

Title: A structural break cartel screen for dating and detecting collusion

KEYWORDS: collusion; antitrust; cartel; screen

BACKGROUND

- In this article, a new empirical screen to detect cartels and date the beginning and end of illegal price fixing is developed. An empirical cartel screen is a statistical method that assesses the likelihood of collusion in a market by looking for suspicious patterns in data on the market such as prices.
- Such cartel screens can complement other tools by competition authorities such as in-depth market investigations and leniency programmes to increase the probability of detecting a cartel. The screens hold the prospect of helping to increase the deterrence of cartels and potentially target cartels, which are not detected by other means.
- The screen is applied to three European industries for pasta products, two of which featured cartels. Testing it on the markets in which cartels were present allows to determine whether it successfully detects cartels. Applying it on a non-cartelised market is a means to test whether it provides false positives, i.e. whether it reports a cartel in a market that did not feature a cartel.

METHODOLOGY

- An empirical methodology based on regression analysis and structural break tests is constructed to detect suspicious patterns in market prices.
- The screen detects collusion by checking whether price changes in an industry can be explained by changes in price shifters. Price shifters are factors that determine the price of the product such as the costs of input goods needed for the production of the product under investigation (e.g. energy or labour costs), but also demand and market characteristics (such as the number of firms in the market or production technology).
- Cartels alter the link between prices and the observed price shifters, which induces a structural break in this relationship that can be picked up by a suitable methodology.
- The proposed methodology can be used for a proactive search for previously unknown cartels. Further, it is suitable to date the beginning and end of a cartel if uncertainty exists with respect to the time in which the cartel was active.

KEY FINDINGS

- The new empirical screen detects cartels that were active in the Italian and Spanish markets for pasta products. The screen detects the cartel in Italy about 9 months before the Italian Competition Authority learned about its existence. In Spain, an exact dating is not possible, as the cartel only lasted for 3 months.
- Despite the fact that the French industry was subject to significant price increases as well, the screen does not falsely report a structural break in the market, but suggests that the price increases can be explained by increased input costs. This finding is in line with the fact that no cartel was detected in the French industry.

W: www.competitionpolicy.ac.uk

T: +44 (0)1603 593715

A: UEA, Norwich, NR4 7TJ

September 2015

A structural break
cartel screen for
dating and
detecting
collusion

POLICY ISSUES

- Cartel screens can be used together with in-depth market investigations to assess the likelihood that a cartel is present.
- The results show that a proactive search for collusion might help to detect more cartels. As such, cartel screens can be a useful tool to increase deterrence. This can strengthen cartel enforcement if fines for price fixing cannot be set sufficiently high or leniency programmes are insufficient to target all cartels.

THE CCP

The Centre for Competition Policy (CCP), at the University of East Anglia, undertakes competition policy research, incorporating economic, legal, management and political science perspectives, that has real-world policy relevance without compromising academic rigour.

FOR MORE INFORMATION

The full working paper 15-11 and more information about CCP and its research is available from our website: www.competitionpolicy.ac.uk

ABOUT THE AUTHOR

- Carsten J. Crede is a PhD student at the UEA School of Economics and student member of the Centre for Competition Policy at the University of East Anglia.

W: www.competitionpolicy.ac.uk

T: +44 (0)1603 593715

A: UEA, Norwich, NR4 7TJ