IMPLICATIONS FOR TRADE TENSIONS AND DISPUTES FROM STRUCTURAL IMPACTS OF THE NAFTA: A U.S. PORK INDUSTRY PERSPECTIVE

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INTRODUCTION

After accepting our charge to address the title subject, Martin Rice and I concluded that the differences in our perspectives would do more to meet the goal of this conference than would a consensus piece. While Martin has addressed trade issues in a broader context, I will confine my comments to structural changes and their long-term implications for the partners to the NAFTA. The entire idea of NAFTA (and any other free trade agreement for that matter) is to integrate markets so that resources can be used most efficiently, costs minimized and, consequently, public welfare maximized across the trading countries. This in no way implies that all consumers or producers will be better off or that no consumer or producer will be worse off. The collective welfare (as measured by consumer surplus) will, however, be maximized under free trade and competitive markets. Adjustment times and phase-in periods allow time for those made worse off to make adjustments to take advantage of the changes wrought by the agreements.

The NAFTA formalizes a paraphrase of communications theory's admonition that "You cannot choose to not communicate"...... the NAFTA brings to hog and pork producers in all three countries the message that "You cannot

Table 1: Population and Population Growth Estimates, NAFTA Countries.

	2000 Pop. (Mil.)	*2025 Pop. (Mil.)*	*Natural Growth Rate (%)*	*Time to Double (yrs.)*
United States	275.6	337.8	<1	120
Canada	30.8	36.0	~0	178
Mexico	98.8	132.0	1.95	36

Source: Population Reference Bureau, 2001

Table 2: Pork Production, Imports, Exports and Consumption, NAFTA Countries.

	Production		***Imports***	***Exports***	***Consumption***	
	000 MT	*% of Total*	*000 MT*	*000 MT*	*000 MT*	*% of Total*
U.S.	8758	76.5	453	569	8440	80.1
Canada	1675	14.6	70	750	998	9.5
Mexico	1010	8.9	130	35	1105	10.5
Total	11443				10533	

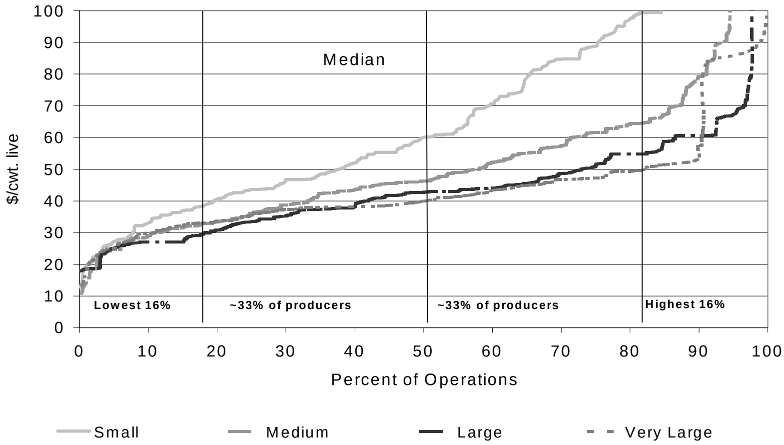
Source: USDA Foreign Agricultural Service

choose to not compete." The emergence of Japan as the major export market for all three countries would have eventually driven this point home. The NAFTA has accelerated the process dramatically. We can no longer view each country's "market structure" as a stand-alone entity. We must redefine structure to encompass the entire trading community.

The key to the NAFTA appeal is what each market offers in terms of consumers. Table 1 illustrates that NAFTA immediately increased the number of buyers for goods from all three countries, mainly due to the overwhelming size of U.S. population and it's relatively high personal income level. In fact, the $37 billion consumer expenditure on pork in the United States will eventually be completely open to trade from both Canada and Mexico . Mexico offers a long-term population growth rate that will not be matched by either the United States or Canada.

At the same time, the number of sellers chasing consumers, and the amount of product offered to them, increased dramatically. The dominant role that the United States plays in the overall supply and demand picture of the North American pork industry is illustrated in Table 2. But economic theory

Figure 1: Production Cost Distributions of U.S. Hog Producers, Operating and Ownership Costs.



teaches us that it is the marginal unit of production that determines price. As a result, each country will bear equal responsibility for the sector's performance. While this is true, the United States appreciates the importance of a small change in its already-large production base. We have clearly been the major determinant of supply and demand balance but growth of Canadian production and integration of three separate markets will reduce this role over time.

Against this backdrop, I would like to address four aspects of industry structure that are expected to have a bearing on the future of the North American pork industry, and discuss how they might give rise to various types of trade tensions and disputes.

Economies Of Size In Production

The same economies of size that have driven major changes in producer structure in the United States since the 1980s are now being realized in Canada and Mexico. The competitive pressure of generally larger, more efficient units will drive the hog production sectors of all three countries over the next 20 years. The opening of markets due to NAFTA will speed up this process. USDA, Economics Research Service research in 2000 showed dramatic

Table 3: Operations and Inventory share with costs above $50/cwt.

Category	Number	Inventory Share	***Costs above $50.*** Percent	Number	Inventory Share
Small	88,985	12	65	57,840	8.0
Medium	18,175	25	40	7,270	10.0
Large	4,765	22	10	477	2.2
Very Large	1,905	41	10	191	4.1
Total	113,830	100		65,778	24.3

Source: McBride, William, Production Costs of U.S. Pork Producers, USDA-ERS and Hogs & Pigs, USDA-NASS, December 1999. In this study, “Small” producers had 1-499 head in inventory, “Medium” had 500-1999 head, “Large” had 2000-4999 head, and “Very Large” had 5000 head and more.

differences in the cost distributions of U.S. hog producers of various sizes. Figure 1 shows the cumulative probability distribution functions from this study. Note that nearly 80 percent of the large and very large producers had total costs of $50/cwt or less. Only about one-half of the medium-sized and one-third of the small producers had such costs. Herein lies the main force for change in the U.S. industry over the past 20 years, and this force is now at work in Canada and Mexico as well.

What does this mean for the structure of the U.S. industry? Table 3 shows the ERS cost distributions and December 1999 data for the number of hog operations in the United States. The data show that about 58 percent of the operations in the United States, representing nearly one-fourth of the hogs in inventory, are at competitive risk from more cost-efficient producers.

Economies Of Size In Packing and Processing

Cost data for pork packers are much harder to come by than data for hog production costs but consideration of the recent history of North American packing companies points out that significant economies of size exist and that these will drive change throughout the NAFTA countries. The cost efficiency of U.S. packers long made the United States the lowest-cost supplier of pork to world markets. Canada had an advantage in hog production costs but was at a decided disadvantage in packing costs due to U.S. packers economies of scale and generally lower wage rates. Much of that disadvantage for Canada has disappeared. The Maple Leaf Foods strike in 1997 lowered the wage structure of Canadian packing plants. Modernization, expansion and construction of new plants has left Canada with several world-class packers which, when combined with Canada's already efficient production segment, can compete effectively in any market in the world. The same pressures will likely now affect Mexico. We already see new plants aimed at export markets and we will likely see more as Mexico's pork industry competes with the United States and Canada at home, and in export markets.

Can packing economies-of-scale grow farther? I'm always hesitant to rule anything out but it is not clear that anyone will be able to push chain speeds higher than what we see now in Brandon, Manitoba and Tarheel, North Carolina. But there are a number of middle-tier packers that can capture some economies by merging into multi-plant companies. Heightened concern about food safety and the food safety risk faced by single-plant firms will only enhance the incentive for this type of consolidation. The competitive bar will rise even farther.

Barriers To Entry

This is a separate but closely related topic to the discussion of economies of size. As shown explicitly for production costs, these economies yield substantial advantages to large firms. They also necessitate very large capital investment. While modern hog production involves \$4-\$5 of capital per dollar required in modern pork packing, the packing sector must also invest enormous amounts to establish brand identities and build marketing relationships. Brands are a key element in pork marketing in North America. A high proportion of pork (60 percent or more) is processed and branded and, with the advent of deep basted "fresh" products, this percentage is rising and will reach 80-90 percent in the not-too-distant future. The brands themselves are viewed by many as barriers to entry. Indeed, any new entrant would be remiss if they did not recognize the value of a brand name and the long, difficult, sometimes expensive road that must be traveled to develop a successful brand. But this is not a function of corporate manipulation; it is a function of consumers' valuing consistency and dependability. Here again, food safety concerns have added a new aspect to the loyalty and trust relationship between a consumer and a brand.

Finally, the difficulty of breaking into established relationships can serve as a large barrier to entry. This is especially true in international dealings. Retail chains and foodservice operations hold the key relationship, contact with the consumer. The size, importance and power of both retail and foodservice firms has grown over time. Getting access to these channels is no easy task, due largely to their value to incumbent suppliers.

Product Differentiation

Product differentiation has often been viewed as a barrier to entry, especially when incumbent firms are zealous about developing new product varieties. I'm not sure the pork industry can be viewed as "zealous" in the same way that, say, ready-to-eat cereal manufacturers were viewed in the 1970s and 1980s when this theory was developed. This viewpoint is raised only to offer the pork industry as its antithesis. Product differentiation is, in fact, the flip side of market segmentation. What good does it do to differentiate a product if there is not a market segment that wants the "different" product? In that regard, I think it is obvious that new market segments are developing at a rapid pace in all three NAFTA countries and in their export markets as well. Consider China as a 1.2 billion consumer "segment" that generally eats pork products that U.S. consumers don't eat! That may be less true for Canada and Mexico but among 1.2 billion people there will be segments larger than our respective countries! In addition, these emerging segments will lend themselves to service from smaller, more nimble companies. The large, "economies of scale" firms will be able to serve some of these by sorting from the wide distribution of products, but many of these segments will be served by smaller firms who can extract enough value from their products to overcome scale disadvantages.

These opportunities should exist in all three NAFTA countries, and abroad. Market segmentation and product differentiation will be a wonderful opportunity in years to come.

Vertical Integration

Vertical integration is the Devil himself to many producers in all three NAFTA countries! Vertical integration is almost always synonymous with BIG. The future, though, will require some variant of vertical integration regardless of size. Value chains are composed of innately interdependent agents. Consumer needs for consistency, convenience, safety and specific traits like "green" pork, Berkshire pork, "welfare" pork, etc. will require the control of vertical integration. In fact, I believe we will see the smaller producer/packer segments become highly vertically integrated long before we see the larger ones. It's already happening, helped along by more face-to-face contact among the various firms and the resulting easier path to beneficial trust relationships.

Effect on Trade Tensions and Disputes

One conclusion that seems obvious from the first six years of the NAFTA is that there will be more trade among North American countries. Whether this causes more tensions and disputes because of more opportunities, or less tensions and disputes because of more familiarity and comfort remains to be seen. It appears to me that relations are getting better and that the parties involved are learning how to effectively settle disputes as they arise. I believe, however, that the competitive pressure of structural changes will cause considerable dissatisfaction within certain sub-sectors of member countries. This dissatisfaction will manifest itself in political responses within the NAFTA countries. My experience is that politicians can usually best solve an internal political problem by finding someone outside their borders to blame. So, I think these disputes will, in turn, manifest themselves in trade disputes.

The hog price crisis of late 1998 had nothing to do with trade, especially within North American, but NPPC found itself arguing with our own producers about the effect of Canadian imports. "Yes," we said, "live hogs from Canada have worsened an already bad situation, but if you want free trade it's a two-way street and you can't bail out when it works against you!" Most reasonable producers accepted that position but I fear that the argument fell on far too many deaf ears belonging to producers who wanted to create "Fortress America" in response to a severe short-term problem. Furthermore, most of these producers are the same ones who look for government intervention in the market-driven changes that have occurred in the U.S. producer segment over the past decade. When similar structural change occurs in Mexico and Canada, I suspect that many producers in those countries will also want to blame NAFTA trading partners.

The shift of the U.S. pork production segment to larger, generally more efficient units is driving changes in both Canada and Mexico. My friends in these countries producer organizations are, I'm sure, already having discussions about the wisdom of subjecting themselves to such direct competitive pressure. The aggressive growth of production in the Canadian prairie provinces has many U.S. producers posing the same question.

Remember my earlier paraphrase of communications theory: "you cannot choose to not compete"...... to which I would add.... "short of exiting the business!" Whether competing in North America or Southeast Asia or Russia, the pork industries of the United States, Canada and Mexico will compete with one another. Some producers and processors in all three countries will be harmed by the competition, but many will flourish. Ultimately though, our eyes must be on our customers and it is they who will be the ultimate benefactors of more competition and more cost-efficient production and processing.