An Economic Analysis of Removing the Canadian Wheat Board’s Single Desk Authority and Rail Deregulation in Western Canada

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Introduction
Wheat marketing in Western Canada has been dominated by the Canadian Wheat Board (CWB)’s single desk structure and rail regulation.
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• All producers receive the same price for their wheat at the end of the crop year (pool system).
• CWB also tried to use its market power to obtain lower marketing costs for producers in the logistic system.
• Rail rates are regulated (revenue cap).

Starting in the 2012/13 crop year, CWB’s single desk will no longer exist, thus producers will be in charge of their own marketing.

Objective
The objective of this research is to explore how changes in the wheat marketing system (removal of single desk and possible deregulation of rail system) affect expected profits and risk for producers in Western Canada.

Research method
• Expected utility framework: impact of changes in marketing system are measured in terms of certainty equivalents (CE).
• Analysis focuses on marketing simulations for a 4-year period between 2006/07 and 2009/10.
• Producers are assumed to maximize profit; profit function = price – marketing costs

Based on previous studies (Fulton et al., 1998; Fulton, 2011),
• Wheat price during the same sample period.
• Marketing costs in an open market scenario are based on a previous study (Fulton et al., 1998; Fulton, 2011).
• Marketing cost risk is represented by variability experienced by marketing costs in the U.S. during the same sample period.

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Open market scenarios (OM)
• Removal of single desk and deregulation of rail system.
• There is uncertainty on the price received and marketing costs, which can vary depending on the time of the year when wheat is sold.
• Four marketing strategies are assumed, with different portions of the crop being sold throughout the crop year.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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<tbody>
<tr>
<td>Strategy 1</td>
<td>25%</td>
<td>10%</td>
<td>100%</td>
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<tr>
<td>Strategy 2</td>
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<td>10%</td>
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<tr>
<td>Strategy 4</td>
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<td>100%</td>
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</tbody>
</table>


Data
• Data for the simulations were obtained from the CWB, Minneapolis Grain Exchange, and Bank of Canada for the period 2006/07 – 2009/10.

Results
• Certainty equivalents (CE) for relative risk aversion of 3 are presented below.
• Two situations are considered:
  o single desk is removed, rail system is deregulated: marketing costs increase 46% in order to remain in the base scenario (CWB).
  o Rail rates are regulated (revenue cap).

For example, CE of $-2.32/bu means that producer would be willing to forego $2.32/bu to avoid the open market scenario and stay under the CWB system.

Table 1: Certainty equivalents (Cdn$/bu) for risk aversion R=3

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<tbody>
<tr>
<td>marketing strategy 1</td>
<td>-2.32</td>
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<td>-4.26</td>
<td>-2.90</td>
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<td>marketing strategy 2</td>
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<td>-1.89</td>
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<td>-2.84</td>
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<td>-4.55</td>
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<tr>
<td>marketing strategy 4</td>
<td>-2.45</td>
<td>+1.48</td>
<td>-5.64</td>
<td>-2.84</td>
</tr>
</tbody>
</table>

Marketing costs increase by 4%

Table 2: Certainty equivalents as a proportion of the pool price for risk aversion R=3

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</thead>
<tbody>
<tr>
<td>marketing strategy 1</td>
<td>-51.8%</td>
<td>-21.3%</td>
<td>-62.8%</td>
<td>-54.8%</td>
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<td>marketing strategy 2</td>
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<tr>
<td>marketing strategy 3</td>
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<td>-57.7%</td>
<td>-50.5%</td>
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<tr>
<td>marketing strategy 4</td>
<td>-48.2%</td>
<td>+20.0%</td>
<td>-64.5%</td>
<td>-48.3%</td>
</tr>
</tbody>
</table>

Conclusions
• Producers who exhibit more risk aversion have a stronger preference for the current system with the CWB’s single desk.
• Producers who are less risk averse would prefer an open market system, without single desk and rail regulation.

References

For further information
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