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ECONOMIC IMPACT OF SOUTHEAST NEW BRUNSWICK'S SMOKED HERRING INDUSTRY ON THE STUDY AREA

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ECONOMIC IMPACT OF SOUTHEAST NEW BRUNSWICK'S SMOKED HERRING INDUSTRY ON THE STUDY AREA

Economic Services Branch
Fisheries and Oceans
Gulf Region
April 1987

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ANNEX

Table A

Expenditures incurred to produce a box of smoked herring and one pail of alewifes

	Smoked Herring ($)	Alewife ($)
Raw material	4.27	4.00
Labour	3.55	2.60
Boxes, salt, wood, sawdust, pails, etc.	1.91	4.74
Electricity	.11	.22
Insurance	.16	.18
Property tax	.06	.28
Interest & bank charges	.37	1.60
Depreciation	.29	.75
Trucking/Travel	.50	.52
Accounting/Office	.13	.25
Telephone	.05	.01
Maintenance & repair	.12	.25
Permits/Licences	.02	.03
Promotion	.04	---
Miscellaneous	.11	.07
Total expenditures	11.68	15.50
Total income	13.00	20.00
Profits	1.32	4.50

Introduction

The smoked herring industry is not a well-known industry. Except for those who depend on it, very few people are aware of the economic activity it generates. Although a number of smoke houses still operate in Grand Manan and in a few other localities throughout the Atlantic provinces, the smoked herring industry is concentrated mainly in the Cap Pelé area. In fact, it is estimated that more than 95% (92% in terms of value) of all the smoked herring produced in Canada (most of which is exported to the Caribbean) comes from the Cap Pelé area.

The smoked herring industry has been the subject of several studies over the years. Most of these discussed the operational and technical changes needed to increase smoke house returns. The most detailed of these is undoubtedly the one carried out by Co-Fish Consultants Limited on behalf of the Cap Pelé Bloater Smokers' Association[1].

The purpose of this study is to assess the importance of the smoked herring industry in terms of income and jobs. In the pages that follow, we will often refer to the chapter of the Co-Fish study entitled "Evaluations of Individual Capacities and Capabilities". Nineteen of the 26 entreprises that formed the smoked herring industry in 1985 were examined on an individual basis. Using these findings and with the help of the Cap Pelé Bloater Smokers' Association, the South East Economic Commission, several smoke house owners and Fisheries Resource and Development staff from DFO at the Shédiac office, we were able to draw a fairly accurate picture of the economic importance of the smoked herring industry in the Cap Pelé area.

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1 The Smoked Herring Industry, a detailed study for Cap Pelé Bloater Smokers' Association by Co-Fish Consultants Limited.

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This report is divided into three chapters. The first contains a brief description of how the industry operates, while the second is a short statistical description of the socio-economic situation in the area. The third chapter examines the economic impact of the smoke houses in terms of income and jobs.

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Chapter 1

1.0 Production of smoked herring

Production methods in the smoked herring industry have changed little over the years. Recently, however, smoke house owners have invested heavily to diversify their production and upgrade their processing, storage and shipping facilities. In 1986, the total market value of the 25 smoked herring entreprises was estimated at $6.3 million.

Last year, the 25 plants that make up the industry produced 952,421 boxes of "hard or mild cured herring", 39,184 boxes of fillets, 10,878 boxes of split herring and 86,361 pails of alewives[1]. Although some entreprises had begun to diversify their production, hard cured herring still accounted for the majority of all the smoked herring produced in 1986.

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1 Hard cured and split herring is sold in 18 lb. boxes, fillets in 10 lb. boxes and mild cured herring in 15 lb. boxes. Alewives are packed in pails containing 50 lbs. of fish and about 25 lbs. of brine. It should be noted that a little over half of the smoke houses produce alewives.

These figures may appear strange when compared to previous production levels of about 500,000 boxes[1]. We should point out, however, that the smoke houses have undergone some major operational changes in the past few years. For example, in 1980, several of the plants had only two processing seasons or packs a year. Last year, most plants had four packs and some even more. About 280,000 boxes of fish could be produced during each pack. Total annual capacity is evaluated at nearly 1.1 million boxes[2].

Capacity is difficult to define. It gives us an idea of the maximum level of production the industry can achieve using existing facilities. The level of production itself depends on several factors such as the availability of raw material, demand, the profit margin and processing time.

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1 Average yearly production for the 5-year period covered by the Co-Fish study (1979-83) was 420,000 boxes.

2 The industry needs about 5,500 short tons of herring to operate at full capacity (280,000 boxes) during each processing season. That figure is based on a raw material/finished product yield of 40 to 45%. This means that about 40 lbs. of fish are needed to produce one 18 lb. box of hard cured or split herring. About 250 lbs. of fish are needed to produce 8 or 9 boxes of mild cured herring (yield approximately 50%), while 1.3 boxes of hard cured herring are needed to produce one box of fillets (yield 19%).

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The following procedure is generally used to produce one pack. First the fish is pickled. This usually takes about 3 days[1] (hard cured herring must be pickled in brine 3 days before it is ready to be strung on wooden rods[2]. Stringing and hanging the fish usually takes 7 days[3]. Each of these steps must be repeated three times to fill the smoke house to capacity. Then the fish is dried and smoked. This takes approximately 3 weeks for the "mild cure" and anywhere from six to eight weeks for the "hard cure", depending on temperature and humidity[4]. After the fish has been smoked, it is taken down and packed in boxes. The entire procedure, including cleaning the installations, takes about 2 months.

---

[1] Tank capacity for all 25 plants is nearly 3,000 tons, including both the Xactic boxes and the concrete tanks (2,200 t). The majority of producers generally use the concrete tanks only even though the Xactic boxes can be used for mild as well as hard cured herring.

[2] The main difference in the pickling of mild cured and hard cured herring is that hard cured herring requires a shorter pickling time.

[3] It is estimated that the industry scoops the fish out of its tanks at the rate of about 500 to 600 tons a day. Therefore, as soon as they empty the tanks, these are filled again.

[4] Herring size and fat content also affect smoking time. According to the smokers, smoking is easiest when the herring is 10 to 12 inches long and has a fat content of 12 to 18%.

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As previously indicated, several smoke houses produced 4 packs in 1986. The spring pack (May/June) was produced with fish landed at Escuminac, Pointe Sapin and in the study area. The summer/early fall pack was produced (September/October) with fish from the Bay of Fundy (Yarmouth). Raw material for the late fall pack (November/December) came from Sydney Bight and Chedabucto, and fish for the winter pack (January/February/March) came from Chedabucto Bay. Alewives are fished in the Miramichi River, Grand Lake (near Fredericton) and at Margaree, Nova Scotia.

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Chapter 2

2.0 Social and economic situation in the study area

Before we can analyze the socio-economic indicators and calculate the economic impact of the smoke houses in terms of income and employment, we must first define the study area. The boundaries of the study area were established according to population dispersal, availability of data and the place of residence of smoke house employees. These criteria enabled us to match the study area to the area affected by the smoked herring industry in terms of employment as well as income.

As shown in Figure 1, the study area encompasses the parish of Botsford, excluding the town of Port Elgin. The parish boundaries match those of the sub-division used by Statistics Canada for census-taking purposes. Within this census zone is the incorporated town of Cap Pelé. Also included in the parish of Botsford are Bas Cap-Pelé, Petit Cap, Shemogue, Cape Tourmentine, Murray Corner and Bayfield.

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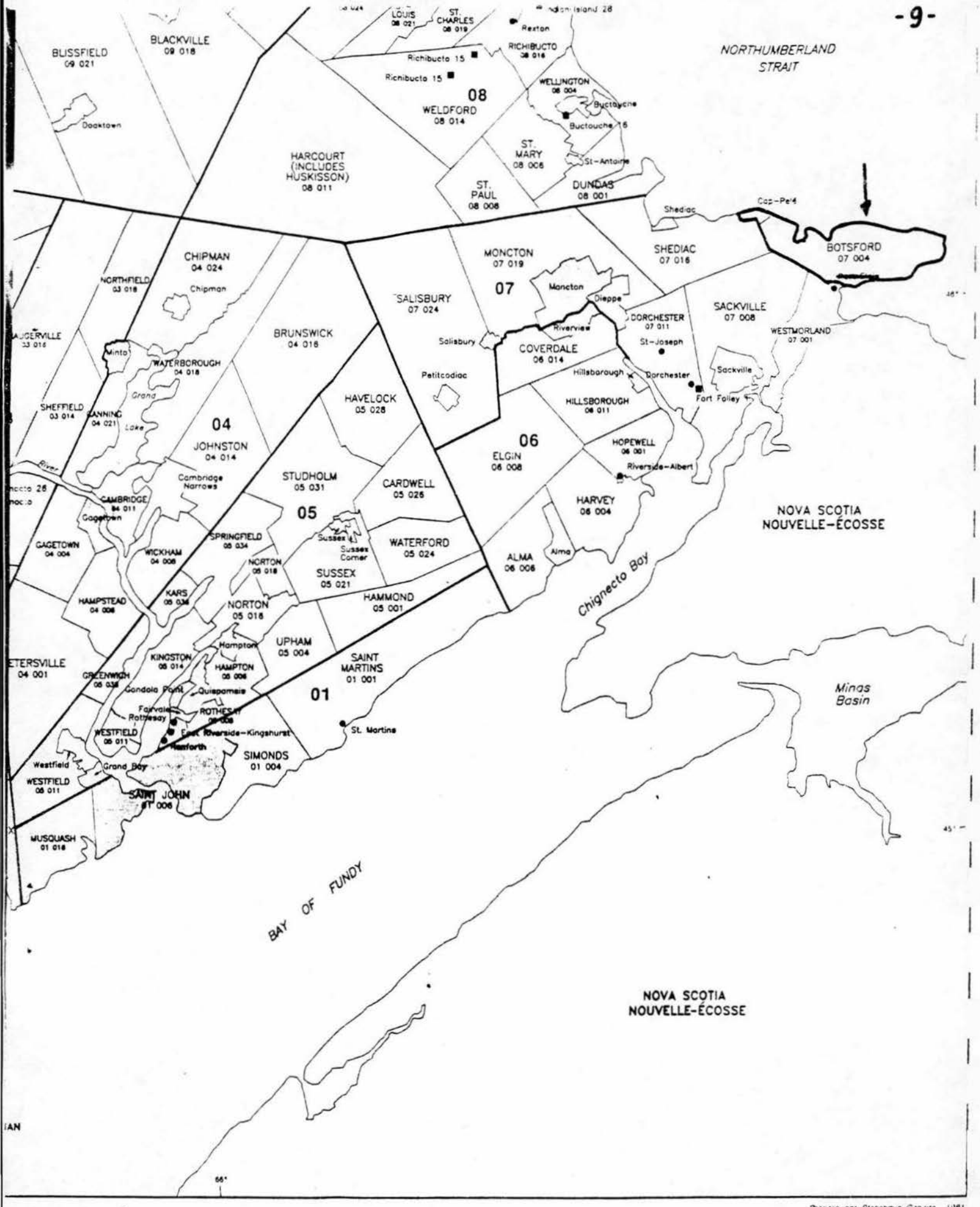
NORTHUMBERLAND STRAIT
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BLACKVILLE 09 018
Dacktown
LOUIS 08 021
ST. CHARLES 08 019
Richibucto 15
RICHIBUCTO 08 016
WELLINGTON 08 004
Buctouche
Buctouche 16
08
WELDFORD 08 014
ST. MARY 08 006
St-Antoine
HARCOURT (INCLUDES HUSKISSON) 08 011
ST. PAUL 08 006
DUNDAS 08 001
Shediac
Cap-Pelé
SHEDIAC 07 016
BOTSFORD 07 004
MONCTON 07 019
07
Moncton
Dieppe
Riverview
SALISBURY 07 024
Salisbury
COVERDALE 06 014
DORCHESTER 07 011
St-Joseph
SACKVILLE 07 008
WESTMORLAND 07 001
Hillsborough
Dorchester
Sackville
Fort Folley
HILLSBOROUGH 06 011
Petitcodiac
CHIPMAN 04 024
Chipman
NORTHFIELD 03 018
BRUNSWICK 04 016
Minto
WATERBOROUGH 04 018
Grand Lake
SHEFFIELD 03 014
CANNING 04 021
04
JOHNSTON 04 014
HAVELOCK 05 028
STUDHOLM 05 031
05
CARDWELL 05 026
WATERFORD 05 024
SUSSEX 05 021
Sussex
Sussex Corner
06
ELGIN 06 008
HOPEWELL 06 001
Riverside-Albert
HARVEY 06 004
ALMA 06 006
Alma
NOVA SCOTIA
NOUVELLE-ÉCOSSE
Chignecto Bay
Cambridge Narrows
CAMBRIDGE 04 011
Gagetown
GAGETOWN 04 004
SPRINGFIELD 05 034
WICKHAM 04 006
NORTON 05 018
KARS 05 034
HAMPSTEAD 04 006
NORTON 05 018
HAMMOND 05 001
UPHAM 05 004
Hampton
KINGSTON 05 014
HAMPTON 05 006
SAINT MARTINS 01 001
St. Martins
ETERSVILLE 04 001
GREENWICH 05 034
Gondola Point
Quispamsis
Fairvale
Rothesay
ROTHESAY 05 008
WESTFIELD 05 011
East Riverside-Kingshurst
Hanford
SIMONDS 01 004
01
Westfield
Grand Bay
WESTFIELD 05 011
SAINT JOHN CY 006
MUSQUASH 01 018
Minas Basin
BAY OF FUNDY
NOVA SCOTIA
NOUVELLE-ÉCOSSE
66°
45°

Before we begin to describe the socio-economic characteristics of the area, we should point out that the census data given are not yearly averages but references to one of the following three periods: June 1, the week prior to June 1 and the year prior to June 1.

Income levels in the study area have always been lower than provincial income levels. In 1981, the most recent year for which data is available, total male income averaged $13,406 in New Brunswick, but $10,225 in Cap-Pelé and $9,995 in Botsford Parish[1]. Concerning the women, their average total income was $6,749 for New Brunswick, $5,566 Cap-Pelé and $5,929 Botsford.

The gap between provincial average employment earnings and the average employment earnings of study area residents is even wider. This is due mainly to the seasonal character of the jobs available in Botsford Parish and the high unemployment rate there.[2] In 1981, 38% of the jobs held by area residents were either in processing or in the primary sector. These figures illustrate the importance of the fishing industry in the study area.

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[1] Data for the last census was gathered last summer. According to Statistics Canada, census data (except for population figures) will not be made public until November 1987. Although we do not believe that the situation has changed dramatically, it would be interesting to see whether it has improved.

[2] In 1981, the unemployment rate for all of New Brunswick was 13%, compared to 19% for the study area (Botsford, 20.7%; Cap-Pelé, 18.8%).

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We did note an interesting change in population movement. As shown in Table 1, Botsford Parish saw its population drop by 2% between 1976 and 1981, a period during which national economic growth was relatively strong. Cap Pelé also saw its population drop from 2,287 to 2,199, a decrease of 3.8%.

During that same period, total population in New Brunswick increased by 2.8%. Between 1981 and 1986, however, when the country was experiencing its worst recession ever, the population rose by 1.1% in Botsford Parish and by 2.0% in Cap Pelé, compared to 1% for the whole of New Brunswick.

Table 1

Population in the study area and in N.B. from 1976 to 1986

Year	Botsford Parish	Town of Cap Pelé	Area	Province
1976	3,019	2,287	5,036	677,250
1981	2,958	2,199	5,157	696,403
1986	2,990	2,243	5,233	703,474

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Chapter 3

3.0 Economic impact of the smoked herring industry on the study area

The economic impact of an industry is usually measured by the income and the number of jobs it generates. In this chapter, we will try to measure the impact of the smoked herring industry on the economy of the study area. Before going further, we should mention that only the income paid by the plants has been taken into consideration. The unemployment insurance benefits received by the workers at the plants have not been considered despite the fact that they ensue from the jobs created by the bloaters.

To measure the income effect of the smoke houses on the study area, we will use the regional multiplier model developed by Tiebout.[1] This model redraws local spending figures to calculate income effect. To measure the full impact of the smoked herring industry on income, we will use two different multipliers, each of which corresponds to a type of local smoke house input. The first of these two inputs is the wages paid by the smoke houses to local residents and the second is the purchase of local goods and services. As previously indicated, data on these two inputs was taken from the Co-Fish study, then adjusted to reflect the changes that occurred between 1984 and 1986.

To better understand the methodology used, let us go over its various steps to estimate the overall impact on income of the wages paid by the smoke houses to local residents.

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[1] Tiebout, Charles Mills, The community economic base study, New-York, Committee for economic development, 1962.

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First, the plants pay their employees who, in turn, use part of their earnings to purchase local goods and services. Part of the money spent in this manner is converted into wages and profits for other local employees and employers. These local employees and employers also spend part of their earnings on local goods and services, and the process is repeated. The multiplier effect is the combined total of all the spending. In other words, to measure the income multiplier, we must add the amount of the initial spending and all subsequent spending generated by the initial spending.

A. Wages paid by the smoke houses

The income multiplier can be expressed mathematically, as follows:

$$Y1 = Y01 + Y01\ (K1.K2) + Y01\ (K1.K2)^2 + Y01\ (K1.K2)^n$$

Y1 = Total income effect resulting from wages paid by the smoke houses to local residents

Y01 = Wages paid by the smoke houses to local residents

K1 = Percentage of wages local residents spend on local goods and services i.e. the average propensity to spend locally

K2 = Percentage of spending by local residents that is converted into local income

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The aforementioned equation is a geometric series. Therefore:

$$Y1 = \frac{Y01}{1 - (K1.K2)} \quad \text{when} \quad 0 \quad K1 \; . \; K2 \quad 1$$

The factors to be determined are K1 (the percentage of wages spent locally by local residents) and K2 (the percentage of local sales that is converted into income for local residents (employees and employers)).

B. Purchase of goods and services by smoke houses

The income effect can also be calculated using the amount spent by the smoke houses to purchase local goods and services. In this case, however, the factor to be determined is the percentage of smoke house spending that is converted into income for local residents. The difference between the two inputs lies in the fact that the first is based on wages paid to local residents.

The purchase of local goods and services by the smoke houses constitutes income for local businesses. Part of this income is converted into wages and profits for local employees and employers. The income from the sale of local goods and services constitutes the first round of income, or, expressed mathematically: $Y02 = K3.Y12$

Y02 = Income received by local employees/employers further to the purchase of goods and services by the smoke houses

K3 = Percentage of smoke house purchases converted into income for local employees/employers

Y12 = Amount spent by smoke houses on local goods and services

According to the methodology used for the previous equation, the income effect resulting from the purchase of goods and services by the smoke houses is:

$$Y2 = \frac{Y02}{1 - (K1.K2)}$$

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The income effect calculated using this method may be underestimated in cases where local businesses purchase goods and services from each other. In the case at hand, however, the study area is small enough to make any such errors inconsequential. Moreover, we note that there are very few wholesalers in the area.

As mentioned above, the smoked herring industry produces two direct income effects. Table #2 shows the wages paid by the smoke houses and the amounts they spend on goods and services. As you can see, raw material and wages account for nearly two-thirds of their total spending. These figures represent total expenditures incurred by the industry during 1986.[1] Except for depreciation, all of the expenditures constitute disbursements. Please note, however, that the expenditures were not necessarily all incurred in the study area. In the pages that follow, we shall separate the local expenditures from those incurred outside the study area. First, we must calculate the propensity to consume locally and the percentage of local resident spending that is converted into local income.

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[1] To obtain the breakdown between the cost to produce a box of smoked herring and a pail of gaspareau, the reader could refer to Table A in the Annex.

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Table 2

Expenditures incurred by the smoked herring industry in 1986
(smoked herring plus alewives)

	($)	(%)
Raw material	$ 4,629,633	35.5
Labour	3,785,846	29.0
Boxes, salt, wood, sawdust, pails, etc.	2,329,261	17.8
Electricity	130,567	1.0
Insurance	172,781	1.3
Property tax	81,887	.6
Interest & bank charges	505,993	3.9
Depreciation	356,299	2.7
Trucking/Travel	551,108	4.2
Accounting/Office	148,237	1.1
Telephone	49,005	.4
Maintenance & repair	137,128	1.0
Permits/Licences	18,885	.1
Promotion	39,253	.3
Miscellaneous	117,881	.9
Total expenditures	$13,053,764	100%
Total income	$14,767,364	
Profits	$ 1,713,600	

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3.1 Calculating the K1 and K2 factors

A. K1 (propensity to consume locally)

Normally, to calculate the percentage of household income spent on local goods and services, a survey must be conducted on the spending habits of households in the area. Such a survey would provide us with information on the location and type of household purchases. Unfortunately, we had neither the time nor the resources to conduct such a survey. We did, however, contact a number of resource persons and consult spending surveys that were carried out in Kent County and other areas.

Findings vary considerably from one survey to another. Often, local residents travel to larger urban centres as the goods and services available in the small towns and villages in their area are too limited to meet their needs. Consequently, the propensity to consume locally is relatively low. The opposite effect is generally noted when adequate services are available locally.

Survey findings also depend on the category of goods and services surveyed. According to the resource persons contacted, clothing is usually purchased in Moncton, whereas household goods, excluding appliances and furniture, are bought locally.

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We calculated K1 by taking into consideration the weights presented in the Statistics Canada survey concerning the households' expenditures. In light of the comments received and surveys conducted in areas comparable to the study area, we shall assume that K1 = 65%. This means that local residents spend 65 cents of each dollar earned on local goods and services. The balance (35 cents) is either saved, spent outside the study area or paid in sales taxes.

B. K2 (Percentage of local resident spending that is converted into local income)

In order to assess the industry's full impact on local income, we need to know what percentage of local spending is converted into income for local residents. This usually involves the following variables: a) total sales by local businesses, b) wages paid by these businesses to local residents, and c) amount spent by local residents.

As this information was unavailable to us, we used a survey conducted in an area similar to our study area[1]. According to data gathered on businesses in the vicinity of Kouchibouguac National Park (St. Louis, Rexton and Richibouctou), each dollar spent by local residents generates an average of 14.28 cents in wages or other income for local residents.

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1 Master thesis presented to the Université de Moncton Economic Department: L'impact socio-économique du Parc National de Kouchibouguac sur son environnement immédiat et sur l'ensemble de la province du Nouveau-Brunswick.

3.2 First round of income generated by the purchase of local goods and services by the smoke houses (Y02)

Table 2 lists all of the expenditures incurred by the 25 smoked herring plants in 1986. As indicated earlier, these expenditures were not incurred solely in the study area. We shall now proceed to assess local spending for each of the expenditures listed in Table 2. Please note that, although smoke house expenditures are different from those incurred by area residents, we used the same income/sales ratio, that is, 14.28 cents on the dollar.

The expenditures listed in Table 2 reflect the costs incurred by the industry in 1986 to produce smoked herring and alewives. As we could see $4.6 million were spent to acquire herring and alewives, of which more than $500,000 were paid to area fishermen[1].

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[1] The 1986 herring fishing season was especially good for area fishermen in that their landings were much larger than in previous years. Reasons given were a change in herring behaviour and increase fishing effort.

The balance, $4.1 million, was paid to fishermen outside the study area[1]. According to cost/income studies carried out by the Department during the past few years, about 65% of the value of herring landings goes to cover labour costs. The other 35% is used to cover ship operating and maintenance costs. As shown on Table 3, we have divided this item and the trucking/travel and accounting/office items into two categories: wages and purchase of goods and services.

Almost all smoke house employees live in the study area. Consequently, we shall use the full amount spent on labour, or total wages paid in 1986, to calculate the income effect. Smoke house wages are usually based on productivity[2]. In 1986, herring stringers were paid 7 cents a rod[3].

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1 The average price paid for herring in 1986 was $210 a ton ($200 during the spring, summer and winter packs and $240 during the fall pack). This price includes the cost of pumping, ice and shipping from the wharf to the smoke house. In general, truckers buy the fish from the fishermen, then sell it to the smoke houses. The price paid for alewives was about 8 cents a lb. or $160 a ton.

2 One of the most labour intensive tasks is stringing the herring on rods. This is usually done by women and accounts for the majority of jobs in the smoked herring industry.

3 The average stringing rate per stringer ranges between 650 to 750 rods a day. This represents an hourly wage of about $6.50.

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After raw material and labour, the purchase of boxes, salt, wood, sawdust and pails constitutes the next largest expenditure incurred by the smoked herring industry, accounting for more than $2.3 million in 1986. If we exclude the few smoked house owners that cut their own wood, the salt, pails, wood and sawdust come from outside the study area[1]. More than 80% of the boxes used are manufactured locally, the balance being brought in from Nova Scotia. We shall therefore assume that $922,841 were spent locally on boxes.

Other expenditure items that constitute an important source of income for the study area are maintenance and repair, accounting and office services, trucking and travel and miscellaneous expenses. Accounting and office services are provided by area residents. As for maintenance, repair and miscellaneous expenses, we shall assume that the percentage spent locally by the industry is similar to consumer spending, ie 65%.

The expenditures not mentioned above, that is, electricity, insurance, property tax, interest and banking charges, telephone, promotion and permits and licences, have little or no impact on the study area.

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1 Wood and sawdust come from St. Paul, Port Elgin, Cocagne or Lakeburn, in southeast New Brunswick.

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Table 3

Expenditures incurred by the smoked herring industry in the study area during 1986

	Wages	Goods and Services
Raw material	261,068	274,456
Labour	3,785,846	---
Boxes, salt, wood, sawdust, pails, etc.	---	922,841
Electricity	---	---
Insurance	---	17,278
Property tax	---	32,755
Interest & bank charges	---	50,599
Depreciation	---	---
Trucking/Travel	137,777	137,777
Accounting/Office	120,072	13,341
Telephone	---	---
Maintenance & repair	---	89,133
Permits/Licences	---	---
Promotion	---	---
Miscellaneous	---	76,623
Total expenditures	4,304,763	1,614,803
Profits	1,713,600	---
Total	6,018,363	1,614,803

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Using the sales/income ratio previously indicated (.1428), we can now calculate the first round of income generated by the industry through its purchase of local goods and services. Thus the $1,614,803 spent by the smoke houses generated $230,594 in direct local income. As shown in Table 3, wages include the profits recorded by the industry in 1986.

3.3 Calculating the total income effect

We are now ready to determine the full impact of the smoked herring industry on local income. In order to do so, we must add the income effect generated by the two types of smoke house input: 1. wages paid, and 2. the purchase of local goods and services. As you will remember, these two inputs were calculated in the previous section.

We have also established the value of K1, the average propensity to consume locally, and K2, the percentage of spending by local residents that is converted into local income.

Therefore:

$$Y1 = Y01 \cdot \frac{1}{1 - K1.K2} \qquad Y2 = Y02 \cdot \frac{1}{1 - K1.K2}$$

$$Y1 = Y01 \cdot \frac{1}{1 - (.65 \times .1428)}$$

$$Y1 = Y01 \cdot \frac{1}{.907}$$

$$Y1 = Y01 \times 1.10 \qquad Y2 = Y02 \times 1.10$$

This means that in the study area, every dollar of income received by local residents generates $1.10 in total income. This low income effect is understandable due to a weak manufacturing sector, the small size of the study area and the proximity of the City of Moncton[1]. The following table illustrates the income generated by the industry in the study area.

Table 4

Impact of the smoked herring industry on income - 1986

	Direct	Indirect	Total
Wages	$ 6,018,363	616,882	6,635,245
Smoke house purchases	230,594	23,636	254,230
Total	6,248,957	640,518	6,889,475

[1] Area residents do most of their spending in Moncton because of the wide range of goods and services available there.

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The smoked herring industry has therefore generated nearly $7 million in income in 1986. Wages paid by the 25 smoke houses account for almost 90% of the total income effect. To assess the relative importance of the smoke herring industry on the study area, we must adjust the data provided by Statistics Canada. According to the 1981 census, in 1980, wages earned by all study area residents aged 15 years or more totalled $19,826,4451 in 1980. Assuming that average earnings in the study area increased at the same rate as throughout the rest of the province between 1980 and 1986, the above-mentioned figure should read nearly $34 million[1]. This means that the smoke herring industry accounted for 20% of all employment earnings in the study area in 1986.

When we consider that the CN represented about 10% of the total income of Moncton, we could easily understand how important the bloaters are for the studied area.

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[1] To adjust Statistics Canada data, we used the average per capita income growth rate for New Brunswick for the years 1980 to 1986. We should mention that this rate includes not only wages but all other sources of income as well (UIC benefits, interest, etc.) This could result in an under-evaluation of the relative importance of the smoke houses. (Total employment earnings reached $19.8 million in 1980, while total household income reached $28.5 million in 1981.)

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3.4 Impact on employment

This section deals with the direct impact of the smoke houses on employment in 1986. As we were unable to obtain all of the necessary data in regard to sales and the number of employees working in businesses who sell to the 25 plants, we will not be able to determine indirect impact. Indirect impact is the number of jobs created by study area businesses to meet the increase in demand caused by the smoke houses. If it is comparable to indirect impact on income, indirect impact on employment should be about 10%.

According to the South East Economic Commission, 471 persons were employed in the smoke houses in June 1986, compared to 800 in fish processing plants throughout the study area.[1] It should be noted, however, that, on a yearly basis, the average term of employment is longer in the smoke houses (15 to 25 weeks) than in crab and lobster processing plants (15 to 20 weeks). It is estimated that smoke house employees worked 60,339 person-days in 1986 or the equivalent of 232 person-years, and earned a total of $3,785.846 in wages. As the labour force in the study area is made up of only 2,655 persons aged 15 years and more, it is easy to understand just how important the smoke house jobs are.

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1 South East Economic Commission, Quarterly Basic Employment Report, June 1986.

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Conclusion

As you can see, the social and economic situation in the study area is not very diversified and highly dependent on the fishing industry. As a large percentage of the jobs are seasonal, government programs such as the Unemployment Insurance Program constitute a major source of income for the studied area.

The smoked herring industry, with a total income of about $15 million, plays a vital role in the local economy. In 1986, the smoke houses generated nearly $7 million in income in the study area, or about 20% of all employment earnings in that area. Each year, they create the equivalent of 232 person-years or jobs for 430 persons for 20 weeks each.

The smoke herring industry has not diversified its production as much as we would have hoped, but has nevertheless managed in recent years to broaden its traditional markets as well as find new ones. In 1986, smoke house production reached a record high and the study area has greatly benefitted from the resulting economic spin-offs.