

Effects of Changing Prices of Grains and Oilseeds on International Competitiveness of the Agri-Food Sector in Canada

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Introduction

- Competitiveness is a very popular but nebulous concept. It often occupies a central role in stimulating policy discussions by economists, politicians, policy makers and in popular press. Unfortunately, they often do not speak the same language.
- There has been an explosion of interest in the concept of competitiveness during the last two decades. How big is this explosion?
- Considerable confusion/misunderstanding exists about the precise meaning of this concept and the scope of this term.

Competitiveness

- Early interests in Competitiveness in Canada can be traced back to CUSTA negotiations and Canada-U.S. Free Trade Agreements in late 1980s. A Task Force on Competitiveness in the Agri-Food Industry in Canada was formed.
- The International Agricultural Trade Research Consortium sponsored a symposium on "Competitiveness in International Food Markets" in early 1990s. Papers presented at this symposium were compiled in book titled, "*Competitiveness in International Food Markets*" edited by Bredahl, Abbott and Reed.
- A grant from the Agro-Industrial Research Program (AIR) of the European Commission funded early research on Competitiveness in the agri-food sector in the EU (*Competitiveness in the Food Industry*).

Competitiveness

- The publication of "*The Competitive Advantage of Nations*" by Michael Porter sparked huge interest among researchers in the business group. Porter attempted to explore how a firm's "proximate environment (geographic location, infrastructure and history)" shapes its competitive success over time. In other words, he was interested to find out why some organizations prosper and others fail.
 - Training of managers and workers
 - Nature of company's key customers
 - Nature of related and supporting industries
 - Role of national and local governments
- Porter's model is multi-faceted.
 - The emphasis is on qualitative explanation.
 - Not readily amenable to econometric analysis
- Why did Porter's analysis draw so much interest in Competitiveness?
 - Narrow vs. broad Views

Competitiveness

- There has been a sustained increase in research interest in North America and Europe to determine international competitiveness of various agri-food commodities.
- The most recent enlargement of the EU towards Central and Eastern Europe when 10 new members joined the EU spawned renewed interests in this area.
- Changes in domestic agri-food policies in major producing and consuming jurisdictions, recent outbreaks of animal diseases and food safety concerns have also sparked new interests in competitiveness analysis.
- Developing countries are yet to get onto the bandwagon of competitiveness research in a meaningful way.

Motivation for this research

- The global market for agri-food commodities went into a panic mode in 2008 due to very high prices of grains and oilseeds. Some low income food importing countries had to deal with sporadic food riots.
- While high grain and oilseed prices lead to high farm income in the short-run, they could also compromise the competitive position of the agri-food sector in the long-run through increased energy costs. Farm commodity prices and input costs may not move in the same direction or with the same intensity.
- How do the dynamics of changing commodity and energy prices *shape* global competitive position of selected agri-food commodities in Canada?

How to Define Competitiveness?

- Since different perceptions of competitiveness is championed by broadly defined research groups, a widely accepted meaning of this term does not exist.
- Depending on the purpose of the study, level of analysis and the commodity in question, alternative definitions of competitiveness can be furnished. See Abbott and Bredahl (1994) and Ash and Brink (1994) for different definitions of competitiveness.
- “ A competitive industry is one that possess the sustained ability to profitably gain and maintain market share in domestic and foreign markets” (Agriculture Canada, 1991).

How to Measure Competitiveness?

- Significant diversity exists in the indicators used to measure competitiveness. Not all of them may be measuring the intended object.
- Competitiveness can be perceived as:
 - Performance
 - Potential
 - Process
- Relevant questions and measures are very different
- **Performance:** how well a sector has done relative to its rivals?
- **Potential:** what raw materials and/ technology can lead to enhanced productivity and competitiveness?
- **Process:** how superior management convert Comp. potential into competitive performance?

Measurement of Competitiveness

- Typical indicators used to measure Performance:
 - Profitability
 - Growth
 - Market Share
 - Balance of Trade
 - Value added
 - Purchasing Power Parity
 - Constant Market Share
 - Revealed Comparative Advantage
- Competitiveness studies dealing with the agri-food sector in Canada
 - Brinkman (1987); Agriculture Canada (1990), Martin et al. (1990), Van Duren et al., (1991, 1992), Coffin et al., (1993), Ash and Brink (1994), Hazeldine (1989, 1994), Chen and Duan (2000); more recent studies commissioned by Agriculture and Agri-Food Canada; a number of studies at the George Morris Centre (GMC) in Guelph.
 -
- Attempt to harvest “Low Hanging Fruits”.

Measurement of Competitiveness

- The definition we have chosen suggests that a country will have competitive advantage in a particular commodity, if at the margin, it can produce and deliver the product abroad at competitive prices.
- This can be discovered through the operation of the market.
- Revealed Comparative Advantage (RCA) developed by Balassa (1965, 1977)
 - What is RCA?
 - How can it be measured?
- Why did we make this choice?
 - Advantages?
 - Potential Pitfalls?

Data Description

- We used FAO trade data from 1990 to 2007
- Total Exports of wheat, pork and beef (in US \$) from Canada to all destinations
- Total Exports of wheat, pork and beef (in US \$) from the United States to all destinations
- Total value of wheat, pork and beef exports from all countries
- Total value of agricultural exports from Canada, the United States and from all countries

Empirical Results

Revealed Comparative Advantage of Wheat, Pork and Beef Export from the Canada

Year	RCA-wheat	RCA-pork	RCA-beef
1991	803.34	74.53	168.08
1992	721.62	63.76	142.33
1993	485.73	100.50	118.99
1994	645.94	90.73	130.33
1995	606.58	72.94	166.04
1996	541.96	66.33	192.51
1997	544.07	62.40	179.55
1998	523.32	57.64	163.50
1999	450.46	62.44	225.50
2000	461.52	68.46	319.85
2001	418.80	61.65	346.71
2002	345.19	55.98	328.75
2003	378.41	70.91	387.60
2004	411.16	74.65	17.95
2005	380.89	67.35	31.13
2006	458.19	69.00	60.26
2007	393.70	60.83	90.64

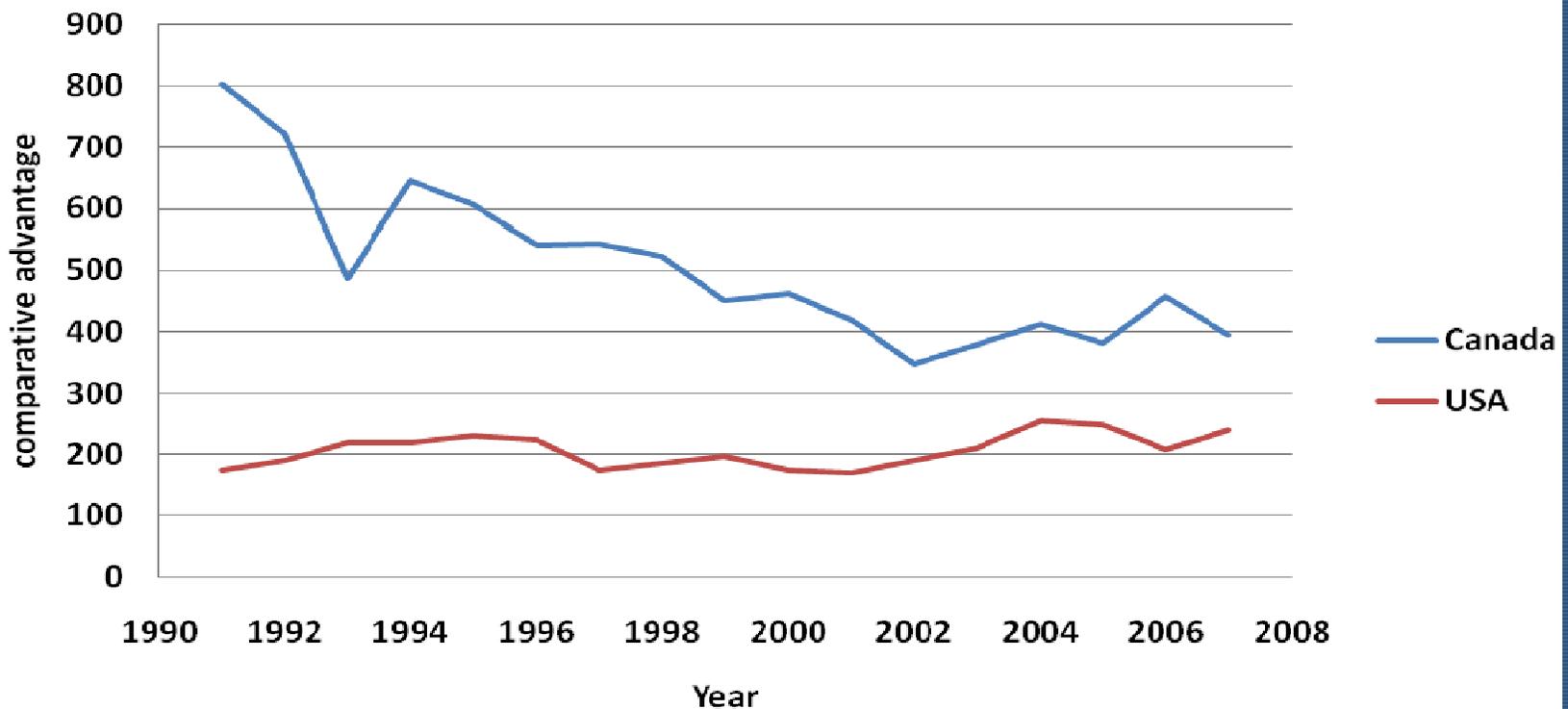
Revealed Comparative Advantage of Wheat, Pork and Beef Export from the USA

Year	RCA-wheat	RCA-pork	RCA-beef
1991.00	174.99	30.57	36.23
1992.00	189.91	37.79	32.23
1993.00	219.37	59.05	25.77
1994.00	218.22	63.54	27.99
1995.00	230.39	90.01	34.11
1996.00	223.04	99.43	42.72
1997.00	174.85	107.76	43.56
1998.00	186.17	128.72	43.79
1999.00	196.15	126.24	62.68
2000.00	174.19	146.79	88.67
2001.00	169.10	133.89	105.49
2002.00	189.25	143.23	97.44
2003.00	209.12	138.92	109.48
2004.00	255.11	161.02	5.78
2005.00	249.33	190.72	10.38
2006.00	208.40	189.56	20.89
2007.00	240.20	187.86	28.89

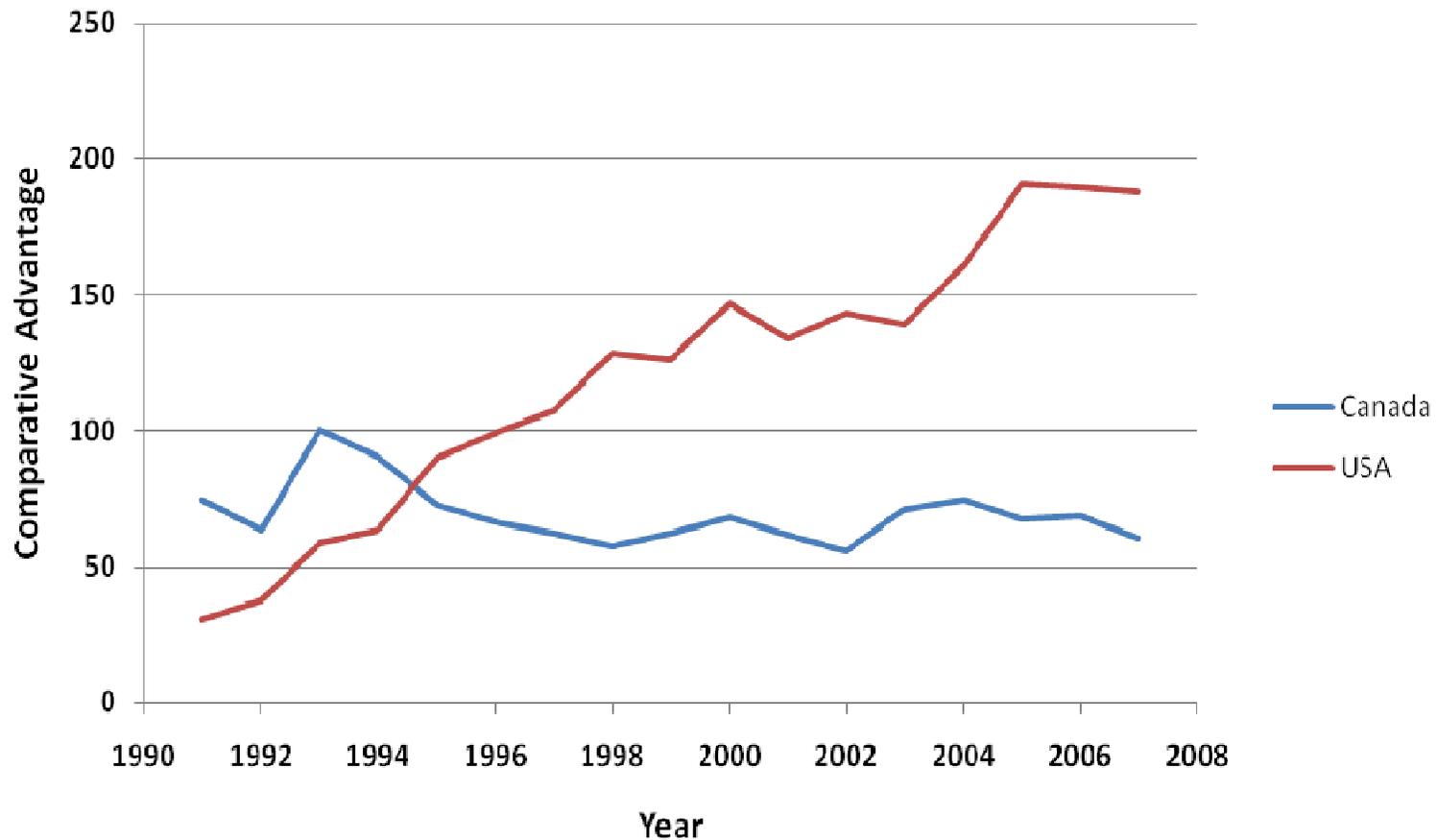
Main Results

- Canada has competitive advantage in wheat and beef but not in pork
- For the beef sector, competitive advantage came crashing down in 2004 but the sector is recovering well.
- The United States, on the other hand, has competitive advantage in wheat and pork production but competitive disadvantage in beef production
- At the beginning of the new Century, the beef sector in the US started to become competitive but due to the discovery of BSE, it took a nose dive. While the sector is recovering, the rate of recovery is rather slow.
- Can we compare the competitiveness of the selected sectors between these two countries?

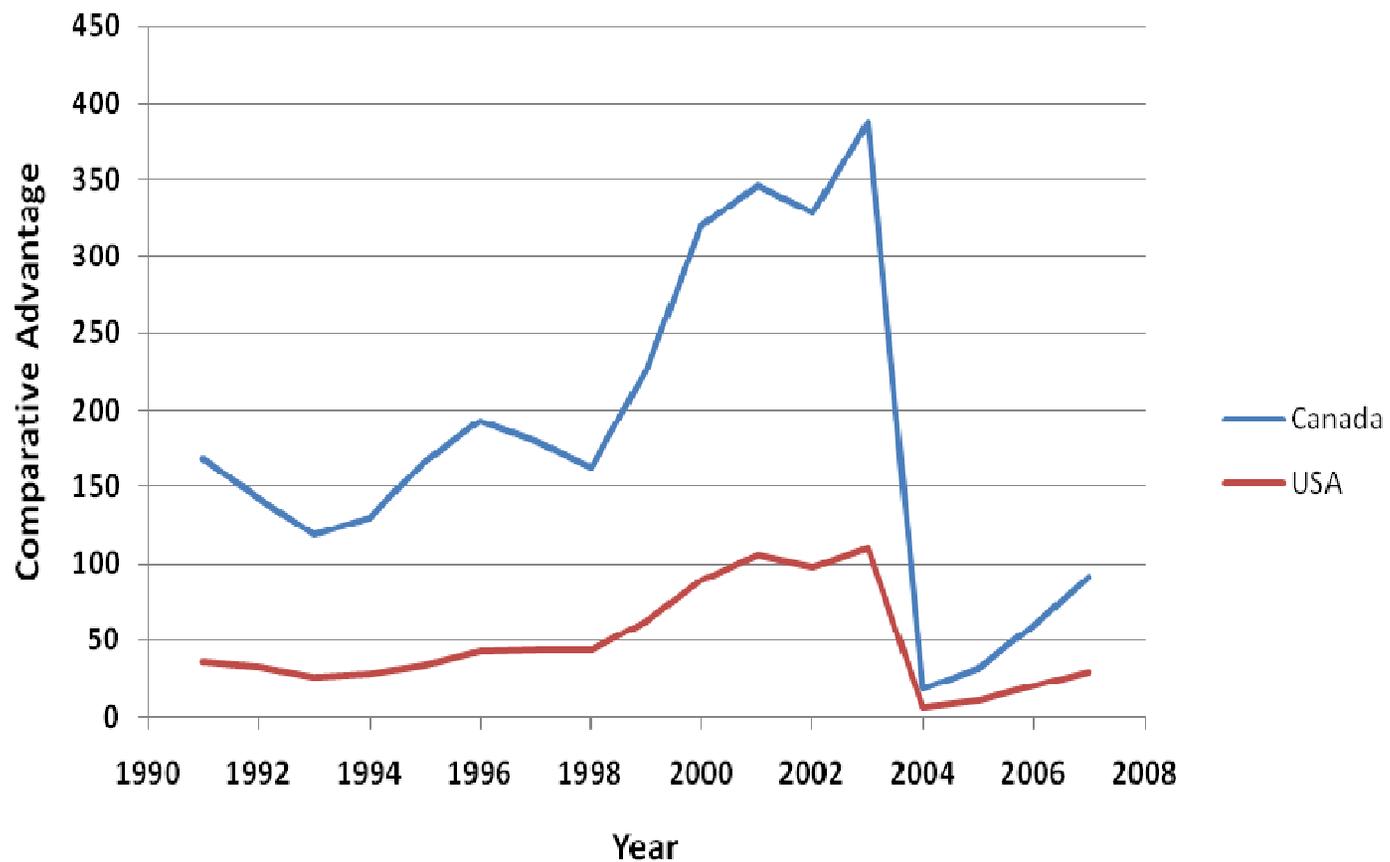
Revealed Comparative Advantage of Wheat Exported from Canada and the USA



Revealed Comparative Advantage of Pork Exported from Canada and the USA



Revealed Comparative Advantage of Beef Exported from Canada and the USA



Results and Policy Implications

- While both Canada and the United States have competitive advantage in wheat, the competitive position of the US wheat sector improved slowly. However, the competitive position of the Canadian wheat sector declined over time.
- While the international competitive position of the US pork sector improved significantly, the pork sector in Canada moved in the opposite direction.
- The beef sector in Canada is a different story. Perhaps, the wheat and pork producers can talk to their friends raising cattle in Canada.

Results and Policy Implications

- Are these results relevant for a meaningful policy dialogue?
- Can these results be used to guide any specific policy choice?
- We need to determine what are drivers of the changes in RCAs for each sector.
- Any thoughts in along this line will be much appreciated.

Concluding Remarks:

- Success in a turbulent world economy critically depend on Competitiveness.
- Despite being a “fuzzy” concept, discussion, analysis and predictions related to international competitiveness agri-food sector acquired the centre stage.
- An attempt is made in this paper to measure international competitiveness of wheat, pork and beef sectors in Canada using RCA as an indicator.
- The results do not support the findings/conjectures made about these sectors by previous researchers.
 - “Canada’s competitive position would appear to be high for wheat and pork, moderate for feed grains, oilseeds and beef, low for dairy and poultry, and mixed for fruits and vegetables”.
- The results can lead to interesting policy dialogue. However, specific policy directions require additional investigation about the drivers of these changes.

THANK YOU!