



Competition Competence Report 21/2007

## **BIDDING MARKETS: VALUABLE ECONOMIC ANALYSES**

Valuable Competition in bidding markets is characterised by a few, typical elements: tenders take place infrequently; the value of each individual contract is usually very significant and contracts are typically awarded to a single successful bidder (so-called “winner-takes-all” principle). Thus, bidding markets can be described as:

- (1) Competition is ‘winner take all’, so each supplier either wins all or none of the order.
- (2) Competition is ‘lumpy’. That is, each contest is large relative to a supplier’s total sales in a period, so that there is an element of ‘bet your company’ in any contest.
- (3) Competition begins afresh for each contract and for each customer. That is, if there is any repetition of a contest, there is no ‘lock-in’ by which the outcome of one contest importantly determines another.
- (4) Sometimes, a fourth characteristic is assumed either implicitly or explicitly: Entry of new suppliers into the market is easy.<sup>1</sup>

For these reasons, market shares in bidding markets are of limited importance: Market shares as at a given date are less significant for the analysis of a bidding market. On such a market the fact that a particular company has had a number of recent ‘wins’ does not necessarily mean that one of its competitors will not be successful in the next competition. Provided that it has a competitive product and that other factors are not heavily weighted in the first company’s favour, a competitor can always win a valuable contract and increase its market share considerably at one go.

However, as the Court stated in GE/Commission such a finding does not mean that market shares are of virtually no value in assessing the strength of the various manufacturers on a market of that kind, especially where those shares remain relatively stable or reveal that one undertaking is tending to strengthen its position. In this instance, an analysis e.g. over a five-year period provides additional insights.

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<sup>1</sup> Klemperer, Paul, 2005, Bidding Markets, <http://www.nuff.ox.ac.uk/users/klemperer/BiddingMarkets.pdf>. p.6.

Thus, the Court reached the conclusion that “even on a bidding market, the fact of a manufacturer maintaining, or even increasing, its market share over a number of years in succession is an indication of market strength. A time must come when the difference between one manufacturer’s market share and that of its competitors can no longer be dismissed as a function of the limited number of competitions that constitute demand on the market.”<sup>2</sup>

These new requirements of the Court of First Instance demand further economic analyses. In case, market shares maintain stable over time or even increase further an economic assessment in bidding markets is required. In the following, the methodology how to assess bidding markets is described.

## BIDDING MARKET ANALYSES

The intensity of competition in bidding markets – e.g. after a merger – can be evaluated by means of bidding market analyses. This approach is based on the analyses whether the two merging parties are close competitors and whether the merger leads to a reduction of the competition intensity. The “closeness of the firms” indicates the competitive pressure of one company on the other.

First, an analysis takes place whether tenders are really important in the market concerned. The number of public tenders (e.g. in the building industry) can provide information on the importance of tenders in an industry. If such information is not public available, merging parties provide the required data. However, for detailed economic analyses the data provided by the parties lacks completeness. This is quite self-evident since the parties should not possess crucial information on pricing and bids of their competitors. Therefore customer surveys are appropriate tools to obtain all the necessary information about the bidding behaviour for further analyses.

The issues which should be covered by customer surveys in course of bidding market analyses are the following:

- Are the merging parties close competitors and are the merging parties able to exercise competitive pressure on each other?
- Is the bidding price in a tender influenced by the participation of one or both merging parties?

Since such data are rarely available, the instrument of an independent customer survey is preferred.

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<sup>2</sup> CFI, judgement 14.12.2005, T-210/01, General Electric Company/ Commission, Fn 149-151.

## INDEPENDENT CUSTOMER SURVEYS

To perform the customer surveys, first electronic questionnaires are developed and programmed. Since in most cases the customers are business customers, an interviewing over the internet is an efficient and non time-consuming way. EE&MC for example uses specific survey software which avoids any form of abuse and guarantees confidentiality. This is a very important issue since highly confidential data about an industry are exchanged. Based on working assumptions about the relevant product and geographic markets, the questionnaires are designed. In the design of the questionnaires thought is explicitly given to the market conditions. Before the actual performance of the interviews takes place, the comprehensibility of the questionnaire is checked first in a pre-test-phase.

The issues to be covered as well as the number of customers to be interviewed influence the scope of the customer survey. Usually about 50% of the customers - either in absolute numbers or by revenues generated – should be questioned. In case a few numbers of customers generate a significant part of the revenues, an analysis of these customers provides more insights than an analysis of a considerable numbers of customers which account for a small part of turnover only.

The time period to be covered should be – however again depending on the issues as well as on the number of customers – several years. Customer data like contact person, e-mail addresses etc. are usually available at the merging parties.

## ANALYSES OF THE CUSTOMER SURVEYS

After the appropriate data are generated by means of the customer survey, these data are analysed according to established standards.<sup>3</sup> Whereas the data of each single tender may include useful information too, further statistical analyses focus on the following key figures:

- Encounter ratio between the merging parties
- Encounter ratio to other bidders
- Size of the other bidders
- Runner-Up
- Price difference

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<sup>3</sup> A framework for statistical analyses of bidding markets can be found in Lorient, Guillaume/ Rouxel, Francois-Xavier/ Durand, Benoit, 2004, GE/Instrumentarium: A practical example of the use of quantitative analyses in merger control, Competition Policy Newsletter, No.1, 60.

In the following, those key figures are discussed in a more detailed way.

## ENCOUNTER RATIO BETWEEN THE MERGING PARTIES

In a first step, the analyses are focused on the fact how often the merging parties take part at the same time in a tender procedure. The number of encounters is an indicator for the so-called "closeness of the companies". Since suppliers of goods can not take part in all tenders, they concentrate on those tenders only, where they assume to have the best chances to win the tender due to technical specifications.

## ENCOUNTER RATIO BETWEEN THE OTHER BIDDERS

The number of encounters between the merging parties is compared to number of encounters with other bidders. That firm is identified which bears the most competitive pressure on the merging parties. This kind of encounter ratio with other firms shows how often two firms compete in tenders and therefore illustrates the existing closeness of these firms.

**Table 1: Example Competitive Pressure between Three Firms**

<b>Tender/ Firms prices in tds</b>	<b>Firm A</b>	<b>Firm B</b>	<b>Firm C</b>	<b>First Best Bid</b>	<b>Second Best Bid</b>
1*	187	192	78	C	A
2	125	158	131	A	C
3	104	89	93	B	C
4	65	85	69	A	C
5	189	147	156	B	C
6	65	116	78	A	C
<b>Total Sales</b>	<b>255</b>	<b>236</b>	<b>78</b>		
<b>Market shares</b>	<b>45%</b>	<b>41%</b>	<b>14%</b>		

\*Reading example: Firm A has in tender 1 a bid of 187.000. The other bids of firm B are 192.000 respectively of firm C 78.000. Firm C won the tender. Firm A had the second best offer.

Although the market share of firm C is 14%, the competitive pressure of firm C on firm A with a market share of 45% is the highest one. In all the six tender procedures, firm C exercised the most competitive pressure on firm A.

## SIZE OF OTHER BIDDERS

Additional to the occurrence of encounters between firms, an analysis of the size of these firms is important. Did only small firms of the fringe bid or did the merging parties compete with huge international players? In the later case the competitive pressure on the merging parties is more significant.

## RUNNER-UP

The second best bid is in the view of a customer nearly as good than the first bid. The second best bid exercises therefore the most competitive pressure on the first bid. For this reason, the Runner-Up in all tenders is analysed in detail. In doing so it is important to check whether one of the merging parties was often the Runner-Up to the other merging party. The aim is the discovery of those firms, which bear the most competitive pressure on the merging parties.

## PRICE DIFFERENCE

A statistical analysis of the effects of the bidding behaviour of the merging parties on the absolute prices can be determined by employing unit prices of the announced products. For this reason – only for homogenous products – the total value of the tender as well as the number of products in the tender has to be determined. With this data it can be measured whether merging parties have an effect on the price difference between the first and the second best bid. Therefore the relative price differences between the first and the second best bid are compared.

Are the differences smaller between merging parties than the differences between other competitors, the competitive pressure between the merging parties is higher and has more influence on the prices than other competitors.

## FURTHER ANALYSES

Those first statistical analyses answer the question whether the merging parties bear competitive pressure on each other or not. Further analyses include the assessment of the amount of the competitive pressure. The competitive pressure can be measured by means of an econometric model. The model analyses the influence of the participation of a merging firm on the price.

Beside information about the first and the second best bid, information about the project size, the number and identity of the other bidders, the products in question as well as the price per unit is necessary for these analyses. With this data the influence on the price difference can be obtained with the following model:<sup>4</sup>

$$\left(1 - \frac{P_{2,i}}{P_{1,i}}\right) = \beta_0 + \beta_1 DUM_i + \beta_2 NUM_i + \beta_3 VOL_i + \beta_4 FOR_i + \mu_i$$

Respectively

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<sup>4</sup> This model is based on Bajari und Ye. Bajari, Patrick/Ye, Lixin 2003, Deciding Between Competition and Collusion, in: [The Review of Economics and Statistics](#), MIT Press, Vol. 85(4), 981.

$$P_{ppu,i} = \beta_0 + \beta_1 DUM_i + \beta_2 NUM_i + \beta_3 VOL_i + \beta_4 FOR_i + \mu_i$$

This model tests whether the participation of the second merging firm does influence the price difference in tenders where the first merging firm gave the best bid. The endogenous variable is the price per unit or the price difference and can be quantified here. If one merging firm does bear competitive pressure on the other merging firm,  $\beta_1$  as a dummy variable for the participation of the first firm, has to be negative and significant.

## BENEFIT TO COMPETITION LAWYERS

The time frame to perform such bidding market analyses is manageable. The realisation of such analyses takes about four weeks, including a field phase of two weeks. In the first week the market conditions are analysed and the product specific questionnaires are developed and programmed. In the following two weeks the customer survey is performed. In addition to the contact over the internet, EE&MC supports the survey by calling all the individual customers to assist them in answering the questionnaire. EE&MC experiences that two weeks are necessary for the field phase to produce reasonable results. The last week is necessary to produce the economic analyses as illustrated before.

These customer generated data allow EE&MC the preparation of solid results about the existing competitive pressure in a bidding market. Bidding market analyses prepared on the basis of founded market data are – according to the Court of First Instance in GE/Commission – an adequate instrument to provide further insights on the economic meaning of market shares. It is for sure that the Commission will use this kind of information in any of their future cases when bidding markets are involved. Competition lawyers can increase their services to clients by proposing to use these analyses tools by themselves upfront – just to be better prepared to encounter Commission's concern.