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Understanding the role of government on agri-food private standards in developed countries:
Preliminary empirical evidence from Canada

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Understanding the role of government on agri-food private standards in developed countries: Preliminary empirical evidence from Canada

Agriculture and Agri-Food Canada

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❖ Introduction

- Private standards are “codes of conducts or product attributes” which are designed and governed by non-state entities.
- Hence, such standards are not subjected to multi-lateral agreements (i.e., SPS and TBT agreements) between state governments under WTO.
- The empirical literature on the impacts of agri-food private standards is mostly limited to export market access by less developed and transition countries for improving their agri-food sector performance.
- In that literature, the impacts of private standards on agri-food firms in developed countries and potential role for their governments in these private standards are not adequately explored.
- Yet, agri-food firms in the developed countries participate with a plethora of private standards (see below) and policy makers strive to define a rationale and scope of government’s role in private standards.

➤ Private standard faced by Canadian farmers

Primary Production in Canada	No. of possible PVT standards if export destination is:						
	U.S.	Europe	Japan	China	India	Australia & Oceania	South America
All Ag. Products	15	16	13	13	11	13	13
Wheat	11	13	11	11	11	11	11
Beef	10	12	10	10	10	10	10
Dairy	12	12	10	10	10	10	10
Pork	10	12	10	10	10	10	10
Poultry/Eggs	10	12	10	10	10	10	10
Corn	11	13	11	11	11	11	11
Soybean	12	14	11	12	11	11	12
Barley	11	13	11	11	11	11	11

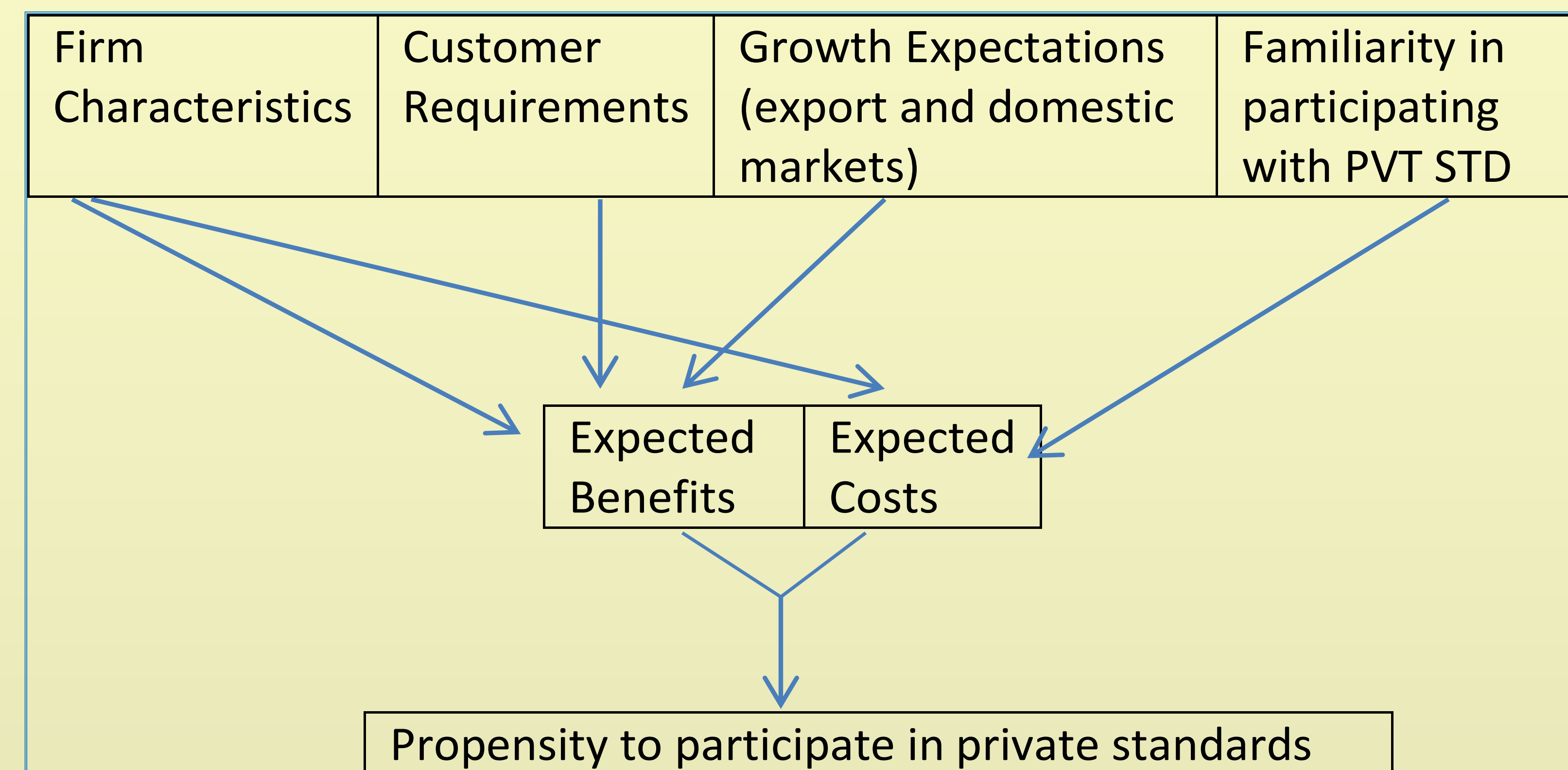
Source: <http://www.standardsmap.org/> (International Trade Centre)

❖ Motivation of the Study

- To explore whether the propensity to participate in private standards by Canada’s agri-food firms is systematically associated with:
 - Their characteristics and activities:
 - ✓ If so, a rationale for government’s role could be to promote the interests of unique sub-classes of firms (e.g., SMEs vs. large firms).
 - Their growth expectations in domestic and export markets:
 - ✓ If so, a rationale for government’s role could be to improve export or domestic market access by agri-food firms.
 - Their familiarity in process of participating in private standards:
 - ✓ If so, a rationale for government’s role could be to familiarize agri-food firms about the process of participating in private standards.

❖ Conceptual Framework

- Extant literature on private standards suggests that the propensity of agri-food firms’ to participate in private standards are influenced by following factors:



❖ Data and Analytical Approach

- Data: Food industry survey 2011 by Centre for Food in Canada of the Conference Board of Canada:** Surveyed agri-food firms by random digit dialling of a provincially stratified sample. There were 1,177 respondents:
 - Crop farmers = 310 Livestock farmers = 168
 - Food processors = 304 Food retailers = 404

- Survey Question :** Does your business participate in any third-party certification programs or private standards systems?

Six private agri-food standard included in the survey					
Benchmarked by Global Food Safety Initiative (primary goal is food safety)				Canadian	International
Global GAP	BRC Global Standards for food safety	International Food Standards	Safe Quality Food 2000	Organic Certification	ISO 22000

- Analytical Approach:** Logit regression: Y=1 if participate with a given private standards & Y=0 if do not participate

Explanatory Variables	
Dummies for firm characteristics	Dummies for growth expectation
1. Being an exporter	7. Expect sales growth in Canada
2. Large firm (> \$ 5 million sales)	8. Expect sales growth in Europe
3. Medium firm (\$ 0.5-< 5 million sales)	9. Expect sales growth in U.S.
4. Livestock farm	10.Expect sales growth in Japan
5. Crop farm	11. Expect sales growth in India or China
6. Food processing firm	12. Expect sales to decrease
Dummy for the familiarity in participating with PVT standards	
13. Participate in one or more of the other remaining 3 GFSI standards listed above (Survey did not collect information about customer requirements)	



❖ Findings and discussion

Logit regression results (Y= 1 if participate in :

Explanatory Variables	GLOGAP	BRC	IFS	SQF2000	ORGANIC	ISO22000
1. Being an exporter	N.S.	S* (+)	S** (+)	S* (+)	S* (+)	S*** (+)
2. Large firm (> \$ 5 mn sales)	S** (+)	NS	NS	S*(+)	NS	NS
3. Med. firm (\$ 0.5 - < \$ 5 mn)	NS	S** (-)	NS	NS	NS	NS
4. Livestock farm	N.S.	NS	NS	NS	S* (-)	NS
5. Crop farm	S*** (+)	S*** (-)	NS	NS	NS	NS
6. Food processor	N.S.	S* (-)	NS	NS	NS	NS
7. Expect sales growth in Canada	S**(+)	S*** (-)	S*(+)	NS	S***(+)	NS
8. Expect sales growth in Europe	NS	NS	NS	NS	NS	NS
9. Expect sales growth in U.S.	NS	NS	S**(+)	NS	NS	NS
10.Expect sales growth in Japan	NS	NS	NS	NS	NS	NS
11. Expect sales growth in India or China	NS	S*(-)	NS	NS	NS	NS
12. Expect sales to decrease	NS	NS	S*** (+)	NS	NS	NS
13. Adopt other GFSI standards	S*** (+)	S*** (+)	S*** (+)	S*** (+)	NA	NA
Model Pseudo R square	0.25	0.17	0.17	0.18	0.05	0.05
Model P value	0.000	0.000	0.000	0.000	0.0017	0.018
Number of observations	1186	1186	1186	1186	1186	1186

N.S.=not significant at 0.10 level; S*, S**, S***= significant at 0.1, 0.05, 0.001 levels

- Propensity to participate is not consistently affected by firm size classes (excluded size class is small), nor by sub-industries (excluded -retailing).
- Propensity to participate in five out of the six standards is significantly increased by being an exporter. But the marginal effect of being an exporter on the probability of participation is small between 4.6% (IFS) to 1.2% (SQF 2000).
- Propensity to participate in some standards (GLOBALGAP, IFS, & ORGANIC), is significantly increased by growth expectations in Canada. Yet surprisingly no such effects by growth expectations in the other major export markets is found.
- Propensity to participate in a given GFSI benchmarked standard is significantly increased if the firm is already participating in one or more of the other remaining 3 GFSI standards. (e.g. probability of adopting BRC will go up by 34%, if the firm has participated one or more of the other 3 GFSI standards).

❖ Conclusions

- A rationale for government’s role in private standards in the developed countries is unlikely to be based on promoting a unique sub-classes of agri-food firms, such as SMEs or agri-food firms in an industry sub-groups.
- However, a rationale for government’s role could be related to promoting agri-food exports by facilitating agri-food firms’ participation in private standards, given the strong linkage between the two.
- Another rationale for government’s role could be to familiarize agri-food firms about the process of participating in private standards given the significant positive spill over effect on participating in one type over the others.

*(Views are those of the authors and not the Agriculture and Agri-Food Canada)