ We aim to act on these suggestions but the resulting changes will involve further modelling work and take time to implement. In the meantime, as mentioned above, we present a range of estimates (rather than a point estimate) to reflect the uncertainty surrounding the assumptions used to estimate impact.

Methodology

- 4.7 Below we outline the key features of our merger simulation method. A more detailed description of the models and process can be found in the OFT report - 'Consumer savings from Merger control'.²²

Scope

- 4.8 Our merger simulation methodology is currently best suited to estimating the unilateral effects of horizontal mergers. It is not currently well suited to modelling non-horizontal mergers, coordinated effects or horizontal mergers where firms compete on factors other than price, such as R&D.
- 4.9 In the event where merger simulation is deemed to be inappropriate in capturing the competitive aspects of the market, or we have

²¹ See paragraphs 5.5- 5.7, pages18-20 in S. Davies, January 2010, OFT1164.

²² OFT917, April 2007.

insufficient data on the model inputs (such as market shares, price-cost margins), we estimate consumer savings by the following method:

a. We calculate the average of the percentage of market turnover accounted for by the 'low' estimates of consumer detriment for the simulated mergers (from the models calibrated using low assumed values of industry elasticity).

b. We apply this average to the turnover of the relevant markets that we have not modelled.

Mathematically:

$$CS_j = T_j \times \frac{\sum_{i=1}^N \frac{CS_i}{T_i}}{N} \quad (1)$$

Where:

CS_j = Consumer savings from unsimulated undertaking j

T_j = Turnover in relevant market in unsimulated undertaking j

N = Number of simulated undertakings

CS_i = Consumer savings from simulated undertaking i

T_i = Turnover in relevant market in simulated undertaking i

Merger simulation

4.10 We have programmed a set of economic models that simulate the effects of a merger - Cournot model for homogeneous products and PCAIDS²³ or ALM²⁴ for differentiated product industries. For vertical mergers, simulation is done for each stage separately.²⁵ The models rely on a few key pieces of data to calibrate the economic relationships between firms and products in a market. Based on these relationships the models calculate the equilibrium state of the market before and after a change in the market structure that a blocked merger would have caused. Comparison of the two states reveals the effect of the change.²⁶

4.11 Simulating the effects of a merger is a three step process:

Step 1: Set the model parameters to reflect the pre-merger state of the market.

Step 2: Use the calibrated model to simulate the effects of a change in market structure on price and quantity demanded.

Step 3: Calculate the consumer detriment averted using the predicted price and quantity change, and an estimate of duration of anti-competitive effects as per the merger simulation.

Step 1: Model adjustment

4.12 To determine whether a merger is likely to significantly lessen competition, it is necessary to strive to approximate the competitive

²³ Proportionally Calibrated Almost Ideal Demand (PCAID) System – a merger simulation model developed by Roy Epstein and Dan Rubinfeld (see their 2002 paper 'Merger Simulation: a simplified approach with new applications').

²⁴ Antitrust Logit Model (ALM) in Froeb and Werden, 1994.

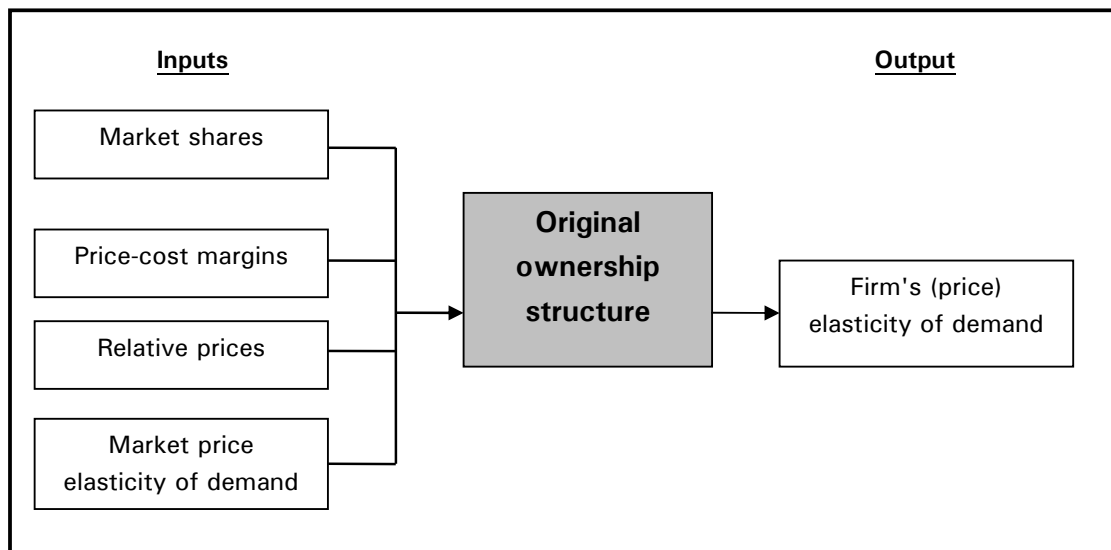
²⁵ The models have been programmed in Mathematica with the assistance of Gluonvision GMBH.

²⁶ See, for instance, Werden and Froeb, 1994; Epstein and Rubinfeld 2002.

features of the market. These include: market shares, price elasticity of demand for firms, price elasticity of demand for the market as a whole, and price-cost margins. Some of these are more readily observable or reliable, such as market shares, price-cost margins and relative prices.

4.13 Figure 4.1 shows, that as an initial step we rely on those parameters that are more readily available (pre-merger values for market shares, price-cost margins, relative prices and the sensitivity of market demand to changes in price) to obtain a value for the firm's (price) elasticity of demand.

Figure 4.1: Calibrating the Merger Model



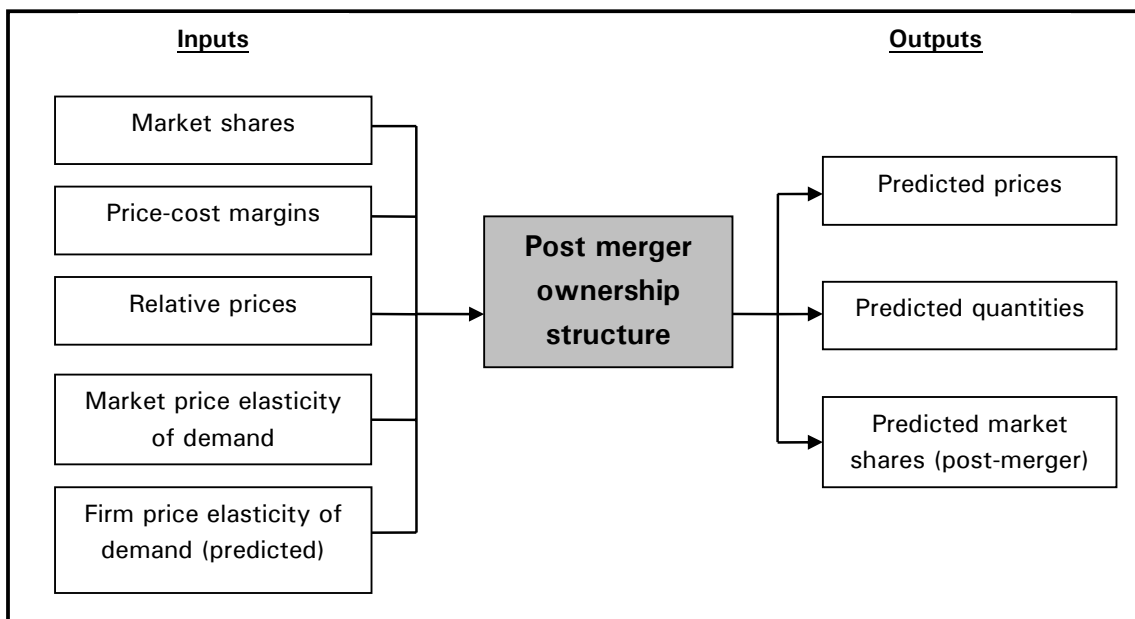
4.14 On occasion, we will not have a complete picture of relative prices for the market under consideration. On those occasions where we are satisfied that competing products are close to being considered as identical and switching costs for consumers are relatively low, we assume that prices across competitors are equal.

Step 2: Simulating effects of the merger

4.15 The effects of a merger can be predicted by using the original input variables as outlined above, together with the calibrated value for the firm price elasticity of demand, but changing the ownership structure of the firms to reflect the post-merger situation. The model simulates the effect of the merger and predicts what the post-merger prices, quantities and market shares would be in the new equilibrium.

4.16 Figure 4.2 shows how the post merger output can be estimated by changing the ownership structure input.

Figure 4.2: Simulating Post Merger Equilibrium



Market elasticity of demand

4.17 One of the key inputs for merger simulation is the market elasticity of demand. Reliable estimates of the market elasticity of demand are difficult to obtain, and we rely on case information to provide us with an indication of its likely size. The market elasticity of demand varies, among other factors, with the degree of availability of substitute

goods, the proportion of income it accounts for and the availability of alternatives in other markets, such as in other regions.

- 4.18 In his review report, Professor Davies concludes that the elasticity values we employ in our simulation models (typically between -0.5 and -1.5) are not very conservative and suggests that the spirit of conservatism might be best served by employing -1.5 or extending the range up to -2.0.²⁷ We will explore the possibility of doing further work in this area by reviewing academic literature for meta-analysis of magnitudes of estimates of demand elasticities. However, we do not expect this to materially affect our methodology.
- 4.19 Due to the uncertainty surrounding the choice of elasticity values, we carry out a sensitivity analysis around the baseline choice. We therefore obtain low, mid and high point estimates for a range of elasticity values.
- 4.20 Impact estimates of abandoned mergers and UILs are scaled down by a percentage corresponding to the proportion of mergers examined by the CC in the previous three years where it found there was a substantial lessening of competition (referred to as the CC 'hit rate'). This is to account for the uncertainty of the outcome of a CC reference.
- 4.21 The models simulate price changes and do not simulate changes in quality or variety as a result of the merger situation. We are unaware of any models that can numerically predict the impact on quality or variety of a merger with the relatively small amount of information available to the OFT as a first stage authority. However, many of the mergers we investigate are likely to lead to such non-price effects.

Step 3: Calculating Consumer Savings

- 4.22 The impact of the merger can be observed by comparing the pre- and post-merger market shares and prices. In addition to estimating

²⁷ See paragraph 5.6, page 19 in S. Davies, January 2010. OFT1164.

changes in the relative market shares of each firm the models will estimate any change to aggregate market demand.

4.23 The impact of the merger consists of two effects:

- The 'price effect': Following a merger which is deemed to lead to a substantial lessening of competition, it is likely that the market price will increase. Those people who continue to buy products at the inflated price suffer a 'price effect', which is a direct financial loss.
- The 'deadweight effect': A number of other consumers will stop buying the good because of the increased price. These consumers lose the benefit that they would have gained from purchasing the good at the pre-merger price.

4.24 Combining the price and deadweight effects gives an estimate of the annual consumer detriment that the merger was likely to have caused.

Duration

4.25 The last element in the calculation is the likely duration of the consumer detriment, that is, the period elapsed before entry, technological change, or other events remove the anticompetitive effects of the merger. While this has to be estimated on a case by case basis, we use a default minimum of two years, since if we believed the market would rectify itself quicker we would be unlikely to find a significant lessening of competition in the first place. The Federal Trade Commission (FTC) in the US and the Dutch competition authority (NMa) also assume in their estimated impact calculations that markets would rectify within two years.²⁸

4.26 Off-model adjustments to the final estimate of harm are sometimes made to account for properties of the market or merger that are not considered by the merger simulation models, such as vertical or co-ordinated concerns. These are agreed with case officers, who have a

²⁸ See table 5.2, page 23 in S. Davies, January 2010, OFT1164.

good understanding of the competitive environment of the market under consideration, and as such are able to assist in forming informed predictions of the likely effects of anti-competitive mergers.

Apportioning consumer savings between the OFT and the CC

- 4.27 Distinguishing between the consumer savings from the OFT's first stage intervention and the CC's second stage is a challenging and somewhat necessarily arbitrary exercise. As a matter of procedure, we have agreed with the CC that the OFT is responsible for estimating consumer savings from undertakings in lieu of a CC reference (UILs) and mergers abandoned on referral to the CC. The CC estimates consumer savings from mergers which they block or amend. This way the body closest to the final decision is responsible for estimating the decision's impact.
- 4.28 We have then agreed to apportion the benefits of merger policy according to an 80-20 rule (see figure 2.1). The body closest to the final decision is allocated 80 per cent of the estimated consumer savings while the other is allocated the remainder. As such, the OFT is allocated 80 per cent of the consumer savings resulting from UILs and abandoned mergers, and 20 per cent of the consumer savings resulting from any CC intervention in this area.

5 MARKET STUDIES, AND REVIEWS OF ORDERS AND UNDERTAKINGS²⁹

Introduction

- 5.1 OFT market studies are examinations into the causes of why particular markets are not working well for consumers, leading to proposals as to how they might be made to work better. They take an overview of regulatory and other economic drivers in a market and patterns of consumer and business behaviour.
- 5.2 A market study could result in one or more of the following outcomes – a clean bill of health for the market, consumer-focused action, recommendations to business, recommendations to Government, investigation and enforcement action, and a market investigation reference to the CC.³⁰
- 5.3 The OFT may refer markets to the CC for further investigation where it has reasonable grounds for suspecting that any feature, or combination of features, of a market is preventing, restricting, or distorting competition. In estimating consumer savings therefore, we consider the impact of the market investigations regime as a whole and include a proportion of impact of MIRs carried out by the CC. The CC, in turn, is

²⁹ This section may also include OFT projects that look at particular markets but are not strictly speaking market studies. For example, we included the Payments Systems Taskforce work in 2008-09 that was not a market study but looked into the market for payments services. In addition, the markets work section in Positive Impact notes cover impact of MIRs. However this document does not cover the method used to estimate impact of MIRs that is undertaken by the CC. For each intervention, the primary agency will estimate its benefits according to the methodology it considers most appropriate - on the grounds of proportionality and given that the primary agency is closest to the intervention, these estimates will be adopted by the other agency.

³⁰ When relevant the OFT reviews orders and undertakings resulting from reports by the Competition Commission.

apportioned a proportion of consumer savings from OFT market studies and reviews.³¹

Methodology

- 5.4 Given the wide variety of projects that are covered under this heading, the exact method used to estimate impact will differ from case to case. However, we outline a broad approach that ensures that assumptions are consistent and that the inclusion of projects is based on objective criteria.
- 5.5 We use both ex post as well as ex ante analyses to estimate the impact of our markets work. Every year, the OFT commissions at least one evaluation of a market study. These independent evaluations typically include monetary ex post estimates of consumer savings resulting from OFT interventions, based on information gathered after the OFT recommendations have been implemented and the resulting impact realised. They are therefore more robust than ex-ante estimates.
- 5.6 The benefit to cost ratio for CSR purposes, however, cannot rely only on such ex-post estimates as ex-post estimates are only available for a small subset of projects. Therefore, it also involves impact estimation and monitoring of market developments. For example, although every year the OFT evaluates ex-post at least one market study, these evaluations are sometimes conducted several years after recommendations have been implemented and resulting benefits realised and may not feature in our estimates of impact for the

³¹ For market investigations carried out by the CC, 20 per cent of impact is apportioned to the OFT and 80 per cent to the CC. For referrals to the CC from other regulators, the CC is attributed with 100 per cent of the impact. For the OFT market studies and reviews of undertakings and orders that involve or could involve the CC, 80 per cent is apportioned to the OFT and 20 per cent to the CC. For market studies where referral to the CC is not considered as a possible option, the OFT is attributed with 100 per cent of the impact.

purposes of the 5:1. We therefore rely more on estimating impact ex-ante.

- 5.7 Ex ante impact estimates are typically based on the best information available at the time of estimation – which is typically when the recommendations have been implemented but the full impact from it is not observable. Using information obtained through monitoring the market both during the project and after its completion, the impact estimates are updated (upwards or downwards) if we obtain better data in the process of monitoring. Our ex ante estimates in this area are reviewed by an academic expert. Where evidence is weak, the assumptions used to estimate benefits are conservative.
- 5.8 We include ex ante estimates of impact from those market studies/ reviews where the OFT's recommendations have been implemented over the relevant financial period. Ex post estimates from evaluations of market studies are included where relevant OFT interventions have had an impact on consumers within the relevant financial period. When we include impact estimates of reviews of orders and undertakings and ex post estimates calculated as part of an evaluation of a market study, we make sure that we do not re-claim benefits from the original ex ante estimation to avoid any double-counting.

Apportioning benefits between the OFT and the CC/ other government bodies

- 5.9 In estimating consumer savings, we consider the impact of the market investigations regime as a whole and include a proportion of impact of market investigation references carried out by the CC. For market investigation references carried out by the CC, 20 per cent of impact is apportioned to the OFT and 80 per cent to the CC. For the OFT market studies and reviews of undertakings and orders that involve or could involve the CC, 80 per cent is apportioned to the OFT and 20 per cent to the CC. For market studies where referral to the CC is not

considered as a possible option, the OFT is attributed with 100 per cent of the impact³²(see figure 2.1).

- 5.10 In addition, we only claim a proportion of the estimated consumer savings from OFT projects where other government departments/ bodies or industry stakeholders were involved. So, for example, where OFT recommendations from a market study are implemented by a government department, the impact estimates would be apportioned between the OFT and the relevant government department. The actual proportion is decided on a case specific basis.

³² For example – Internet Shopping included in 2007-08 that was a fact finding study.

6 CONSUMER PROTECTION ENFORCEMENT

Introduction

- 6.1 Estimating the impact of consumer protection enforcement is a relatively new area for the OFT. Below we describe the methodology used to estimate the impact of our consumer protection enforcement interventions.³³ It should be noted that this is work in progress that we will continue to develop.
- 6.2 The OFT's consumer protection enforcement work seeks to change trader behaviour that contravenes consumer protection legislation using a range of interventions such as issuing informal warnings, accepting undertakings under the Enterprise Act, or obtaining Court Orders.³⁴
- 6.3 All interventions are aimed at protecting consumers, particularly vulnerable consumers, from rogue trading, unfair commercial practices and other breaches of consumer protection legislation.
- 6.4 Professor Davies commented in his review that this was an area that required further development. We fully recognise the limitations of this work, that is very much a work in progress, and are working on developing a broader approach that goes beyond complaints data and

³³ While this section refers to our non scams consumer protection enforcement work, in the future we may not be able to report impact estimates for consumer protection enforcement under the two categories (scams and non scams). In 2009, the OFT restructured the group previously responsible for consumer protection work (to further increase the impact of its consumer protection work) and the scams work was incorporated into the overall consumer protection enforcement umbrella.

³⁴ Trading Standards are also responsible for consumer protection enforcement and tackling unfair trading practices. This section only considers the consumer savings resulting from OFT enforcement action. See OFT1085, June 2009.

draws on previous work on evaluation of OFT's consumer protection cases.³⁵

Methodology

6.5 The methodology estimates benefits to consumers arising from improvements in the future business practices of the targeted trader and other traders (in the same sector) engaged in similar harmful practices. It does **not** attempt to estimate the following:

- Deterrent effect - Future consumer detriment prevented by the improved future practices of businesses not subject to the OFT action and not engaged in harmful consumer behaviour, but who absent the OFT intervention would possibly adopt harmful practices similar to the targeted business in the future.
- Non financial benefits - Consumer protection work can often deliver significant non-financial benefits, for example preventing or reducing psychological detriment, including the stress and loss of confidence that can accompany consumer problems.
- Unrevealed detriment – This refers to detriment that may be suffered by consumers without their being aware of it. (for example – misleading online pricing leading to additional search costs, and distortion of competition leading to higher prices and lower levels of participation in the market.)
- Costs to businesses – Any additional costs incurred by businesses as a result of our interventions that may have been passed on to consumers.

6.6 We estimate the impact of our interventions in two stages:

³⁵See, for instance, OFT1139, October 2009.

- **Stage 1** – Consumer savings from improved trading practices of the targeted trader(s).
- **Stage 2** – Consumer savings from improved trading practices of trader(s) in the same sector, not targeted by the OFT action, but engaged in similar harmful practices as the targeted trader(s).

6.7 The formula used to calculate impact in the two stages is the same. Below we describe the key inputs in the impact estimation:

Reduction in complaints

6.8 For each intervention, we identify in stage 1, the number of relevant complaints³⁶ against the targeted trader from the Consumer Direct database³⁷ for the 12 month period before the intervention (*Cb*) and the 12 month period after the intervention (*Ca*). For stage 2 calculations, the relevant complaints in the 12 months before and after intervention refer to those against other traders in the same sector not targeted by OFT action.

6.9 For some interventions, complete data for the full 12 month period post intervention is not available and we therefore estimate the number of complaints for the 12 months post intervention based on number of relevant complaints to date.³⁸ Any adjustments to the estimates and

³⁶ Relevant complaints are those complaints that could be reasonably said to be addressed by the consumer protection intervention.

³⁷ Consumer Direct is a national consumer advice service. The Consumer Direct central database collects and consolidates data relating to all calls made to Consumer Direct contact centres.

³⁸ So, if the intervention was completed on 4 October 2008, the number of complaints in the 12 months post intervention was estimated based on complaint data for the period 4 October 2008 to 4 March 2009.

