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Sara Lee Foods Takes Flight: An Economic Impact Analysis of a Turkey Plant Closure

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In 1998, the Sara Lee Corporation implemented a corporate strategy of deverticalization. Bil Mar Foods, Inc., a subsidiary of Sara Lee responsible for the processing of packaged meat products, followed the strategy by shutting down its turkey slaughter facility in Zeeland, Michigan. As a consequence, turkey growers in Michigan were left with no viable outlet for live bird slaughter and the potential end of live bird production in the region. This study analyzes the economic impact associated with the cessation of live bird slaughter at the Bil Mar Foods plant. The economic consequences may be as high as an $81 million loss in total industry output, a $29 million loss in income, and a total employment loss of nearly 800 jobs. Faced with these economic consequences, turkey growers in the region joined forces to form a valued-added cooperative.

Key Words: impact analysis, plant closure, turkey industry

In 1997, the Sara Lee Corporation decided to restructure its value chain by diverging from manufacturing many of its products to outsourcing production and concentrating on developing and managing its name brands. In light of this change, Bil Mar Foods, a subsidiary of Sara Lee located in Zeeland, Michigan, and responsible for the processing of packaged meat products, shut down its turkey slaughter facilities and turned its attention to outsourcing turkey meat supplies and expanding its processing capacity. As a consequence, Bil Mar Foods opted not to renew the expired production and marketing contracts of turkey growers and bought out the existing contracts of other growers. By 1999, turkey growers in the region who owned significant production capital and infrastructure were faced with no existing market for live birds and the potential end of live bird production in southwest Michigan.

The current study employs input-output analysis to investigate the economic impact associated with the cessation of live bird slaughter and deboning operations at the Bil Mar Foods plant on southwest Michigan's local economy. The study proceeds by first describing Sara Lee's role in the turkey industry and the chain of

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events that led to the closure of the Bil Mar slaughtering facility. Next, the economic impact of Sara Lee's actions on southwest Michigan's local economy is assessed. The final sections report results and conclusions, and detail the efforts of Michigan producers who, faced with the challenge of not having a market for live birds, joined forces to create the Michigan Turkey Producers Cooperative.

Sara Lee's Corporate Strategy and the Bil Mar Plant

In 1997, Sara Lee announced it would implement a deverticalization strategy that would include moving out of manufacturing operations and becoming a "virtual firm" (Miller, 1997). The objective was for Sara Lee to reduce its physical assets, but continue building brand leadership through developing and marketing brands. To do this, the company pursued a strategy of outsourcing production and diverting its attention to brand management, new products, and market share, while increasing and improving brand strength and recognition among consumers. The deverticalization process also included the divestment of certain businesses (*Feedstuffs*, 1997). The turkey slaughter operation of Sara Lee-owned Bil Mar Foods was viewed as having only a modest rate of return and one for which supplies could easily be outsourced.

Prior to Sara Lee's deverticalization announcement, the Bil Mar plant had already begun to respond to industry changes. By the mid-1990s, negative returns and a surplus of meat existed in the turkey industry, due in part to overproduction in a mature market and a relatively stable per capita consumption. Following the industry trend, Bil Mar reduced its slaughtering capacity by converting from a double-shift to a single-shift operation in the early months of 1998. In doing so, Bil Mar opted not to renew a number of turkey grower contracts. By the middle of the year, approximately 35 grower contracts in Michigan, Indiana, Ohio, and Ontario had expired. In mid-1998, remaining producers were notified that their marketing and production contract agreements would be terminated and that Bil Mar would discontinue slaughter and boning at its Zeeland, Michigan, plant by mid-January 1999. Finally, in January 1999, Bil Mar shut down its kill floor and bought out the marketing and production contracts of current growers.

Contemporaneously, Bil Mar decided to expand its processing capacity. By following Sara Lee's corporate strategy and focusing on processing and brand name recognition, the company moved from producing and slaughtering its own turkeys to simply purchasing deboned turkey meat as an input to its expanded processing operation. After the slaughter plant closure, Bil Mar received its raw turkey products either through increased production at its Storm Lake, Iowa, operation or by commodity market purchases. Without an operation in place to slaughter their birds, Michigan turkey growers were left without a market in the state.

Bil Mar Foods was ranked seventh among U.S. turkey companies for the years 1997–1999, and was the only major turkey slaughtering plant in Michigan (*Turkey World*). Responsible for the production, slaughter, processing, and marketing of packaged meat products to deli, foodservice, and retail customers, the company sold products under the Sara Lee Premium, Mr. Turkey, and Bil Mar brands. In 1996, Bil Mar processed more than 10 million birds at its plant in Zeeland, Michigan. More than half of these birds were produced in Michigan, specifically in top-producing Ottawa and Allegan counties with more than 270 turkey farms (Vincent, 1997). A total of 118 growers, many who owned and operated multiple turkey farms, were impacted by the plant closure.[1] In addition, by cutting its kill rate and expanding into a full value-added facility, Bil Mar directly impacted approximately 360 slaughter facility employees who either lost their jobs or took on new jobs in the expanded processing facility.

Impact Analysis

To analyze the impacts of the Bil Mar slaughter plant closure on the local economy, an economic impact analysis is conducted. The impacts of the plant closure on regional economic activity are estimated by IMPLAN (Minnesota IMPLAN Group, Inc., 1997). This computer program performs regional input-output analysis for a given change in an activity level. Here, the activity level is the loss of the slaughtering facility and turkey production. The analysis is performed on Michigan's District 7, located in the southwest part of the state. Counties in District 7 include Allegan, Berrien, Cass, Kalamazoo, Kent, Ottawa, and Van Buren. Impact analysis is used to assess the change in District 7's overall economic activity as a result of the change in Bil Mar's operation.

Total economic impact can be separated into three components: direct, indirect, and induced effects. Direct effects are the changes in the industries to which a final demand change is made. By discontinuing its slaughtering activities, Bil Mar directly impacted those persons working in the slaughtering plant. In addition, because they are considered "quasi-employees" of Bil Mar and have no other existing outlet for live bird production, turkey growers who produced and marketed birds under contract to Bil Mar are also included in the direct impact. Overall, the direct impact of the closure of the slaughtering facility is a loss in live bird production and slaughter activities.

The backward linkages to regional input suppliers create indirect effects. All industries and businesses that provided the slaughtering plant and turkey growers with inputs are included in the indirect effects. For example, Zeeland Farm Services, the local soybean processing plant, supplied turkey growers with soybean meal needed for feed. In fact, nearly half of the plant's output was allocated to turkey production in District 7 (Meeuwsen, 2000). An indirect effect is the loss of demand for this input due to the loss of turkey growers and production in the region.[2] Last,

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[1] This number is based on full-time equivalent (FTE) turkey "growing" jobs in Michigan, and includes owner-operators as well as turkey farm employees.

[2] Because the data on Zeeland Farm Services' operation are not included in the 1996 data used by IMPLAN, the figures for employment, output, and value added that correspond to Zeeland Farm Services were obtained directly from the company and manually inputted into the study area data (Meeuwsen, 2000).

Table 1. Economic Impact of Bil Mar Turkey Plant Closure

	Economic Impact Effects			
SCENARIO	Direct	Indirect	Induced	Total
SCENARIO 1: 100% of Plant Workers Rehired				
Employment (no. of jobs) [a]	!118.0	!37.3	!16.5	!171.8
Value Added ($) [b]	!1,121,741	!1,226,915	!657,195	!30,058,518
Output ($) [c]	!8,526,418	!2,160,554	!1,066,280	!11,753,253
SCENARIO 2: 50% of Plant Workers Rehired				
Employment (no. of jobs) [a]	!298.0	!72.9	!104.0	!474.9
Value Added ($) [b]	!9,064,782	!2,882,642	!4,148,168	!16,095,592
Output ($) [c]	!33,713,240	!6,140,557	!6,730,288	!46,584,084
SCENARIO 3: 0% of Plant Workers Rehired				
Employment (no. of jobs) [a]	!478.0	!108.5	!191.5	!778.0
Value Added ($) [b]	!17,007,823	!4,538,367	!7,639,142	!29,185,331
Output ($) [c]	!58,900,062	!10,120,558	!12,394,296	!81,414,916

[a] Employment includes total wage and salary employees as well as self-employed jobs in the region (both full- and part-time workers).
[b] Value added (income) includes wages, business taxes, property income, and self-employment income.
[c] Total industry output is the value of production by industry for a given time period.

any changes in regional household spending behavior resulting from the direct and indirect effects are termed induced effects.

The sum of these three effects yields the total economic impact on the region and provides an improved understanding of the significance of Sara Lee's strategic decision on the local economy. It assists in highlighting the consequences and opportunities confronting the plant workers and turkey producers, input suppliers, and District 7's economic community.

To begin the analysis, it is first necessary to determine the overall loss in jobs resulting from the slaughter plant closure. In addition to the 118 turkey growers who lost their market and therefore their employment opportunities, the approximately 360 employees who worked at the Bil Mar slaughter plant faced one of two outcomes: permanent job loss, or change of job description from slaughter to processing. By expanding its processing capacity, Bil Mar potentially created new jobs in processing. Consequently, the total net job loss at the Bil Mar facility is unclear since some workers previously employed in slaughter operations might simply be transferred to newly created processing jobs, while others will experience permanent job loss.

To account for the unknown staffing level at the expanded processing plant, three alternative scenarios are examined. The first scenario assumes that new positions for all 360 slaughter plant employees are created in the expanded processing plant, thereby resulting in a net job loss at the Bil Mar plant of zero workers. The second scenario assumes 50% of the slaughter plant workers are retrained as processing plant workers, while the remaining 50% face permanent job loss. As a result, in the second scenario, a net job loss of 180 employees occurs. Finally, under the third scenario, it is assumed no new jobs are created in the expanded processing facility, so that all 360 slaughter plant employees face permanent job loss.

In most instances, the economic impact on turkey suppliers would simply be accounted for as an indirect impact because it is a backward-linked industry of the poultry and egg sector. In the third scenario discussed above, where all 360 Bil Mar slaughter plant employees lose their jobs, this is indeed the case, and the indirect effect would lead to the expected job loss of the 118 individuals involved in turkey production. However, in each of the other two scenarios, only a portion of the Bil Mar slaughter plant workers experience permanent job loss. Consequently, if turkey production is simply treated as an input into turkey processing, the indirect effect will be dampened and less than 118 turkey growers will be unemployed in these scenarios. This result would be inconsistent with the true fate of the individuals employed in turkey production who lose their jobs, and the full impact of the turkey plant closing on these individuals would not be captured.

In order to avoid this dampening effect, this analysis treats turkey growers as quasi-employees of the Bil Mar plant and evaluates their job loss as a direct effect. To do this, it is necessary to modify the underlying production function for the turkey industry to ensure turkey growers are not treated as input suppliers to the plant, and therefore double counted as both a direct effect and an indirect effect in the processing plant's impact.[3]

Empirical Results

In analyzing the scenarios identified above, IMPLAN measures the impacts on the basis of employment, value added, and output.[4] Here, employment includes total wage and salary employees as well as self-employed jobs in the region. It includes both full-time and part-time workers. Value added, or income, includes wages, business taxes, property income, and self-employment income. Total industry output is the value of production by industry for a given time period. The impacts of eliminating the slaughter process from Bil Mar's operation, considering a direct employment impact of 360 slaughtering employees and 118 turkey growers, are presented in table 1.

In the first scenario, where it is assumed all slaughter plant employees are transferred to the processing facility, the employment in District 7 drops by 172 jobs, including the job loss incurred by the 118 turkey growers. In addition, approximately $30 million is lost in income and $11.7 million in total industry output.

The second scenario, which assumes Bil Mar transfers only one-half of the slaughter plant workers to positions in the processing facility, leads to a total job loss

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[3] To avoid double counting, the coefficient corresponding to the "Poultry and Eggs" sector was set to zero in the production function of "Poultry Processing." This approach allows the turkey growers' impact to be manually inputted as a direct effect without influencing other indirect effects.

[4] Impact definitions are derived from the *IMPLAN Professional Version 2.0 User's Guide* (Minnesota IMPLAN Group, Inc., 1997).

Table 2. 1997 Agricultural Sales in Michigan's District 7 Counties

County/Description	Percent of State's Total Receipts (%)	Million $
Ottawa	8.4	300.0
Allegan	5.2	186.8
Kent	3.4	121.0
Kalamazoo	3.0	105.5
Van Buren	2.8	100.6
Berrien	2.3	81.4
Cass	1.9	67.5
District 7 Total	27.0	$962.8
State Total		$3,567.8

Source: 1997 Census of Agriculture (USDA/NASS, 1999).

in the region of approximately 475 positions. Moreover, total loss in income is $16 million and total loss in industry output is nearly $47 million.

In the worst-case scenario, where no Bil Mar slaughter plant employees are transferred to the expanded processing facility, total employment loss reaches 778 jobs, lost income amounts to slightly more than $29 million, and total industry output exceeds $80 million. These findings are particularly significant when one recognizes that the loss of $80 million is approximately 8% of the total agricultural sales in the region (see table 2). Clearly, the closure of the Bil Mar turkey slaughter plant has important economic consequences, impacting not only plant workers and turkey growers, but the region's economic community.

The Michigan Turkey Producers Cooperative

Faced with the economic consequences following the closure of Bil Mar's slaughtering and deboning operations at its Zeeland, Michigan, plant, 15 Michigan farmers joined together and created the Michigan Turkey Producers Cooperative (MTPC). They acquired property in Wyoming, Michigan (a Grand Rapids suburb), and extensively retrofit the facilities, using cutting-edge technologies, to perform the turkey slaughter and processing operations which Sara Lee/Bil Mar strategically decided to discontinue. MTPC's facility was approved by the U.S. Department of Agriculture (USDA) on February 29, 2000 (Vincent, 2000). Remarkably, this approval was granted only slightly more than a year after Bil Mar closed its Zeeland plant.

The core business objective of the MTPC as stated in its Fiscal 2001 Business Plan is to use cutting-edge technology to produce and market a full array of unique commodity products plus a value-added product line under the Golden Legacy brand name. The Cooperative expects to raise and process 4.25 million birds with sales in excess of $72 million. Based on its business plan, the MTPC anticipates it will largely market to a core customer group with primarily a Midwestern base of operations, to take advantage of freight economics and to strategically partner with customers having proven financial strength and the potential capability of co-packing/cooking for creating added-value products. The MTPC has great potential to dampen and perhaps offset the negative economic impacts of the Bil Mar plant closure.

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