

# News from IFN

No 2 • 2019

## Deregulating Retail: The Hidden Impact of a Lower Bar to Entry

A key task for economists and policymakers is to predict how markets will respond to regulatory changes. In recent research we analyze the impact of entry regulations on consumers and firms, focusing on product variety. Analyzing rich product-level data, we find that a more liberal entry regime in Swedish retail increases both product variety and efficiency, to the benefit of consumers and firms. Our results suggest that policymakers need to factor in the consequences for product variety when taking regulatory decisions.

By Florin Maican and Matilda Orth



*An important goal for policymakers is to ensure that consumers enjoy broad access to products and services regardless of where they live. To this end, the appropriate design of entry regulations has been widely debated among policymakers and academics. But remarkably little attention has been paid to one of the most central choices retailers make – what products to offer. The literature on deregulation has focused on implications for pricing and productivity, but has ignored the fact that firms can also respond by changing their product portfolio (De Loecker et al. 2016). This is surprising because decisions on what products to offer are among the most fundamental choices firms make, and are clearly important to consumers.*

In an ongoing project (Maican and Orth 2019 a,b) we examine the incentives for firms to respond to the increased competitive pressure created by deregulation by adjusting their product mix. We analyze retail firms that sell multiple products and that operate in local markets where entry is regulated. We employ a combination of product- and store-level information that has not yet been used in the literature and which is highly useful for addressing the questions at hand.

This research takes a first step towards understanding the drivers of product variety and how they are affected by increased competition through more liberal entry regulations. The gains in product variety that we document are rarely measured in the literature. We discover nontrivial differences across geographic regions, suggesting that a more liberal regulation of entry yields notable gains in product variety for consumers in rural areas. Our overriding conclusion is that both consumers and incumbent firms in retail are better off with more liberal entry regulation.

### **A Swedish study**

The Swedish Planning and Building Act (PBA) regulates the use of land, water and buildings. The PBA empowers Sweden's 290 municipalities to decide on applications for new entrants. Each store seeking to enter the market in an area not yet allowed for retail activities is required to file an application with local government. When a store seeks to enter a local market, the municipality evaluates the consequences for prices, local employment, availability of store types for different types of consumers, purchasing patterns, traffic and so on. The municipal council evaluates and provides an overall assessment of the tradeoffs between the public interest and private retail interests.

Our data cover an annual panel of about 1,100 retailers for the period 2004–2011. It consists of a representative sample of stores in terms of size, geographic coverage etc., provided by Statistics Sweden. The data are classified into nine specialized retail sectors such as clothing,

electrical household appliances and books. Stores sell between one and 17 product categories. Products in clothing stores are, for instance, categorized into male, female and children's clothes. Besides the number of product categories, we also access sales per product for the universe of products offered by the stores in our sample.

We have developed a theoretical framework to analyze the effects of deregulation on consumers and incumbents that includes changes in product variety. The direct effect on incumbent firms of more intense competition after deregulation is a decline in sales, while low-productivity stores are forced to exit. Surviving incumbents invest in new technologies and adjust the number of employees, which increases their productivity.

Higher productivity enables stores to sell existing products at a lower cost. Higher productivity also creates incentives for stores to introduce new products. New products are introduced if revenues are expected to be higher than the cost of adding variety. Store revenues increase if new products do not merely cannibalize sales from existing products. The magnitude of the induced changes in productivity, number of products and sales per product can only be determined through empirical work. A central feature of our framework is that it covers not only short-term price adjustments but also long-term decisions on investment in new technologies and product variety.

### **Methods to evaluate policy changes**

To evaluate the impact of deregulation, one ultimately wants to examine the costs and benefits to consumers, firms and society as a whole, under alternative regulatory designs. Such evaluations require measures of consumer welfare and the long-term profitability of firms. There are no data available on this, however. But recently developed structural econometric methods can be employed to circumvent this problem. These methods combine theory, data and institutional knowledge to examine what is likely to occur under different degrees of regulation.



We apply our framework to the above-described firm-level data under the current regulation, to estimate its parameters. The model can be used to quantify the effects of introducing a more liberal entry regulation regime. We are particularly interested in capturing the mechanisms that determine product variety and estimating the effects of changes in product variety for store profits and consumer surplus. To this end, we calculate how changes in entry regulation affect profit-maximizing choices regarding number of products, sales per product, productivity etc. for each incumbent in the data. These new optimal choices are in turn used to calculate how long-term store profits and consumer surplus respond to policy change.

### Product variety effects of entry regulations

Our results show that more liberal regulation – measured by the acceptance of an additional PBA application – benefits both consumers and incumbent firms. The results provide evidence of a direct decline in sales because of more intense price competition, while low-productivity stores exit after deregulation. We also find that product variety increases as a result of more liberal regulation. On average, incumbents increase sales per product after acceptance of an additional PBA application. Furthermore, incumbents introduce new products and increase their product variety. Consumers are therefore better off under a more liberal regulatory regime, as indicated by an increase in average consumer surplus across local markets after acceptance of an additional PBA application. Thus consumers benefit because they are offered a wider variety of goods.

The effect on the profits of incumbent firms is somewhat surprising. There is substantial heterogeneity in how profits of existing stores are affected by stronger competitive pressure in the local market. The long-term profits of some incumbents increase under a more liberal regulatory regime. The results provide evidence of productivity improvements after acceptance of an additional PBA application. This holds not only for simple measures such as sales per employee or sales per inventory, but also for total factor productivity – that is, for the ratio of output to an index of inputs.

---

*“A more liberal regulation benefits both consumers and incumbent firms.”*

---

A further observation is that local markets that are small benefit relatively more from a wider product variety than do larger markets.

This suggests that policymakers can expect the variety effect to be particularly strong if they liberalize entry restrictions in rural markets. In addition to these economic benefits, concerns regarding traffic, congestion and the environment are likely to be of less importance in these markets. Yet a challenge for incumbents is to understand consumer behavior in order to adjust their product variety in these rural areas.

### Policy conclusions based on this research

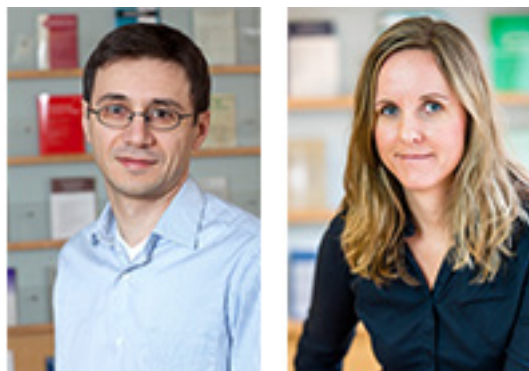
Our research examines the retail sector in Sweden. But we believe that we can draw broader conclusions regarding the role of product variety in evaluating public policies. We believe that our results demonstrate that when evaluating deregulation, policymakers need to consider more than price and productivity. Greater product variety as a response to increased competition from deregulation can lead to substantial welfare improvements. These improvements would be ignored in a more conventional analysis.

---

*”Greater product variety can lead to substantial welfare improvements.”*

---

Of course, the gains for consumers and incumbents need to be weighed against possible drawbacks related to store exit, labor market implica-



Florin Maican and Matilda Orth. Photo: Karl Gabor.

tions, environmental costs and increased traffic.

### Recent publications

*The Entrepreneurial Society: A Reform Strategy for the European Union*, Elert N, Henrekson, M and M Sanders, Springer.

This book builds on the European Union’s (EU) Horizon 2020 project ‘Financial and Institutional Reforms for an Entrepreneurial Society’ (FIRES). The authors outline how Europe can move towards more inclusive, innovative and sustainable growth through reforms that will rekindle its entrepreneurial spirit.

Heyman, F, P-J Norbäck, L Persson and F Andersson (2019), “Has the Swedish business sector become more entrepreneurial than the US business sector?”, *Research Policy* 48(7): 1809-1822.

Recent studies document a 30-year decline in various measures of dynamism in the US, manifested in a decline in the share of young firms as well as their share of job creation. In a recent IFN study Heyman, Norbäck, Persson and Andersson show that this has not been the case in Sweden. Young firms have been more prominent in the Swedish business sector than in the US in recent decades, and policies to encourage entrepreneurship are key to this.

---

### References

De Loecker, Jan, Pinelopi K. Goldberg, Amit K. Khandelwal and Nina Pavcnik (2016), “Prices, Markups and Trade Reform”, *Econometrica*, Vol.84, No. 2, pp 445–510.

Maican, Florin and Matilda Orth (2019a), “Entry Regulations, Product Variety and Productivity in Retail”, *Mimeo*.

Maican, Florin and Matilda Orth (2019b), “Determinants of Economics of Scope in Retail”, *IFN Working Paper No. 1247*.

This research newsletter is published biannually. In addition a newsletter in Swedish is published seven times a year. To subscribe go to [ifn.se](http://ifn.se).

# News from IFN

Editors: Henrik Horn and Lars Persson. Editorial consultant: David Crouch. Publisher: Magnus Henrekson. Phone +46-8-665 4500. Email [info@ifn.se](mailto:info@ifn.se).

---