[International trade related to entreprise statistics : German controlled firms.]

RAFT NOTES ON PRESENTATION \$ 1-6/32

Introduction

The impact on Canadian enterprises of opening the economy through globalization is subject to debate. By understanding domestic market trends, the extent of canadian competitiveness can be determined. The opening of the canadian market has increased the number of foreign-controlled firms. Trade and Foreign ownership are the issues we are considering today. The development of the importer and exporter databases in International trade allows to link trade data with financial and ownership data from industrial Organization and Finance. These links can be extended to other divisions. This is the first time financial characteristics and trade have been joined. It has opened up a whole new area for analysis--very exciting actually

Initially, we wanted to compare enterprises involved in trade with those that are not involved with trade. We also decided to include foreign ownership--personal interest,

Two questions arise:

1- Why are foreign firms establishing themselves in Canada?

Hypothesis is: -They are here to serve/access the US market

- -They are here for domestic market
- for their home market -pillagers? robbing us of natural resources--
- 2- Is there a relationship between trade and profitability?
- curiosity--we had no preconceived notion except that firms maximize profitsso it would make sense that this is why they trade, and that there must be some relationship.
- To answer these questions we could not look at all firms. Therefore we decided to considered the german controlled firms. Germany one of our principal trading partners and german controlled firms rank in the top five by country of foreign control.
- We created a portrait of these firms for 1990, by examining certain financial characteristics (revenues, profit, assets, ratios of profitability, efficiency and leverage) as well as their imports and exports and comparing these to other firms who operate in Canada.
- Then we examined the financial characteristics for the firms that trade as well as those that do not, by industry and size. We also examined the relationship between the propensity to import/export and profitability.
- We found that German controlled firms were established in Canada to serve the domestic market and that there is no relationship between trade & profitability

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Methodology

Linkage

- A list of german controlled firms was produced from the ICO (Inter corporate ownership) file. Various elements were extracted including T2 number, name, province of residence and SIC C(1980).
- This list was matched by T2 to sample files of the quarterly survey.
- This did not provide adequate coverage.
 -60% of assets, 80% of revenue, But we only had 10% of the total number of firms.
- instead, the administrative file from Revenue Canada-Taxation was used.

 We linked about 90% of the firms. Remaining portion did not file a T2 with Revenue Canada-taxation

 (Though they were on the file for 1989 with low assets and revenues)
- Linked list of T2 to the importer and exporter database. A manual process of verification was used to ensure that all firms were included and to verify that the linkages were accurate. (essentially due to different names --legal name vs. importer of exporter name.)
- We linked 242 firms to trade data (35%)

Variable and Ratios used

- The use of the administrative file from RCT limits our choice of financial characteristics that we can use.
- We used from IOFD- assets, equity, sales and profits before tax from ITD- value transactions, country of origin and destination.
- The choice of financial ratios calculated was influenced by the choice of variables available to us.
- As well, we observed that many firms had a negative value for equity which weakened any calculation of return on equity (profits before taxes over equity).-Foreign enterprises controlling canadian companies tend to invest in their affiliates in form of a loans instead of share capital. This practice undervalues the equity and overvalues the liabilities of enterprises under foreign control.
- Our choice of ratios are as follows:
- Efficiency: links volume of sales & quantity of resources
- Two ratios were used

Operating margin: operating profit/sales

This ratio reflects how well you use your dollar of sales.

Assets turnover: sales/assets

This ratio shows how well a company uses its assets to generate sales.

Profitability: compares revenue to capital that produced it

profits before tax/assets

NOTE: observed negative values of equity therefore could not use return on equity.

Capital structure- capital ratio: liabilities/equity -depicts solvency of a company. larger ratio--> more risky since liabilities > equity

Warning: again the negative values for equity may effect this ratio.

Propensity to export: exports/sales

Propensity to import: imports/sales

Limitations:

- conceptual differences
- timing differences-calendar year for trade statistics
- -fiscal year for each company-about 200 enterprises had year-ends before October
- we observed that imports are composed of merchandise that may be considered as operating expenses (raw materials) and other as machinery & equipment, fixed asset, (capital expenditures.)

ASSETS

two measures of size were used by assets and by sales

If we look at Assets.

Our definition of large- >10mil small <10mil

• The large entreprises control majority of assets, generate most sales and have a greater proportion of trade.

if we look at the large companies: There are more traders than non traders, -they have majority of assets and sales.

if we look at the small enterprises: There are more non-traders (74% of small ents), though they have more asset and profits, The traders are the ones with more sales.

Ratios

Larger firms are slightly more profitable and are more solvent.

Differences are the operating margin and assets turnover-

- --large firms generate more profit per dollar of sales but small firms uses the little assets that they have, more effectively.
- --smaller firms are also more dependent on trade for their sales.

if we look at the large enterprises:major difference is in efficiency-profitability is achieved in two ways

- -trading firms--through effective use of assets
- -non-trading firms--generate more profit per dollar of sale.

if we look at the small enterprises:

- -non traders are more profitable and less solvent.
- -traders use their asset effectively
- So we see that the large firms are slightly more profitable, and though they have a larger proportion of trade, the small firm are more dependent on trade.

Sales

If we look at Sales.

• The large entreprises control majority of assets, generate most sales and have a greater proportion of trade.

if we look at the large companies: Almost all are involved with trade- again as before -they have majority of assets and sales.

if we look at the small enterprises: There are more non-traders (78% of small ents), though they have more asset and profits, The traders are the ones with more trade.

Ratios

- Larger firms are more profitable, and more efficient.
- But smaller firms are also more dependent on trade for their sales.

if we look at the large enterprises:

- traders are more profitable
- major difference is again in efficiency--profitability is achieved in two ways
- -trading firms--through effective use of assets
- -non-trading firms--generate more profit per dollar of sale.

if we look at the small enterprises:

- -non traders are more profitable and less solvent.
- -traders use their asset effectively

Conclusion

- 1- German-controlled firms are established in Canada to serve the Canadian market.
- 2- With the German-controlled firms, there is no clear relationship between profitability and trade

Foreign ownership, Trade and Business Financial Statements German-controlled entreprises in Canada

1990

Le contrôle étranger, le commerce et les états financiers des entreprises

Les entreprises sous contrôle allemand au Canada

1990

Ratios calculated Ratios utilisés

Туре	Name	Calculation
Efficiency Efficiency Profitability Capital structure Propensity Propensity	Operating margin Assets turnover Return on assets Capital ratio Propensity to export Propensity to import	Operating Profits / Sales Sales / Assets Profits before Tax / Assets Liabilties / Equity Exports / Sales Imports / Sales

Genre	Nom	Calcul
Efficience Efficience Rentabilité Structure du capital Propension	Marge bénéficiaire Rotation de l'actif Rendement de l'avoir Ratio du capital Propension à exporter	Bénéfice / ventes Ventes / actifs Bénéfice avant impôts / actifs Passif / avoir Exportations / ventes
Propension	Propension à importer	Importations / ventes

German-controlled firms in Canada Sociétés sous contrôle allemand au Canada 1990

Summary results of linkage Résultats des liens

legal	statistical
entities	entreprises
unités	entreprises
légales	statistiques

Active	860	•••	Actives
Holding companies	46	•••	Sociétés d'investissement
			et de gestion de portefeuille
No financial data	71	•••	Aucune information
available			financière disponible
Available for analysis	743	727	Disponibles pour l'analyse
Trading:	242	239	Commercent:
Export and import	168	167	Exportent et importent
Export only	58	56	Exportent seulement
Import only	16	16	Importent seulement
Non-trading	502	488	Ne commercent pas

Overview

Vue d'ensemble

German-cont.	Canada'	Share
legal entities	Total	
Unités légales	Total	Part
sous cont. all.	Canada	

Financial characteristics			6	araoteristiques from éleces
Number of legal entities	743	720,244	0.1 %	Nombre d'unités légales
	(\$ millions)	(\$ millions)	•	
Assets	13,243	2,195,153	0.6 %	Actifs
Equity	4,787	482,733	1.0 %	Avoir
Sales	11,375	1,225,294	0.9 %	Ventes
Operating Profits	312	27,646	1.1 %	Bénéfice d'exploitation
Profits before Tax	403	47,156	0.9 %	Bénéfice avant impôts
Assets turnover	85.89 %	55.82 %	•••	Rotation de l'actif
Operating margin	2.74 %	2.26 %	•••	Marge bénéficiaire
Return on assets	3.04 %	2.15 %	•••	Rendement de l'actif
Capital ratio	1.77	3.55	•••	Ratio du capital

Trade characteristics Caractéristiques commerciales						
262	•••	•••	Nombre d'unités légales			
(\$ millions)	(\$ millions)					
1,422	135,951	1.0 %	Exportations			
3,222	142,643	2.3 %	Importations			
	(\$ millions) 1,422	(\$ millions) (\$ millions) 1,422 135,951	262 (\$ millions) (\$ millions) 1,422 135,951 1.0 %			

Trading and Non-trading enterprises Entreprises qui commercent et qui ne commercent pas

	TOTAL	X and/et M	X only seul.	M only seul.	no X no M pas de X pas de M	
Number	727	167	16	56	488	Nombre
Assets Equity Sales Operating Profits Profits before Tax	(\$ mil.) 13,243 4,787 11,375 312 403	(\$ mil.) 5,411 2,202 9,257 215	(\$ mil.) 272 134 118 7	(\$ mil.) 3,376 1,111 1,009 39	(\$ mil.) 4,184 1,339 989 51	Actifs Avoir Ventes Bénéfice d'exploitation Bénéfice avant impôts
Assets turnover Operating margin Return on assets Capital ratio	85.89 % 2.75 % 3.04 % 1.76	171.07 % 2.32 % 4.03 % 1.46	43.38 % 5.93 % 1.84 % 1.03	29.89 % 3.87 % 1.63 % 2.04	23.64 % 5.16 % 2.96 % 3.12	Rotation de l'actif Marge bénéficiaire Rendement de l'actif Ratio du capital
Exports Imports	(\$ mil.) 1,422 3,222	(\$ mil.) 1,352 2,918	(\$ mil.) 70	(\$ mil.) 302	•••	Exportations Importations

Table 9
1990 imports and Exports by German-controlled Enterprises
Top Five HS Chapters

184		ľ
	RI	~

	Imports of	German-c enterprise:		Candian Ir	Share of G.Ent	
Rank HS	Chapter	Value (MIL)	%	Value (MIL)	%	
		(a)		(b)		(a)/(b)
1	87	\$912	28.3%	\$26,627	18.7%	3.4%
. 2	84	\$432	13.4%	\$26,342	18.5%	1.6%
3	29	\$221	6.9%	\$2,014	1.4%	11.0%
4	39	\$203	6.3%	\$3,561	2.5%	5.7%
5	71	\$201	6.2%	\$1,329	0.9%	15.1%
Total Valu	e of five chapter:	\$1,969	61.1%	\$59,873	42.0%	3.3%
Total Imp	orts	\$3,222	100.0%	\$142,643	100.0%	2.3%

EXPORTS

	Exports of	German-c enterprise:		Canadian Exports		Share of G.Ent
Rank HS	S Chapter	Value (MIL)	%	Value (MIL)	%	•
		(a)		(b)		(a)/(b)
1	87	\$351	24.7%	\$28,728	21.1%	1.2%
2	84	\$192	13.5%	\$11,293	8.3%	1.7%
3	10	\$138	9.7%	\$3,821	2.8%	3.6%
4	29	\$105	7.4%	\$1,663	1.2%	6.3%
5	55	\$83	5.8%	\$233	0.2%	35.6%
Total Val	ue of five chapter	\$869	61.1%	\$45,739	33.6%	1.9%
Total Exp	ports	\$1,422	100.0%	\$135,951	100.0%	1.0%

Tableau 9 Importations et exportations (1990) par les entreprises sous contrôle aliemand Les cinq chapitres principaux du S.H

		Importations	s des entreprises le allemand	Importations	s canadiennes	Part des entreprises sous contrôle allemand	
Rang	Chap	oitre du SH	Valeur (MIL)	%	Valeur (MIL)	%	
		k	(a)	•	(b)		(a)/(b)
	1	87	\$912	28.3%	\$26,627	18.7%	3.4%
	2	84	\$432	13.4%	\$26,342	18.5%	1.6%
	3	29	\$221	6.9%	\$2,014	1.4%	11.0%
	4	39	\$203	6.3%	\$3,561	2.5%	5.7%
	5	71	\$201	6.2%	\$1,329	0.9%	15.1%
Valeu	r total	e, cinq chapitres	\$1,969	61.1%	\$59,873	42.0%	3.3%
Impor	rtation	s totales	\$3,222	100.0%	\$142,643	100.0%	2.3%
EXPO	RTATIO	ONS	Exportation: sous contrô	s des entreprises le allemand	Exportations	s canadiennes	Part des entreprises sous contrôle allemand
Rang	Char	oitre du SH	Valeur (MIL)	%	Valeur (MIL)	%	
		•	(a)		`(b) [′]		(a)/(b)
	1	87	\$351	24.7%	\$28,728	21.1%	1.2%
	2	84	\$192	13.5%	\$11,293	8.3%	1.7%
	3	10	\$138	9.7%	\$3,821	2.8%	3.6%
	4	29	\$105	7.4%	\$1,663	1.2%	6.3%
	5	55	\$83	5.8%	\$233	0.2%	35.6%
Valeu	r total	e, cinq chapitres	\$869	61.1%	\$45,739	33.6%	1.9%
		s totales	\$1,422	100.0%	\$135,951	100.0%	1.0%

By Region Dimension géographique

	Atl.	Québec	Ontario	Prairi es	B.C. CB.	
# of Ent. Assets Equity Sales Oper. Prof Prof. bef. Tax	8 0.49% 0.69% 0.52% 1.62%	78 9.58% 10.72% 15.57% 25.50% 19.24%	518 82.10% 80.12% 79.31% 67.07%	70 5.06% 5.38% 1.86% 9.24% 7.97%	53 2.78% 3.10% 2.74% -3.43% -1.14%	# d'ent. Actifs Avoir Ventes Bénéf. d'expl. Bénéf. av. imp.

By SIC-C Dimension industrielle

Percentage of Totals Pourcentage des totaux

	# of/d' Ent.	Sales Ventes	Assets Actifs	Profits bef. Tax Bénéfice av. imp.	х	M	Total Trade Comm. Total	
Non finan.	605	92.71%	72.91%	83.52%	95,88%	99,99%	98.73%	Non finan.
Trading	228	88.79%	53.87%	62.23%	95.88%	99.99%	98.73%	Commer.
Non trad.	377	3.92%	19.04%	21.20%	•••	•••	•••	Ne comm. pas
Financial	88	7.29%	27.09%	16.48%	4.12%	0.01%	1.27%	CHECK-1015
Trading	8	2.52%	14.55%	7.23%	4.12%	0.01%	1.27%	Commer.
Non trad.	80	4.77%	12.53%	9.23%	•••	•••	•••	Ne comm. pas
Total	693	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	Total

*:excludes SIC-C = 0000 /ne comprend pas les CTI-C = 0000

By SIC-C Dimension industrielle

Ratios

	# of/d' Ent.	Profit. Rentab.	Oper. Marg. Marge bénéf.	Assets Turnover Rotation de l'actif	Capital Structure Structure du capit.	Prop.	Prop.	·
Non finan. Trading Non trad.	605 228 377	3.47% 3.51% 3.36%	2.87% 2.53% 10.64%	109.14% 141.46% 4.89%	1.23 1.18 2.35	12.92% 13.50%	30.58% 31.94%	Non finan. Commer. Ne comm. pas
Financial Trading Non trad.	88 8 80	1.84% 1.52% 2.68% 2.2	1.41% 2.16% 1.01%	23.10% 14.85% 15.22%	6.97 9.60 6.19	7.07% 20.47% 	0.03% 0.09%	Financier Commer. Ne comm. pas
Total	693	3.03%	2.77%	85.83%	1.77	12.50%	28.36%	Total

*:excludes SIC-C = 0000 /ne comprend pas les CTI-C = 0000

Table 6
1990 Imports and Exports by German-controlled Enterprises- Principal Trading Partners

IMPORTS Imports	of German-co	ontrolled	Canadian In	nports	Share of
Rank Countries	enterprises Value (MIL)	%	Value (MIL)	%	G.Ent.
	(a)		(b)		(a)/(b)
1 Germany	\$1,546	48.0%	\$3,837	2.7%	40.3%
2 United States	\$1,242	38.5%	\$89,597	62.8%	1.4%
3 Mexico	\$81	2.5%	\$1,748	1.2%	4.7%
4 Belgium	\$42	1.3%	\$539	0.4%	7.7%
5 Brazil	\$37	1.2%	\$798	0.6%	4.7%
Total Value of five countries	\$2,949	91.5%	\$96,519	67.7%	3.1%
Total Imports	\$3,222	100.0%	\$142,643	100.0%	2.3%
EXPORTS Exports	of German-co	ontrolled	Canadian E	xports	Share of
	enterprises	•			G.Ent.
Rank Countries	Value	%	Value	%	
	(MIL)		(MIL)		
	(a)		(b)	-	(a)/(b)
1 United States	\$958	67.4%	\$111,380	81.9%	0.9%
2 Germany	\$86	6.0%	\$2,322	1.7%	3.7%
3 Belgium	\$58	4.1%	\$1,249	0.9%	4.7%
4 Saudi Arabia	\$46	3.2%	\$278	0.2%	16.6%
5 Japan	\$43	3.0%	\$8,230	6.1%	0.5%
Total Value of five countries	\$1,192	83.8%	\$123,459	90.8%	1.0%
Total Exports	\$1,422	100.0%	\$135,951	100.0%	1.0%

Tableau 6 Importations et exportations (1990) par les entreprises sous contrôle allemand Les principeux partenaires commerciaux

IMPORTATIONS		des entreprises	Importations	canadiennes	Part des entreprises
	sous contrôl	e allemand			sous contrôle allemand
Rang Pays	Valeur	%	Valeur	%	
	(MIL)		(MIL)		
	(a)		(b)		(a)/(b)
1 Allemagne	\$1,546	48.0%	\$3,837	2.7%	40.3%
2 États-Unis	\$1,242	38.5%	\$89,597	62.8%	1.4%
3 Mexique	\$81	2.5%	\$1,748	1.2%	4.7%
4 Belgique	\$42	1.3%	\$539	0.4%	7.7%
5 Brésil	\$37	1.2%	\$798	0.6%	4.7%
Valeur totale des cinq pays	\$ 2,949	91.5%	\$ 96,519	67.7%	3.1%
Importations totales	\$3,222	100.0%	\$142,643	100.0%	2.3%
EXPORTATIONS	Exportations	des entreprises	Exportations	canadiennes	Part des entreprises
:	sous contrôl	e allemand			sous contrôle allemand
Rang Pays	Valeur	%	Valeur	%	
· ·	(MIL)		(MIL)		
	(a)	•	(b)		(a)/(b)
1 États-Unis	\$958	67.4%	\$111,380	81.9%	0.9%
2 Allemagne	\$86	6.0%	\$2,322	1.7%	3.7%
3 Belgique	\$58	4.1%	\$1,249	0.9%	4.7%
4 Arabie Saoudite	\$46	3.2%	\$278	0.2%	16.6%
5 Japon	\$43	3.0%	\$8,230	6.1%	0.5%
Valeur totale des cinq pays	\$1,192	83.8%	\$123,459	90.8%	1.0%
Exportations totales	\$1,422	100.0%	\$135,951	100.0%	1.0%

By Size of Assets Selon la taille de l'actif

Percentage of Totals Pourcentage des totaux

		,		. oomer Bo		-		_
	# of/d' Ent.	Assets Actifs	Sales Ventes	Profits bef. Tax Bénéfice av. imp.	X	M	Total Trade Comm. Total	
> = \$10M Trading Non trad.	90 60	91.77% 64.91% 26.84%	90.37% 83.63% 6.73%	92.80% 67.74% 25.06%	80.21% 80.21% 	86.12% 86.12%	84.32% 84.32% 	Commer. Ne comm. pas
< \$10M Trading Non trad.	577 149 428	8,24% 3,49% 4,75%	9.63% 7.67% 1.96%	7.44% 1.74% 5.71%	19.78% 19.78% 	13.88% 13.88%	15.68% 15.68% 	Commer. Ne comm. pas
Total	727	100.00%	100.00%	100.00%	100.00%	100.00%	100,00%	Total

By Size of Assets Selon la taille de l'actif

Ratios

	# of/d' Ent.	Profit. Rentab.	Oper. Marg. Marge bénéf.	Assets Turnover Rotation de l'actif	Capital Structure Structure du capit.	Prop. X	Prop.	
> = \$10M Trading Non trad.	150 90 60	3.07% 3.18% 2.84%	3.00% 2.72% 6.40%	84.59% 110.65% 21.54%	1.70 1.59 1.97	11.09% 11.99% 	26.99% 31.94%	>= \$10M Commer. Ne comm. pas
< \$10M Trading Non trad.	577 149 428	2.75% 1.51% 3.63%	0.37% 0.29% 0.65%	100.37% 188.82% 85.90	2.90 2.41 3.37	25.70% 39.17%	40.85% 51.30%	< \$10M Commer. Ne comm. pas
Total	727	3.05%	2.75%	85.83%	1.77	12.50%	28.33%	Total

By Size of Sales Selon la taille des ventes

Ratios

	# of/d' Ent.	Profit. Rentab.	Oper. Marg. Marge bénéf.	Assets Turnover Rotation de l'actif	Capital Structure Structure du capit.	Prop. X	Prop.	
>= \$10M Trading Non trad.	122 107 15	3.59% 3.97% 2.38%	2.98% 2.86% 5.00%	104.70% 129.92% 26.68%	1.79 1.78 2.04	11.26% 12.01%	28.58% 30.48%	>= \$10M Commer. Ne comm. pas
< \$10M Trading Non trad.	605 132 473	1.26% -1.79% 3.77%	-0.52% -4.95% 5.41%	24.72% 31.35% 19.27%	1.10 0.47 2.26	29.62% 51.77%	24.94% 43.58%	S10M Commer. Ne comm. pas
Total	727	3.04%	2.75%	85.89%	1.77	12.51%	28.33%	Total

By Size of Sales Selon la taille des ventes

Percentage of Totals Pourcentage des totaux

	# of/d' Ent.	Sales Ventes	Assets Actifs	Profits bef. Tax Bénéfice av. imp.	X	M	Total Trade Comm. Total	
> = \$10M Trading Non trad.	122 107 15	93.22% 87.42% 5.80%	76.47% 57.80% 18.68%	90.32% 75.43% 14.64%	83.96% 83.96% 	94.04% 94.04%	90.98% 90.98% 	Commer. Ne comm. pas
< \$10M Trading Non trad.	605 132 473	5.89% 3.88% 2.89%	23.53% 10.62% 12.91%	9.68% - 6.20% 15.88%	16.04% 16.04% 	5.96% 5.96% 	9.04% 9.04% 	< \$10M Commer. Ne comm. pas
Total	727	100.00%	100.00%	100.00%	100.00%	100,00%	100.00%	Total

Profitability and Trade Rentabilité et commerce

- Is an entreprise which trades a lot, more profitable than those which trade less?
- Is an entreprise more profitable because it trades more than others?

- Une entreprise qui commerce beaucoup est-elle plus rentable que d'autres qui commercent moins ?
- Une entreprise est-elle plus rentable parce qu'elle commerce plus que d'autres ?

By Size of Total Trade Selon la taille du commerce total

Percentage of Totals Pourcentage des totaux

	# of/d' Ent.	Total Trade Comm. total	X	M	Sales Ventes	
>= \$10M < \$10M No trade	63 176 488	91.59% 8.41%	94.06% 5.94%	90.51% 9.50%	74.88% 16.42% 8.69%	>= \$10M < \$10M Ne comm. pas
Total	727	100,00%	100.00%	100.00%	100.00%	Total

Ratios

	# of/d' Ent.	Profit. Rentab.	Prop.	Prop.	
>= \$10M < \$10M No trade	63 176 488	4.45% 1.51% 2.96%	15.71% 4.52%	34.25% 16.39%	> = \$10M < \$10M Ne comm. pas
Total	727	3.05%	12.50%	28.33%	Total

By Profitability Selon le rendement

	Profit. Rentab.	Prop.	Prop. M	X	M	
Top Third Middle Third Bottom Third	14.43% 1.58% -9.11	10.38% 8.32% 25.98%	19.16% 34.92% 34.49%	38.88% 22.61% 38.51%	32.93% 43.58% 23.48%	1er tiers 2e tiers 3e tiers
Total	3.03	12.59%	27,41%	100.00%	100.00%	Total

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