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Regional Integration of US Border States with Canada:
Evidence from US State Exports, 1996 to 2001

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Abstract: This paper examines the nature of regional trade integration between the United States and Canada by using a Similarity Index that summarizes the behavior of exports of states along the US/Canadian border relative to US states that are not on the Canadian border. An export Similarity Index is used to show the considerable importance of industry mix relative to distance. Similarity Index changes suggest that increased export sales between the US and Canada between 1996 and 2001 were not primarily driven by proximity factors that underlie a regional phenomenon. Industry factors independent of location and distance were important contributors to changes in US exports to Canada. The upshot is that global, not regional, factors may underlie increasing trade between the US and Canada. That is, an apparent global phenomenon may have been mistaken for a regional one.

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Introduction

Alan Rugman challenged conventional wisdom with data and analysis that shows that when the history books are closed on the last half of the 20th century, the chapter heading will say "The Age of Regionalization" not "The Age of Globalization". This distinction clearly matters for researchers and policymakers, whether they are practicing in business, government, or academe. My paper dives down deep into the muck of disaggregated sub-national data to add evidence to this issue. I do not find compelling evidence of regionalization with respect to the United States and Canada for the 1996 to 2001 time period. My results are compatible with Wall (2003). [1]

The next section is a review of Rugman's work and his conclusion that favors regionalization over globalization. I then explain why disaggregated data – data for 50 states and 97 industries – can be used to shed more light on this issue and how a Similarity Index can be used to add evidence to the regional/global question. Similarity Index changes are presented and compared for US exports to Canada and to the world. The Similarity Index values measure increasing similarity or dissimilarity of the industry mix of exports from two sets of states – the ones that border Canada and the ones that don't. The final section contains my summary. While the overall Similarity Index numbers support the idea that distance or proximity matters for trade, a closer look at the details suggests there is some room for doubt. Thus, my analysis finds no compelling evidence for regionalization

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[1] Howard J. Wall (2003) examined the impacts of NAFTA on exports for the time period from 1993 to 1997. He found that NAFTA did not uniformly increase trade within the pact's members and explained why economies of scale and trade creation and diversion can and did lead to increased trade between pact and non-pact members. The trade experiences of various regions of Canada were quite distinctive. For example, whereas Western Canadian exports to Mexico rose by over 90%, those from Eastern Canada increased by less than 1%.

and suggests that existing and historical links among the industries of various countries was more important than distance in determining changes in trade between Canada and the US between 1996 and 2001.

Distance, Regionalization, and Globalization

Alan Rugman in a series of papers argues that international trade has not become more global – it has become more regional. Rugman and Verbeke (2003a) look at foreign sales as a percentage of total sales for the world's 500 largest multinational enterprises (MNEs) and is able to classify only 10 of them as truly global. Examining 100 of the world's largest (MNEs), Rugman and Verbeke (2003) conclude[2] "Therefore, in the overall set of 20 highly internationalized MNEs, the case of global strategy and structure can be made for only six firms, with the additional observation that even these firms exhibit regional elements." Rugman and Brain (2002) found additional evidence with respect to the regionalization/globalization issue. They found that while intra-regional trade within NAFTA countries increased significantly, foreign direct investment (FDI) flows did not. FDI was more apt to develop between the EU and NAFTA. The investment result, they explain, is the result of many decades of free trade in the automotive manufacturing sector in North America that precluded the need for cross border investments. They point out that desires for increased trade in services has resulted in larger Canadian investments in US services industries.

Rugman is essentially saying that the emphasis on globalization has been misplaced, leading to misunderstanding. Business schools mislead students if they teach global

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[2] Rugman and Verbeke (2003), page 8.

strategy when business decisions largely are influenced by regional trends and changes. Policymakers mislead the public about the impacts of global policies if the more urgent needs for policy exist within multi-country triads. Policymakers create unrealistic hopes for global trade outcomes if the needs for such policies are exaggerated.

Tracking trade shares and examining the behavior of the 100 or 500 largest companies by triad offers useful but insufficient evidence about the regionalization/globalization debate. Results depend very much on the definition of optimal distance. Rugman implicitly assumes that a triad is the right distance measure. But triads are very large both in terms of distance and culture (Uruguay and Quebec are in the same triad). My approach uses a much shorter measure of distance that derives from the location difference of the 15 states on the southern border of Canada relative to the other states.[3]

My paper focuses on the principal discriminating factor in the regional/global debate – distance or proximity. Regionalization makes sense because distance – whether measured by kilometers or culture – is a "barrier" to trade. It makes sense, therefore, that business find it easier and more profitable to engage in business closer to home. Doing global business – in all triads – would be a second best solution for many companies that seek the benefits of international trade. My work tests the importance of distance by putting it on equal footing with industry mix explanations of international trade. Underlying the idea of globalization are pre-existing industry linkages. While a company might want to trade closer to home, it might also want to take advantage of country, company, or industry

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[3] Alaska is not included with the 15 border states. It is not part of a contiguous region of border states and its economy is quite different from the others. Alaska largely exports oil, fishing, and other mineral products.

relationships that have formed over time. The question we pose is that for 1996 to 2001, for changes in US export sales to Canada, how important was the role of proximity relative to industry mix? If proximity is shown to be less important, then we consider this as weakening the case for regionalization.

Similarity Index

I use an industrial mix Similarity Index[4] to identify cases where industry differences played strong roles in state export performance from 1996 to 2001.[5] The range of this index is from zero, indicating complete dissimilarity, to 100, indicating the state's sectoral distribution of exports is identical to the national distribution.

I use industry export Similarity Indexes that compare export sales of the 15 border states to the remaining 35 non-border states. If, according to a Similarity Index, border state exports to a given foreign destination became less similar to non-border states exports over a given time period, that result would imply that industry mix was important to relative export performances of border states. If this turned out to be true for exports to Canada, then this would be evidence supporting the regionalization hypothesis. If this evidence of export industry dissimilarity turned out to be truer for Canada than for other export destinations, this would make the regionalization case even stronger. Because of distance and location, one would expect export industry dissimilarity between border and non-border states to be

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[4]Coughlin and Pollard (2001), page 29.
[5]We choose 1996 to 2001 for several reasons. First, the data we use with the rich industry detail is published with state detail only back to 1996. We wanted the data to be as long-term as possible, but no data exists for the pre-1996 time period, especially because of the timing of NAFTA. Second, data for full-year 2002 were not available when the research was done for this paper. Third, because there was very rapid export growth that peaked in 1999/2000, ending earlier than 2001 would have yielded a sample period with little cyclical variability. Containing 2000 and 2001 allows for a time period with both very strong increases and decreases in export sales. While some might point out that our beginning and ending dates are not equivalent time periods insofar as export strength is concerned, there is nevertheless, an expected upward trend over the time period as witnessed by the positive growth rates over that time period.

much more important for Canada than for other export destinations. Of course, if pre-existing industrial structure of export sales was more important than distance, then one might expect no change in industry-based similarity over time. To make this point more vivid, consider the following matrix:

State/Destination	Canada		Rest of World (R)	
	Industry 1	Industry 2	Industry 1	Industry 2
Border	.7	.3	.5	.5
Not Border	.6	.4	.5	.5

Each cell contains export sales share data for each industry in a border or non-border state. For simplicity, in this example we assume only two industries comprise a state's exports. Assume also that industry 1 in the border state specializes in Canada while industries 1 and 2 are roughly equal with respect to exports to the rest of the world. Consider the cell for border state exports to Canada which says that 70% of the border state's X1 exports go to Canada. The remaining 30% of border state's exports to Canada are from Industry X2.

Now consider three types of changes that might affect these export sales.
1. Regional shock when distance is very important
2. Regional shock when distance is not important
3. Global shocks

Border states have a larger share of industry 1 exports going to Canada than do the non-border states. If distance is very important, one would expect that a regional shock that promotes more integration would favor border state industry1 more than non-border state industry 1.[6] In that case the industry 1 border to non-border share gap should increase and

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[6] Lorraine Eden commented on an earlier draft of this paper that much of the impact of the Canadian-US Free Trade Agreement would have been felt before 1996. NAFTA would have been a more dominant shock between 1996 and 2001. Thus, one might not have expected significant increases in trade integration between Canada and the border states. In this version I compare Similarity Index changes with respect to Canada and Mexico and find the surprising additional result that the Mexico-bound exports of states along the Canadian border were more affected than states closer to Mexico. This underscores the point of the article, that distance is not the paramount factor in determining export flows. This paper is not meant to be an event-shock study. Much was happening – beyond NAFTA and the unfolding impacts of the Canadian-

the Similarity Index for Canada would decrease. But this would have no effect on the Similarity Index value for the rest of the world. If distance was not important, in contrast, there is no reason to expect the Similarity Index to decrease for either location.

Global shocks could have two different kinds of impacts. Consider a global shock that favors border state industry 1's exports to the world. For example, suppose that border state industry 1 has been negatively impacted by trade regulations that are now removed n countries where border states have heavily exported. This might decrease the Similarity Indexes for both Canada and/or the US. Thus, evidence that the Similarity Index for Canada decreased would not be sufficient evidence of regionalization. A second kind of global shock might negatively impact industry 2 in the border state. In that case a global shock would decrease the Similarity Index as global factors tended to disproportionately impact the minority share industry in the border versus the non-border states.

The upshot of these examples is that rising dissimilarity of industrial export distributions of border to non-border states could result from:

- Regional factors that promote increased trade and distance matters
- Global industry or country factors that increase trade and favor high share industries
- Global industry or country factors that decrease trade and penalize low share industries

Exports Sales and Export Shares of Border and Non-Border States, 1996 to 2001

US Free Trade Agreement – in the 1996-2001 time period that might have impacted trade with the border and non-border state export destinations. This work simply compares the role of distance and industry mix over that time period.

US exports to the world were $622.8 billion in 1996 and subsequently increased to $731 billion in 2001 after peaking at $780.4 billion in the year before.[7] Table 1 shows the situation of the border states in 1996. These 15 states sold $188 billion to the world, or about 30% of all US exports. These states, however, accounted for almost exactly 50% of US exports to Canada. In contrast the $7.6 billion sold to Mexico was only 13% of US exports to that destination in 1996.

With respect to individual states, there was considerable diversity in sales by export destination. New York was the largest exporter to the world from among the border states. Michigan, however, was the largest exporter to both Canada and Mexico. Michigan, Illinois, New York, and Ohio accounted for about two-thirds of the border state's exports to Mexico and Canada. Washington, a major exporter to the world, in comparison, was a relatively small part of the border state's exports to either Mexico or Canada.

Table 1 here

Table 2 shows export growth between 1996 and 2001 from the US, the 15 border states, and the remaining non-border states to the World, Canada, and Mexico. US exports to the world grew by 17% over that 6-year time period. Exports to Mexico and Canada grew faster, at 79% and 23%, respectively. Exports of border states to the world grew by 22.5%, faster than exports of the non-border states of 15.1%. The 15 states along the Canadian border, therefore, led the nation in international sales to the world. The same result holds true for exports to Mexico. The magnitude of the growth rate differences, however, are

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[7] The data used throughout this report is Harmonized System of Tariffs or Schedule B information supplied by the US Census Bureau and distributed by Global Trade Information Services, Inc. For more information about this and other similar state export sales data, see Davidson (2003).

much larger for exports to Mexico. States with especially strong growth rates to Mexico were Indiana, Washington, Ohio, and New York. With respect to Canada, however, the story changes. The non-border states exports to Canada grew by 35%, almost three times the increase of the 13% increase for the border states. Michigan and New York, two of the larger exporters to Canada in 1996, had very weak growth in export sales to Canada during that time period. These facts alone warrant a closer look at the regionalization phenomenon since, at surface, they seem to contradict the importance of distance.

Table 2 here

The growth rate experience is evident in the shares of exports. Table 3 shows the shares of world exports as they were in 1996 and the changes in shares between 1996 and 2001. We see that 35% of the exports of the states that border Canada went to Canada in 1996. Mexico was a minor destination, receiving only about 4% of exports from these northern states. The non-border states were more apt to sell their exports to Asia (35%) or Europe (23%). These states were more likely than border states to sell to Mexico but less likely to sell to Canada than their northern counterparts.

Some of these shares changed markedly between 1996 and 2001. The largest changes in shares for the border states were a 3% increase in share to Mexico and 3% decreases in shares to Canada and Japan. They also increased share by 2% to Europe. The non-border states, in contrast, had an increase share of goods going to Canada. The share going to Mexico rose by 6%.

Table 3 here

These results provide conflicting evidence for the regionalization hypothesis. First, US neighbor Mexico clearly has become more important to both groups of states. Its share

increases dominated all other world region share increases. For the non-border states,

Mexico and Canada together saw a share increase of 9%, much larger than any of the other

areas. But for the border states, export share to Canada fell by about the same amount as

exports to Japan. The share of exports to Mexico rose, but not much faster than increases to

the EU and to Australia/Oceana. For the country as a whole, therefore, the results are

mixed and we look further at industry performances to examine these apparent

contradictions. In particular, a declining share of exports from border states to Canada is

not sufficient reason to reject regionalization. The question revolves around the industrial

composition of the decline – was it because key industries in the border states had a

common experience with the same industries in non-border states (no increase in

dissimilarity)? Or was it because border state industries with strong ties to Canada showed

declines relative to the same industries in the non-border states (increase in dissimilarity)

Thus, the Similarity Index will give us information that goes beyond the usual aggregated

information about share changes.

Similarity Index Values
Introduction

A Similarity Index is used to measure the similarity of industry exports of the border to

the non-border states for their exports to the world in 1996 and for changes between 1996

and 2001. A Similarity Index sums the minimum share values for each industry, where

the minimum refers to the lesser of the shares for the border and non-border states.[8]

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[8] These sums are simple sums of minimum share values and are not weighted. This might give the
impression that unimportant industries had as much influence on the totals as important industries (those
with large shares). But the fact is that the sums and the changes in sums were dominated by the largest
industries. This makes sense because the minimum share for most of the industries were very small
numbers. Many were less than 1%. The share values and changes in share values for a few large industries

Similarity Index Values by Export Destination

Table 4 shows the Similarity Index values for the border states in 1996. The value for exports to the world in 1996 was 77.9, indicating that the industrial composition of border state and non-border states exports to the world were quite similar in that year.[9] Somewhat higher values existed in 1996 for exports to EU15 and Canada, respectively 79.2 and 79.1.The border states were least like the non-border states with respect to exports sales in 1996 to Other Europe and Mexico. The destinations roughly fell into three groups with respect to the Similarity Index:

- Highly similar: EU15, Canada, Other Western Hemisphere, Other Asia
- Somewhat similar: Australia, Japan, Africa, Southeast Asia
- Not very similar: Mexico, and Other Europe.

Table 4 also shows that similarity declined between 1996 and 2001 for exports to the world and for exports to eight of the 10 regions. This means that for all destinations, except for EU15 and Japan, the structure of industry exports of the border states became less like the structure for the non-border states.[10] The border states were becoming more distinctive, less like the non-border states for all destinations besides EU15 and Japan. The Similarity Index decreases ranged from about -0.6% for Australia to -26.2% for

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were quite large in comparison – several in double digits. Inasmuch, the more important industries dominated the results.

[9] The similarity values for the individual states ranged from 36 to 76, indicating that while some states were quite like the non-border states, some were not. Most similar to the non-border states were Illinois, New York, and Minnesota. Least like the non-border states were Vermont, Washington, North Dakota, and Montana

[10] This was primarily because of industry changes in Washington, Illinois, Ohio and Wisconsin. In contrast, the industrial structures of 11 border states became more like that of the non-border states, though to differing degrees. Having the largest changes toward similarity were Vermont, Massachusetts, Maine, Montana, and New York

Africa. The value for Canada fell by nearly 5% about twice the decline for exports to the world.[11]

Table 4 here

The single fact that the Similarity Index fell twice as much for Canada than for the World is evidence in favor of regionalization and the importance of distance. If distance is very important, then one would expect that the states closest to Canada would develop closer and stronger trade relationships with Canada. But several other facts suggest that the Canada Similarity Index change was not very special and question the importance of distance:

- Three country destinations (Africa, Southeast Asia, and Other Asia) had very large negative Similarity Index changes indicating that the border states had significant share changes relative to the non-border states.
- Other Europe and Other Western Hemisphere had negative changes similar in size to Canada's.
- The border states are considerably farther from Mexico than Canada, yet the change in Similarity Index was similar for exports to these two countries.

Our examples of similarity change above suggest some answers to these questions. We listed three factors that might cause rising dissimilarity. Any of these would explain a decline in the Similarity Index (border states export share becoming more dissimilar with non-border states):

- Regional factors that promote increased trade and distance matters
- Global industry or country factors that increase trade and favor high share industries
- Global industry or country factors that decrease trade and penalize low share industries

Trade did increase over the time period, but the share of the border states exports to Canada decreased. Therefore, it looks like global rather than regional factors might have

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[11] These conclusions about the degree of similarity or dissimilarity stem from intuitive judgments. I know of no standard statistical tests to determine statistically significant deviations.

been influential towards explaining the decline in the Similarity Index. This requires a deeper look into the sources of changes in the Similarity Index.

Similarity Index Changes by Industry

The similarity changes reflect changes in the industry shares of exports to the world of each state. We can see why various border state exports become more or less the same as the non-border states by examining the role of the 98 industry sectors that comprise each state's export sales. It would seem straight-forward to examine the contribution to the Similarity Index for each industry by state. However, because of the construction of the index and the interplay of the many industries, the changes in the minimum share values do not always convey this information. Instead, I calculated for each industry in each state for its exports, the value which I will call I-SIM[12], where

I-SIM= Absolute value of the border state share gap in 2001 minus
Absolute value of the border state share gap in 1996

The border state share gap is defined as the difference between the industry share in the border states and the non-border states. I-SIM is always greater (less) than zero when the industry share's are becoming more similar (dissimilar).

The industries with the greatest I-SIM values for exports to the world and exports to Canada were: 27 (Mineral Fuel/Oil), 84 (Machinery), 85 (Electrical Machinery), 87 Vehicles), and 88 (Aircraft/Spacecraft). These industries dominated the share changes between 1996 and 2001. Industries 84, 85, and 87 are the main export industries of the

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[12] I thank my colleague Mike Baye for helping me think through this issue and for suggesting I-SIM.

United States. These three industries in 1996 accounted for over 57% of the border state's exports to the world and over 49% of non-border states exports.

Whereas I-SIM values were used to choose these important industries, we discuss below the actual share changes by industry and export destination to interpret why they contributed to changes in similarity. Four cases are analyzed.

First, the most intuitive case supporting regionalization is when the share gap for exports to Canada in 1996 was positive and then became more positive between 1996 and 2001. This result held for the following cases, suggesting that border states improved their position relative to non-border states with respect to exports to Canada:

> 84: the border state share rose more than the non-border state share

> 87: the border state share fell, but somewhat less than the non-border state share

Second, this result is somewhat diminished by the fact that border states generally improved their share positions relative to non-border states with respect to exports to other locations in which the border states had no "distance" advantage:

- 88: border state share to the world increased while share of non-border states fell

- 84, 87: border state exports to Mexico increased much more than non-border state exports to Mexico

Third, an intuitive case favoring regionalization exists when the share gap was negative in 1996 and then shrank (moved closer to zero from a negative value) between 1996 and 2001. In this case the border states would be converging in share on the non-border states

from below. There were no cases of this happening with respect to Canada. But there were several cases of this for other destinations that go against this intuition since they imply that the states that border Canada were doing relatively better in Mexico and the EU than the non-border states:

- 85, 88: border states exports shares rose more than non-border states export shares to Mexico
- 27: border states export share fell but by less than non-border states export shares to the EU15

Fourth, if the share gap in 1996 was positive and it declined between 1996 and 2001, this would indicate that the border state advantage to Canada was eroded by the more distant non-border states. This would be evidence against regionalization. This was true for industry 27, wherein border states export share fell to Canada while non-border states share was rising. This result was also true for other destinations where the share gap was eroded between 1996 and 2001: industry 84 (to the world), industry 85 (to the EU15), and industry 87 (to the world and the EU15).

If the share gap in 1996 was negative and became more negative this would indicate that the border states were becoming even less competitive with respect to export shares over time. One would not expect this result for exports to Canada if regionalization were strong within an industry. But this was true for industry 85 which saw the border share falling to Canada significantly more than the non-border share. For industry 88, the border state share rose, but the non-border state share increased even more. In these

cases, the states became more dissimilar, but this was not evidence consistent with regionalization. This loss of relative share was not just true for exports to Canada. It was also true for industries 85 to the world and industry 27 to the world and to Mexico.

Summary

Did export sales to Canada of the border states differ from the non-border states? If yes, then this implies that distance and proximity were important. The Similarity Index decreases in value whenever the absolute value of the share gap between border and non-border industries increased. Another way of saying this is that the shares of border and non-border industries diverged. If the close proximity of the border states to Canada was meaningful, then the special relationship between these states and Canada should have been enhanced and revealed.

The Similarity Index value between 1996 and 2001 for Canada fell by 5%. This implies increasing divergence – thus the border states were becoming less like the non-border states with respect to Canada. The Similarity Index fell for 10 of the 15 border states indicating that the increasing divergence was shared by most of the border states. The strongest divergence was exhibited by Idaho, Maine, Illinois, and Wisconsin. This contrasted with Similarity Index changes for exports to the world wherein only four of the 15 border states showed increasing divergence. This implies that proximity to Canada was important for the time period from 1996 to 2001. Thus, regionalization seems to be at work in North America. But there is other evidence that questions this conclusion.

First, while border state exports were increasing over the 1996 to 2001 period, exports to

Canada (13%) were growing slower than exports to the World (23%). As a result, the

share of border state exports to Canada decreased by 3%. Meanwhile the shares of border

state exports were rising to Mexico, EU15, Australia/Oceania, and Africa. The non-

border states exports had the opposite experience with exports to the world growing at

15% and exports to Canada growing by 35%. The share of non-border state exports to

both Mexico and Canada rose significantly – though the Mexico share rose twice as fast

as the Canadian one. In short, while border states were becoming less like the non-border

states, it was not because of increased intensity of trade with Canada. It was partly

because border states were increasing share in other parts of the world while non-border

states were doing relatively better in Canada. In a few cases, the increased relative share

of border states exports was to Mexico. One might consider that as evidence of

regionalization. But it is not in the sense defined in this article. Border states are further

from Mexico than the non-border states. This suggests that something other than distance

was at play in determining these changes.[13] In effect, this industry information supported

the idea that global shocks were impacting key industries and they were having similar

effects on border state exports to various regions of the world.

Second, the details of the Similarity Index declines were revealed by the I-SIM values for

the contribution of each industry. The main contributors were industries 27 (Mineral

Fuel/Oil), 84 (Machinery), 85 (Electrical Machinery), 87 (Vehicles) and 88

(Aircraft/Spacecraft). Consider heir contributions. Analyzing 20 possible cases of

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[13] My colleague, Chuck Tryczinka, explains that the distance within the United States may not be significant and that the border and non-border states are "equally" close to Canada and Mexico. This suggests more inquiry into how to define the smallest unit of significant distance.

industry share changes (for these five industries and four export destinations) between 1996 and 2001 finds only two strong indications of growing regionalization: industries 84 and 87 exports to Canada. The remaining cases did not support growing dissimilarity in the sense that border state industry exports to Canada rose relative to non-border state exports. In most cases there was evidence that suggested that differential export performance that had nothing to do with distance.

In conclusion, my analysis of Similarity Indexes questions the impact of distance or proximity on trade between the US and Canada between 1996 and 2001. During this time period, the relationship between the border states and Canada did become more special – industry export shares of the closer border states diverged from those of the more distant non-border states. While this special distinctiveness of the closer border states might indicate a special role for proximity, a closer inspection suggests that the special relationship is not what would be normally expected from regional integration. The share of border state exports to Canada declined over this time period. Furthermore, it appears that existing (in 1996) industry strengths or linkages had more to do with trade than proximity. The distinctiveness of the border states arose primarily because the border states were increasing trade with non-Canadian destinations while the more distant non-border states were focusing more on Canada.

Generalizing this result from the Canada/US experience to the full North American Triad or other Triads is not warranted. Nevertheless, this paper suggests that digging deeper into industry mix and specific sub-triad country or region details is worth the effort.

Further work along these lines could expand our understanding of the regional-global experiences of trade. We might corroborate Alan Rugman's conclusion that few multinationals are global in the sense that they do not operate in all three triads. But we might also find that Rugman simply has not given the process long enough to unfold. If apparent regionalization comes more from industry mix and less from proximity, then the potential for rapid globalization may be stronger than Rugman admits.

Acknowledgements

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Table 1. Export Sales of Border States to the World, Canada, and Mexico, 1996 (in billions of dollars)

	Mexico	Canada	World
US	56.761	132.584	622.827
Border States	7.552	66.371	188.001
New York	0.867	9.655	34.23
Michigan	3.085	16.613	27.553
Washington	0.234	2.612	26.482
Illinois	1.182	7.621	24.176
Ohio	0.709	10.93	22.676
Massachusetts	0.326	3.532	14.524
Indiana	0.325	5.442	10.984
Wisconsin	0.361	3.128	9.504
Minnesota	0.23	2.588	8.992
Vermont	0.022	2.361	3.302
Idaho	0.044	0.274	1.571
New Hampshire	0.053	0.52	1.481
Maine	0.017	0.527	1.38
North Dakota	0.058	0.38	0.707
Montana	0.04	0.187	0.44

Table 2. Export Sales of Border and Non-Border States to the World, Canada, and Mexico, Percentage Change from 1996 to 2001 (in percent)

	Mexico	Canada	World
US	79	23	17
Non-border States	75	35	15
Border States	106	13	23
New Hampshire	55	14	62
Idaho	43	29	35
Washington	268	5	32
Maine	96	60	31
Indiana	444	14	31
Illinois	91	50	26
New York	114	1	23
Massachusetts	75	-19	20
Ohio	197	27	19
Michigan	55	6	17
Minnesota	89	2	17
North Dakota	-34	4	14
Montana	-15	62	11
Wisconsin	86	21	10
Vermont	-17	-41	-14

Table 3. Export Sales Share of Border and Non-Border State Exports to World Destinations, 1996 and change from 1996 to 2001 (in percent, shares do not add to 100 because of rounding errors)

Destination	Border States 96 share + or – Change	Non-Border States 96 share + or – Change
Canada	35 -3	15 +3
EU15	21 + 2	20 +1
Other Asia	13 --	16 -2
Japan	10 -3	11 -3
Southeast Asia	5 --	8 -2
Mexico	4 +3	11 +6
Other Western Hemisphere	4 --	10 --
Rest of Europe	4 --	3 --
Africa	1 +1	2 --
Australia/Oceania	2 +2	2 --

Table 4. Similarity Index Values by Export Destination in 1996 and Percentage Change from 1996 to 2001 (index values and percent)

	Index Value	Percent Change
EU15	79.2	5.4
Canada	79.1	-4.6
World	**77.9**	**-2.3**
Other W. Hemis	77.6	-2.6
Other Asia	76.5	-12.2
Australia	74.4	-0.6
Japan	73.3	6.1
Africa	70.1	-26.2
Southeast Asia	69.9	-13.2
Mexico	66.5	-2.6
Other Europe	61.9	-4.3