WORKSHOP ON COMPETITION ASSESSMENT IN THE CONTEXT OF THE REGULATORY IMPACT ASSESSMENT

CASE STUDY
REVIEW OF THE IMPACT AND EFFECTS OF THE REGULATORY INTERVENTIONS

The regulation of tortilla shops

In Mexico there are state and local regulations with opposite effects to the process of competition and free market participation. A common example of these types of rules is the municipal bylaws that regulate the manufacture and sale of tortillas at the municipal level. Among the most common arrangements with anti-competitive effects are the imposition of minimum distances for the installation of new establishments (tortilla shops), to condition the entry of new establishments by the number of those already established, to subject the entry of new establishments and prices to the opinion of existing establishments, and impose undue requirements for the opening and operation of establishments, among others.

Responsible institution
- Municipal governments.

Reflection elements
- The use of the criterion of minimum distance is a barrier to entry, allowing artificial market segmentation, how does this hurt the rights of the potential entrants to the market and the consumer freedom?
- Why is the limiting of the number of participants in the tortilla market anti-competitive? What effect can have in cost reduction, quality of services and prices?
- Why is not desirable to request established shops to allow for new entrants? Why neither should comment on prices? Can the above lead to collusion or undue displacement?
- Between the opening and operation requirements, it is common to find the setting of unjustified mandatory opening hours and the prohibition of home delivery, How does this affect the competition process?
- How can we evaluate the above considering that the tortilla is a basic and large commodity?

- What other industries and/or products can you identify with similar provisions? Is this unique of state/municipality regulations?
Firms Compete in Different Dimensions

• Many of these dimensions allow firms to differentiate their products and services from their competitors
• We outlined the Bertrand model of price competition with differentiated products
• We can also model Cournot quantity competition with differentiated products
Key Decision Variables

- Pharmaceuticals: firms have large R&D budgets and compete to obtain patents.
- Many consumer products and service firms compete to establish reputation and loyalty with advertising.
- Hospitals and medical clinics: compete in provision of service variety and quality.
- We expect that, at the margin, more competition will
  - Improve product and service variety and quality
  - Increase incentives to innovate in order to
    • Earn profits (economic rents); capture market share.

Types of impacts of competition

- Consistent with our expectations, we see a variety of dimensions in which firms respond to more competition: these dimensions can be considered in examining regulations:
  - Lower prices
  - Greater quantity: e.g., new routes and more flights per route
  - Greater variety: e.g., in grocery stores; pharmacies
  - Better quality: e.g., better/more in-flight services
  - Modernization investments: e.g., in shipping fleet
  - Improved productivity: e.g., port operations
  - Changes in managerial and organizational structures: e.g., retail grocery superstore operations
  - More innovation
  - Growth of market
  - Related markets
## Comparing options

### Qualitative method

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid</td>
<td>Challenges easily mounted</td>
</tr>
<tr>
<td>Limited information required</td>
<td>Not clear how important competition is</td>
</tr>
<tr>
<td>Results easily explained</td>
<td></td>
</tr>
</tbody>
</table>

### Quantitative method

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides range of impacts</td>
<td>Data requirements</td>
</tr>
<tr>
<td>Establishes substantive hurdle for challengers</td>
<td>Potentially slow to complete</td>
</tr>
</tbody>
</table>

## Qualitative methods

- Application of critical thinking techniques to compare options
- Quadrant analysis
- Points-based analysis
- Comparison of pro and cons in list
### Quadrant analysis

<table>
<thead>
<tr>
<th></th>
<th>Simple</th>
<th>Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully open competition</td>
<td></td>
<td>Option B</td>
</tr>
<tr>
<td>Partially restricts concerns</td>
<td>Option A</td>
<td>Option C</td>
</tr>
<tr>
<td>Significantly restricts competition</td>
<td>Option D</td>
<td></td>
</tr>
</tbody>
</table>

### Points-based analysis

<table>
<thead>
<tr>
<th></th>
<th>Option A</th>
<th>Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in CO2 emissions (0-5 points, 5 is maximum reduction)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Reduce particulates (0-5, 5 is maximum reduction)</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Limit number of suppliers (0=total limitation, 5=no limit)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Ease of implementation (1 or 2)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>
Comparison of pros and cons in list

Remove rule establishing large minimum size for asphalt plants
Identify pros and cons and weigh against each other, seeing whether pros outweigh cons

<table>
<thead>
<tr>
<th>Pro (compared to default)</th>
<th>Con (compared to default)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permits entry of small asphalt plants</td>
<td>Will require more facilities be visited by regulator</td>
</tr>
<tr>
<td>Generates greater distribution of asphalt plants that can be closer to sites</td>
<td></td>
</tr>
<tr>
<td>Environmental impacts will be more distributed</td>
<td>Small operators may not follow all rules</td>
</tr>
<tr>
<td></td>
<td>Local authorities will have to review environmental permit requests</td>
</tr>
</tbody>
</table>

Quantitative techniques

- Is the restriction binding?
- Is the likely outcome of reform a price change/quantity change?
- Is consumer surplus the right variable for comparison?
- Calculate change in consumer surplus from an expected price change or expected quantity change
Quantification

- Quantification can apply to many variables of interest
  - Not limited to price and quantity
- Variables determined after considering
  - Nature of policy challenge
  - Data available
### U.S. Hearing Aids

- Estimated 31 million in the U.S. have some hearing loss
- Hearing aids are classified as a medical device
- Hearing aids can have a large effect on quality of life and productivity, especially for the elderly
- There are significant hearing aid device, delivery and fitting regulations
  - These support an environment with **high prices**

### Economics and Market Characteristics

- Hearing aids can be **costly**
  - Device cost approximately $700 – $6,000
    - Older models are sold at discount
  - Costs of replacement parts (e.g., batteries) add up
- Hearing aids are typically **not covered by insurance**
  - Standard insurance plans typically do not cover hearing aids
  - Medicare, the U.S. health insurance program for the elderly, does not cover hearing aids
  - Medicaid, the federal health insurance program for the unemployed and poor, often does cover hearing aids
  - Supplemental insurance, either provided by former employer or purchased directly by individuals sometimes cover hearing aids
U.S. Hearing Aids
History of Regulation

• Prior to 1977
  – Many cases of hearing aids fitted badly for users
  – Unethical sales tactics combined with no returns policy
• 1976 FDA Interdepartmental Task Force on Hearing Aids report cited studies which indicated that “patients bought hearing aids when their hearing loss required medical treatment”

U.S. Hearing Aids
History of Regulation

• Hearing aid final rule (1977)
  – Hearing aids are classified as medical devices
  – Require medical evaluation by licensed physician prior to purchase of hearing aid
  – Require that hearing aids be fitted by state-licensed fitters or that a waiver be signed, in which clients acknowledge that they are choosing not to do so despite being informed that FDA believes seeing a fitter is in their best interest
U.S. Hearing Aids

Process of Fitting Hearing Aids

• Visit medical doctor and hearing aid specialist
• Undergo examinations, some using hi-tech equipment, as recommended by professional organizations and, in part, to identify differential hearing loss by frequency
  – In minority of cases, these exams identify conditions benefiting from medical treatment that would otherwise not be detected
• Refit or buy new hearing aids after 5 years
• FDA: “The best place to buy a hearing aid is from a licensed hearing aid dispenser, or seller.”

U.S. Hearing Aids

Actions of Professional Organizations

• Develop standards of care delivery that involve extensive testing
  – Ensures devices are well-suited to patient needs
  – Ensures medical problems are not overlooked
  – Reduces effective supply of “fitting opportunities”
• Develop model law for state regulations on hearing aids
  – Model law requires hearing aids to be delivered under supervision of someone who is a Board Certified Audiologist
U.S. Hearing Aids
Seniors Reporting Hearing Problems who have hearing Aids

Low Income Group

Reported family income

U.S. Hearing Aids
Income Distribution Among People 65 Years or Older

Low Income Group

Reported Household Income
**U.S Hearing Aids**

**Potential Impact of Lower Prices**

- Particularly affected group – those with incomes less than $30K per year
  - Potentially much higher usage at lower prices
- For overall population, comparisons with foreign countries with nationally provided hearing aids suggest that provision is about 3% of population, or roughly 50% higher level than the U.S.
- If U.S. achieved international average due to lower prices there would be an increase in hearing aids wearers in the U.S. from about 7.8m to 11.8m, or approximately 4m

---

**U.S. Hearing Aids**

**The Problem and a Solution**

- Central problem?
  - Complex and expensive services required by regulation
  - Deny consumers of a low-cost option
- A possible solution?
  - Make hearing aids available **over-the-counter**
  - This may lower costs (considerably)
U.S. Hearing Aids
Over-the-counter Hearing Aids

• FDA received proposal for over-the-counter hearing aids
  – Petition to permit sale of hearing aids over the counter
  – Petition to eliminate the requirement that adults obtain a medical clearance before a hearing aid can be sold to them when not sold by audiologist
• Eliminate/minimize government and professional regulation over issuance of hearing aids
  – Hearing aids would still be approved by FDA
• Provide competition to professional dispensing services
• Evidence that cost difference could be large
  – E.g., UK’s NHS cost for mass produced, high quality digital hearing aids: about $150
  – Contrast this to $2K-$4K at current prices

U.S. Hearing Aids
Over-the-counter Hearing Aids

• Evidence that cost difference could be large

• E.g., UK’s NHS cost for mass produced, high quality digital hearing aids: about $150
  – Contrast this to $2K-$5K at current U.S. prices
U.S. Hearing Aids
Considerations in Over-the-counter Proposal

• Consumer benefits
  – New users who were previously deterred by high prices
  – Reduce extent of medical problem of atrophy of hearing potential due to non-use of hearing aids
  – Existing customers of hearing aids who would have chosen an over-the-counter option were it available
  – Price competition with over-the-counter could result in lowering costs for dispensed hearing aids
  – Medical diagnoses might be made as a result of patients who currently do not have hearing aids reading a warning in the hearing aid package that encourages visits to physicians in specific circumstances

• Consumer costs
  – Loss of some medical diagnoses that arise as a result of the current medical approvals requirement
COMPETITION WORKSHOP
Mexico City

Competition Assessment of Canadian Milk Supply Management

Background

• Canadian milk supply management system put in place in 1960s and 1970s

• Depressed world dairy prices, unstable markets, variable revenues and alleged processor market power lead dairy industry to call for greater regulation.

• Objectives of milk supply management system was to control milk surpluses, support producer returns and address market power concerns.

• System has been effective in attaining these objectives.

• However, rising concerns regarding the competition and economic costs of the system leading to calls for reform.
The Supply Management Framework

- Prices controlled to allow a “fair” return to farmers.
  - Complicated pricing system used with prices varying according to end-use.

- Quantities limited match supply and demand.
  - Individual farmer granted quotas.
  - Quotas tradable within provinces but generally not between.

- Import barriers maintained to limit import competition.
  - Originally quotas that have now been largely tariffed.

Basic Economics of Supply Management

- Where price high quantity restriction needed to prevent excess supply.
- Transfers from buyers to suppliers, deadweight loss triangle subject to possible loss of efficiencies and other increased costs.

![Graph showing supply and demand relationships.]

Impact on Prices at Farm

- OECD estimates market price support for dairy about 50%

![Table showing commodity-specific transfers (SCT) for 2009-11.]

- Single commodity transfers were 73% of the PSE in 2011. The share of the SCT in commodity receipts is highest for milk (above 50%) and around 20% for poultry and eggs.

Impact on Farm Operating Income

Dairy Farm Profit Margins
(per cent*)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy cattle and milk production</td>
<td>12</td>
<td>14</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>All animal production, excluding dairy</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>All animal production, excluding supply managed**</td>
<td>0</td>
<td>1</td>
<td>-2</td>
<td>-1</td>
</tr>
</tbody>
</table>

*Net operating income (adjusted for capital cost allowance) as a share of operating revenues.

**Supply-managed production includes dairy cattle and milk production, and poultry and egg production.

Sources: Statistics Canada (Canadian Farm Financial Database); The Conference Board of Canada.


Impact of Market for Quotas

- Operating returns reflected in quota prices.

Impact of Market for Quotas

- Quotas have cost as high as $30,000 or more.
- Price cap now in place $25,000.
- For 80 cow farm at price cap cost of $25000 creates additional capital cost of $2 million.
  - Increases dairy farmers debt loads and depresses net returns.
- Costs create a major barrier to pro-competitive reform.
  - Farmer concerns over loss of accumulated quota value.

Efficiency Considerations

- Tradability of permits has limited the potential for high returns on dairy quotas to result in inefficient production being maintained.
- However imposition of constraints on quota prices may limit this benefit.
- Less quota traded, and higher prices no longer insuring that most efficient farmers expand production.

(Rebecca Elskamp, Getu Hailu, Department of Food, Agricultural and Resource Economics, University of Guelph, March 2013)
Impact of Quota Price Caps

Ontario Milk Quota Bids and Purchases

- Substantial supply and demand gap / little exchange of quotas.

Impact on Other Markets

- Raw milk demand in Canada divided into fluid beverage (40%) and industrial uses (60%).
  - Industrial uses include manufacturing of cheese, butter, yogurt, skim milk powder (SMP), ice cream, cream cheeses and other products.
- Under the milk supply management system, separate prices set for different categories of use, and supply of milk as an input is managed.
Impact on Other Markets

- Contributing to relatively high Canadian prices for dairy products.

![Chart 4: Average Retail Price of Butter, 454-Gram Package (CS)](chart4)


Impact on Other Markets

- Butter reasonably homogeneous and transportable dairy product.

- Choice of comparator countries or regions important.

- US farmers substantially protected and subsidized.

- Australia has deregulated dairy market.
  
  - Substantially lower price than both Canada and the US in 2009.
Impact on Growth

• Growth of supply limited to changes in Canadian demand.

  – 2002 WTO decision found that previous Canadian export sales subsidized.
  – Lower milk prices available for exporters but quantity restricted by WTO decision.
  – Exports declined from over 100,000 kgs in 2004 to about 90,000 kgs in 2011.

Efficiency and Innovation Effects

• Dairy products subject to significant trends and innovation.

From Canada’s Supply-Managed Dairy Policy: Challenges and Need for Evolution, Al Mussell, Bob Seguin, and Janalee Sweetland, George Morris Center, December, 2012
Efficiency and Innovation Effects

Table 4 Global New Dairy Product Launches

<table>
<thead>
<tr>
<th>Year</th>
<th>Spoonable Yogurt</th>
<th>Drinking Yogurt and Liquid Cultured Milk</th>
<th>Soft and Semi-Soft Cheese</th>
<th>Total Dairy Foods Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2,189</td>
<td>1,328</td>
<td>1,025</td>
<td>10,673</td>
</tr>
<tr>
<td>2007</td>
<td>2,507</td>
<td>1,553</td>
<td>1,338</td>
<td>12,942</td>
</tr>
<tr>
<td>2008</td>
<td>2,316</td>
<td>1,586</td>
<td>1,344</td>
<td>12,408</td>
</tr>
<tr>
<td>2009</td>
<td>2,452</td>
<td>1,404</td>
<td>1,426</td>
<td>12,727</td>
</tr>
<tr>
<td>2010</td>
<td>2,458</td>
<td>1,293</td>
<td>1,134</td>
<td>12,480</td>
</tr>
</tbody>
</table>

Source: International Dairy-Deli-Bakery Association

From Canada’s Supply-Managed Dairy Policy: Challenges and Need for Evolution, Al Mussell, Bob Seguin, and Janalee Sweetland, George Morris Center, December, 2012

Efficiency and Innovation Effects

- Unlike dairy quotas, market mechanism not used to allocate or move supply among producers.
  - Milk allocation to plants generally draws upon the historic volume share of milk purchases, with some definition of priority milk uses.
  - For example, in Ontario while some types of plants may be able to purchase based on their demand, others, such as butter and cheese manufacturers are residual buyers with predetermined shares of residual supply.

- Potential result is allocation of milk to less efficient uses and potential barriers to entry.
Efficiency and Innovation Effects

It is instructive to consider how a newly constructed dairy processing plant might access milk under this system. First, if it wished to process a product that is a priority use, it can have its volume filled “on demand”. In the immediate term, this milk is allocated away from plants that are residual users in the province. Conversely, if a new plant were constructed that processed a product in a residual allocation, it would need to acquire PSQ (quota) from another processing plant in order to be allocated milk.

It is thus somewhat striking that globally, dairy products are experiencing rapid innovation and product growth/development, yet the mechanics of supply management in allocating milk to plants are quite inflexible and not very market responsive.


Other Considerations

• To extent it result in increased prices, supply management’s effects are regressive.
  – Proportionally, impact is highest on families and lower income persons.

• Can negatively affect businesses outside of the dairy sector through effect on Canadian international trade relations.
Examining Impacts and Effects

3rd Session

Declan Purcell
24 September 2013

General Practitioners – Background

- 40% of the Irish population are public patients, and entitled to free GP care
- The other 60% have to pay privately
- To treat public patients, GPs must have a State contract to treat a particular list of public patients
- 2,800 GPs in Ireland, mostly independent & self-employed
- But only 2,000 have a GMS contract
The Issue

- The number of State contracts has been limited
- New contracts only given when a GP dies or retires, or (rarely) through creating a new patient list
- Applicants must prove they won’t affect the viability of existing practices if they get a contract
- Doctors’ union heavily involved in the process
- Result – many qualified and willing GPs are deprived from getting a contract

Importance of a public contract

- Vital to have a contract –
  - stable number of patients, payment is on an annual per-patient basis, lots of allowances
- Possession of a public patient list is regarded by GPs as important in the successful long-term development of a practice, particularly in rural areas
Effects on Patients

- 30% of GPs limiting new patient registration due to an excessive workload
- 44% of GPs feeling there are not enough GPs to meet the needs of the area
- 34% of private patients and 23% of public patients defer visiting a GP because of limited opening hours
- 17% of private patients and 22% of public patients feeling that they were given enough time to discuss their medical/health problem with their GP

What this all means

- Patients adversely affected because there is:
  - Less choice of doctor
  - Less incentive for GPs to innovate and develop their practices in order to attract new patients and retain existing patients
  - Less competition for private patients, contributing to upward pressure on fees.
- While public patients do not themselves pay for GP visits, the restricted pool of GPs paid to provide services to public patients limits competition for State funding
Rate of Growth in the price of Doctors’ Fees, Health Inflation and General Inflation

**Effects on Competition**

- Competition-related concerns about the contract can be summarised under three headings -
  - Protection of established GP practices;
  - Location-specific contracts; and
  - The role of the IMO (the doctors’ Trade Union)
Specific Impacts – 1

- The system for awarding contracts acts as a barrier to entry for newly-establishing GPs:
  
  - **Access to public contracts is restricted:** Contract only awarded where a patient list becomes available (due to the death, retirement or resignation of the existing contract holder), or where a clearly-identified need for a new GMS post has been identified, following consultation with the IMO.
  
  - **Competitors are subsidised:** The monies paid to GPs under the contract effectively subsidise the entire practice, making it easier for practices which have one or more publicly-contracted GPs to compete on price for private patients.

Specific Impacts – 2

- The requirement to give “due regard” to the viability of existing GMS practices in an area is clearly anti-competitive. It explicitly seeks to protect existing practices from competition by newly-qualified GPs. In effect, it gives existing GP practices in an area the right to influence the entry of new competitors.

- The main situation in which a new GP practice would threaten the viability of an existing practice is if it was providing a better service to patients, or offering a better price to private patients!
Specific Impacts – 3

- The system effectively divides up the market for public patients between participating GPs through the allocation of patient lists in specific locations.
- GPs applying for a contract under the GMS are not simply applying for the right to treat public patients; they typically apply for a list of patients in a particular location.
- The system encourages GPs to locate “where the lists are” rather than where they see a business opportunity.
- This leads to inertia, sluggish responses to changing demographics, and a reduction in competition.