

## Summary report

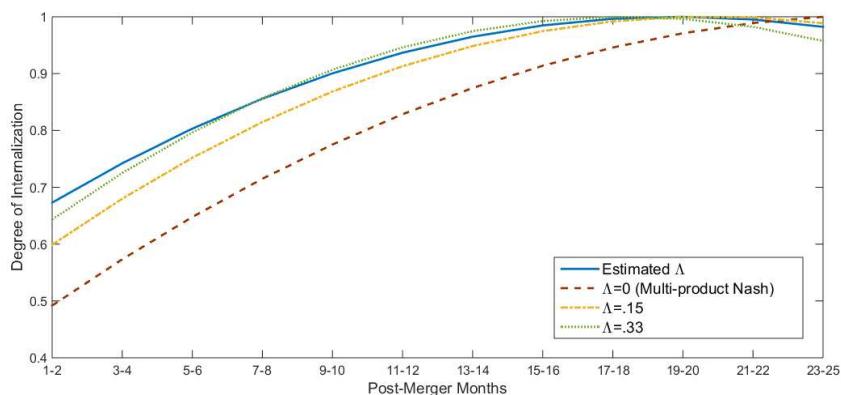
# Empirical Assessment of Intra-Organizational Behavior on Industry Competitiveness

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## Results

The project has refined an empirical framework from the economic field of industrial organization to estimate in a detailed manner the different intensities of within-firm integration of horizontally aligned divisions of merging firms, while still accounting for competitive industry effects. In a second part of the project, it furthermore applies a similar strategy to directly estimate the intensity of competition between different firms in an industry. Several key results have been achieved during the course of the fellowship. First, the project has found that recently developed differentiation instruments that exploit heterogeneity in the product space can contribute to identify the supply side parameters (i.e. the degree of within-firm or industry competition, respectively) of interest. This allowed for estimating detailed structures of supply behavior.

The empirical framework has then been applied using data from the ready-to-eat cereal industry. The availability of both retail and wholesale price data greatly helped in disentangling between costs and industry markups. From an organizational viewpoint, it has been found that the degree of joint profit maximization of merging firms has been increasing over time over the first two years after the considered merger in the industry, eventually leading to almost full maximization of joint profits. This can be seen in the graph below, which depicts the degree of joint profit maximization for different intensities of industry competition.



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From an industry viewpoint, it has been found that between 15 and 22 percent of the wholesale markups in the industry during the considered time span were due to cooperative behavior of firms in the industry. This gave evidence that the industry behavior deviates from full competition. Besides, the project has furthermore started to widen the scope of the analysis to be able to account for cross-industry effects. This is intended to generate more insights regarding the relationships between organizational structure and industry structure.

### **Socio-economic relevance**

There are several reasons why the results are of socio-economic relevance.

First, a so-called merger simulation is an important tool in competition policy to predict the effects of horizontal mergers. However, these tools usually rely on the assumption that firms fully and immediately maximize joint profits following a merger. The project provided a way to test this assumption. Furthermore, it the project provided a way to estimate the degree of industry competition in an industry. This is again important for competition policy, because it can give indications when authorities should investigate more deeply a market because of anti-competitive concerns.

Second, from an economic policy and growth standpoint, it is important to assess whether firm performance might be harmed due to inefficient integration. The project provided for a novel way to shed light on this question. This question will be further investigated in the follow up projects.